The TME 10 Deployment Cookbook

These pages are web versions of some embryonic IBM Redbook material. The material in these pages has been written by a team of IBM and business partner professionals participating in the ITSO residency programs. This redbook is being edited for hardcopy publication and is published here for those who need the information now and are willing to put up with spelling, grammar and layout errors.

This material has not been submitted to any formal IBM test and is published ***AS IS****. It has not been the subject of rigorous review. Your feedback is welcomed to improve the usefulness of the material to others.*

IBM assumes no responsibility for its accuracy or completeness. The use of this information or the implementation of any of these techniques is a customer responsibility and depends upon the customer's ability to evaluate and integrate then into the customer's operational environment.

The TME 10 Deployment Cookbook:
Courier and Friends

April 1997

SG24-4976-00

Fred Plassman

Stefan Uelpenich

Steef van Braband

Gordon Love

Gehrhard Kahmann

Uwe Volkmann

International Technical Support Organization
Raleigh Center

Take Note!

Before using this information and the product it supports, be sure to read the general information in Appendix A. "Special Notices".

First Edition (April 1997)

This edition applies to TME 10 Software Distribution 3.1, 5697-SWD for use with the AIX, Windows NT, Windows 95, Windows 3.1, HP-UX and Sun Solaris operating systems.

```
Comments may be addressed to:
IBM Corporation, International Technical Support Organization
Dept. HZ8  Building 678
```

P.O. Box 12195
Research Triangle Park, NC 27709-2195

Table of Contents

[**Top of Page** | **Next Page** | **Index**]

The TME 10 Deployment Cookbook

Figures

[Top of Page | Previous Page | Next Page | Table of Contents | Index]

The TME 10 Deployment Cookbook

Tables

[**Top of Page** | **Previous Page** | **Next Page** | **Table of Contents** | **Index**]

The TME 10 Deployment Cookbook

Preface

This redbook provides guidance on how to understand and use TME 10 Software Distribution.

It will help you position TME 10 Software Distribution and TME 10 as a solution for enterprise systems management and show practical examples for its use.

We use the latest features in TME 10 Software Distribution and show how to integrate them with other components of Tivoli Management Environment (TME) 10, Tivoli/IBM's solution for enterprise systems management.

Some of the Tivoli components we exploit include Tivoli/Enterprise Console, TME 10 Remote Control, TME 10 Application Extension Facility, TME 10 Task Library Language and AutoPack Control Center.

We also show an example of a large customer environment where TME 10 Software Distribution is used for typical software distribution tasks in a Windows NT environment.

The scenarios are documented in a way that service providers can use the code and examples as a base in customer implementations.

The Team That Wrote This Redbook

This redbook was produced by a team of specialists from around the world working at the Systems Management and Networking ITSO Center, Raleigh.

Fred Plassman is a Senior International Technical Support Organization (ITSO) Specialist at the Systems Management and Networking ITSO Center, Raleigh, North Carolina, USA. He writes extensively and teaches IBM classes worldwide on all areas of software distribution. Before joining the ITSO in July 1996, Fred provided national technical support for IBM software distribution products, primarily IBM Software Distribution V3.1 for AIX and NetView DM/6000 V1.2 in the IBM Networking Support Center, Gaithersburg, Maryland, USA.

Stefan Uelpenich is an Advisory ITSO Representative, working as a project leader at the Systems Management and Networking ITSO Center, Raleigh. He writes extensively and teaches IBM classes worldwide on all areas of systems management. Before joining the ITSO, he worked in IBM Germany's Professional Services organization as an Advisory I/T Architect for Systems Management, consulting major IBM customers.

Steef van Braband is a System and Networking Consultant working for Orda-B, a Software and Services company. Orda-B is an IBM Business Partner in the Benelux countries. He has five years of experience in designing system and network management solutions for large companies in Europe.

Gordon Love is an Advisory I/T Specialist working in Network Station Management at IOS/IBM South Africa. He has three years of experience in systems management and is currently working as a technical team leader for software distribution. Before joining IBM he worked in product support for software distribution products at a large South African

bank.

Gehrhard Kahmann is an Advisory I/T Specialist for Systems Management working in IBM Germany's Professional Services organization. He has been with IBM for 23 years and has nine years of experience in Client/Server environments. For the last three years he has worked on several systems management projects with large IBM customers in Germany.

Uwe Volkmann is a Network Computing Architect working in IBM Germany's Software Division. He has seven years of experience in Client/Server environments. For the last three years he has worked in several software distribution projects in Germany.

Thanks to the following people for their invaluable contributions to this project:

David L. Boone
Paul Braun
Evelyn Evans
Linda Robinson
Shawn Walsh
Gail Doucette Wojton
Systems Management and Networking ITSO Center, Raleigh.

Wolfgang Geiger
ITSO Raleigh/Tivoli Systems, An IBM Company, Austin

Comments Welcome

Your comments are important to us!

We want our redbooks to be as helpful as possible. Please send us your comments about this or other redbooks in one of the following ways:

- Fax the evaluation form found in Appendix E. "ITSO Redbook Evaluation" to the fax number shown on the form.

- Use the electronic evaluation form found on the Redbooks Home Pages at the following URLs:

  For Internet users
  `http://www.redbooks.ibm.com`
  For IBM Intranet users
  `http://w3.itso.ibm.com/redbooks`

- Send us a note at the following address:

  `redbook@vnet.ibm.com`

[**Top of Page** | **Previous Page** | **Next Page** | **Table of Contents** | **Index**]

The TME 10 Deployment Cookbook

Chapter 1. Introduction

In this redbook we work with products from the TME 10 Deployment area, focusing on TME 10 Software Distribution.

We show new functions of these products and also focus on how the products from the TME 10 Deployment area can be integrated with other Tivoli components to enhance their function and usability.

This redbook is a collection of experiences we gathered when working with TME 10 Deployment products. Some of the scenarios deal more with product functions, while others are more task oriented, for example in the customer environment example shown in Chapter 9. "A Real Customer Environment".

All of them are useful in helping you understand and use TME 10 as a powerful tool for deployment in your enterprise.

The examples in this book assume that you are already familiar with the basic concepts of TME 10 and TME 10 Software Distribution.

If you are not, we recommend that you read the redbook *TME 10 Cookbook for AIX*, SG24-4867 first. This redbook covers more basic information about how to use TME 10 Software Distribution (Courier), for example, creating profiles, profile managers, policy regions, etc.

1.1 TME 10 Deployment Products

At the time this redbook is written, we are still in the phase of coexisting products in the TME 10 Software Distribution area.

To avoid confusion in the course of this redbook we first define the terms we use throughout the book.

When speaking of TME 10 Software Distribution 3.1.3, or TME 10 Software Distribution for AIX we talk about the former SystemView product (also known as NetView Distribution Manager or Software Distribution for AIX).

When speaking of TME 10 Software Distribution 3.1 or Courier 3.1 we talk about what was formerly known as Tivoli/Courier.

When speaking of TME 10 Software Distribution this means the TME 10 Software Distribution family of products.

Although the former Tivoli and SystemView products are still coexisting, this book shows some interesting examples of integration. For example, in Chapter 4. "Using the AutoPack Feature in TME 10 Software Distribution 3.1" we show AutoPack, which is a new feature in TME 10 Software Distribution 3.1 and has been ported from DiskCamera, which was available in the SystemView family.

Also, in Chapter 2. "Using the T/EC Adapter in TME 10 Software Distribution for AIX" we show the T/EC adapter for TME 10 Software Distribution for AIX, which is a new feature in this product and allows integration into Tivoli management.

We work with the following products:

- TME 10 Software Distribution 3.1 on the following platforms:
    - AIX 4.1.4
    - Windows NT 4.0
    - Windows 95
    - Sun Solaris 2.5
    - Hewlett-Packard HP-UX 9.0.5
- TME 10 Software Distribution 3.1 Extension API
- TME 10 Software Distribution for AIX
- TME 10 Remote Control 2.0 on the following platforms
    - Windows NT 4.0
    - Windows 95
- Tivoli Enterprise/Console
- TME 10 Application Extension Facility

Note
The focus of this redbook is on TME 10 Software Distribution 3.1 (Courier 3.1). However, in Chapter 2. "Using the T/EC Adapter in TME 10 Software Distribution for AIX" we work with TME 10 Software Distribution for AIX 3.1.3 (formerly known as NetView Distribution Manager).

1.2 ITSO Raleigh Lab Environment

For performing the scenarios described in this redbook, we have set up the environment shown in the following figure:

Figure 1. ITSO Raleigh Lab Environment

View figure.

We have set up two Tivoli Management Regions (TMRs), the first is controlled by a TMR server running AIX (rs600012), while the other is controlled by a TMR server running Windows NT 4.0 (foxtrot).

Note
All names in this section used for machines are the TCP/IP host names and are also used as the system labels in TME 10.

On the TMR servers and on all managed nodes we use the Tivoli Management Environment (TME) 10 Framework version 3.1.

The installation and setup of the framework itself are not described in detail in this redbook, except in Chapter 9. "A Real

Customer Environment" where we show the complete installation.

For a more detailed description of these topics, you should refer to the following redbooks:

- *TME 10 Cookbook for AIX*, SG24-4867
- *Setting up a TME 3.0 NT Environment*, SG24-4819

In the basic setup, the TMR server rs600020 has the following managed nodes attached to it:

- The machine hp, running Hewlett-Packard HP-UX 9.0.5
- The machine sun, running Sun Solaris 2.5
- The machine rs600024, running AIX 4.1.4
- The machine rs600020, running AIX 4.1.4
- The machine tango, running Windows NT 4.0

Besides, the following TME 10 PC Managed Node is attached to rs600012:

- The ThinkPad oscar, running Windows 95

In the TMR controlled by foxtrot there is a managed node romeo attached to it and a TME 10 PC Managed Node juliet. All machines in this TMR are running Windows NT 4.0.

We will use the two TMRs for different purposes in this redbook. In some scenarios we only work locally in one TMR, while in others we work across TMRs. For the latter purpose we link the TMRs in 3.7.1 , "Connecting TMR foxtrot to TMR rs600011".

1.3 Where to Find What?

In order to help you find the sections of this redbook that are most relevant for you and your environment the following list contains a summary of the content of each chapter with the focus topics:

- Chapter 2. "Using the T/EC Adapter in TME 10 Software Distribution for AIX" describes the T/EC adapter for TME 10 Software Distribution for AIX. This chapter is mainly relevant for people working with TME 10 Software Distribution for AIX (formerly known as Software Distribution for AIX or NetView Distribution Manager) but also gives you detailed information on native Tivoli components, such as T/EC.

  Some of the topics covered are:

  - T/EC rule bases, event consoles and automated tasks
  - Debugging T/EC
  - Using the Task Library Language to create automated tasks
  - TME 10 policies
  - Extending TME 10 Software Distribution for AIX alerts

- Chapter 3. "Installing and Configuring TME 10 Remote Control" describes how to install and use TME 10 Remote

Control Release 2. Other topics covered in this chapter are:

  - Remote Control policies
  - Connecting TMRs
  - Using TME 10 Remote Control with TME 10 Software Distribution

- Chapter 4. "Using the AutoPack Feature in TME 10 Software Distribution 3.1" introduces AutoPack, which is a new feature in TME 10 Software Distribution 3.1. The topics covered include:

  - AutoPack architecture
  - Installing and configuring AutoPack
  - Creating an AutoPack for Freelance Graphics
  - AutoPack policies

- Chapter 5. "Distributing Microsoft Office for Windows 95 Using AutoPack" is based on Chapter 4. "Using the AutoPack Feature in TME 10 Software Distribution 3.1" and shows how to create an AutoPack for another application: Microsoft Office.

- Chapter 6. "Modifying Tivoli/Courier Using AEF" shows simple examples of how Courier can be modified using TME 10 Application Extension Facility. This chapter is a good start for getting a more in-depth view of how Courier is structured.

  This chapter focuses mainly on changing the appearance of Courier, that is icons, bitmaps and dialogs.

- Chapter 7. "Beyond the GUI" goes even more into the internals of Courier and shows how to leverage functions that are only available using the command line interface.

  Based on a file package example we explore the parameters for a file package, file package policies and also show how to get information on Courier file packages using IDL calls.

  As a side effect we create a general purpose BARC script that can be used for all kinds of file packages.

- Chapter 8. "Installing WABI on HP-UX and Solaris" uses the general purpose BARC script created in Chapter 7. "Beyond the GUI" to distribute a file package to HP-UX and Sun Solaris. We also show how to embed the operating system-specific installation programs on HP-UX and Solaris into TME 10 Software Distribution file packages.

- Chapter 9. "A Real Customer Environment" shows several change management examples used in a real customer environment based on Windows NT. We create a model of the customer environment, show how to set up and configure this model and then perform the following scenarios:

  - Distributing a Windows NT application, using the TME 10 Software Distribution Windows NT Command Line Utilities
  - Distributing data to multiple clients
  - Upgrading the TME PC agent with TME 10 Software Distribution using the Windows NT SYSDIFF tool
  - Using different distribution approaches and compare their performance
  - Using different distribution options

Getting Demonstration Code

You can retrieve the code examples in this redbook from ITSO.

IBM Employees can point their Web browser to w3.itso.ral.ibm.com/~stefanu and follow the links to sample code.

People outside IBM can send e-mail requesting the code to uelpenich@vnet.ibm.com.

[Top of Page | Previous Page | Next Page | Table of Contents | Index]

The TME 10 Deployment Cookbook

Chapter 2. Using the T/EC Adapter in TME 10 Software Distribution for AIX

With Version 3.1.4 of TME 10 Software Distribution for AIX an event adapter is available that can be used to send alerts from TME 10 Software Distribution for AIX to the Tivoli/Enterprise Console.

In this chapter we will show how to configure the event adapter and use it in change management scenarios.

Besides, we will also show how to use native Tivoli components, such as Tivoli/Enterprise Console and the Task Library Language in combination with TME 10 Software Distribution for AIX with the goal of integrating and automating the software distribution component.

TME 10 Software Distribution for AIX 3.1.4 is the latest version of what was formerly known as NetView Distribution Manager/6000 or SystemView Software Distribution for AIX and is therefore not a native Tivoli application.

However, in this chapter we will show some examples of how the Tivoli framework and its applications can be used to further enhance and integrate TME 10 Software Distribution for AIX. TME 10 Software Distribution for AIX will eventually be merged with Tivoli/Courier into the next generation of TME 10 Software Distribution, then being a native Tivoli framework application.

In an existing TME 10 Software Distribution for AIX environment you will eventually face the migration to the new TME 10 Software Distribution solution which will be a true framework application. While this migration might not take place immediately after this next generation has become available the future direction of TME 10 Software Distribution is clear.

Therefore it is a good idea to use other Tivoli applications today to enhance the functionality of software distribution even when you are still using TME 10 Software Distribution for AIX.

Using the T/EC adapter in TME 10 Software Distribution for AIX is a good start for this since you can use your familiar software distribution environment while at the same time enhancing its function through true framework applications.

As a side effect this will eventually ease the migration to the next generation of TME 10 Software Distribution because you will gain the experience in the Tivoli "world", for example, by using T/EC that will help you fully and rapidly exploit TME 10 Software Distribution as a core TME 10 application.

2.1 Overview and Objective

Figure 2. TME 10 Software Distribution for AIX & Tivoli Scenario

View figure.

The primary aim of this chapter is to show how to get the T/EC adapter that comes with TME 10 Software Distribution for AIX up and running on your system. The steps involved in this process are:

1. Installing the T/EC adapter on the CC server of TME 10 Software Distribution for AIX
2. Configuring the T/EC adapter
3. Configuring the T/EC event server
    1. Creating a new rule base
    2. Extending the new rule base
    3. Compiling the new rule base
    4. Activating the new rule base
    5. Extending the severity levels
4. Configuring the event console
    1. Creating a new event console
    2. Creating a new event source
    3. Creating a new event group
    4. Creating a new event filter
    5. Assigning the event group to an administrator
5. Generating test events

After setting up the event adapter and the event server and testing it we will introduce a Task Library in 2.10 , "Creating a Task Library for Controlling TME 10 Software Distribution for AIX" that contains some tasks to control TME 10 Software Distribution for AIX.

We will then use this Task Library in 2.11 , "Using T/EC Automation with TME 10 Software Distribution for AIX" where we guide you through a "real" TME 10 Software Distribution for AIX automation with T/EC.

At the ITSO test site we use one TMR for this scenario. The TME 10 Software Distribution for AIX change control (CC) server is installed on a managed node (rs600020). The T/EC server is installed on another managed node (rs600024). The TMR server is rs600011.

Note
The change control (CC) domain shown in Figure 2 that is controlled by the TME 10 Software Distribution for AIX server is just shown for illustration. In our scenario there are no CC clients connected to the TME 10 Software Distribution for AIX server.

2.1.1 Overview of Tivoli/Enterprise Console

The Tivoli/Enterprise Console (T/EC) is a rule-based event management application that converges events from different sources. It distinguishes itself from other event handlers through the superior flexibility in handling events, filtering and correlating. The T/EC has the following features:

1. Event priorities (6 by default)
2. Filtering out redundant or low priority events
3. Advanced correlation between events of any source
4. Access rights per operator on viewing and acting on events
5. Triggering automatic actions

The T/EC architecture contains an event server, multiple event consoles and multiple event sources called adapters.

Figure 3. The T/EC Architectural Overview

View figure.

The event server is the central point where events are gathered. It is here that events get correlated and actions get executed. The event console is a view of current events. This console can execute on any managed node running UNIX. From Version 3 onward the console can also run on Windows NT. We are using Version 2.6 for the examples in this redbook.

More detailed information about T/EC can be found in:

- *TME 10 Cookbook for AIX*, SG24-4867
- *TME 3.0 NT - Automated Processes*, SG24-4793
- *Tivoli Enterprise Console Documentation Kit*, SK2T-6050

2.1.2 Overview of the TME 10 Software Distribution for AIX T/EC Adapter

Event adapters collect information about monitored systems and convert them into a general event class format that is understood by Tivoli/Enterprise Console.

These events are then sent to the T/EC event server and distributed to event consoles.

The T/EC adapter for TME 10 Software Distribution for AIX is built into the product and converts messages from the TME 10 Software Distribution for AIX message logs into T/EC events.

Hence, it provides a means of centrally collecting events from TME 10 Software Distribution for AIX and triggering actions. The advantage of this is that the events from TME 10 Software Distribution for AIX can be treated in the same fashion as events from other sources or even be correlated with other events, for example, from SNMP managers.

An example of this would be that a software installation that has failed because of a network failure will automatically be tried again, when the SNMP manager reports to T/EC that the network node is available again.

2.2 T/EC Adapter Compared to NetView Adapter

There has been a NetView SNMP adapter available in TME 10 Software Distribution for AIX for quite a while that follows a similar concept.

The following figure shows both, the NetView and the T/EC adapter:

Figure 4. TME 10 Software Distribution for AIX T/EC and NetView Adapters

View figure.

The NetView adapter generates SNMP traps from the TME 10 Software Distribution for AIX message log and sends them to a NetView for AIX SNMP manager.

Although the approach is quite similar, the T/EC adapter provides more flexibility since T/EC is able to handle all sorts of events while SNMP managers, like NetView can only handle SNMP traps.

For example, NetView itself can send events to T/EC using the appropriate event adapter as shown in the above figure.

However, if at the moment you have no T/EC installed but NetView is already in use you might still want to use the NetView adapter.

For both adapters, the events that are to be generated from the message log of TME 10 Software Distribution for AIX are configured in the UNIX message catalog used by TME 10 Software Distribution for AIX.

We will show how to configure additional events in 2.13 , "Extending and Customizing TME 10 Software Distribution for AIX Events".

For more information on the NetView adapter you can refer to the redbook *NetView DM/6000 Agents and Advanced Scenarios*, GG24-4490.

2.3 Hardware and Software Prerequisites

There are no additional hardware requirements for the T/EC Adapter beyond those of TME 10 Software Distribution for AIX.

To have the T/EC adapter available, you must have product level 3.1.4.0 of TME 10 Software Distribution for AIX installed.

To determine the level of TME 10 Software Distribution for AIX type the following command:

```
lslpp -h netviewdm*
```

In our case, this produces the following output:

Figure 5. Output from lslpp Command

```
 Fileset          Level     Action       Status       Date         Time
```

```
  ----------------------------------------------------------------------------
Path: /usr/lib/objrepos
  netviewdm6000.base.obj
                  3.1.2.0   COMMIT       COMPLETE     02/05/97     15:11:07
          3.1.2.1.U444136   COMMIT       COMPLETE     02/05/97     15:24:37
          3.1.3.0.U444904   COMMIT       COMPLETE     02/05/97     15:32:01
          3.1.4.0.U447466   COMMIT       COMPLETE     02/05/97     15:53:33

...
```

Note
As you can see from the above figure we have updated the netviewdm6000.base object to 3.1.4.0 by applying PTF U447466.

Refer to the PTF installation memo that comes with the 3.1.4 PTF for instructions on how to install the PTF.

2.4 Installing and Configuring the T/EC Adapter

In this section we describe how to install and configure the T/EC adapter for TME 10 Software Distribution for AIX.

2.4.1 Installing the T/EC Adapter

When you install TME 10 Software Distribution for AIX then the T/EC adapter gets installed automatically. There is nothing else that you have to do.

The files involved in the configuration of the T/EC adapter are stored in the /usr/lpp/netviewdm/db directory.

2.4.2 Configuring the T/EC Adapter

To configure the TME 10 Software Distribution for AIX event adapter so that it sends alerts to the Tivoli Event Server, insert the line

```
TIVOLI ALERT: YES
```

in the TME 10 Software Distribution for AIX configuration file /usr/lpp/netviewdm/db/nvdm.cfg.

For your convenience, the following is a free sample configuration file:

```


WORKSTATION NAME:      rs600020
MESSAGE LOG LEVEL:     N
LAN AUTHORIZATION:     0
LOG FILE SIZE:         500000
TRACE FILE SIZE:       1000000
API TRACE FILE SIZE:   500000
TCP/IP PORT:           729
MAX TARGETS:           600
MAX CONNECTIONS:       50
MAX USER INTERFACES:   20
CONFIGURATION:         REMOTE_ADMIN_SERVER
MACHINE TYPE:          AIX
REPOSITORY:            /usr/lpp/netviewdm/repos
SERVICE AREA:          /usr/lpp/netviewdm/service
```

```
BACKUP AREA:           /usr/lpp/netviewdm/backup
WORK AREA:             /usr/lpp/netviewdm/work
SERVER:                rs600020
MAX SERVER TARGETS:    2048
PLAN FEATURE:          Y
TIVOLI ALERT:          YES
```

To have the connection with the event server configure the /usr/lpp/netviewdm/db/tecad_nvdm6k.conf as follows:

```
#
#  Component    : tecad_nv6k.conf
#
#  Description  : Default configuration file for the
#                 NetView Distribution Manager 6000 T/EC Adapter.
#
#  Primary Author : Salvatore Azzollini  (sazzollini@vnet.ibm.com)
#
#  Peer Reviewer  :
#
#  (C) COPYRIGHT IBM, sa/nv 1996
#  Unpublished Work
#  All Rights Reserved
#  Licensed Material - IBM, sa/nv.
#
# File format:
#
#    <keyword>=<value>
#
# where <keyword> is
#
#   ServerLocation      - name of the host where the T/EC server is running
#   ServerPort          - port number on which the T/EC server is listening
#   EventMaxSize        - maximum length of T/EC event messages
#   ConnectionMode      - connection_oriented OR connection_less
#   WellBehavedDaemon   - TRUE/FALSE
#   AdapterCdsFile      - full pathname of the CDS file
#   AdapterErrorFile    - full pathname of the ERR file
#   AdapterSpecificFile - full pathname of the OID file
#

ServerLocation=rs600024

#ServerPort=0
EventMaxSize=4096
BufEvtPath=/etc/Tivoli/tec/nvdm6k.cache
WellBehavedDaemon=TRUE
```

Insert the hostname of the machine on which the T/EC event server resides in the ServerLocation field of the /usr/lpp/netviewdm/db/tecad_nvdm6k.conf file.

As you see from the above example in our case the T/EC event server is **rs600024**.

Configure the /usr/lpp/netviewdm/db/alert_nvdm6k.conf as follows:

Figure 6. /usr/lpp/netviewdm/db/alert_nvdm6k.conf File

```
FND001 FATAL
FND002 MINOR
FND003 MINOR
FND004 FATAL
FND005 MINOR
FND006 FATAL
FND007 WARNING
FND008 FATAL
FND009 MINOR
```

In the /usr/lpp/netviewdm/db/alert_nvdm6k.conf file you can assign the severity to each alert category. The severities that the event server provides by default are as follows:

- FATAL
- CRITICAL
- MINOR
- WARNING
- HARMLESS
- UNKNOWN

The alert categories in column one of Figure 6, for example, FND001 are the internal TME 10 Software Distribution for AIX alert categories as used in the message log.

It is possible to associate, for example, the severity MINOR to the FND007 category.

As a result, TME 10 Software Distribution for AIX messages in this category that are sent to T/EC will result in a T/EC event of severity MINOR instead of WARNING.

Assign different severities according to the importance you give to certain problems relative to others.

For example, a bank could assign a severity of FATAL for the FND009 alert category. This category concerns security problems.

The tecad_nvdm6k.conf and the alert_nvdm6k.conf files can be modified at run time without stopping TME 10 Software Distribution for AIX.

On the contrary, to make active a different value of the TIVOLI ALERT tag in the nvdm.cfg file, you must stop and start the product, or issue the `nvdm rld` command. The default value of the TIVOLI ALERT tag is NO.

After you have performed the above steps at the TME 10 Software Distribution for AIX server, TME 10 Software Distribution for AIX sends alerts related to all the machines in its change control (CC) domain automatically.

2.5 Configuring the Tivoli Event Server

To customize the Tivoli event server to receive, recognize, and classify an event coming from TME 10 Software Distribution for AIX, follow the steps below:

1. Create a new rule base.
2. Extend the new rule base.
3. Compile the new rule base.
4. Activate the new rule base.
5. Extend the severity levels.

Note
The event server needs to be configured only once. Execute this procedure only for the first TME 10 Software Distribution for AIX server in your organization.

For each step, we give both command line actions and their equivalent GUI commands.

We assume that the event server is up and running. If you don't have the T/EC installed yet, you must install and configure it first, before proceeding.

There are two ways in which you can add the TME 10 Software Distribution for AIX T/EC adapter class definitions. The first is to create a new rule base, and the second is to update an existing rule base. To update a rule base, simply skip the step of creating a new rule base and work on an existing one.

You can change all the names in this sequence, except for the `NVDM_EVENT` class name and the `NVDM6K` source name, because these two labels are hard-coded in the event adapter.

Our environment uses two active rule bases. The first, DaytimeRuleBase, is used during the day. The second, NighttimeRuleBase, is used during the night. A configuration like this covers most of the real life situations where T/EC is used.

In our examples the rule bases, DaytimeRuleBase and NighttimeRulebase, already exist. They are examples that represent rule bases in a production environment.

2.5.1 Creating a New Rule Base

To create a new rule base from the command line enter:

```
wcrtrb -d <rule base directory> NVDM_Rule
```

where `<rule base directory>` is a directory on the system where T/EC is installed. If you already made some customizations on the T/EC then you 10

Be sure that this directory is accessible by the root account on the machine on which T/EC is installed. Our advice is to create the directory on a local file system. If you do not have a naming convention in place, you can use the following:

```
/usr/rulebases/NVDM_Rule
```

The command we use on our system is:

```
wcrtrb -d /usr/rulebases/NVDM_Rule NVDM_Rule
```

To create the rule base using the graphical user interface do the following:

In the TME 10 desktop double-click on the **EventServer** icon. The Event Server Rule Bases window will appear. Select **Create** from the menu bar and then **Rule Base...** from the pull-down menu.

The following window will appear:

Figure 7. The Create Rule Base Window

View figure.

Enter the name of the new rule base in the Name field and the path where it is to be stored in the Directory Path field. Then press the **Create & Close** button to create the rule base.

At any one time there is only one rule base active. This rule base must contain rules to process any configured event from any configured source. So the second step in creating a new rule base is to copy an existing one over it and then customize it. In our example, we use the DaytimeRuleBase rule base. You can find the name of your current rule base by entering the command:

```
wlscurrb
```

You will see the message:

```
The currently used rule base was loaded from the rule base named 'DaytimeRuleBase'.
```

Or, when using the graphical user interface, you can tell the current rule base because it is the one with the red arrow over it:

Figure 8. The Event Server Rule Bases Window

View figure.

To copy the current rule base to the new rule base, enter:

```
wcprb -cr DaytimeRuleBase NVDM_Rule
```

The options specify that you want to copy both class definitions (-c) and the rules (-r) themselves. We now have an exact copy of the DaytimeRuleBase. We can now add the TME 10 Software Distribution for AIX classes to this new rule base.

Note
If you don't have a rule base in your environment to which you have already made customizations like the DaytimeRuleBase in our example, you can just use the Default rule base.

2.5.2 Extending the New Rule Base

The new T/EC class definitions for TME 10 Software Distribution for AIX are written down in a file called tecad_nvdm6k.baroc. copy this file from the /usr/lpp/netviewdm/db directory of the TME 10 Software Distribution for AIX CC server to a directory on the T/EC server.

In our case the TME 10 Software Distribution for AIX server is rs600020 and the T/EC server is rs600024.

You can use, for example, the ftp command to transfer the file.

First, you should check to see if the classes you are about to add to the rule base do not conflict with existing class definitions. Do this with the wchkclass command as follows:

```
wchkclass tecad_nvdm6k.baroc NVDM_Rule
```

You should see the following message:

```
Validation of class succeeded.
```

There is no equivalent in the graphical user interface for this command.

If the validation has succeeded, you can import the class definitions in the new rule base.

If the validation has failed, you should check the class definitions in your rule bases and see where the conflicts are. Most probably, it is a naming conflict. If you made new classes yourself, you may have to appropriately change the names of the classes you made.

To import the new class definitions into the rule base, type:

```
wimprbclass tecad_nvdm6k.baroc NVDM_Rule
```

To do the same using the graphical user interface, do the following:

In the Event Server Rule Bases window, select the rule base with the right mouse button and hold down the button. In our case, the rule base is **NVDM_Rule**.

From the context menu that will appear, select **Import...**.

The following window will appear:

Figure 9. The Import into Rule Base Window

View figure.

Enter the name of the file where the class definitions are stored in the Directory Path field of the Import Class Definitions section.

In our case, this is /tmp/tecad_nvdm6k.baroc. This is the place on your event server where you have copied the tecad_nvdm6k.baroc file from the TME 10 Software Distribution for AIX server.

Select the **Insert After** radio button, and then press **Import & Close** to import the class definitions.

2.5.3 Compiling the New Rule Base

Although compiling the rule base is not always necessary, we strongly advise you to compile the rule base after you have made changes.

To compile the new rule base, enter:

```
wcomprules NVDM_Rule
```

To do the same using the graphical user interface, select the rule base in the Event Server Rule Bases window using the right mouse button, and then select **Compile...**, as shown in the figure below:

Figure 10. The Event Server Rule Bases Window

View figure.

This will pop up the T/EC_Compile_Rules window.

Enter `n` in order to not put the rule base in trace mode, and press Enter.

When compiling has finished, enter `q` and then press Enter to quit.

Note

When compiling rules, you can choose to put the rule engine in trace mode. It might be a good idea to do this if you are new to the T/EC. In order to use tracing, you have to perform two steps:

1. Put the rule engine in trace mode. You do this by changing the event server parameters. In the TME 10 desktop, put the mouse cursor on the EventServer icon. Click the right mouse button and select **Parameters...**. You will see the window shown in Figure 11. In this window, check the **Trace Rules** check box and fill in the filename for the trace file.

   In our example this is /tmp/rules/trace.

   Be aware that this file will grow indefinitely until you restart the event server.

2. Compile the rule base you want to trace with compile option -t, as shown below:

   ```
   wcomprules -t NVDM_Rule
   ```

Do not use tracing in a production environment.

It slows down the evaluation of rules and the trace file will grow until you stop the event server.

Do use tracing to get a more direct response from the event server and see what is going on.

We recommend the use of tracing whenever introducing new rules and follow the output for about an hour. Then turn it back off by unchecking the trace check box, and stopping and starting the event server. Recompile the rule base without the -t option, and load the rule base again.

Figure 11. The Event Server Parameters Window

View figure.

2.5.4 Activating the New Rule Base

You activate the rule base by loading it into the event server. To load the new rule base file, enter:

```
wloadrb NVDM_Rule
```

Using the graphical user interface, you select the rule base in the Event Server Rule Bases window using the right mouse button, and then select **Load...**, as shown in the following figure:

Figure 12. Selecting to Load the Rule Base

View figure.

The Load Rule Base window will pop up:

Figure 13. Loading the Rule Base

View figure.

Select **Load and activate the rule base**, and then **Load & Close**.

In order for the new rule base to become active, we have to stop and restart the event server.

To stop and restart the event server, enter:

```
wstopesvr
wstartesvr
```

Or, use the graphical user interface, as shown in Figure 14 and Figure 15.

To stop the event server, select the **EventServer** icon with the right mouse button and then select **Shut Down**.

Figure 14. Stopping the Event Server

View figure.

To start the event server, select the **EventServer** icon with the right mouse button, and then select **Start-up**.

Figure 15. Starting the Event Server

View figure.

2.5.5 A Word on Rule Bases

A rule base is a set of rules and class definitions. Both are specified in a language called BAROC.

The class definitions extend the set of basic events. The rules are programs that specify what should be done on reception of an event.

There can be only one rule base in action at a given time. So, one of the most common actions in customizing the T/EC is to add class definitions and rules to a rule base. The standard installation of many adapters will extend the default rule set.

Some adapters, such as the logfile adapter, do this during installation. For others you will have to do this manually. If you have been using the T/EC for some time and have already customized the standard rule base, you will be familiar with most of the commands used here.

Note

If you consult the manual that comes with TME 10 Software Distribution for AIX, it will tell you how to install the class definitions in the Default rule base. There is a problem with this. Normally, you will not be using the default rule base, and thus executing this procedure will leave you with the default rule base extended with the TME 10 Software Distribution for AIX classes. This is most likely not what you want.

Normally, you will want to integrate the TME 10 Software Distribution for AIX classes with your current rule base, or maybe with several other rule bases that you are using at different times.

We advise you to create a new rule base and add the class definitions to the new one. Here, you can always switch back to the old rule bases if something goes wrong.

Rule bases reside in several places on your system. There are directories for every rule base you create and there is a directory for the current rule base.

We recommend that you never work directly in either (and certainly not this last) directory. What you should do is create a new rule base. Then copy both class definitions and rules from an existing rule base into the new one. You now have an exact copy of the original rule base. Adding class definitions or rules to the rule base is done with the commands wimprbclass and wimprbrules. These commands will place any file that you specify in the right place in the rule base.

Note

The TME 10 Software Distribution for AIX manual describes a procedure that does not follow these rules. It tells you to create a rule base in the directory just above the directory that holds the current rule base, but this is hardly the place to store anything, as this directory is maintained by T/EC and the Tivoli framework.

You are better off choosing a directory not belonging to T/EC or the Tivoli framework. For example, create a /usr/rulebases directory and create all the rule bases there.

The manual also tells you to copy the tecad_nvdm6k.baroc file directly into the currently loaded rule base. The content of this directory is overwritten each time you load a rule base, even if you reload the same rule base. The file is not taken into account, as it is not listed in the .load_classes file. Then the manual tells you to import this file in the rule base you created. Although all this works, it is not the clean and proper way to work.

2.5.6 Extending the Severity Levels

The TME 10 Software Distribution for AIX manual describes a method for adding new severity levels. It specifies modifying the root event class EVENT.

This assumes that you are working with the Default rule base.

However, it is best to leave the Default rule base alone. Create a new rule base, copy an existing one to the new rule base, and then modify the new one.

If you do want to add your own severity levels, here is what you can do. We, however, do not advise you to add your own severity levels. *You should never modify the existing severity levels*.

Edit the root.baroc file in the TEC_CLASSES directory of the rule base to which you want to make the changes:

```
################
# ENUMERATIONS #
################

ENUMERATION STATUS
    0   OPEN
    10  RESPONSE
    20  ACK
    30  CLOSED
END




ENUMERATION SEVERITY
        10       UNKNOWN
        20       HARMLESS
        30       WARNING
        40       MINOR
        50       CRITICAL
        60       FATAL
END




ENUMERATION TASK_STATUS
    0   RUNNING
    1   SUCCESS
    2   FAILURE
    3   UNKNOWN
END
```

```
ENUMERATION TASK_MONITOR
 0  YES
 1  NO
END



ROOT : TEC_CLASS ;
END


##########################
# ALARM class definition #
##########################

### DO NOT MODIFY THIS CLASS ###

TEC_CLASS :
 EVENT
 DEFINES {
  server_handle: INTEGER,
     parse = no;
  date_reception: INT32,
     parse = no;
  event_handle:  INTEGER,
     parse = no;
  source:  STRING;

sub_source:  STRING;
  origin:  STRING;
  sub_origin:  STRING;
  hostname: STRING;
  adapter_host: STRING;
  date:   STRING;
  status:  STATUS,
     default=OPEN;
  administrator:  STRING,
     parse = no;
  acl:   LIST_OF STRING,
     default = [admin],
     parse = no;
  credibility:  INTEGER,
     default = 1 ,
     parse = no;
  severity:  SEVERITY,
     default = WARNING;
  msg:   STRING;
  msg_catalog:  STRING;
  msg_index:  INTEGER;
  duration:  INTEGER,
     parse = no;
  num_actions:  INTEGER,
     parse = no;
  repeat_count:  INTEGER;

  cause_date_reception: INT32,
     parse = no;
  cause_event_handle:  INTEGER,
     parse = no;
  };
END
```

```
TEC_CLASS :
 TASK
 DEFINES {
  server_handle: INTEGER;
  date_reception: INT32;
  event_handle: INTEGER;
  task_number: INTEGER;
  command: STRING;
  monitor: TASK_MONITOR;
  event_slot_names: LIST_OF STRING;
  event_slot_values: LIST_OF STRING;
  event_object: INT32;
  start_time: INT32;
  status: TASK_STATUS,
    default = RUNNING;
  exit_status: INTEGER;
  execution_msg: LIST_OF STRING;
  };
END


#######
# EOF #
#######
```

What you may do is add items to the SEVERITY enumeration. But, do not modify the defaults. If the event adapter fails to find the alert configuration file, or in finding the tag related to the alert category that it should issue, it assigns the CRITICAL severity by default.

2.6 Configuring the Event Consoles

Configuring an event console consists of the following steps:

- Creating an Event Console
- Creating an Event Source
- Creating an Event Group
- Creating an Event Filter
- Assigning the Event Group to an Administrator

2.6.1 Creating an Event Console

You should read this section if you do not already have an event console created, or if you want to have an event console that only serves as the console for TME 10 Software Distribution for AIX events.

In the TME 10 desktop, select **Create** from the menu bar, and then **Event Console...** from the pull-down menu as shown below:

Figure 16. Creating an Event Console

View figure.

Then select the host on which you will execute the event console. Choose the host on which the T/EC is installed. In our case, this is **rs600024**:

Figure 17. Selecting Event Console Host

View figure.

Select **Create** in the Create Event Console window, using the name of the current Tivoli administrator.

This new event console will not have any event groups or sources assigned to it. We show how to do this in the next sections.

2.6.2 Creating a New Event Source

To create a new event source, enter:

```
wcrtsrc -l "NVDM6K" NVDM6K
```

Using the graphical user interface, in the TME 10 desktop click with the right mouse button on the **EventServer** icon, and select **Sources...**.

Figure 18. Creating an Event Source

View figure.

You will now see a window where you must enter a source name and label. For convenience, make both the same. If you are going to write rules yourself, this will greatly simplify your job.

Select an appropriate icon to go with this source. This bitmap will be shown in the event console. You can still change this later if you want. You will have to change it if you have created the source from the command line, since you cannot specify an icon there. A default is chosen for you.

Figure 19. Creating an Event Source

View figure.

Select **Add Source**, and then **Save & Close**. This will add the NVDM6K event source to your event console.

2.6.3 Creating a New Event Group

To create a new event group, enter:

```
wcrteg "NVDM Group"
```

If you are using the graphical user interface, select the **EventServer** icon with the right mouse button pressed, and then select **Event Groups...** from the context menu, as shown in the following figure:

Figure 20. Selecting to Create an Event Group

View figure.

You will see the Event Group Management window pop up:

Figure 21. Creating an Event Group

View figure.

Select **Event Group** from the menu bar, and then **New...** from the pull-down menu.

Enter the Event Group Name, choose an icon for the event group and select **Create**.

If you are working with the graphical user interface, you will immediately see the Filter Editor window.

2.6.4 Creating a New Event Filter

Each event group has a filter associated with it. The filter here specifies all that you want to see, not what you don't want to see. We would like to see the events coming from the TME 10 Software Distribution for AIX T/EC adapter, and only those of event class NVDM_EVENT. Our filter will be as follows:

- `SOURCE = NVDM6K`

- `EVENT CLASS = NVDM_EVENT`

To define a new event filter, enter:

```
waddegflt -s NVDM6K -c NVDM_EVENT "NVDM Group"
```

Using the graphical user interface, do the following:

If you have just created a new event group using the graphical user interface, as described in 2.6.3 , "Creating a New Event Group", then you will automatically be presented with the Filter Editor window.

Otherwise, select the **EventServer** icon by holding down the right mouse button, and then select **Event Groups...** from the context menu.

Figure 22. Creating an Event Filter

View figure.

Fill out the Event Class field and the Source field. Leave the rest empty, or put an asterisk in them. An asterisk specifies all possible values. Then choose the buttons **Add Filter** and **Set & Close**.

Now you may close the Event Group Management window. You will be asked to save the changes. Select **Save & Exit**.

To check to see if the event filter has been successfully created enter:

```
wlseg -f "NVDM Group"
```

There is no equivalent in the graphical user interface for this command.

2.6.5 Assigning the Event Group to an Administrator

To assign the event group to an administrator, enter:

```
wassigneg @<ADMIN_NAME> "NVDM Group" senior admin user
```

Using the graphical user interface, select the event console you have previously created with the right mouse button. In our case, this is the console named Steef.

Then, select **Assign Event Groups...** from the context menu, as shown in the following figure:

Figure 23. Selecting to Assign Event Groups to an Event Console

View figure.

You will now see the Assign Event Groups dialog window:

Figure 24. Assigning Event Groups to an Event Console

View figure.

You must move the **NVDM Group** from the Unassigned list to the Assigned list.

When you select the **NVDM Group**, the admin roles will turn from gray to solid black. Select the roles you want this event console to have on the group. If you don't know the ramifications of the roles, see the T/EC manual. For now, just select super, senior, admin and user.

Select the **Set & Close** button.

This step allows the administrator to open his event console to manage the alerts related to TME 10 Software Distribution for AIX.

Now you can open the event console by double-clicking on the event console icon, in our case this is **Steef**. You should see the two main windows:

Figure 25. Event Console Sources Window

View figure.

Figure 26. Event Console Groups Window

View figure.

Click on the **NVDM Group** icon and you will see the actual events window.

It is empty for now, since there have not been any events sent from TME 10 Software Distribution for AIX yet.

Figure 27. Event Console Groups Window

View figure.

2.7 Generating a Test Event

This section shows how the events get sent to the T/EC. The test event will be generated just by stopping and starting the TME 10 Software Distribution for AIX server.

The TME 10 Software Distribution for AIX server is delivered with sample SNA/DS and STS configuration files which are located in the /usr/lpp/netviewdm/db/snadscon directory.

These samples are not configured properly and will cause a warning message in the TME 10 Software Distribution for AIX message log that is then sent to T/EC.

Note
If you have not just installed TME 10 Software Distribution for AIX but have been working with it for a while, you might not have the SNA/DS and STS samples anymore.

The file that causes the configuration warning is called CONNSNA, and is shown below:

Figure 28. SNA/DS Sample Configuration File

```
PROTOCOL:                         APPC
TYPE:                             SNA
SEND TP SYMBOLIC DESTINATION:     NVDMSIDS
RECEIVE TP SYMBOLIC DESTINATION:  NVDMSIDR
NEXT DSU:                         NETWRK1.LU0001
TRANSMISSION TIME-OUT:            60
RETRY LIMIT:                      3
SEND MU_ID TIME-OUT:              60
RECEIVE MU_ID TIME-OUT:           120
```

If you do not have this file anymore, you might want to re-create it for this example.

Before you try the complete sequence, try sending an event from the command line, using the following command:

```
wpostemsg -r MINOR -m "tst" NVDM_EVENT NVDM6K
```

You should see an event appearing in the event console. In the next figure, you can see the event console NVDM6K Group view:

Figure 29. Event Console Showing the Test Event

View figure.

Now stop and start the TME 10 Software Distribution for AIX server.

Use these commands:

```
nvdm stop
nvdm start
nvdm start
```

You have to execute the start command twice. The first time, it will complain with the following message:

```
FNDCL233E: Unable to start the system as the transmission controller
           is shutting down.
```

Just ignore this and try again. The command will now wait for the TME 10 Software Distribution for AIX server to be shut down, and then restart it.

Once started, you should see the event showing up on the console:

Figure 30. Event Console Showing the Configuration Error Event

View figure.

The details for this event are shown when clicking on the **View Message...** button.

Figure 31. Event Details

View figure.

As you can see in the Event Details window, the event notifies us about the configuration error in the CONNSNA file.

2.8 Using Automated Actions in the Event Console

Besides just receiving alerts from a source, you also normally want to be able to trigger actions following a certain event.

The T/EC allows you to perform actions on reception of an event.

There are two places where these events can be executed: within the event server and within the event console.

Automating tasks within the event server is done by means of rules. Before you start on this path you should read up on the BAROC language, which is beyond the scope of this redbook.

Automating event actions within the event console, however, is rather easy.

We give an example of how to do this by showing the steps involved in attaching a pop-up window to the reception of the configuration error event, described in 2.7 , "Generating a Test Event".

The chain of actions starts in the event list of the NVDM Group:

Figure 32. Event Console Events List of the NVDM Group

View figure.

Select the event to which you want to assign an automated task. You do this by clicking on the line, so that the event is highlighted.

Figure 33. Highlight the Event

View figure.

From the menu bar at the top of the window select **Automated Tasks** and then select **New with Selected Event...**.

Figure 34. Select New with Selected Event...

View figure.

Now you get the Summary of Automated Tasks window:

Figure 35. Summary of Automated Tasks Window

View figure.

This dialog needs to be filled out with the criteria.

Criteria are tests on the content of an event slot. Figure 31 shows all the slots in the event detail window.

Our criteria are "source slot equals NVDM6K" and "msg slot must start with FNDTC266E".

Select the **Edit Criteria...** button.

You are now presented with the Setup Automated Task Execution window. On the left, you see a list of slot names. These are all the slots defined in the event class to which the selected event belongs.

On the right, there is the relationship selection for the criteria and the list of already assigned criteria. This list is empty to start with. You can now select a slot from the list. We chose the source slot and set the relation "equals NVDM6K".

Figure 36. Entering the Slot Criteria

View figure.

There are a few hitches to doing this. After selecting the slot, you must push on the right arrow button to move the selected slot to the relationship.

The name of the slot will now appear next to the right arrow and up arrow buttons.

Verify that the value is set correctly. If not, you did something wrong.

Now, click on the check mark button to the right of the relation. The criteria are now listed in the criteria list. Set up the next choice as "msg contains FNDTC266E", following the same procedure.

After doing so, the window should look similar to the following:

Figure 37. Entering the Slot Criteria

View figure.

Select the **Set & Close** button.

We are finished entering the slot conditions, so we can continue by selecting a task to be executed.

We will show a pop-up window with a fixed text. In the Summary of Automated Tasks window select the **Add Task...** button. The Automated Task Execution Setup window appears. In this window there are four areas:

- Task library selection

- Tasks selection
- Task configuration area
- The execution node

Figure 38. Entering the Task Details

View figure.

The only task library that is present by default is called T/EC Tasks, unless you have added task libraries.

Note

We will show how to create a task library using the Task Library Language in 2.10 , "Creating a Task Library for Controlling TME 10 Software Distribution for AIX".

You can double-click on the T/EC library, and the tasks contained therein will get listed in the tasks list.

Select **Popup message on desktop**. The task configuration area will show configuration items proper to the task.

For the selected task these are:

- Administrator's Name
- File Name

You can click on the **Administrator...** and **File Name** buttons to get a list to choose from, or just type in the values.

In our example we select enter steef as the administrator and /etc/motd as the file name.

The file /etc/motd contains the text that is to be displayed in the pop-up message.

Now you must choose where to execute the task.

If you leave the default as **Execute on Event**, then the task will be executed on the node where the event originated.

In our case, rs600020, as this is the TME 10 Software Distribution for AIX server node. On this node, there are no T/EC binaries installed. So when you set up a task that calls T/EC binaries, this task will fail.

In this example, we chose the **Execute on Select Managed Nodes**. You will be asked to select a managed node when you click on the **Set & Close** button.

Figure 39. Choosing the Managed Node

View figure.

Click on the node on which T/EC is installed. In our case, this is node **rs600024**.

Then press the **Set** button.

The Summary of Automated Tasks window shows what you have just entered:

Figure 40. Summary of Automated Tasks Window

View figure.

Now save this setup by selecting the **Save As...** button. Type in the name of this Automated Task in the top edit box. There is no caption before this edit box, so it might not be clear that you must do so.

Figure 41. The Automated Tasks Execution Setup

View figure.

Now you are ready to test the task execution.

Log on to the TME 10 Software Distribution for AIX server node, then stop and start the TME 10 Software Distribution for AIX server. This will cause another event to be sent to T/EC, assuming that the file CONNSNA with the configuration error is still there.

You should see the following window on rs600024:

Figure 42. The Automated Tasks Execution Setup

View figure.

The text `Reading Redbooks is a very productive thing to do.` is displayed in the pop up message, since this is the content of our /etc/motd file.

2.9 Testing and Debugging Automated Tasks

2.8 , "Using Automated Actions in the Event Console" describes in detail how to set up automated actions in the event console. It seems very easy, and it is. But, if things go wrong sometimes, there are several things you can do to determine exactly where things go wrong. We give a short explanation of some of the actions and commands we used to get the results shown in 2.8 , "Using Automated Actions in the Event Console". We used:

- `wpostemsg` to generate events
- `wtdumprl` to dump the content of the reception log
- `wgettask` to see the exact commands that the task uses

2.9.1 Posting Arbitrary Events from the Command Line

The T/EC installs a command called wpostemsg. You can send any event to the Event Server by specifying the right arguments to this command. The syntax is:

```
wpostemsg [-S server] [-f configuration_file ] [-m message
          [-r severity] [slot=value...]  class source
```

To test the automated actions, we used:

```
wpostemsg -r MINOR -m "FNDTC266E" hostname=rs600024 \
adapter_host=rs600024 NVDM_EVENT NVDM6K
```

You can specify any valid slot name defined in the event class you are using.

Not all slots will get accepted by the rule engine. For example, if you specify `administrator=Root_rs60001-region`, then the rule engine will not process this event.

However, the wpostemsg command will not complain. You can see what is going wrong with the command wtdumprl.

2.9.2 Dumping the Rule Engines Reception Log

The command to dump the reception log is called wtdumprl (Wizard T/EC Dump Reception Log).

The syntax:

```
wtdumprl [-S server] [-f file] [-t start_time] [-e end_time]
         [-o ASC | DESC] [-m number]
```

If you just type `wtdumprl` you get the entire log scrolling over your screen.

Mostly, you are interested only in the last few lines. We found:

```
wtdumprl -oDESC -m3
```

sufficient for our purposes. It only shows the last three events in the reception log. If your event server receives many messages, then you might have to dump more messages.

Here are the commands that we executed:

```
wpostemsg -r MINOR -m "test" administrator=steef NVDM_EVENT NVDM6K
wtdumprl -oDESC -m3
```

Here is the output:

```
1 1408 0 856475290(Feb 20 16:48:10 1997)
### EVENT ###
NVDM_EVENT;
source=NVDM6K;
severity=MINOR;
msg=test;
administrator=steef;
origin=9.24.104.161;
END

### END EVENT ###
PARSING_FAILED 'Line 5: Slot administrator defined as non-parsable
'

1 1406 0 856474479(Feb 20 16:34:39 1997)
### EVENT ###
Logfile_Ftp;hostname=rs600024;date='Feb 20 16:34:39';origin=9.24.104.161;\
msg='ftp: EXPORT user steefvb, host wtscpok.itso.ibm.com, local 4976tec.script,\
 remote 4976tec.script.';pid=42224;sub_source=ftp;END

### END EVENT ###
PROCESSED ' '

1 1407 0 856474479(Feb 20 16:34:39 1997)
### EVENT ###
Logfile_Ftp;hostname=rs600024;date='Feb 20 16:34:39';origin=9.24.104.161;\
msg='ftp: EXPORT user steefvb, host wtscpok.itso.ibm.com, local 4976tec.script,\
 remote 4976tec.script.';pid=42224;sub_source=ftp;END

### END EVENT ###
PROCESSED ' '
```

If you examine the output, you can see that the engine received two events after the one we sent by means for the wpostemsg command. In the dump you notice the reason for the event not showing up in the event console:

```
PARSING_FAILED 'Line 5: Slot administrator defined as non-parsable
```

The engine is, of course, right. In the event class definition of the basic event (EVENT, from which NVDM_EVENT inherited the slots) the slot administrator is marked with the option `parse = no`. This means that the rule engine itself assigns these values.

2.9.3 Finding the Task Details

The T/EC Task library is installed on the TMR server, not on the managed node running the T/EC.

Most tasks are shell scripts. You will notice this when the automated task does not run. The first thing to do when you don't get the desired result from the automated task is to use the regular task, not the automated one.

To execute a task from the desktop, you must first locate it. For the tasks that come with T/EC, these can be found in a policy region that T/EC creates during installation.

To open this region, select the T/EC region in the Tivoli desktop and double-click on it with the left mouse button. In our case, this is the region **TEC25Region**.

This will open the region. In the region you will find a task library called "T/EC Tasks". Double-click on this task library to open it.

You will see the tasks in the task library. To execute a task, double-click on it and then select the **Display on Desktop** check box and a Task Endpoint in the Execute Task window.

The task pops up a window showing the output of the task. In this output, you might already find the reason for the error.

In the following figure, you can see the output of the Change severity of event task from the T/EC library.

Figure 43. The Task Error Output

View figure.

We specified **Execute on Selected Events**, which means that the task will be executed on the managed node where the event originated. Here, we used one of our test events. This event had an empty value (a blank space) for the slot "hostname". It is this slot that is used to determine the origin. You can see that the task searches a managed node called "' '".

If this screen does not reveal the error in a way that you can interpret it, then you must go one step further. You can find the shell script associated with this task by executing the command `wgettask <Task Name> <Library Name>`. The problem is that you have to know the real name of the task, not the description.

There are two ways to get this. The first is in the Task Selection dialog box. It contains a check box called "Show by Identifier". If you check this, then the task list will switch from displaying the task descriptions to displaying the task identifiers. It is this identifier that you must use in the wgettask command.

Figure 44. The Task Selection Dialog with the "Show by Identifier" Option Checked

View figure.

The second way is to list all the tasks in the library by using the command:

```
wlstlib -a
```

The output on our system is as follows:

```
NVDM Lib 1:
(task)  start_nvdm
(task)  stop_nvdm
(task)  restart_nvdm
(task)  add_user
Sample:
(task)  Stefan
T/EC Tasks:
(task)  Send_Email
(task)  Log_Event_To_File
(task)  Popup_Message
(task)  Wake_Up_Netscape
```

```
(task)  Forward_Event
(task)  Send_Event
(task)  Reset_Event_Log
(task)  Clear_Reception_Log
(task)  Clear_Closed_Events
(task)  Change_Severity
(task)  Dump_Event_Repository
(task)  Backup_Event_log
(task)  Event_Query
(task)  page_admin
(task)  Find_Similar_Events
(task)  Clean_Database
(task)  Close_Event
```

You can see that on our system there are more libraries available.

Once you have the name of the task, you can use the wgettask command, as follows:

```
wgettask Change_Severity "T/EC Tasks"
```

Be aware of the double quotes. The shell will interpret the argument wrong otherwise. The output is as follows:

```
Task Name               Change_Severity
User Name
Group Name
Task ACL                super:senior:admin:user
Supported Platforms
        default         <install-dir>/generic_unix/TAS/TASK_LIBRARY/bin/1215
928592/T_EC_Tasks_C_zonctxba
Task Comments
        Task Name            : T/EC Tasks/Change_Severity
        Task Created         : Tue Feb 11 18:58:46 1997
        Task Created By      : root@rs600024.itso.ral.ibm.com
        Task Files
            default          rs600011         /tmp/taskbSp6gyT
        Distribution Mode    : ALI
        Task Comments        :

        ----------------------------------------------------------
```

You can now edit the file on the TMR server and add "echo" commands to it so you get more information on the error. The file is located on the TMR server, rs600011; in our case, in the directory /usr/local/Tivoli/bin/generic_unix/TAS/TASK_LIBRARY/bin/1215928592 with file name of T_EC_Tasks_C_zonctxba. Be sure to make a copy of the original before editing this file.

2.10 Creating a Task Library for Controlling TME 10 Software Distribution for AIX

In this section we will create a TME 10 Task Library with some simple tasks that allow us to control Software Distribution for AIX.

This will enable us to trigger some automated actions, for example, taken by Tivoli Enterprise Console (T/EC) when an event from TME 10 Software Distribution for AIX arrives.

The purpose of this section is to show how to create tasks that control TME 10 Software Distribution for AIX and can then be used in T/EC automations.

The tasks presented in this section are very basic and are not intended to be a full-blown solution to control TME 10

Software Distribution for AIX. However, the task library presented here can be used as a good start to create your own TME 10 Software Distribution for AIX library.

To fully benefit from this part you should have some basic knowledge in shell programming.

For further information on tasks and task libraries, refer also to:

- *TME 10 Task Library Language Developer's Guide*, SC31-8436
- *TME 10 Framework User's Guide*, GC31-8433

2.10.1 What Is a Task Library?

In TME 10 a task library is a collection of tasks. Each task represents a program that can be executed on a TME Managed Node, however, a task has several advantages over a normal program execution:

- A task must be associated with a TME Resource role, thus having a better security control.
- A task can be run under an arbitrary user ID on the system on which it is executed, thus temporarily assigning special privileges just for that task.
- The organization into Task Libraries and tasks establishes a common way to store automated routines in a common way and place. The importance of this must not be underestimated, as in a "traditional" system, small programs and tools are stored everywhere, making it difficult to keep control.
- The Task Library Language can be used to furnish a task with a simple user interface which the administrator can use to supply input parameters to the task.

2.10.2 What Is the Task Library Language?

The TME 10 Task Library Language is a simple script language that allows you to add task libraries and the tasks contained in it to the TMR.

To be available in the TMR, the source file with the Task Library Language definitions needs to be compiled.

The Task Library Language compiler is available after you have installed the TME 10 Framework.

2.10.2.1 Creating a Task Library

A task library is created by editing a standard ASCII file with the task library definitions, as explained in the *TME 10 Task Library Language Developer's Guide*, SC31-8436.

We will show an example of such a definition file in 2.10.3 , "The Task Library for TME 10 Software Distribution for AIX".

Some of the attributes for a task are mandatory; others are not. For example, each task must have a definition for the Description, HelpMessage, Roles and Implementation fields.

2.10.2.2 Compiling a Task Library

To add the new task library to the TMR, you have to compile the source file using the `wtll` command.

If the source file with the TLL definitions is stored in the file nvdm.tll, the command to compile it and add it to the TMR is:

```
wtll -p rs600011-region nvdm.tll
```

In the above example, the name of the TMR where the task library is to be added, is rs600011-region.

If you want to update a task library that already exists, you must specify the -r flag also, so in that case, the command would be:

```
wtll -r -p rs600011-region nvdm.tll
```

Note

We experienced problems with the pre-processor option that is normally specified with the -P flag. When not specifying this flag, our TLL source file would not compile, neither when specifying -P/usr/lib/cpp as the pre-compiler.

As a workaround we specified -P/bin/cat as the pre-compiler which solved the problem, so the full command would be:

```
wtll -r -p rs600011-region -P/bin/cat nvdm.tll
```

2.10.3 The Task Library for TME 10 Software Distribution for AIX

In this section, we present the source code for the Task Library Language definition that adds tasks to control TME 10 Software Distribution for AIX.

The following single tasks are contained in the task library:

- start_nvdm
- stop_nvdm
- restart_nvdm

The implementation for the task library is shown below:

```
TaskLibrary "NVDM Lib 1" {
 Version = "1.0";
 Requires = ">2.1";
 Context = "*";
 Distribute=("_!_","ALI",1);
 HelpMessage=("_!_","No help available :)",1);
 Task start_nvdm {
   Description=("_!_","Start nvdm",1);
   HelpMessage=("_!_","No help available :)",1);
   Roles=("_!_","admin",1);
   Uid=("_!_","root",1);
   Implementation ("aix4-r1", "aix3-r2")
     .#!/bin/ksh
     ./usr/lpp/netviewdm/bin/nvdm start
     .exit 0
    ;
 };
 Task stop_nvdm {
   Description=("_!_","Stop nvdm",1);
   HelpMessage=("_!_","No help available :)",1);
   Roles=("_!_","admin",1);
   Uid=("_!_","root",1);
   Implementation ("aix4-r1", "aix3-r2")
     .#!/bin/ksh
     ./usr/lpp/netviewdm/bin/nvdm stop
     .exit 0
    ;
 };
 Task restart_nvdm {
   Description=("_!_","Restart nvdm",1);
   HelpMessage=("_!_","No help available :)",1);
   Roles=("_!_","admin",1);
   Uid=("_!_","root",1);
   Implementation ("aix4-r1", "aix3-r2")
     .#!/bin/ksh
      ./usr/lpp/netviewdm/bin/nvdm stop -x
      ./usr/lpp/netviewdm/bin/nvdm start
      ./usr/lpp/netviewdm/bin/nvdm start
      .exit 0
     ;
 };
};
```

You should notice that the user ID under which the tasks are run is set to root using the Uid keyword.

However, in TME 10 Version 3.1 there is a default policy that forbids tasks to be created that run under this user ID.

Therefore, when you try to compile the above TLL definitions using wtll you will get the following error message:

```
attribute 'user ID' not permitted to take on value 'root'
in region 'rs600011-region' by validation method 'tl_val_set_uid'.
```

However, the `nvdm` command needs to be run under root to start or stop the product, so we need to find a way to do this. There are certain ways to achieve this and we will present a way that changes the validation policy here.

The validation policy is called tl_val_set_uid and we can use the following command to retrieve the implementation of this policy:

```
wgetpolm -v TaskLibrary BasicTaskLibrary tl_val_set_uid >pol
```

This will retrieve the shell script that implements the policy method and store it in the pol file.

The content of this file will look as follows:

```
#!/bin/sh
###############################################################################
#
# $Id: tl_val_set_uid.sh,v 1.5 1996/09/04 13:21:48 mca Exp $
#
# This script implements the "validate_set_uid" policy
# method for the Task Library.  The script is provided with
# the label of the Admin value the user chose for the user ID of the new
# task.  Modify the code below
# if you want something different returned.
#
# To debug your changes you could add the lines:
#
#  set -xv
#  exec > `wtemp`/debug.output 2>&1
#
# These lines will allow you to see any errors that occur by looking
# in the `wtemp`/debug.output file.
#
###############################################################################

administrator=$1
user_id=$2
shift 2
```

```
## Example of how to validate a uid ##
#
# if [ $administrator != root ]; then
#  if [ $user_id = "root" ]; then
#   echo FALSE
#   exit 0
#  fi
# fi

#
# For the 2.5 release this policy is changed so that no one can create
# tasks that run as root. It was considered a security hole.
#
if [ "$user_id" = "root" ]; then
 echo FALSE
 exit 0
fi

if [ "$user_id" = "Administrator" ]; then
 echo FALSE
 exit 0
fi


if [ "$user_id" = '$root_user' ]; then
 echo FALSE
 exit 0
fi


echo TRUE
exit 0
```

To allow tasks running under root to be added we modify the file and eliminate the checks for the root user.

The modified file looks as follows:

```
#!/bin/sh
###############################################################################
#
# $Id: tl_val_set_uid.sh,v 1.5 1996/09/04 13:21:48 mca Exp $
#
# This script implements the "validate_set_uid" policy
# method for the Task Library.  The script is provided with
# the label of the Admin value the user chose for the user id of the new
# task.  Modify the code below
# if you want something different returned.
#
# To debug your changes you could add the lines:
#
#  set -xv
#  exec > `wtemp`/debug.output 2>&1
#
# These lines will allow you to see any errors that occur by looking
# in the `wtemp`/debug.output file.
#
###############################################################################

administrator=$1
user_id=$2
shift 2
```

```
## Example of how to validate a uid ##
#
# if [ $administrator != root ]; then
#  if [ $user_id = "root" ]; then
#   echo FALSE
#   exit 0
#  fi
# fi

#
# For the 2.5 release this policy is changed so that no one can create
# tasks that run as root. It was considered a security hole.
#
#if [ "$user_id" = "root" ]; then
# echo FALSE
# exit 0
#fi
#
#if [ "$user_id" = "Administrator" ]; then
# echo FALSE
# exit 0
#fi
#
#
#if [ "$user_id" = '$root_user' ]; then
# echo FALSE
# exit 0
#fi


echo TRUE
exit 0
```

If the modified policy method is stored in a file called polnew, the following command replaces the policy implementation:

```
wputpolm -v TaskLibrary BasicTaskLibrary tl_val_set_uid <polnew
```

Now the task library can be compiled and added using the command:

```
wtll -r -P/bin/cat -p rs600011-region nvdm.tll
```

After the command has completed, there should be new icons for the task library and the tasks in the rs600011-region.

Warning
For ease of use and to show how to replace policy method implementations, we have eliminated the policy rule that does not permit tasks running under root. Before doing this in a production environment, you must make sure you understand the security impact that such a change might have!

2.10.4 Alternative Ways of Creating Task Libraries

Sometimes it might be a better approach to create a task library using the TME 10 desktop, and then export the task library definition for further editing. This can be quicker than starting to write a task library from scratch.

In the following we present an example of this approach.

In our Policy Region, we select **Create** from the menu bar, and then **Task Library** from the pull-down menu.

The following window will appear:

Figure 45. Create Task Library Window

View figure.

Enter a Name/Icon Label for the new task library and then press the **Create & Close** button. The new task library should have been added to your Policy Region, as shown in the following figure:

Figure 46. Policy Region Window

View figure.

Double-click on the task library icon (in our example this is **Sample**) to open it:

Figure 47. Task Library Window

View figure.

Select **Create** from the menu bar, and then select **Task...** from the pull-down menu. The Create Task window will appear:

Figure 48. Create Task Window

View figure.

Enter a name for the new task in the Task Name field and select a role from the Roles Required to Execute Task list box. Then click on **IBM RS/6000 / AIX 4** in the Platforms Supported list box. The following window will appear:

Figure 49. IBM RS/6000 / AIX Executable Window

View figure.

Enter sample values for the On Host and Path to File text fields, as shown in the above figure, and then select the **Set & Close** button. Back in the Create Task window, select the **Create & Close** button to create the new task.

You should see an icon for the new task, as shown in the following figure.

Figure 50. Task Library Window

View figure.

To export the Task Library Language definition to a file, type the following command in the directory where you want the TLL file to be created:

```
wtll -F sample.tar -l Sample
```

In the above example, we assume that the name of our task library is Sample. The command will create a tar archive file, called sample.tar.

To extract the files in that archive, we type:

```
tar -xvf sample.tar
```

In our example this will create the following files:

```
0.aix4-r1
tll
```

The file tll contains the source code for the TLL definition and is shown below:

```
#ifndef TASK_BINDIR
#define TASK_BINDIR "./"
#endif
TaskLibrary "Sample" {
        Context = ("_!_","*",1);
        Distribute = ("_!_","ALI",1);
        HelpMessage = ("_!_","Conventional Task Library",1);
        Requires = ("_!_",">2.5",1);
        Version = ("_!_","1.0",1);


        Task Stefan {
                Description = ("_!_","Upgraded Task",1);
                HelpMessage = ("_!_","No Help Available",1);
                Uid = ("_!_","*",1);
                Comments = ("_!_","Task Name            : Sample/Stefan
Task Created         : Fri Feb 14 09:19:20 1997
Task Created By      : root@rs600020.itso.ral.ibm.com
Task Files
    aix4-r1          rs600011         /bin/ls
Distribution Mode    : ALI
Task Comments        :

----------------------------------------------------------
",1);
                Roles = ("_!_","admin",1);
                Implementation ("aix4-r1") Binary TASK_BINDIR "0.aix4-r1";
        };

}
```

The file 0.aix4-r1 contains the command file that is associated with our command. Since we specified /bin/ls in our example the 0.aix4-r1 contains a copy of the /bin/ls executable in our case.

The source file tll can now be modified as needed and then be re-compiled using the `wtll` command.

2.11 Using T/EC Automation with TME 10 Software Distribution for AIX

So far, we have shown how to send T/EC events from TME 10 Software Distribution for AIX and how to create a sample automated action. Also, we have shown how to create a sample task library with tasks to control TME 10 Software Distribution for AIX

In this section we will show how to use these tools to automate change management actions in TME 10 Software Distribution for AIX.

The following steps can be used to create a T/EC automation for TME 10 Software Distribution for AIX:

- Manually create the condition in TME 10 Software Distribution for AIX that causes the alert.
- Examine the event received by Tivoli/Enterprise Console.
- Implement an automated action script.
- Manually test the action script.
- Set up an automated action.
- Test the automated action.

We will perform all these steps for the following example:

If a disk full error occurs during a software distribution we consider this to be a fatal error and stop the TME 10 Software Distribution for AIX server.

For this purpose, we will customize the appropriate T/EC event and use a task to stop TME 10 Software Distribution for AIX that we created in 2.10 , "Creating a Task Library for Controlling TME 10 Software Distribution for AIX".

We will first create the exception on which we want to react. In our case this, is a disk full error. For this purpose, we will create a file system /small that is too small to hold a file that we distribute.

We use the following AIX command to create the file system:

```
crfs -v jfs -g rootvg -a size=1 -m /small -A yes \
-p rw -t no
```

This will create a file system with the size of 8 MB.

After creating the file system, we mount it:

```
mount /small
```

The next step is to create a change file with TME 10 Software Distribution for AIX that is too big for our new file system.

To do so, we start TME 10 Software Distribution for AIX using the command:

```
nvdmgi &
```

After logon, the Catalog window will appear:

Figure 51. TME 10 Software Distribution for AIX Catalog Window

View figure.

Select **Catalog** from the menu bar, and then **Change File** from the pull-down menu.

From the submenu select **Create New**, and then **Refresh...**.

The following window will appear:

Figure 52. TME 10 Software Distribution for AIX Change File Type Window

View figure.

Select **Generic** and then the **OK** button.

The Change File window will appear:

Figure 53. TME 10 Software Distribution for AIX Change File Window

View figure.

We do the following:

- Enter `ITSO.TECTEST` as the Component Name.
- Enter `1` as the Level.
- Click on the **Files...** button.

The following window will appear:

Figure 54. TME 10 Software Distribution for AIX Files and Directories in Change File Window

View figure.

Select the **Find...** button and include a file in the change file that is bigger than our newly created file system.

In the example, we have selected a file that is about 8 MB in size.

Select the file and press the **Options...** button.

The File Options window will appear:

Figure 55. TME 10 Software Distribution for AIX File Options Window

View figure.

We change the Target entry to `/small/demo` to distribute the file to the target file system we have created before. We expect that the file is too big for this file system.

We press the **OK** button to get back to the previous window. There, we press **OK** again, to get back to the Change File window.

In the Change File window, we press **OK** once more, to build the new change file. This can take quite a while since the file to be included is large. During the build, the following message will pop up:

Figure 56. TME 10 Software Distribution for AIX Build Progress Window

View figure.

After the build has finished, you should see the new change file in the catalog:

Figure 57. TME 10 Software Distribution for AIX Catalog Window

View figure.

To install the file, select it and then select **Selected** from the menu bar. From the pull-down menu, select **Install...**.

The Install Change Files window will appear:

Figure 58. TME 10 Software Distribution for AIX Install Change Files Window

View figure.

Since we have created the /small file system on the TME 10 Software Distribution for AIX server node (rs600020), we will simply distribute the file to the server itself.

To do so, we select **rs600020** as the Target and then press the **Install** button.

After a while, we will see a new event in our T/EC console:

Figure 59. T/EC Console Window

View figure.

To see the message details, we select the new event and then click on **View Message...**.

This will display the event slots:

Figure 60. T/EC Event Groups Message Viewer Window

View figure.

We will now add an automated action to be triggered when this event arrives.

We select **Close** to get back to the event console. Then we select **Automated Tasks** from the menu bar and **New with Selected Event...** from the pull-down menu.

Figure 61. T/EC Summary of Automated Tasks Window

View figure.

The first thing we have to do is specify the criteria, so we select **Edit Criteria**.

Figure 62. T/EC Setup Automatic Task Execution Window

View figure.

We double-click on **source** and then select the check mark symbol to add the event source, NVDM6K.

Figure 63. T/EC Setup Automatic Task Execution Window

View figure.

Then we double-click on **msg** and change the selection from `equals` to `contains`. We modify the value box to only contain the text `FNDC008E`.

After this, we click the check mark again, and then select **Set & Close** to set the criteria.

To set the task to be executed, we click the **Add Task...** button.

This will pop up the following window:

Figure 64. T/EC Setup Automatic Task Execution Window

View figure.

Note
We experienced problems with the task library that we created in 2.10 , "Creating a Task Library for Controlling TME 10 Software Distribution for AIX" not showing up under Libraries in the above figure. After changing the Context field in our TLL definition from * to TEC, the library showed up.

The modified TLL definition is shown below:

```
TaskLibrary "NVDM Lib 1" {
 Version = "1.0";
 Requires = ">2.1";

 Context = ("","TEC",1);

 Distribute= ("","ALI",1);
 HelpMessage=("_!_","No help available :)",1);
 ArgLayout Name {
   Text;
   ButtonLabel=("_!_","OK",1);
 };
 Task start_nvdm {
   Description=("_!_","Start nvdm",1);
   HelpMessage=("_!_","No help available :)",1);
   Roles=("_!_","admin",1);
   Uid=("_!_","root",1);
   Implementation ("aix4-r1", "aix3-r2")
     .#!/bin/ksh
     ./usr/lpp/netviewdm/bin/nvdm start
     .exit 0
    ;
 };
 Task stop_nvdm {
   Description=("_!_","Stop nvdm",1);
   HelpMessage=("_!_","No help available :)",1);
   Roles=("_!_","admin",1);
   Uid=("_!_","root",1);
   Implementation ("aix4-r1", "aix3-r2")
     .#!/bin/ksh
     ./usr/lpp/netviewdm/bin/nvdm stop
     .exit 0
    ;
 };
 Task restart_nvdm {
   Description=("_!_","Restart nvdm",1);
   HelpMessage=("_!_","No help available :)",1);
   Roles=("_!_","admin",1);
   Uid=("_!_","root",1);
   Implementation ("aix4-r1", "aix3-r2")
     .#!/bin/ksh
      ./usr/lpp/netviewdm/bin/nvdm stop -x
      ./usr/lpp/netviewdm/bin/nvdm start
      ./usr/lpp/netviewdm/bin/nvdm start
      .exit 0
     ;
 };
 Task add_user {
   Description=("_!_","Add nvdm user",1);
   HelpMessage=("_!_","No help available :)",1);
   Roles=("_!_","admin",1);
   Uid=("_!_","root",1);
   Argument ("_!_","User Name:",1) {
     Layout="Name";
   };
   Argument ("_!_","Authorization Profile:",1) {
     Layout="Name";
   };
   Implementation ("aix4-r1", "aix3-r2")
    .#!/bin/ksh
     ./usr/lpp/netviewdm/bin/nvdm addusr $1 $2 -a
     .exit 0
 };
};
```

After modifying the Task Library appropriately and then compiling it using `wtll` it will show up in the Libraries section.

Note

You will also notice that in the above source code we have added another task called "add_user" to the task library already presented in 2.10 , "Creating a Task Library for Controlling TME 10 Software Distribution for AIX".

This task will add a TME 10 Software Distribution for AIX user and is just included as an example for a task that requires user input, here the User Name and the Authorization Profile.

When executed, this task will present two text boxes in which you can enter the parameters which will then be passed to command execution as parameters $1 and $2.

We double-click on **NVDM Lib 1** and then on **Stop nvdm**.

After doing so, we hit the **Add & Close** button.

Back in the Summary of Automated Tasks window, we select **Save as...**.

Figure 65. Save Automated Task Execution Window

View figure.

We enter a name for the new automatic task and then hit the **Save & Close** button.

Back in the Summary of Automated Tasks window, we select **Close**.

The automated task is now active.

To test it, we distribute the change file ITSO.TECTEST.REF.1 again to generate an error.

After a while, we get another event in the event console and the TME 10 Software Distribution for AIX will be stopped.

In the message log /usr/lpp/netviewdm/fndlog on rs600020 we will find the following messages:

```
FNDDB057E: A disk full error occurred writing to the file /small/demo.
The operating system returned errno 28.
FNDCC008E: @root rs600020 57 0 N/A rs600020 : A disk full error occurred
while transferring the contents of /usr/lpp/netviewdm/work/chngfile to
/small/demo, return code = 2110.
FNDDB015E: The operating system returned error 9 on file INVALID
in routine co_fsync.
FNDDB015E: The operating system returned error 9 on file INVALID
in routine co_close.
FNDSH011E: @root rs600020 57 0 N/A rs600020 : Install request failed
on ITSO.TECTEST.REF.1.  Sense data is 0812:0011.
FNDRQ080I: @root rs600020 57 0 N/A rs600020 : Received Install report.
Sense data is 0812:0011.
FNDRQ148I: @root rs600020 57 0 N/A rs600020 : Install request completed.
Error severity is 12.
FNDCL786I: Product stopping.
```

The last message (FNDCL786I) shows that the product is stopping, so our automated action works.

2.12 Alternatives to Using the TME 10 Software Distribution for AIX T/EC Adapter

In this chapter, we have used the T/EC adapter that is integrated in Version 3.1.4 of TME 10 Software Distribution for AIX, so far.

As an alternative, you can also use, for example, the standard T/EC logfile adapter.

Both ways have their advantages and disadvantages. While the TME 10 Software Distribution for AIX T/EC adapter is closely integrated with TME 10 Software Distribution for AIX the work of filtering messages needs to be done on the T/EC server.

For example, we need to edit the criteria to search the event messages for certain strings we expect.

With the logfile adapter, however, you can do certain pre-processing already on the node where the adapter resides, thus taking load away from the T/EC server.

In contrast, you need to customize the logfile adapter to be used with TME 10 Software Distribution for AIX while the TME 10 Software Distribution for AIX adapter is ready to use after installing.

2.13 Extending and Customizing TME 10 Software Distribution for AIX Events

After installing and configuring the TME 10 Software Distribution for AIX T/EC adapter it will send events to T/EC for all the log messages that are configured by default.

However, sometimes you might want to send additional events for messages in the log file of TME 10 Software Distribution for AIX that are not contained in this default setup.

In this section, we will show an example of how to do this: We will add an event that will be sent to T/EC whenever TME 10 Software Distribution for AIX is started or stopped.

2.13.1 How Are Events Configured?

You configure which log messages in TME 10 Software Distribution for AIX should generate a T/EC event (and also a NetView trap if the TME 10 Software Distribution for AIX NetView adapter is used) by modifying the UNIX message catalog that TME 10 Software Distribution for AIX uses.

The name of the message catalog is fndcomsg.cat and it is stored in the directory /usr/lib/nls/msg/$LANG where the $LANG environment variable is set to the current language configured on the AIX system. In our example, this is en_US.

You can display the setting of your language environment by typing:

```
echo $LANG
```

TME 10 Software Distribution for AIX provides two scripts, fndlsal and fndupdal which can be used to update the message catalog and, therefore, the events, however, we do not recommend using them. Instead, we find it easier to isolate errors when manually reverse-compiling the existing message catalog, making the changes, and then compiling it again, as shown in the next section.

2.13.2 Customizing the Message Catalog

The first thing in customizing the message catalog is reverse-compiling the existing one.

To do so, we type the following command:

```
dspcat -g /usr/lib/nls/msg/$LANG/fndcomsg.cat >fndcomsg.msg
```

Note
If you want to know more about the dspcat command, type `man dspcat`.

This will create a source code version of the message catalog in fndcomsg.msg that can now be modified.

We recommend that you make a backup copy of fndcomsg.msg before modifying it.

We want to add events if the TME 10 Software Distribution for AIX product is stopped or started. Here, we want to assign an alert level of FND009 which creates a T/EC event of severity MINOR. These are the default settings specified in the alert_nvdm6k.conf file shown in Figure 6.

We edit the fndcomsg.msg file, for example, using vi and change the messages 40 and 41, as shown below:

```
40      "-a09 -n FNDCL785I: The product started successfully."
```

```
41      "-a09 -n FNDCL786I: Product stopping."
```

After making the changes you can save the file.

2.13.3 Compiling the Message Catalog

To activate the changes we have to compile the message catalog source.

To do so, we use the gencat command.

Warning

In our environment, rs600020 is the TME 10 Software Distribution for AIX server, but also a TME Managed Node. However, the Tivoli code also contains a gencat command as opposed to the gencat command that is delivered with AIX.

If the Tivoli directory /usr/local/Tivoli/bin/aix4-r1/ADE which contains the gencat command appears in your UNIX path before /bin, then this command will be used instead of the original AIX command.

To avoid this you should invoke the AIX command with its full path name /bin/gencat.

To compile the message catalog, we type:

```
/bin/gencat /usr/lib/nls/msg/$LANG/fndcomsg.cat fndcomsg.msg
```

This will replace the message catalog for TME 10 Software Distribution for AIX with our modified version.

2.13.4 Activating the Change in TME 10 Software Distribution for AIX

In our environment, we experienced that despite replacing the message catalog, we did not get new events in T/EC when TME 10 Software Distribution for AIX was started or stopped.

We had to reboot rs600020 in order for TME 10 Software Distribution for AIX to use the new message catalog.

Note

You should be careful when modifying the message catalog. The file fndcomsg.cat is stored in several places, such as /usr/lpp/netviewdm/bin and /usr/lib/nls/msg/en_US.

To find all the versions that are installed, you can type:

```
find / -name fndcomsg.cat -print
```

To simplify debugging, we erased all versions but one which makes it a lot easier to find out which copy is actually used.

When TME 10 Software Distribution for AIX cannot find a message catalog at all, it will not start. At this point, check the setting of $LANG and then copy fndcomsg.cat to /usr/lib/nls/msg/$LANG. This way you can be sure about which version is used.

We also recommend that you change not only the alert flag, but also the message itself. This way you can tell if the message catalog has really been updated by just looking in the fndlog file.

2.13.5 Testing the New Events

Since we have added events to be sent whenever the TME 10 Software Distribution for AIX product is started or stopped, we can create the test events simply by typing:

```
nvdm start
nvdm stop
```

After a few moments, we should see two new events showing in our event console:

Figure 66. T/EC Event Console

View figure.

To see the message details highlight one of the new messages and press **View Message...**.

This will pop up the Message Viewer window:

Figure 67. T/EC Message Viewer Window

View figure.

[Top of Page | Previous Page | Next Page | Table of Contents | Index]

The TME 10 Deployment Cookbook

Chapter 3. Installing and Configuring TME 10 Remote Control

In this chapter, we show how to install and configure TME 10 Remote Control 2.0. We use TME Remote Control in combination with TME 10 Software Distribution 3.1 in this chapter, and in Chapter 4. "Using the AutoPack Feature in TME 10 Software Distribution 3.1", and Chapter 5. "Distributing Microsoft Office for Windows 95 Using AutoPack".

3.1 Overview and Objective

In large corporate IT organizations, desktop and distributed application support functions are being centralized to contain costs, pool expertise, and effectively manage distributed applications.

At the same time, managers of support organizations are realizing that the ability to take control of remote systems for diagnosis and troubleshooting is a requirement.

TME 10 Remote Control can, for example, be used to check software distribution results on remote targets. An example of this would be if you were remotely installing a product on a group of targets and that product made changes to one or more of the system files, you need to be sure that the installation program executed correctly before the remote targets were rebooted.

Although remote software distribution is always tested and piloted before mass distribution starts, experience has told us that test and live results are often different. TME 10 Remote Control provides the functionality to remotely check and confirm installation results.

TME 10 Remote Control Release 2 provides the following important functions:

Complete real-time remote control

- Connection via mouse and keyboard drivers
- Menu for transmitting select keystrokes
- Quick connection to the right target
- Searchable list of remote clients
- Optimized for distributed applications
- Support for Windows 3.x/95 + NT 3.51 targets
- Allows for multiple simultaneous sessions by single authorized administrator

Policy-based authorization

- Targets can be grouped into policy regions
- Administrator access authorized by policy region
- Roles of control, or reboot can be assigned

- User prompted to relinquish control
- Separate Controller and Target software components
- User can change session status, suspend a session, or terminate a session
- Connection log is maintained

The TME 10 Remote Control Release 2 server component runs on AIX, Microsoft Windows NT, Sun Solaris and SunOS, and HP-UX.

Supported administrator controlling workstations include: Microsoft Windows NT running the TME 10 desktop.

Supported targets include: Microsoft Windows NT 3.51, Windows 95 and Windows 3.x. TCP/IP is the Server/Target protocol.

The objective of this chapter is to successfully install the TME 10 Remote Control server component on rs600011 and foxtrot. The controller component will be installed on tango and the target component will be installed on oscar. Both, tango and foxtrot will have controller functionality to take control over oscar.

We will then show how to use Remote Control and how its policies can be manipulated to suit your environment.

The two TMRs will then be connected. Software will be distributed from TMR server foxtrot to oscar in the rs600011 region and we will show how to use remote control within a software distribution environment.

In our environment:

- rs600011 is the TMR Server running AIX 4.1.4.
- tango is the Windows NT Server 4.0 TME 10 Managed Node.
- oscar is the Windows 95 TME 10 PC Managed Node.
- foxtrot is the TMR Server running Windows NT Server 4.0.
- romeo is the Windows NT Server 4.0 TME 10 Managed Node.
- juliet is the Windows NT workstation 4.0 TME 10 PC Managed Node.

Note

At the time this redbook is written OS/2 is not supported by TME 10 Remote Control Release 2. However, you can still use Distributed Access Control Facility (DCAF) 1.31 to have the functionality available on OS/2.

This will also give you support for other communication protocol besides TCP/IP, for example, NetBIOS.

The main difference between DCAF and TME 10 Remote Control 2.0 is that TME 10 Remote Control is integrated into TME 10 while providing the same functionality.

Check with your Tivoli/IBM representative for availability information on TME 10 Remote Control for OS/2.

Figure 68. Remote Control Environment

View figure.

3.2 Hardware and Software Prerequisites

In this section, we give you an overview of the requirements needed to run TME 10 Remote Control.

3.2.1 Software Requirements

You must have at least the following software installed and running:

- Tivoli Management Platform 3.0 and Service Pack 01
- TME 10 Desktop for Windows
- The TME PC Agent 4.004, or later

  This must be installed and running on all PCs that are to be monitored. If the agent is not running, the target software will not install.
- TCP/IP

3.2.2 Hardware Requirements

You must have 2 MB of available disk space on the TME Server and each Windows station to install the Remote Control Controller Software.

Target machines must have 1.2 MB of available disk space. The Remote Control controller requires a minimum of 4 MB RAM.

In our scenario, we used the following:

Software:

- AIX 4.1.4 on the TMR Server rs600011
- Windows NT Server 4.0 with Service Pack 2 on the Controller tango
- Windows 95 on the target oscar
- Windows NT Server 4.0 with Service Pack 2 on the TMR Server foxtrot
- Windows NT Server 4.0 with Service Pack 2 on romeo
- Windows NT Workstation on juliet
- Tivoli Management Platform 3.1 Revision C
- TME 10 Desktop for Windows on the controller tango
- TME PC Agent 4.005 on the target oscar
- TCP/IP protocol on all systems

Hardware:

- RS/6000 Model 58H with 256 MB RAM for the TMR Server
- IBM ThinkPad Model 760LD (Type 9547) with 40 MB RAM for the controller tango
- IBM ThinkPad Model 755C (Type 9545 L9E) with 36 MB RAM for the target oscar
- PS/2 95 (9595-OQT) with 80 MB RAM, 1 GB disk space for the TMR Server foxtrot
- PS/2 95 (9595-OQT) with 64 MB RAM, 1 GB disk space for romeo
- PS/2 77 (9577-DNC) with 32 MB RAM, 540 MB disk space for juliet
- Token-ring 4 MBps

3.3 Installing TME 10 Remote Control 2.0

The following is a brief explanation of the available components that can be installed with Remote Control 2.0:

TME 10 Remote Control Server
This installs binaries on the TMR Server or managed node in the local Tivoli Management Region (TMR). This should be installed on the TMR server before it is installed on any other node.

TME 10 Remote Control Target (PcManaged Nodes)
This installs binaries on the PcManaged nodes that are to be controlled or monitored with Remote Control. A PcManaged node can be a Windows 3.x, Windows NT 3.51, or Windows 95 machine.

TME 10 Remote Control Target (Managed Nodes)
This installs binaries on the NT managed nodes that are to be controlled with Remote Control.

TME 10 Remote Control Controller (PcManaged Nodes)
This installs binaries on the PCManaged nodes from which Remote Control can be launched.

TME 10 Remote Control Controller (Managed Nodes)
This installs binaries on the managed nodes from which Remote Control can be started.

Note
The TME 10 Remote Control Server code must be installed on the TMR server first. We have experienced some inconsistencies when this is not done first.

Remote Control contains three main elements:

Server component
The server component adds the `RemoteControl` managed resource and resource roles.

Controller component
A controller is a Managed/PcManaged node that can monitor or take over and operate the keyboard and mouse of another workstation. A controller must be a Windows NT managed node or a Windows NT PcManaged node.

Target component
A target is a Windows 3.x, Windows NT 3.51 or Windows 95 PcManaged node that the controller monitors or acts on.

The PC Internet Protocol (IP) agent must also be installed on Target PC Managed node machines. The PC IP agent allows the TME Server to receive information from or pass information to the PC.

Note

Any product that provides remote access to the display, keyboard, and files of another system can be considered a security risk.

However, the TME 10 framework allows Remote Control to be configured to match any model of trust that an organization may have. You can permit all administrators to perform any function that Remote Control provides, or a senior administrator can edit the default policy to restrict the functions that junior administrators can perform.

Also, through default policy, you can determine whether administrators can control or reboot a system without prompting the end user (which is useful if they have gone home), or only if the user allows it.

3.3.1 Installing the Server and Controller Components

We install TME 10 Remote Control from the NT Server Managed node, tango in our environment.

From the Windows NT managed node tango, start the TME 10 desktop for Windows and log on.

The TME 10 desktop for Windows will appear:

Figure 69. TME 10 Desktop for Windows

View figure.

From the menu bar select **Desktop** and then **Install** from the pull-down menu. Then select **Install Product** from the submenu.

The Install Product window will now be displayed.

Figure 70. Install Product Window

View figure.

Click on **Select Media** to set the source directory.

The File Browser window is now displayed.

Figure 71. File Browser Window

View figure.

Enter the path to the location of the TME 10 Remote Control code in the Path Name field and Click on **Set Media and Close**.

The Install Product window is displayed.

Figure 72. Move TMR Server rs600011 to Clients to Install on Window

View figure.

Highlight **TME 10 Remote Control Server**. A check for installation history will now be performed. As this is the first time this installation is being done, all nodes (Managed and PcManaged) will be displayed in the Clients to Install On window.

Move all clients except for the TMR Server (rs600011) to the Available Clients window and click on **Install**.

The following window will appear:

Figure 73. Pre-Install Check Window

View figure.

Click on **Continue Installation** to start the actual installation.

Click on **Close**once the installation has completed.

Note
This installation process for the TME 10 Remote Control server component must also be performed on TMR Server foxtrot. The controller component is included in the server component. As foxtrot is a windows NT platform with the TME 10 desktop installed there is no need to install the controller component as, well.

We can now install the TME 10 Remote Control Controller code on tango, as tango will also be the controller in our environment.

Figure 74. Controller Code Install on tango

View figure.

Highlight **TME 10 Remote Control Controller (Managed Nodes)** from the Select Product to Install list. As before, the installation history will be checked and all managed nodes will be listed in the Clients to Install On section.

Move all other managed nodes, except tango, to the Available Clients section and click on **Install**.

Note

You can also click on **Install & Close** but it advisable to check the installation result.

Click on **Continue Install**. Once the installation is complete, click on **Close**.

3.3.2 Installing the Target Software on a PcManaged Node

We will install the target software on the PcManaged node oscar.

From the Install Product window, click on **TME 10 Remote Control Target (PcManaged Nodes)**. You will see that only PcManaged nodes in your environment are available in the Clients to Install On window:

Figure 75. PcManaged Node Install

View figure.

Highlight **oscar** and click on **Install**.

Figure 76. Install PcManaged Node Agent on oscar

View figure.

Click on **Continue Install**. Once the installation has completed, click on **Close** and then **Close** again to return to the TME 10 desktop.

Note

Any machine on which you install the target portion must be rebooted because the installation program creates new mouse, keyboard and display device drivers that have to be loaded into system memory.

3.3.2.1 Install Commands from the Command Line Interface (CLI)

The following are example commands:

```
winstall -c /cdrom/tivoli -s node -i file
```

where:

-c /cdrom/tivoli
Specifies the path to product images

-s node
Specifies the name of the Managed or PcManaged node on which to install the component

-i file
Specifies the index file from which the Remote Control component is installed

The file argument can be any of the following:

RC_ALI
Installs the TME server component

RC_CTL_M
Installs the controller component for managed nodes

RC_CTL_P
Installs the controller component for PcManaged nodes

RC_TGT_M
Installs the target component for Managed nodes

RC_TGT_P
Installs the target component for PcManaged nodes

3.4 Setting Up Remote Control for Use

After you have installed the Remote Control controller, you must perform several tasks to enable administrators to use the product. These tasks are typically performed once per policy region or administrator. The tasks that need to be performed are:

- Assigning the Remote Control resource
- Setting resource roles
- Creating a Remote Control tool

3.4.1 Assigning the Remote Control Resource

Each policy region maintains a list of managed resource types that are valid or defined for that specific policy region. Resources correspond to the systems, devices, services and facilities in the distributed system. A Remote Control resource must be added in order for you to use the Remote Control product.

Start the TME 10 desktop. The following window will appear:

Figure 77. Assigning the Resource

View figure.

Open **Managed Resources** by clicking once, with the right mouse button, on the policy region (rs600011-region in our scenario) and selecting **Managed Resources...**.

The Set Managed Resources window is displayed as follows:

Figure 78. Set Managed Resources Window

View figure.

You will now see that RemoteControl has been added to the Available Resources window. Double-click on it to move it to the Current Resource window.

Figure 79. Add to Current Resource Window

View figure.

Click on **Set & Close** to add the new managed resource to the policy region, rs600011-region, and close the Set Managed Resource window.

3.4.1.1 Adding Managed Resources from the Command Line Interface

The following command adds the RemoteControl resource to the Policy Region from the command line interface:

```
wsetpr RemoteControl @PolicyRegion:rs600011-region
```

where:

RemoteControl
specifies the type of resource to add to the policy region

@PolicyRegion:rs600011-region
Specifies the name of the region

Note
If you get an insufficient authorization error, then you must check to see if the Administrator ID has been set as a login name.

You can add the Administrator ID as a login name, as shown below:

Figure 80. Edit Logins

View figure.

Open **Edit Logins...** by clicking once with the right mouse button on the administrator icon, and selecting **Edit Logins...**. The Edit Logins window is displayed as follows:

Figure 81. Set Login Names Window

View figure.

Add the login name in the Add Login Name field, and press Enter to move it to the Current Login Names section.

Click on **Change & Close**.

We are now back to the TME 10 desktop and we see a message stating that resource types have been changed and have been updated in the Operation Status window. Notice that RemoteControl has been added.

Figure 82. Operation Status Window

View figure.

3.4.2 Setting Resource Roles

Setting the TMR roles of an administrator allows the administrator to perform tasks within the TMR. When you install Remote Control, the product adds the following roles to the list of Available Roles:

remote_control
Enables you to control the mouse actions and enter keyboard data on a remote workstation

remote_probe
Enables you to debug problems on a PcManaged node from the CLI

remote_reboot
Enables you to restart a workstation

These roles are only required in the policy region of the target system and not the policy region where the RemoteControl resource is. An example would be if oscar were defined in the rs600011 region, and the resource RemoteControl were defined in the TEC25Region, then the rs600011 region (which contains the target) would require the roles, and not the TEC25Region (which contains the resource).

Only the admin role is required to use this product. Setting Resource roles at the policy region level allows the administrator to perform the appropriate remote control tasks within the specified policy region. These privileges do not extend to other policy regions.

Open the **Administrators** icon on the desktop by double-clicking on it. Select **Edit Resource Roles...** by clicking on the Root_rs600011-region with the right mouse button.

Figure 83. Resource Roles

View figure.

The Set Resource Roles window is now displayed.

Figure 84. Set Resource Roles

View figure.

Click on **rs600011-region** and move **remote_probe**, **remote_reboot** and **remote_control** from Available Roles to Current Roles.

Click on **Change & Close**.

A pop-up message is now displayed, informing you to restart the TME 10 desktop, as the changes you have made will not take effect until this has been done:

Figure 85. Message Prompt

View figure.

Click on **Dismiss** and restart the TME Desktop.

3.4.3 Creating a Remote Control Tool

The TME 10 Remote Control tool can be created in any policy region that has RemoteControl as a managed resource.

We will create it in rs600011-region.

Note
This task can be performed from the TME Desktop *only*.

Open the TMR rs600011-region by double-clicking it:

Figure 86. Policy Region - Remote Control

View figure.

Select **Create** from the menu bar, and then **RemoteControl...** from the pull-down menu.

The Create Remote Control window will appear as follows:

Figure 87. Creating a TME 10 Remote Control Tool

View figure.

We enter the resource name `PcRemote` in the Name/Icon label field, and the managed node `tango` in the Managed Node field. Use names relevant to your environment and click on **Create & Close** to add a Remote Control tool to the region.

Figure 88. PcRemote Added to Policy Region

View figure.

You will notice that the TME 10 Remote Control tool PcRemote has been added to the rs600011-region.

3.5 Using Remote Control

To start a Remote Control session, double-click on **PcRemote** in the rs600011-region. The Remote Control window will appear:

Figure 89. Remote Control Window

View figure.

All nodes defined in the region will be displayed, although this product can only be used on Windows 3.X, 95 and NT 3.51. If you try to initiate a Remote Control session on a non-Windows machine, you will get an error.

In this scenario we have only installed the agent code on oscar.

From the Remote Control window you can change some of the default options, namely:

Endpoint Type
The default is Both; other options are Managed Nodes and PcManaged Nodes. This can be used to limit the display to NT Managed nodes or PcManaged nodes only.

Grace Period
The default is 15 seconds, but can be increased in 5-second intervals, to a maximum of 60. The Grace Period is the amount of time the end user at the target machine has to respond to the Remote Control request.

Remote Action
The default is Control; Monitor and Reboot are also available.

We will be initiating a remote session with oscar in this example.

Double-click on **oscar** in the Remote Control window. A remote session will be initiated with oscar, and a pop-up window will display on oscar's desktop with two options, either **OK** or **Cancel**.

If the end user selects **Cancel**, then you will receive the following error on tango:

Figure 90. Response on tango If Cancel Is Selected on oscar

View figure.

If **OK** is selected then the Remote Control window (oscar's desktop) will be displayed on your desktop (tango):

Figure 91. Response If OK Is Selected on oscar

View figure.

Once you have established an active session from your controller workstation to your agent workstation then you will have the following pull-down menus available:

- **Keystrokes:**

  Local
  The end-user machine oscar will have control over the keyboard. The controller workstation, tango, will still have control over the mouse.

  Remote
  The controller machine, tango, will have control over the keyboard and mouse.

Note
This did not work as it was supposed to in our environment, whether the keystroke was set to Local or Remote. We still had full control of the keyboard and mouse from the managed node tango.

  Alt-esc
  Switches active processes to the foreground.

  Alt-tab
  Switches between active processes.

  Ctrl-esc
  Displays the Task List window.

  Ctrl-Alt-Del
  Reboots. If you send this to a remote client twice in a row, the remote target will be rebooted.

  Exit
  Exits the Remote Control session.

Note
Alt-T can be pressed at any time on the remote client. This will give the end user access to the mouse and keyboard, and also give them the option to change the session state. Even if the end user does not change the session state on the remote client, you as the controller, are totally disabled.

- **Session:**

  Active
  Gives you full control of keyboard and mouse.

  Monitor
  Monitors the remote client; the end user has full control of mouse and keyboard.

  Suspend
  Returns control of mouse and keyboard to the remote client; the remote control process remains active.

  Terminate
  Terminates the Remote Control session.

3.6 Remote Control Policy Methods

Remote Control provides four default policy methods that define the default settings on the Remote Control dialog. The product is configured to be as flexible as possible for the administrator. If your site security policy requires a more stringent definition of access, you can edit any of the following policy methods:

rc_def_command
Determines if the default action will be to control, monitor or reboot the target. The default value is monitor.

rc_def_filter_mode
Determines whether to display managed nodes, PcManaged nodes, or both. The default is both.

rc_def_grace_time
Determines how long to wait for the user to respond before beginning a remote control session. The default is 15.

rc_def_timeout_op
Determines whether to begin a remote session if the user does not respond. The default is no.

Use the following procedure to change the default policy of the Remote Control dialog:

We are going to change the shell script associated with the rc_def_command and change the default value from control to monitor, using the following command:

```
wgetpol -d RemoteControl RemoteControl_PDO rc_def_command >
rcdef.txt
```

where:

-d
Indicates that a default policy is to be edited.

RemoteControl
Specifies the resource type

RemoteControl_PDO
Specifies the policy object name

rc_def_command
Specifies the policy name

c:\rcdef.txt
Specifies the name of a temporary text output file

Note
You can refer to 7.3 , "Changing the Policies" to get a more detailed explanation of TME 10 policies.

Use a line editor to modify the output file c:\rcdef.txt, which will look similar to the following:

Figure 92. rcdef.txt File before Editing

```
#!/bin/sh
#
#  Default policy method for Remote Control Command
#
#  This method prints the command which the controller will perform on
#  the target.  The choices are:
#
#       "monitor"
#       "control"
#       "reboot"
#
#       XXXX-locked     Use the XXXX setting, and the user cannot change
#                       (eg:  "monitor-locked")

echo "control"

exit 0
```

We selected the **rc_def_command** policy to edit the echo statement to look like the following:

```
echo monitor
```

The modified file should look like:

Figure 93. rcdef.txt File after Editing

```
#!/bin/sh
#
#  Default policy method for Remote Control Command
#
#  This method prints the command which the controller will perform on
#  the target.  The choices are:
#
#       "monitor"
#       "control"
#       "reboot"
#
#       XXXX-locked     Use the XXXX setting, and the user cannot change
#                       (eg:  "monitor-locked")
```

```
echo "monitor"

exit 0
```

Enter the following command to replace the policy with the edited policy method script:

```
wputpolm -d RemoteControl RemoteControl_PDO rc_def_command <
rcdef.txt
```

If you selected **rc_def_filter_mode** policy, edit the echo statement to one of the following:

- `echo node`
- `echo pcnode`
- `echo both`

If you selected the **rc_def_grace_time** policy, edit the echo statement to one of the following:

- `echo 0`
- `echo 5`
- `echo 10`
- `echo 30`
- `echo 60`

If you selected the **rc_def_timeout_op** policy, edit the echo statement to one of the following:

- `echo Yes`
- `echo No`

You can append the string, `-locked`, to any of these values to disable the other options associated with the policy on the Remote Control dialog. For example, if you specify **monitor-locked** for the rc_def_command policy, users cannot select the Control or Reboot options from the Remote Control dialog.

To require that an administrator gets confirmation from the end user before monitoring a host, both the rc_def_grace_time and rc_def_timeout_op policies must be set to **-locked**.

In addition to enabling you to control the product, Remote Control generates a notice in the TME 10 Remote Control notice group for each operation attempted.

The notice provides an audit trail for all actions performed by Remote Control. The notice shows what action has been taken and the outcome of the operation.

Actions performed during a remote control session are not logged, but the fact that a session has been successfully initiated is (as well as the administrator responsible for the session).

The following figure is an example of the notices that are logged:

Figure 94. Notice Group Messages for TME 10 Remote Control

View figure.

3.7 Setting Up a TMR Connection

There are several reasons for dividing your environment into multiple TMRs.

TMRs can be divided geographically, by department, by floor, by groups or based on shared resources. In our scenario, we have two TMRs and will show how to connect the two TMRs to perform software distribution and remote control functions from one TMR to the other.

We set up a two-way connection from TMR foxtrot to TMR rs600011, and we then will distribute a software distribution package across TMRs to oscar.

TME 10 Remote Control will then be used to check the successful completion of the distribution from TMR Server foxtrot to target oscar.

3.7.1 Connecting TMR foxtrot to TMR rs600011

Start the TME 10 desktop from foxtrot.

The following window will appear:

Figure 95. TME Desktop for Windows

View figure.

Select **Desktop** from the menu bar, and then **TMR Connections** from the pull-down menu. From the submenu select **Connect**.

The following window will be displayed:

Figure 96. Connect to a Remote TMR Window

View figure.

Enter `rs600011` (remote TMR Server) in the Connect to Remote TME Server field.

Select the **Two-way** radio button in the Make Connection box. Enter the login and password of the remote system rs600011 in the Access for Connecting process box.

Once this is complete, click on **Connect & Close**. The Confirm Connect window will now appear.

Figure 97. Confirm Connect Window

View figure.

Click on **Continue with Connection**.

When TMRs are first connected, you will be asked if resources should be updated immediately upon connection. As we are creating a two-way connection, the resources are exchanged between the two TMRs.

After the initial resource exchange, the local name registry contains names of resources local to TMR foxtrot, as well as names for resources in rs600011. Updates are required on a regular basis to keep the TMRs synchronized with each other.

These updates can be done manually from the desktop or via the command line once you know that the resources have been changed. These updates can also be scheduled to occur on a regular basis.

Note
TMR information updates are always *pull* operations where one TMR will request information from the other. A TMR cannot *push* information to another TMR.

Once the remote connection has been established, you will see a Remote Connection Completed window, as shown below:

Figure 98. Remote Connection Completed Window

View figure.

Click on **Continue**.

Now that the connection between the two TMRs has been established oscar needs to be added as an available subscriber before we can distribute software to it.

To add oscar as a subscriber open the Policy Region window on foxtrot by double-clicking on **foxtrot-region** on the TME 10 desktop.

The following window will appear:

Figure 99. Foxtrot Region

View figure.

Double-click on the profile manager, **File Package**.

Note
The File Package profile was created in 9.4 , "Distribution of an Application (Scenario 1)".

The Profile Manager window will now appear.

Figure 100. Profile Manager Window

View figure.

Our target system for this scenario (oscar) is part of the rs600011-region TMR with which we have just established a two-way connection.

We will now add oscar to our Subscribers window.

Figure 101. Adding oscar to Subscribers Window

View figure.

Select **Profile Manager** from the menu bar, and then **Subscribers** from the pull-down menu.

The Subscribers window will appear.

Figure 102. Subscribers Window

View figure.

Highlight **oscar (Pc Managed Node)** in the Available to become Subscribers window, and move it to the Current Subscribers window.

Once this has been done, click on **Set Subscriptions & Close**.

You will be returned to the Profile Manager window where you will notice that oscar has been added to the Subscribers window, as shown below:

Figure 103. Profile Manager Window

View figure.

3.7.2 Using the Clone Facility to Create a Software Distribution Package

As Hijaak for Windows was previously packaged as described in 9.4 , "Distribution of an Application (Scenario 1)" for Windows NT we will use the clone facility to create another profile, called Hijaak. Hijaak will then be distributed across TMRs, from foxtrot to oscar.

Figure 104. Profile Manager Window

View figure.

From the Profile Manager window, click on **Scenario 1** to highlight it.

Select **Edit** from the menu bar and then **Profiles** from the pull-down menu. Then select **Clone...** from the submenu.

The Clone Profile window will appear.

Figure 105. Clone Profile Window

View figure.

Enter `Hijaak` in the Name/Icon Label field.

Select **File Package** in the Clone to Profile Manager window.

Click on **Clone & Close**. The updated Profile Manager window with the new profile Hijaak will appear.

Figure 106. Profile Manager Window

View figure.

We now have to change some platform-specific options for oscar's platform, which is Windows 95.

Double-click on the profile **Hijaak**. The file package properties window will appear.

Figure 107. File Package Properties Window

View figure.

As this is being cloned, we will keep all the original settings that were used to build Scenario 1.

We only need to change the platform-specific options for oscar, which is a Windows 95 machine.

Figure 108. Change Platform Specific Options for oscar

View figure.

To change the platform-specific options, select **Edit** from the menu bar, and then **Platform Specific Options** from the pull-down menu. From the submenu select **Windows 95 Options...**.

The File Package Windows 95 options will appear.

Figure 109. File Package Properties Window

View figure.

Enter `c:\` in the Destination Directory Path field, and click on the **After Distribution** button.

In the Get BAT/EXE/COM file from box, click on the **Subscribers** radio button.

In the Enter BAT/EXE/COM file name window, enter:

```
c:\tivoli\tmeagent\win95\cli\waddicon.exe -g "HiJaak for Windows"
-c \hjwin\hjwin.exe -t "HiJaak".
```

Click on **Set & Close**.

Click on **Save & Close**.

Now that the profile has been built and customized for the Windows 95 platform, we can distribute it to oscar.

Figure 110. Profile Manager Window

View figure.

From the Profile Manager window, click once on **HiJaak** and **oscar** with the left mouse button, so they are both highlighted. Select **Profile Manager** from the menu bar and then select **Distribute...** from the pull-down menu.

The Distribute Profiles window will appear as follows:

Figure 111. Distribute Profiles Window

View figure.

Click on **Distribute Now**.

Return to the TME 10 Desktop to monitor the status of the distribution. You will notice that a message `Distributing Profile HiJaak` has been added to the Operation Status window, as shown below:

Figure 112. Operation Status Window

View figure.

Once complete, you will see that the Operation Status window has been updated with `Distributed Profile HiJaak`, as shown below:

Figure 113. Operation Status Window

View figure.

3.7.3 Confirm Distribution with Remote Control

Now that the distribution has been reported as being successful, let's use TME 10 Remote Control to check the results on oscar.

From the TME 10 desktop on foxtrot, double-click on **foxtrot-region** to open the Policy Region window as shown below:

Figure 114. foxtrot-region Policy Region

View figure.

Double-click on **RemoteControl**.

The following window will appear:

Figure 115. Remote Control Window

View figure.

Change the Endpoint Type to **PcManagedNode**.

Change the Proceed if Timeout radio button to **Yes**.

Change the Remote Action to **Control**.

Highlight **oscar** and click on **Run & Close**. The remote session with oscar will now be established.

Once the session with oscar has been established, select **Start** from the Windows 95 Taskbar to see if the HiJaak for Windows program has been added, as shown below:

Figure 116. Check Installation Via Remote Control

View figure.

[Top of Page | Previous Page | Next Page | Table of Contents | Index]

The TME 10 Deployment Cookbook

Chapter 4. Using the AutoPack Feature in TME 10 Software Distribution 3.1

In this chapter, we describe how to use AutoPack, which is a new feature in TME 10 Software Distribution 3.1.

We describe how to install the product and then show an example of how to install a software product with AutoPack.

Note
TME 10 Software Distribution 3.1 is the latest version of what was previously known as Tivoli/Courier.

For further information about TME 10 Software Distribution 3.1 and AutoPack, refer to *TME 10 Software Distribution User's Guide Version 3.1*, GC31-8330.

4.1 Introduction to AutoPack

AutoPack is a new feature in TME 10 Software Distribution 3.1. AutoPacks are TME 10 Software Distribution profiles that are similar to file packages, but provide a simpler, more convenient way of creating installable images for Windows, Windows 95 and Windows NT PCs.

For those of you who are familiar with the DiskCamera product (used to create an install process for non-CID enabled products on the OS/2 and Windows 3.1 platform), this is the equivalent and more, currently for the Windows environment only.

An AutoPack profile contains an AutoPack file (*.pak) that you create using the Autopack Control Center. This AutoPack file contains all the necessary files to install shrink-wrapped applications, such as Freelance Graphics or Netscape Navigator, and also includes all the necessary script files that perform the required configuration changes, including all registry changes (in case of Windows 95 and Windows NT).

With previous versions of Courier, it was not possible to create file packages directly at a TME 10 PC Managed Node, even if they were designated to be eventually distributed to a TME 10 PC Managed Node.

For example, a file package for a Windows 3.1 system had to be created on a Windows NT system acting as a TME 10 Managed Node.

In this case, you had to transfer the files from the TME 10 PC Managed Node to the TME 10 Managed Node before creating the package.

With the new release, AutoPacks can be created on a TME 10 PC Managed Node and then retrieved by a TME 10 Managed Node creating the profile.

In the NetView Distribution Manager products, the ability to create a change file on a node type for which it is designated is also called a preparation site.

The new AutoPack feature allows you to create AutoPack profiles automatically after installing the software manually on a PC. All the installed files will be added into one AutoPack file.

The principle for creating a file package automatically is the same for both, DiskCamera and AutoPack:

1. Take a snapshot of the system before installation.
2. Manually install the software on the system where the snapshot was taken.
3. Take another snapshot of the system after the installation.

The following figure illustrates this process:

Figure 117. AutoPack Process

View figure.

The process shown above serves mainly two purposes:

- Simplifies the creation of File Packages
- Creates File Packages for software that does not supply a batch interface for the installation process

By using AutoPack, file packages can be created with a few mouse clicks and you don't have to write complicated installation or removal scripts.

Also, some software does not support the installation or de-installation to be triggered by a batch interface, but only using, for example, the installation GUI.

In this case, you will not be able to write, for example, install or de-install scripts and supply them as BARC scripts when creating a Courier file package.

AutoPack, however, can just record the changes made to the system and then create generic installation and de-installation scripts and add them to the file package's BARC specification.

AutoPack consists of three parts, one which is the server part and runs on a TMR Server or TME 10 Managed Node. This part is responsible for creating the AutoPack profiles and distributing them to subscribers. An example for the creation of an AutoPack profile can be found in 4.5 , "Creating an AutoPack for Freelance Graphics".

The second part resides on either a TME 10 PC Managed Node or TME 10 Managed Node and is used to create the snapshots and create an AutoPack file that is then included by the server part into the AutoPack profile.

This part is called AutoPack Control Center (APCC) and is comparable to what is known as DiskCamera in NetView Distribution Manager.

The third part is called AutoPack agent and needs to be installed on each TME 10 PC Managed Node that shall be able to receive AutoPack profiles. This AutoPack agent is needed in addition to the TME PC Agent.

4.2 Overview

In this scenario, we will perform the following steps:

- Installing AutoPack
- Creating an AutoPack profile for Lotus Freelance Graphics
- Using TME 10 Remote Control to check the target before distribution
- Distributing the AutoPack profile to a TME 10 PC Managed Node

Figure 118. AutoPack Environment

View figure.

In our scenario, rs600011 acts as the TMR server. The Windows NT system, tango, is configured as a TME 10 Managed Node in rs600011's TMR, and acts as the preparation system, that is, it will hold AutoPack Control Center.

The Windows 95 system, oscar, will act as the target for distribution, that is, it will receive the AutoPack file that we create on tango.

Besides, tango also acts as a TME 10 Remote Control controller while oscar also acts as a TME 10 Remote Control target. This will enable us to check oscar from tango before we distribute the AutoPack profile.

Refer to Chapter 3. "Installing and Configuring TME 10 Remote Control" for information about TME 10 Remote Control.

4.3 Hardware and Software Prerequisites

In this section, we give you an overview of the requirements needed to run AutoPack and what we use in our environment.

4.3.1 Software Requirements

You must have at least the following software installed and running:

- Tivoli Management Platform 3.0 and Service Pack 01
- TME 10 Software Distribution 3.1 installed on your TME 10 Managed Nodes where you want to use AutoPack
- TME 10 Desktop for Windows
- The TME PC Agent 4.007, or later, installed and running on all PCs that act as targets for AutoPack distributions
- TCP/IP on all nodes

Note
AutoPack Control Center can only run on Windows 32 Bit platforms, which are Windows NT, Windows 95 or Windows 3.1 with 32 Bit support installed.

4.3.2 Hardware Requirements

You must have 3 MB of available disk space to run the AutoPack Control Center. AutoPack target machines must have 4 MB of available disk space to install the AutoPack agent.

In our scenario, we use the following:

Software:

- AIX 4.1.4 on the TMR Server rs600011
- Windows NT Server 4.0 with Service Pack 2 on tango
- Windows 95 on the target oscar
- Tivoli Management Platform 3.1 Revision C on rs600011 and tango
- TME 10 Desktop 3.1 for Windows on tango
- TME PC Agent 4.007 on the target oscar
- TCP/IP on all nodes

Hardware:

- RS/6000 Model 58H with 256 MB RAM for the TMR Server rs600011
- IBM ThinkPad Model 760LD (Type 9547) with 40 MB RAM (tango)
- IBM ThinkPad Model 755C (Type 9545 L9E) with 36 MB RAM (oscar)
- Token-ring 4 MBps

4.3.3 Supported Operating Systems

The TMR server can have any operating system installed that can run the TME Framework.

More important here is what platforms are supported for the TME 10 PC Managed Node portion of the AutoPack feature, or, to be more precise, the PCs that act as AutoPack agents.

At the moment, the following operating systems are supported:

- Windows 3.1
- Windows 95
- Windows NT 3.51
- Windows NT 4.0

For these platforms, AutoPack Control Center can determine changes made to the configuration files of the system. The configuration portions that are checked for are:

- CONFIG.SYS file (DOS)

- AUTOEXEC.BAT file (DOS)
- Windows .INI files (Windows 3.1, 95, NT)
- Windows Program Manager items (Windows 3.1, 95, NT)
- Windows Program Manager groups (Windows 3.1, 95, NT)
- Windows Registry entries (Windows 95, NT)
- Windows Folders (Windows 95, Windows NT 4.0)
- Windows Shortcuts (Windows 95, Windows NT 4.0)

When creating the snapshot before manually installing the software product, you can choose which files or components are to be monitored.

Note
OS/2 is currently not supported by the AutoPack feature. However, the DiskCamera feature that comes with the TME 10 Software Distribution 3.1.3 family of products supports OS/2.

4.4 Installing AutoPack

In this section, we describe how to install AutoPack on the three types of nodes:

- Installing TME 10 Software Distribution 3.1 on the TMR server rs600011
- Installing AutoPack Control Center (APCC)
- Installing the AutoPack agent

4.4.1 Installing AutoPack on a TMR Server or TME 10 Managed Node

On a TMR server or TME 10 Managed Node, AutoPack is automatically installed with TME 10 Software Distribution 3.1.

After the installation you should have two new profile types available in your TMR:

- FilePackage
- AutoPack

FilePackage is the profile type already known from previous versions of Tivoli/Courier.

AutoPack is the new profile type that is used to create profiles for AutoPacks on a TME 10 Managed Node.

To check to see if AutoPack is available after the installation of TME 10 Software Distribution 3.1, select your top level TMR region with the right mouse button, and then select **Managed Resources** from the context menu.

After releasing the mouse button, a window, similar to the following, should display:

Figure 119. Displaying Managed Resources

View figure.

You should see File Package and AutoPack as Available Resources. Select both with the left mouse button, and then select the left arrow icon to move them to the Managed Resources side of the window. This will allow you to create File Packages and AutoPack profiles in this TMR.

Click the **Set & Close** push button to confirm the changes.

4.4.2 Installing AutoPack Control Center (APCC)

AutoPack Control Center can be installed on a TME 10 PC Managed Node or TME 10 Managed Node. In our scenario, we install APCC on tango, which is a TME 10 Managed Node.

In fact, APCC can also run on a system that is neither a TME 10 PC Managed Node nor TME 10 Managed Node. However, that does not make much sense, since you would not be able to easily retrieve the AutoPack file into the AutoPack profile.

From the TME 10 Managed Node tango, open a command prompt and change to the drive and directory where the AutoPack Control Center code is.

Run **SETUP** from the command line.

The TME 10 Software Distribution AutoPack Control Center Install window will be displayed.

Figure 120. AutoPack Control Center Setup Window

View figure.

Click on **Next**.

The following window will be displayed:

Figure 121. Question Window

View figure.

Since tango is running Windows NT 4.0, we select **Yes**.

The Choose Destination Location window will appear.

Figure 122. Destination Location Window

View figure.

Click on **Next**.

The setup program continues the installation. An indicator will inform you about the progress of the installation. After a while, a window will pop up, informing you that the installation is complete:

Figure 123. Setup Complete Window

View figure.

Click on **OK** to close the Information window. Another dialog will pop up asking if you want to look at the Release Notes.

If you select **No**, the following window will appear on the desktop:

Figure 124. AutoPack Control Center

View figure.

The AutoPack Control Center has now been successfully installed on tango.

4.4.3 Installing the AutoPack Agent on a TME 10 PC Managed Node

We will now install the AutoPack agent on the TME 10 PC Managed Node, oscar.

The AutoPack agent is required on all TME 10 PC Managed Nodes that shall be able to act as endpoints for AutoPack profiles.

The remarkable thing about the installation of the AutoPack agent is that AutoPack itself is used to install the AutoPack agent.

Therefore, in the following steps, we will create an AutoPack profile that contains the AutoPack agent, and then distribute this profile to oscar.

This is a convenient way to install the AutoPack agent, since once the TME PC Agent is running on the TME 10 PC Managed Node you can install the AutoPack agent remotely.

Note
Although the AutoPack agent is distributed through an AutoPack profile, you should notice that there is a difference between the AutoPack agent installation and a "normal" AutoPack profile.

Before we install the agent, we want to make sure that oscar is running the correct version of the TME PC Agent.

To do so, we start the TME 10 desktop. This can be done from either tango or the TMR server rs600011.

In our case, we start the desktop on rs600011, by typing:

```
tivoli
```

Open the Policy Region window by double-clicking on rs600011-region.

The following window will appear:

Figure 125. rs600011 Policy Region

View figure.

Select **oscar** with the right mouse button, and then select **Properties...** from the context menu.

The following window will appear:

Figure 126. Check PC Agent Version

View figure.

As you can see from the above figure, oscar has the TME PC Agent 4.007 installed.

Note
In our case, we already have a TME 10 PC Managed Node created in our TMR for oscar. If you do not have a TME 10 PC Managed Node for the PC where you want to install the AutoPack agent yet, then you must install the TME PC Agent 4.007 on it and create a TME 10 PC Managed Node in your TMR for it first.

Click on **Dismiss** to return to the Policy Region window.

In our example, we already have a profile manager, called Autopacks, that we will use to keep our AutoPack profiles.

Note
If you do not have a profile manager in your TMR yet, you must create one first. You can do this by selecting **Create** from the menu bar in your Policy Region window, and then **Profile Manager...** from the pull-down menu.

Double-click on the **Autopacks** profile to open the profile manager:

Figure 127. Profile Manager Window

View figure.

As you can see, there is already an AutoPack profile in our profile manager which we had created before. You may notice that the icon looks slightly different from a standard Courier FilePackage profile.

To create a new AutoPack profile we select **Create** from the menu bar, and then **Create Profile...** from the pull-down menu.

The Create Profile window will appear.

Figure 128. Create Profile Window

View figure.

Select **AutoPack** from the Type selection list, and enter a Name/Icon Label for the new profile.

In our example, we enter `AutoPackAgent` as the profile name.

Then select **Create & Close** to create a profile.

Back in the profile manager, you will notice that a new AutoPack profile has been added:

Figure 129. Profile Manager Window

View figure.

However, this profile does not contain any data, so the next step is to populate it.

Double-click on **AutoPackAgent**.

The Set AutoPack Properties window will appear.

Figure 130. Set AutoPack Properties Window

View figure.

In this window, you specify where to retrieve the AutoPack file and the path where it is stored. An AutoPack file can be retrieved either from a TME 10 Managed Node, or a TME 10 PC Managed Node.

Note

This is probably the right time to note the difference between an AutoPack profile and an AutoPack file.

The AutoPack profile is the container that holds the data and is used by TME 10 Software Distribution 3.1 to distribute the data, while the AutoPack file is one file that holds all the data and files that comprise the application to be distributed.

The AutoPack agent itself is supplied in this format (an AutoPack file).

We select **tango** as the Managed Node, since, after the installation of APCC, this is where the AutoPack agent file has been stored.

We enter `C:/TIVOLI/AUTOPACK/WINNT/ap_agent.pak` as the Path since this is where the AutoPack agent is stored in our environment. Select **Save & Close**.

To see if the AutoPack file has really been included in the AutoPack profile, we look at the TME 10 desktop window:

Figure 131. Updated Operation Status on the TME Desktop

View figure.

The Operation Status window on the TME Desktop has been updated and we can see that the operation was successful.

We must now subscribe target oscar to the Autopacks profile manager by dragging and dropping the **oscar** icon from the rs600011-region window to the Profile Manager window.

After doing so, the Profile Manager window should look similar to the following:

Figure 132. Profile Manager Window

View figure.

We are now ready to distribute the profile.

Select AutoPackAgent with the right mouse button, and then select **Distribute...** from the context menu.

The following window will appear:

Figure 133. Distribute AutoPack Window

View figure.

Highlight **oscar** in the Available Subscribers section, and move it to the Distribute AutoPack To section. Click on **Distribute**. Notice that the operation status window on the TME Desktop has been updated.

Figure 134. Operation Status Window

View figure.

The AutoPack agent has been successfully installed on oscar.

4.5 Creating an AutoPack for Freelance Graphics

In this section, we create an AutoPack for Lotus Freelance Graphics 2.1 for Windows.

This task is divided into the following steps:

- Creating a baseline snapshot
- Manually installing the software
- Building the AutoPack file

4.5.1 Creating the Baseline Snapshot

The baseline snapshot contains the status of the system configuration files that you decide to monitor before manually installing the application which is to be packaged.

Start the AutoPack Control Center on TME 10 Managed Node tango by clicking on **Start**, **Programs**, **AutoPack Control Center** and **AutoPack Control Center** from the Taskbar. The following window will appear:

Figure 135. AutoPack Control Center Main Window

View figure.

Click on **Create Baseline Snapshot**.

The following window will appear:

Figure 136. AutoPack Control Center Create Baseline Snapshot Window

View figure.

In the Create Baseline Snapshot window, you can specify which files to monitor, where to store the baseline snapshot, and other options.

Change the Directory in the Save Baseline To section to `c:\autotemp` (this is the subdirectory where all the AutoPack files for Freelance Graphics will be stored).

Click on the **Files To Monitor** tab.

The following window will appear:

Figure 137. Create Baseline Snapshot

View figure.

The registry will be monitored by default. Any other files you want to be monitored can be added here. The AutoPack Control Center will always monitor the c:\autoexec.bat and c:\config.sys files, regardless of whether or not you remove them from the list. You can add files to the list but they must be .ini files.

Click on the Files To Exclude tab.

The following window will appear:

Figure 138. Create Baseline Snapshot Files to Exclude Window

View figure.

In this window you can specify the files that should be excluded from monitoring.

In our example, we assume that monitoring the files, shown in Figure 137, is sufficient to record the changes made during the install of Freelance Graphics.

Leave the defaults and click on **Run**. You can monitor what is being done by watching the Component bar in the Scan Status window. Once the scan is complete, the following window will appear:

Figure 139. Scan Status Window

View figure.

Click on **OK**. You will be returned to the AutoPack Control Center main window.

4.5.2 Installing Freelance Graphics

We are now ready to perform the manual installation of the application, in our case Freelance graphics.

The installation program of Freelance Graphics will be started from within AutoPack Control Center.

Figure 140. AutoPack Control Center Main Window

View figure.

Click on **Install Software**.

The following window will appear:

Figure 141. AutoPack Control Center Install Software Window

View figure.

Click on **Browse** to change to the source directory of Freelance Graphics.

Figure 142. Source of Freelance Graphics

View figure.

As we are installing Freelance Graphics 2.1 for Windows from the diskette drive in this example, we change the Look in selection box to **Floppy (A:)**.

Before performing this step, make sure that the first installation diskette of Freelance Graphics has been inserted in diskette drive A.

Figure 143. AutoPack Control Center Select Install Software Window

View figure.

Highlight **Install.exe**, and then click on **Open**.

This will get you back to the Install Software window:

Figure 144. AutoPack Control Center Install Software Window

View figure.

Click on **Run**. This will start the actual installation.

The Lotus Install screen will be displayed:

Figure 145. Freelance Graphics Installation Window

View figure.

Enter the installation details and click on **Next**. Follow the steps as a normal local software installation of Freelance Graphics.

Once all the disks have been shuffled, you will receive a successful installation message:

Figure 146. Freelance Graphics Install Complete Window

View figure.

The installation of Freelance Graphics on tango is now completed.

Click on **Done**. This will return you to the AutoPack Control Center main window.

4.5.3 Building the AutoPack File

Figure 147. AutoPack Control Center Main Window

View figure.

Select **Build AutoPack**.

This will pop up the Build AutoPack window.

Figure 148. AutoPack Control Center Build AutoPack Window

View figure.

Change the Name field to `c:\autotemp\FG4WIN21.pak` and then select **Run**.

The Scan Status window will appear, and APCC will begin comparing the system configuration against the snapshot taken in 4.5.1 , "Creating the Baseline Snapshot":

Figure 149. AutoPack Control Center Scan Status Window

View figure.

Note
The AutoPack Control Center uses scanning/differencing technology to create the contents of the File Package. Of course, only those components are checked for configuration changes that you selected in 4.5.1 , "Creating the Baseline Snapshot" when taking the baseline snapshot.

Click on **OK**. The FG4WIN21.def AutoPack Properties window will appear:

Figure 150. AutoPack Control Center AutoPack Properties Window

View figure.

In this window, you can define some additional attributes for the AutoPack file that is created.

Under the General tag, set the Destination Drive (this is the drive on the remote client where Freelance Graphics will be installed) and the Staging Directory (this is a temporary directory used by TME 10 Software Distribution Release 3.1 during the installation of Freelance Graphics).

Note
The files in the temporary directory will be removed after installation, but the directory structure remains.

Click on the **File Mode** tab.

Figure 151. AutoPack Control Center AutoPack Properties Window

View figure.

Preserve mode of source files is the default radio button selected. This will preserve the current attributes of the files on the target system.

Click on the **Log Info** tab:

Figure 152. AutoPack Control Center AutoPack Properties Window

View figure.

Select the **Send to Distribution notice group** check box. Also, select the **Send to log file on** check box.

Enter tango as the Host and c:\autopack\oscar.log as the path where the log file will be written to.

Click on **Contents** to display the files that will be included in the file package.

The following window will appear:

Figure 153. View the Contents of the File Package

View figure.

Click on **OK** to return to the AutoPack properties window.

Click on the **Distribution** tab.

Figure 154. AutoPack Control Center AutoPack Properties Window

View figure.

Select the **Stop Distribution on error** and the **Perform compression on distribution** check boxes.

In the Distribution Mode section, the distribution can be set to Mandatory or Optional. If **Mandatory** is selected, then the user at the target workstation will not be prompted before distribution starts.

If **Optional** is selected, then you can display a warning on the target machine. This warning has a timeout value in seconds, where the valid range is 1 to 6000.

If, during distribution, the timer times out before the user responds, the default is to continue with the installation.

Note
We selected the **Optional** radio button for this installation but, the pop-up never appeared on oscar.

Click on **Optional**, and set the Display warning for field to 60 seconds.

Click on **Build**.

This will pop up the following window:

Figure 155. AutoPack Build Progress Window

View figure.

Once the build is complete, the following window will appear:

Figure 156. AutoPack Build Complete Window

View figure.

Click on **OK**, then click on **Close**.

The AutoPack file has now been built and stored in the file C:\autotemp\FG4WIN21.pak on tango.

4.6 Creating an AutoPack Profile for Freelance Graphics

So far, we have created an AutoPack file containing all the files and scripts needed to install Freelance Graphics 2.1 for Windows.

This file resides on the node where AutoPack Control Center is installed. In our case, this is node tango.

However, to distribute the AutoPack file to a TME 10 PC Managed Node using TME 10 Software Distribution 3.1, we need to create a profile, since TME 10 Software Distribution 3.1 is a profile-based application.

The profile type needed to distribute an AutoPack file is called AutoPack.

From the TME 10 desktop, open the policy region where your profile manager resides, and then open the profile manager.

In our case, this is the profile manager, called Autopacks:

Figure 157. TME 10 Profile Manager Window

View figure.

Select **Create** from the menu bar, and then **Profile...** from the pull-down menu.

The following window will appear:

Figure 158. TME 10 Create Profile Window

View figure.

Select **AutoPack** as the Type, and enter `FG4WIN21` in the Name/Icon Label field.

Then select **Create & Close** to create the new profile.

Figure 159. TME 10 Profile Manager Window

View figure.

Notice that FG4WIN21 has been added as a profile.

However, this profile is empty, so the next step is to set the profile properties.

Open the profile properties by double-clicking the **FG4WIN21** icon.

This will pop up the Set AutoPack Properties window:

Figure 160. Set AutoPack Properties Window

View figure.

In this window you must specify the name of the AutoPack file and where to retrieve it.

AutoPack files can be retrieved from TME 10 PC Managed Nodes and from TME 10 Managed Nodes.

Note

Here, you see the reason why it is a good idea to use a TME 10 PC Managed Node or TME 10 Managed Node as the machine where AutoPack Control Center is installed.

Otherwise, you will not be able to retrieve the AutoPack file directly from it, but you will have to transfer it to a TME 10 Managed Node or TME 10 PC Managed Node first.

Enter `tango` in the Managed Node field and set the path to the FG4WIN21.pak file in the Path field.

Another feature of AutoPack is the ability to calculate the package size. This is very useful, so you can check for sufficient disk space on the targets.

In our example, we need to know how big the package for Freelance Graphics is to check for sufficient disk space on oscar. This check will be performed using TME 10 Remote Control.

To check the size of a package, select **AutoPack** from the menu bar, and then select **Calculate Size...** from the pull-down menu.

The following window will pop up:

Figure 161. Calculate AutoPack Size Window

View figure.

The size is calculated as 27105494 bytes.

Click on **Close** to return to the Set AutoPack Properties window. Then select **Save & Close**.

4.7 Using TME 10 Remote Control before Distribution

We now use TME 10 Remote Control to check for sufficient disk space on oscar before we start the distribution.

We have installed and configured TME 10 Remote Control in our environment, as described in Chapter 3. "Installing and Configuring TME 10 Remote Control".

From the TME 10 desktop on tango, open the Policy Region window. Double-click on **PcRemote**, and then double-click on **oscar**.

Note
This step cannot be performed from rs600011, since you need a Windows-type display to take over the screen from oscar.

Figure 162. Using TME 10 Remote Control to Check Disk Space

View figure.

Once the remote session with oscar is active, double-click on **My Computer**.

Highlight **(C:)** and click once with the right mouse button, and click on **Properties**.

The Properties window will appear, displaying the available disk space. If there is sufficient disk space, click on **OK** and terminate the TME 10 Remote Control session. If there is not sufficient disk space, delete unwanted files from the target system first.

4.8 Distributing the AutoPack Profile for Freelance Graphics

We are now ready to distribute the AutoPack profile to oscar to install Freelance Graphics.

Figure 163. TME 10 Profile Manager Window

View figure.

From the Profile Manager window, select the profile **FG4WIN21** by clicking on it once with the left mouse button. Also, select **oscar** in the Subscribers section by clicking on it once with the left mouse button.

Select **Profile Manager** from the menu bar, and then **Distribute...** from the pull down menu.

The following window will appear.

Figure 164. TME 10 Distribute Profiles Window

View figure.

Click on **Distribute Now**.

If you go to the TME 10 desktop main window, you can monitor the status of the distribution:

Figure 165. TME 10 Desktop Window

View figure.

Once the distribution is finished, Freelance Graphics is installed on oscar.

4.9 Removing the AutoPack Profile

The removal of an installed AutoPack profile is simple and easy. Let's say, for example, we want to remove Freelance Graphics for Windows which we installed on tango.

Open the rs600011-region from the TME 10 desktop by double-clicking on it.

The Policy Region:rs600011-region window will appear:

Figure 166. rs600011-region Window

View figure.

Double-click on the profile manager **Autopacks**.

Figure 167. TME 10 Distribute Profiles Window

View figure.

Click on **FG4WIN21** to select it, then click once with the right mouse button to activate the menu. From the menu select **Remove from hosts...**.

Figure 168. Remove AutoPack Window

View figure.

Highlight **oscar** in the Available Subscribers window, and move it to the Remove From Hosts window.

Click on **Remove**.

The removal status can be monitored from the TME Desktop's Operational Status window, as shown below:

Figure 169. TME 10 Distribute Profiles Window

View figure.

Freelance Graphics for Windows has now been removed from oscar. This can be verified by using TME 10 Remote Control.

Initiate a Remote Control session with oscar, as described previously in this chapter.

Once the session has been established, click on **Start**, **Programs** from the taskbar. You will notice that the Lotus Applications program has been removed.

Note
As with the work area created during the installation of Freelance Graphics, the removal process removes all files, but does not remove the FLW directory structure.

4.10 AutoPack Policies

After the installation of TME 10 Software Distribution 3.1, you will have additional default and validation policies added to your TMR.

To display the validation policy methods added to the system, enter the command:

```
wlspolm -v AutoPack
```

This will display the validation policy methods for AutoPack profiles:

```
ap_val_autopack_host_file
ap_val_name
ap_val_operation
```

To display the default policy methods, type:

```
wlspolm -d AutoPack
```

The output should look similar to:

```
ap_def_autopack_host
ap_def_autopack_file
```

The default policies can be used, for example, to make tango the default Managed Node in the AutoPack File section of the Set AutoPack Properties window, as shown below:

Figure 170. Set AutoPack Properties Window

View figure.

To display the default policy method for the Managed Node field and redirect it to a file so it can be edited, enter the command:

```
wgetpolm -d AutoPack BasicAutoPack ap_def_autopack_file > def.txt
```

You will see that the default policy is empty. We are going to edit the def.txt file so we can make tango the default managed node. We will be creating all of our AutoPack profiles on tango, so it makes sense to make this the default.

Edit the def.txt file with a text editor. Change the def.txt file to reflect the following:

Figure 171. Contents of def.txt File

```
#!/bin/sh
echo "tango"
```

Save def.txt. We now need to replace the default policy. To do this enter the command:

```
wputpolm -d AutoPack BasicAutoPack ap_def_autopack_file < def.txt
```

The default policy has now been updated to reflect tango as the default managed node.

4.11 More about AutoPack Profiles

An AutoPack profile is an installable image used to distribute shrink-wrapped applications. The working directory that you specify in the Save Baseline To field on the General Options property sheet is where the AutoPack Control Center will store the files used to create the final AutoPack (c:\autotemp was used to install Freelance Graphics in our scenario). The contents of this directory after building the AutoPack are as follows:

FG4WIN21.CHG
Also called the change file, contains a listing of the system changes that are necessary for Freelance Graphics when the AutoPack is distributed. This file is created when the AutoPack Control Center compares the system files listed in the Files to Monitor property sheet of the Create Baseline Snapshot dialog after the post-install snapshot has been performed. The files that are contained in FG4WIN21.CHG can be seen on the Files property sheet of the AutoPack Contents dialog.

FG4WIN21.DEF
Also called the definition file. It lists all properties of the AutoPack file. If you edit this, or any other existing AutoPack file, the AutoPack Control Center expects to open a .DEF file.

FG4WIN21.ERR
This is the log file which contains any errors that occurred while the AutoPack file was being built.

FG4WIN21.PAK
This is the result of building an AutoPack. It is a combination of the .DEF file and the .CHG file. This is what is distributed when you distribute an AutoPack profile.

The following matrix illustrates which machine types can receive an AutoPack distribution, based on where the AutoPack profile has been created. Note that targets can be TME 10 PC Managed Nodes, NT TME 10 Managed Nodes, or clients of a NetWare managed site.

AutoPack File Created on	**Distribution Targets**			
	Win 3.1	**Win 95**	**NT 3.51**	**NT 4.0**
Win 3.1	Yes	No	No	No
Win 95	No	Yes	No	No
NT 3.51	No	No	Yes	No
NT 4.0	No	Yes	No	Yes

4.12 Using the Command Line Interface

To use the command line to perform distributions of AutoPack profiles, enter the following:

```
wdistrib @AutoPack:FG4WIN21 @ProfileManager:Autopacks
```

where:

@AutoPack:FG4WIN21
Specifies to distribute the FG4WIN21 AutoPack

ProfileManager:Autopacks
Specifies to distribute the AutoPack to the subscribers of the Autopacks profile manager

4.13 AutoPack Limitations

In most cases, AutoPack provides a convenient and very efficient way of automatically creating file packages for distribution with TME 10 Software Distribution.

However, there might be limitations to its use, such as:

- Platform support
- Machine dependent configuration parameters

At the time this redbook is written, AutoPack supports only Windows platforms. This means that if you are using OS/2 or another desktop operating system besides Windows, you will not be able to use AutoPack to automatically create file packages for distribution with TME 10 Software Distribution.

However, you can still manually create file packages, or, if you are using TME 10 Software Distribution 3.1.3 (formerly known as NetView DM), you can still use the DiskCamera product to automatically create file packages.

AutoPack, as well as DiskCamera, takes a snapshot of the system before and after manually installing the software you want to distribute.

Hence, it can only detect changes that were made to the system on which you manually install the software. Therefore, if there is data that is specific to that machine, for example, a serial number, this data will be copied to all machines to which you distribute the AutoPack profile.

There are several ways to deal with this, depending on the type and size of the changes that need to be made at each machine after distributing the AutoPack profile.

For example, if the changes are minor, let's say just adjusting a serial number at the target system, you might want to use TME 10 Remote Control as a convenient way to do this.

If there are more comprehensive changes, you might want to run a script on each system after the distribution that makes the changes.

[Top of Page | Previous Page | Next Page | Table of Contents | Index]

The TME 10 Deployment Cookbook

Chapter 5. Distributing Microsoft Office for Windows 95 Using AutoPack

In this chapter, we describe how to create an AutoPack file for Microsoft Office for Windows 95 and distribute it using TME 10 Software Distribution 3.1. Refer to Chapter 4. "Using the AutoPack Feature in TME 10 Software Distribution 3.1" for more information on how to use AutoPack.

In our scenario, we use the following:

Software:

- AIX 4.1.4 on the TMR Server rs600011
- Windows NT Server 4.0 with Service Pack 2 on tango
- Windows 95 on the target oscar
- Tivoli Management Platform 3.1 Revision C on rs600011 and tango
- TME 10 Desktop 3.1 for Windows on tango
- TME PC Agent 4.007 on the target oscar
- TCP/IP on all nodes

Hardware:

- RS/6000 Model 58H with 256 MB RAM for the TMR Server rs600011
- IBM ThinkPad Model 760LD (Type 9547) with 40 MB RAM (tango)
- IBM ThinkPad Model 755C (Type 9545 L9E) with 36 MB RAM (oscar)
- Token-ring 4 MBps

5.1 Creating an AutoPack for Microsoft Office for Windows 95

In this section we create an AutoPack for Microsoft Office for Windows 95.

This task is divided into the following steps:

- Creating a baseline snapshot
- Manually installing the software
- Building the AutoPack file

5.1.1 Creating the Baseline Snapshot

The baseline snapshot contains the status of the system configuration files you decide to monitor before manually installing the application that is to be packaged.

Start the AutoPack Control Center on TME 10 Managed Node tango by clicking on **Start**, **Programs**, **AutoPack Control Center** and **AutoPack Control Center** from the taskbar.

The following window will appear:

Figure 172. AutoPack Control Center Main Window

View figure.

Click on **Create Baseline Snapshot**.

The following window will appear:

Figure 173. AutoPack Control Center Create Baseline Snapshot Window

View figure.

In the Create Baseline Snapshot window, you can specify which files to monitor, where to store the baseline snapshot, and other options.

Change the directory in the Save Baseline To section to `c:\autotemp` (this is the subdirectory where all the AutoPack files for Microsoft Office for Windows 95 will be stored).

Click on the **Files To Monitor** tab.

The following window will appear:

Figure 174. Create Baseline Snapshot

View figure.

The registry will be monitored by default, any other files you want to be monitored can be added here. The AutoPack Control Center will always monitor the c:\autoexec.bat and c:\config.sys files, regardless of whether you remove them from the list or not. You can add files to the list, but they must be .ini files.

Click on the **Files To Exclude** tab.

The following window will appear:

Figure 175. Create Baseline Snapshot Files to Exclude Window

View figure.

In this window, you can specify the files that should be excluded from monitoring.

Leave the defaults and click on **Run**. You can monitor what is being done by watching the Component bar in the Scan Status window. Once the scan is complete, the following window will appear:

Figure 176. Scan Status Window

View figure.

Click on **OK**. You will be returned to the AutoPack Control Center main window.

5.1.2 Installing Microsoft Office for Windows 95

We are now ready to perform the manual installation of Microsoft Office for Windows 95.

The installation program of Microsoft Office for Windows 95 will be started from within AutoPack Control Center.

Figure 177. AutoPack Control Center Main Window

View figure.

Click on **Install Software**.

The following window will appear:

Figure 178. AutoPack Control Center Install Software Window

View figure.

Click on **Browse** to change to the source directory of Microsoft Office. As we are installing Microsoft Office for Windows 95 from the CD drive (D:) in this example, we change the Look in selection box to **D:**.

Before performing this step, make sure that the Microsoft Office for Windows 95 CD has been inserted into the CD drive.

Highlight **Setup.exe**, and then click on **Open**.

This will return you to the Install Software window, as shown in Figure 178.

Click on **Run**. This will start the actual installation.

The Microsoft Office for Windows 95 setup screen will be displayed:

Figure 179. Microsoft Office for Windows 95 Setup Screen

View figure.

Click on **Continue**.

Figure 180. Microsoft Office 95 Setup Window

View figure.

Enter the installation details and click on **OK**. The Confirm Name and Organization Information screen will be displayed:

Figure 181. Confirmation Screen

View figure.

Do the following:

1. Click on **OK**.
2. Enter your CD key.
3. Click on **OK**.

4. Click on **OK** to confirm agreement.

5. Click on **OK** to confirm folder location for install.

You will now be prompted for the type of installation you wish to perform. We will perform a Typical Install.

Click on **Typical Install**.

The installation will now continue.

Figure 182. Microsoft Office Installation Window

View figure.

Once the installation is complete, you will receive the following message:

Figure 183. Installation Complete Window

View figure.

Click on **OK**. This will return you to the AutoPack Control Center main window.

5.1.3 Building the AutoPack File

Note
We built this AutoPack file for Microsoft Office for Windows 95 package (63 MB including compression down to 38 MB) in 3 minutes. Those of you who are familiar with DiskCamera on the OS/2 platform will see that there is quite a performance improvement.

Figure 184. AutoPack Control Center Main Window

View figure.

Select **Build AutoPack**.

This will pop up the Build AutoPack window:

Figure 185. AutoPack Control Center Build AutoPack Window

View figure.

Change the Name field to `c:\autotemp\MSoffice.pak`, and then click on **Run**.

The Scan Status window will appear and APCC will begin comparing the system configuration against the baseline snapshot.

Figure 186. AutoPack Control Center Scan Status Window

View figure.

Note
The AutoPack Control Center uses scanning/differencing technology to create the contents of the File Package.

Click on **OK**. The MSoffice.def AutoPack Properties window will appear:

Figure 187. AutoPack Control Center AutoPack Properties Window

View figure.

In this window, you can define some additional attributes for the AutoPack file that has been created.

Under the General tag, set the Destination Drive (this is the drive on the remote client where MS Office will be installed) and the Staging Directory (this is a temporary directory used by software distribution during the installation of MS Office).

Note
The files in the temporary directory will be removed after installation, but the directory structure remains.

Click on the **File Mode** tab:

Figure 188. AutoPack Control Center AutoPack Properties Window

View figure.

Preserve mode of source files is the default radio button selected. This will preserve the current attributes of the files on the target system.

Click on the **Log Info** tab.

Figure 189. AutoPack Control Center AutoPack Properties Window

View figure.

Select the **Send to Distribution notice group** check box. Also, select the **Send to log file on** check box.

Enter `tango` as the Host and `c:\msoffice.log` as the path where the log file will be written.

Click on the **Distribution** tag:

Figure 190. AutoPack Control Center AutoPack Properties Window

View figure.

Select the **Stop Distribution on error** and the **Perform compression on distribution** check boxes.

Click on **Mandatory**.

Click on **Build**.

This will pop up the following window.

Figure 191. AutoPack Build Progress Window

View figure.

Once the build is complete, the following window will appear:

Figure 192. AutoPack Build Complete Window

View figure.

Click on **OK**. Click on **Close**.

The AutoPack file has now been built and stored in the file C:\autotemp\MSoffice.pak on tango.

5.2 Creating an AutoPack Profile for Microsoft Office for Windows 95

So far, we have created an AutoPack file containing all the files and scripts needed to install Microsoft Office for Windows 95.

This file resides on the node where AutoPack Control Center is installed, in our case, this is node tango.

However, to distribute the AutoPack file to a TME 10 PC Managed Node using TME 10 Software Distribution 3.1, we need to create a profile, since TME 10 Software Distribution 3.1 is a profile-based application.

The profile type needed to distribute an AutoPack file is called AutoPack.

From the TME 10 desktop, open the profile manager, called Autopacks, by double-clicking on **AutoPacks**.

The Profile Manager window will now appear:

Figure 193. TME 10 Profile Manager Window

View figure.

Select **Create** from the menu bar, and then **Profile...** from the pull-down menu.

The following window will appear:

Figure 194. TME 10 Create Profile Window

View figure.

Select **AutoPack** as the Type, and enter `MSoffice` in the Name/Icon Label field. Then select **Create & Close** to create the new profile.

Figure 195. TME 10 Profile Manager Window

View figure.

Notice that MSoffice has been added as a profile.

However, this profile is empty, so the next step is to set the profile properties. Open the profile properties by double-clicking on the **MSoffice** icon.

This will pop up the Set AutoPack Properties window:

Figure 196. Set AutoPack Properties Window

View figure.

In this window, you must specify the name of the AutoPack file and where to retrieve it. Enter `tango` in the Managed Node field and `c:\autotemp\MSoffice.pak` as the path.

Then select **Save & Close**.

5.3 Distributing the AutoPack Profile for Microsoft Office for Windows 95

We are now ready to distribute the AutoPack profile to oscar to install MS Office.

Figure 197. TME 10 Profile Manager Window

View figure.

From the Profile Manager window, select the profile **MSoffice** by clicking on it once with the left mouse button. Also, select **oscar** in the Subscribers section by clicking on it once with the left mouse button.

Select **Profile Manager** from the menu bar and then **Distribute...** from the pull-down menu.

The following window will appear:

Figure 198. TME 10 Distribute Profiles Window

View figure.

Click on **Distribute Now**.

If you go to the TME 10 desktop main window, you can monitor the status of the distribution:

Figure 199. TME 10 Desktop Window

View figure.

Once the distribution is finished, Microsoft Office for Windows 95 will be installed on oscar.

5.4 Using TME 10 Remote Control to Confirm Installation Results

From the TME 10 desktop on tango, double-click on the **rs600011 region** to open the Policy Region window, as shown below:

Figure 200. Policy Region

View figure.

:rs600011-region Window

Double click on **PcRemote**. The following window will appear:

Figure 201. Remote Control Window

View figure.

Change the Endpoint Type to **PcManagedNode**.

Change the Proceed if Timeout radio button to **Yes**.

Change the Remote Action to **Control**.

Highlight **oscar** and click on **Run & Close**. The remote session with oscar will now be established.

Once the session with oscar has been established, click on **Start**, **Programs** from the Windows 95 taskbar to see if the Microsoft Office for Windows 95 components have been added, as shown below:

Figure 202. Check Installation Via Remote Control

View figure.

[Top of Page | Previous Page | Next Page | Table of Contents | Index]

The TME 10 Deployment Cookbook

Chapter 6. Modifying Tivoli/Courier Using AEF

In this chapter, we will show some very basic examples of how to modify the appearance of the Tivoli/Courier application.

As Tivoli/Courier is a TME profile-based application, we can do this using the tools provided in the Application Extension Facility (AEF).

We will show the following examples:

- Modifying the Courier Distribute File Package dialog
- Modifying the Courier Remove File Package dialog
- Modifying bitmaps in file package profiles
- Modifying file package icons

To fully benefit from this chapter, you should have some knowledge in shell programming and about the Tivoli Management Environment.

Detailed information about AEF can be found in *Tivoli/AEF User's Guide*, GC31-8345.

Also, you should always read the `man` pages of the commands mentioned in this chapter.

For digging further into Courier, you should also read Chapter 7. "Beyond the GUI".

6.1 Prerequisites

To perform the examples in this chapter, you need the following software installed:

- TME Framework 3.0 or TME 10 Framework 3.1
- Tivoli/Courier 3.0 or TME 10 Software Distribution 3.1
- Tivoli Application Extension Facility 3.0 or TME 10 AEF 3.1

In our examples, we use TME 10 Software Distribution (Courier) 3.1 and TME 10 AEF 3.1 on the TME 10 Framework 3.1.

6.2 Modifying Courier Dialogs

The TME 10 Application Extension Facility allows you to make changes to existing TME 10 applications.

One of the possible changes is modifying existing dialogs in an application.

The dialogs themselves are coded in the Dialog Specification Language (DSL). DSL consists of the DSL compiler, dsl, and the DSL reverse compiler, rdsl, both of which are part of AEF.

Modifying a Courier dialog is divided into the following steps:

1. Obtaining a list of the dialogs contained in the Courier application
2. Retrieving the compiled version of the dialog from the TME framework
3. Reverse compiling the dialog to obtain a source code version that can be modified
4. Making the necessary changes to the dialog source code
5. Compiling the dialog definition
6. Adding the compiled dialog to the TME framework

A list of all the dialogs associated with the Tivoli/Courier application can be retrieved with the following command:

```
wlsdialog -r FilePackage
```

This will display a list of the dialogs associated with Courier. You will notice that we use the profile type FilePackage to retrieve the dialogs associated with Courier, since Courier is a profile-based application and, therefore, all the dialogs are associated with the profile type managed by Courier.

The above command will display the following list of available dialogs in Courier:

Figure 203. Output from wlsdialog Command

```
dialog name (customization status)

distribute_filepack
remove_filepack
size_filepack
properties_filepack
options_unix
options_dos
options_netware
netware_rights
options_windows
options_win95
options_nt
options_os2
select_fps
confirm2
confirm3
optional_info
excludes
advanced_win_opt
notice
sched_add
sched_edit
sched_expert
sched_browse
```

```
find
sched_popup
set_fields
sort_records
notice_browser
file_browser
file_browser_single
by_icon
by_name
close
collection
delete
deselect_all
name
open
order
refresh
remove
return
select_all
show_region
confirm
info
error
create_collection
edit_collection
clone
clone_button
execute_query
```

Note

With version 3.1 of Courier there is a new profile type available, called AutoPack, which is also a profile type managed by Courier.

To display the dialogs available in AutoPack, type the following command:

```
wlsdialog -r AutoPack
```

Once you know the dialog you want to modify, you can retrieve the compiled version of that dialog by typing the following command:

```
wgetdialog -r FilePackage error >error.d
```

In the above example, we retrieve the dialog named `error` and store its definition in the file error.d.

However, this definition is still in compiled format and can, therefore, not be modified. To get a source code version we can use the reverse DSL compiler rdsl. This will translate the compiled dialog code back into source code.

To reverse compile the file error.d we can use the command:

```
rdsl error.d >error.dsl
```

Note

The DSL reverse compiler rdsl is located in /usr/local/Tivoli/bin/aix4-r1/bin since we work with an AIX 4.1 system.

This will store the source code for the error dialog in the file error.dsl which is shown below:

Figure 204. error.dsl File

```
 Command Dialog
{
    Attributes
    {
        Name = error;
        PopDown =
            destroy&.:(1);
        Purpose = ERROR;
        StatusField = NO;
        Title = Msg(GenericCollectCat,Error,48);
    }

    Gadgets
    {
        CommandButton
        {
            Commands =
                destroy&.:(1);
            Name = ok;
            Title = Msg(GenericCollectCat,OK,39);
        }

        Message
        {
            Name = dummy1;
            Title = "";
        }

        Page
        {
            Name = page;
            Title = "";
        }

    }
 }
```

The following shell script can be used to reverse compile all dialogs associated with the FilePackage profile type:

Figure 205. extract_courier_dialogs Shell Script

```
#!/bin/ksh
LIST=$(wlsdialog -r FilePackage)
for i in $LIST
do
   print $i
   wgetdialog -r FilePackage $i >$i.d
   rdsl $i.d >$i.dsl
done
```

The above script will first list all the dialogs for the FilePackage profile type, then retrieve the compiled versions from the TME framework and translate them into the DSL source code.

If the script is called extract_courier_dialogs, you can invoke it by using the following command:

```
 ./extract_courier_dialogs
```

Note

You must have the appropriate TME role to run this script, namely, the super role. Therefore, be sure to call this shell script from a UNIX system under a user ID that is assigned to a TME administrator with this role.

In our example, we use the user root on an AIX system.

After the command has run, you will find several files with the extension .dsl in the directory from where you have run the script.

6.2.1 Modifying the Distribute File Package Dialog

In the first example, we will modify the dialog that pops up when distributing a Courier file package.

You can get to this dialog by selecting a Courier FilePackage profile with the right mouse button, and then selecting **Distribute...** from the context menu.

This will pop up the following window:

Figure 206. Distribute File Package Dialog (Original)

View figure.

As an easy modification, we will remove the **<< Query <<** button, so that the user will not be able to use the result of a Query Library as a distribution target list for a File Package profile.

The DSL source code should be stored in the file distribute_filepack.dsl after running the extract_courier_dialogs script shown in Figure 205.

Before making modifications, we copy this file by typing:

```
cp distribute_filepack.dsl dist.dsl
```

The DSL code for creating the **<< Query <<** button looks like the code fragment shown below:

Figure 207. Code Fragment to Create Query Button

```
Button
 {
   Commands =
     CB_DistQuerySubs&.:/.../SubscriberList("/.../DistributeToListList");
   Name = QueryButton;
   Title = Msg(FpDsl,"<< Query <<",564);
 }
```

Note

For a detailed explanation of the source code syntax used in the examples refer to *Tivoli/AEF User's Guide*, GC31-8345.

Use an editor, for example vi, and remove this code fragment from the dist.dsl file.

After doing so, compile the DSL code in dist.dsl by typing:

```
dsl dist.dsl >dist.d
```

Now that we have a binary version of the new dialog, we need to replace the original version in the TME framework.

To do so, we use the wputdialog command:

```
wputdialog -r FilePackage distribute_filepack <dist.d
```

To verify that the dialog has really been updated, we use the wlsdialog command again:

```
wlsdialog -r FilePackage
```

In the output there should be two lines for the distribute_filepack dialog:

```
distribute_filepack
distribute_filepack (resource-wide customization)
```

This verifies that we have successfully installed a customization for this dialog. In fact, TME does not replace the existing dialog, but instead installs the new version on top of the existing one.

The advantage of this is that if we want to have the original version back, we only need to remove the customization again.

If you now try to distribute a file package again, you will see the modified dialog, as shown in the following figure:

Figure 208. Distribute File Package Dialog (Modified)

View figure.

As you see, the **<< Query <<** button has disappeared.

To remove the customization, simply type:

```
wrmdialog -r FilePackage distribute_filepack
```

This will bring back the **<< Query <<** button.

6.2.2 Modifying the Remove File Package Dialog

We will now show another example, where we change the distribute_filepack dialog in Courier.

In contrast to the example in 6.2.1 , "Modifying the Distribute File Package Dialog" where we just removed a gadget, we will add an attribute in this example and change a gadget.

The default dialog for remove_filepack looks like the following figure:

Figure 209. Remove File Package Dialog (Original)

View figure.

We want to modify this dialog in the following ways:

- Change the background color of the dialog to orange to alert the user that he/she is going to remove files.
- Change the Remove Empty Directories field from a check box to a choice box.

In order to do so, we first need to change the DSL source file for this dialog. After running the extract_courier_dialogs script, the source code should be stored in a file called remove_filepack.dsl.

We make the following changes using an editor, for example, vi:

In the Attributes section of the dialog, add the following line after the `BitmapTitle = fp_icon` statement:

```
Background = orange
```

Replace the implementation of the EmptyDirsSwitch gadget with the following code fragment:

Figure 210. Code Fragment to Create Choice Box

```
Choice
 {
   Name = EmptyDirsSwitch;
   Show = ONE;
   Choices =
   "Remove empty dirs" { "1" },
   "Don't remove empty dirs" { "0" };
 }
```

After editing the file, compile it by typing:

```
dsl remove_filepack.dsl >remove.d
```

To add the modified dialog to the TME framework type:

```
wputdialog -r FilePackage remove_filepack <remove.d
```

To see the modified dialog, select a FilePackage profile with the right mouse and then select **Remove from Hosts...** from the context menu.

You will see the modified dialog:

Figure 211. Remove File Package Dialog (Modified)

View figure.

To remove the customization type:

```
wrmdialog -r FilePackage remove_filepack
```

This will restore the default dialog.

6.3 Modifying Courier Bitmaps and Icons

In this section, we will show examples of how to modify bitmaps and icons associated with Courier file packages.

By default, Courier uses the same icon for all file packages. Sometimes, however, you may wish to assign a different icon to a file package, for example, the application icon for a Windows or OS/2 application.

6.3.1 Modifying File Package Bitmaps

First, we will modify the bitmap that is associated with a FilePackage profile.

To demonstrate this, we will first create a new file package.

To do so, we select **Create** from the menu bar in our profile manager, and then **Profile...** from the pull-down menu.

The Create Profile window will appear:

Figure 212. Create Profile Window

View figure.

We select **FilePackage** as the Type and enter `X Clock` as the Name/Icon Label.

Then we press **Create & Close** to create the new profile.

Back in the Profile Manager window, we will see a new icon for the newly added profile:

Figure 213. Profile Manager Window

View figure.

To see the bitmap for the profile, we double-click on the **X Clock** icon.

This will pop up the File Package Properties window:

Figure 214. File Package Properties Window

View figure.

In the upper left corner, you see the bitmap that is associated with a FilePackage profile.

Note

Although the bitmap used in the FilePackage Properties window is identical to the bitmap associated with the X Clock icon in the Figure 213 the bitmap there cannot be modified by the procedure shown here.

Instead, you will have to use the procedure shown in 6.3.2 , "Modifying the File Package Icon", since the resource type here is an icon, not a bitmap.

To determine the name of the bitmap that we want to change, we type the following command to list all bitmaps associated with the FilePackage resource:

```
wlsbitmap -r FilePackage
```

The output for that command should look similar to the following:

Figure 215. Output from wlsbitmap Command

```
bitmap name (customization status)

fp_icon
right
left
up
down
Select
Deselect
Collection_icon (resource-wide customization)
left_right
clock
ArrowDown
ArrowLeft
ArrowRight
ArrowUp
Collection_icon
Query
```

The bitmap we want to modify is fp_icon.

To replace the default bitmap with our own, we need to have the new bitmap available in .xpm format.

Our new bitmap file is called clock.xpm, so we can invoke the following command to assign a new bitmap to the X Clock profile.

```
wputbitmap -l '@FilePackage:X Clock' fp_icon <clock.xpm
```

After the command has run, we can double-click on the X Clock icon again.

The bitmap in the upper left corner has changed:

Figure 216. File Package Properties Window

View figure.

You will notice, however, that the X Clock icon in the profile manager itself has not changed. The reason for this is that to change this bitmap, we also have to modify the icon resource.

We will show how to do this in 6.3.2 , "Modifying the File Package Icon".

6.3.2 Modifying the File Package Icon

Icons are somewhat different from normal bitmaps. Although each icon normally has a bitmap that makes up its appearance, the process for modifying an icon is a little more complex than modifying a simple bitmap.

The main difference that is important to us in changing the bitmap that is associated with an icon is that each icon has a state.

To replace an icon's bitmap, we need to use the wputicon command. This command, however, requires two parameters that we first need to determine:

- The resource state
- The icon's dialog file

Every icon has a resource state associated with it. The default state for an icon is "normal".

To list the icon states for the FilePackage resource, we type:

```
wlsicon -r FilePackage
```

This will display the following output:

```
normal
```

Also, each icon has a dialog associated with it. Although we will not modify the dialog in this example, we need the dialog descriptor file as an input for the wputicon command, so we retrieve it with the following command:

```
wgetdialog -I normal -r FilePackage >fp.d
```

The default bitmap for the FilePackage icon can be retrieved by typing:

```
wgetbitmap -I normal -r FilePackage >fp.xpm
```

In our example, we will replace the default bitmap with a bitmap from the AIX Common Desktop Environment (CDE) showing a mail symbol.

In our example, this bitmap file is stored in new.xpm.

To replace the bitmap for the FilePackage icon, we type:

```
wputicon -r FilePackage normal fp.d new.xpm
```

Note
You should notice that we have to use the dialog descriptor `fp.d` which we had previously retrieved, although we have not done any modification to it.

To put the change into effect, we have to stop and start the TME 10 desktop.

After starting the desktop and opening the profile manager with the FilePackage profiles again, you should see that the icons for the file packages have changed, as shown in the following figure:

Figure 217. Profile Manager Window

View figure.

Note
You should notice that the profile called "Auto1" has not changed. The reason for this is that this profile has a profile type AutoPack which has its own icons.

In the above example, we have changed the icon appearance of all FilePackage icons.

However, this might not be desirable. Instead, you may wish to associate each FilePackage with the application icon of the application that is contained in the FilePackage, so all the FilePackage icons would look different.

One solution to cope with this is to introduce new resource states for the FilePackage icons.

For example, we can introduce a new state xclock which we will then use just to change the appearance of the X Clock profile.

We can use the same command, wputicon, however we will just use xclock as the state, instead of normal:

```
wputicon -r FilePackage xclock fp.d new.xpm
```

To change the icon bitmap for the normal state back to the default we type:

```
wputicon -r FilePackage normal fp.d fp.xpm
```

So far, all the FilePackage icons would be switched back to the default bitmap after re-starting the desktop.

To associate the new bitmap with just the X Clock profile, we have to change the state of this resource to "xclock":

```
wputstate -l '@FilePackage:X Clock' xclock
```

To verify that the state has been changed, you can type:

```
wgetstate -l '@FilePackage:X Clock'
```

This should produce the following output:

```
xclock
```

After restarting the TME 10 desktop, only the icon for the X Clock profile has changed to the new bitmap:

Figure 218. Profile Manager Window

View figure.

To switch back the bitmap for X Clock, you can simply set the state back to "normal":

```
wputstate -l '@FilePackage:X Clock' normal
```

Then re-start the desktop again.

[Top of Page | Previous Page | Next Page | Table of Contents | Index]

The TME 10 Deployment Cookbook

Chapter 7. Beyond the GUI

The aim of this chapter is to show how you can get the most out of TME 10 Software Distribution Release 3.1. This chapter describes features that are not accessible through the GUI. If you are new to Courier, this might not be the right place to start. You should read the other chapters of this redbook first.

If, on the other hand, you just read the manual, and are now dissatisfied with the GUI functionality, then this is the chapter to read. A whole lot of functionality is not available through the GUI, but this does not mean it is not there.

We will explain how to use several file package options. We will gradually create a general purpose install script. Within this script you will leverage of all the configuration parameters set with the GUI or CLI. You can exploit these in your scripts.

As an example, we will create a script to distribute a C program in source form and then compile it on the destination.

The example uses most types of scripts:

- Before distribution
- After distribution
- Remove distribution
- Commit distribution

We did not use after_removal, before_src and after_src scripts.

In the course of this chapter, you will learn how to write effective BARC scripts, access file package parameters from within a BARC script, write IDL calls, and much more.

7.1 File Package Parameters

A file package is identified by several parameters. The obvious place to specify these parameters is the TME 10 Software Distribution Release 3.1 GUI. However, the parameters you specify through the GUI are not all the parameters you can use.

You can find a comprehensive list of parameters in the *TME 10 Software Distribution Release 3.1 Reference Manual*, GC31-8331. Or, you can export an arbitrary file package and look at the exported file. There are numerous ways to set these parameters. Modifying an exported file package is probably the easiest way.

First, let's take a look at such an exported file package file.

7.1.1 The Exported File Package Configuration File

This file lists all the configurable parameters. You can generate it using the command:

```
wexprtfp @<file package name>
```

It writes the exported file package configuration file to your terminal. The sample file shown below is the exported configuration file of a fresh (empty) file package.

Note
If you do not have an empty file package, you should create one one, using the TME 10 GUI. Just follow the standard procedure to create a FilePackage profile within a profile manager.

```
#*TFP-v2.02 Tivoli Filepack (Version 2.02)
postproc=
preproc=
do_checksum=n
do_compress=n
  .
  .
  .
log_file_uid=
log_file_gid=
log_file_mode=
%
%
%
```

You can see four sections in this file. The first line is a comment. Then there is the list of parameters. This list is ended by the percent sign on a line by itself. Below this line is the part where the included files are listed. This list is, again, ended by a percent sign on a line by itself.

The part below the second percent sign lists the nested file packages.

The part below the third percent sign lists the excluded files.

Note
Since, in the above example, we have exported an empty FilePackage profile, the sections for the included and excluded files, as well as the nested file packages, are all empty.

All the parameters can be grouped in sections.

- General parameters
- UNIX parameters
- NetWare parameters
- DOS parameters
- Windows 3.1 parameters
- Windows 95 parameters
- Windows NT parameters
- OS/2 parameters
- Included files section
- Nested file package section

- Excluded files section

The next sections will explain the parameters in detail. They are listed in alphabetical order within the groups.

The values shown are the defaults. We provide some tips on how to use the parameters. You can browse through them quickly or return to them when you need more information on one particular item.

7.1.1.1 General Parameters

We give a list of all the parameters. Most are explained in the manual, but it does not say how to use them, nor the way in which they effect each other.

Therefore, the main purpose of this section is to provide tips for the most important parameters regarding their effects and usage.

- append_log

  Default: **append_log=n**

  If you specify a logfile, then the logfile will be re-created each time you distribute. Setting this value to **y** will append output of consecutive distributions to this file.

  This option cannot be set in the GUI.

  Command: `wsetfpopts -T gen -a y @"filepackagename"` to set to **y**.

- backup_fmt

  Default: **backup_fmt=**

  This can be used to manipulate how TME 10 Software Distribution Release 3.1 backs up previously distributed files on the target.

  You assign a format string to this parameter.

  The syntax is a normal path name, plus three macros, %p, %f and %n:

  - %p is the install path on the target.
  - %f is the filename.
  - %n is a sequence number.

  To backup files to a directory named "back" in the install directory, use format **%p/back/%f**. If you want to save more than the previous version, use format **%p/back/%f.%n**.

  This will create files with the original name with .1, .2, ... appended to them.

  Command: `wsetfpopts -T gen -b "%p/back/%f.%n" @"filepackagename"` to set format to **%p/back/%f.%n**.

  Think of the implications of this format. It is not as obvious as you might think.

  Instead of appending the increment to the filename, you might want to append it to the directory name.

  Why? Well, if you used to distribute changed source files only then the numbering may no longer be consistent. Files with the same extension will not belong to a same distribution.

To be able to return to a previous distribution, you must be able to replace the files with the right files. We think, it is far easier to create directories with incremental extensions.

You may choose to use the following format:

%p/back.%n/%f.

- create_dirs

  Default: **create_dirs=y**

  creates the directories on the target if they are not already present.

  Command: `wsetfpopts -T gen -C n @"filepackagename"` to set to **n**.

- default_dest

  Default: **default_dest=**

  The path where the files get placed on the target is controlled by three parameters:

  - xxx_platform_prefix
  - keep_paths
  - default_dest

  The destination path is /xxx_platform_prefix/default_dest/filename if keep_paths has the value n. The destination path is /xxx_platform_prefix/default_dest/sourcedir/filename if keep_paths has the value y.

  Command: `wsetfpopts -T gen -D SomeDir @"filepackagename"` to set to **SomeDir**.

  You can override this mechanism for specific files with the d option in the file list section of the file package definition format.

- default_dir_mode

  Default: **default_dir_mode=**

  Sets the default access permissions on the directories on the target.

  You assign an octal value. The value is used in the `chmod` command.

  The interpretation depends on the platform. On UNIX systems you will be able to specify access rights for owner, group and others. On other systems, it depends on the user and group security implementation on that operating system.

  You can always assign 4 or 6, meaning Read-Only and Read-Write access.

  Command: `wsetfpopts -T gen -M 6 @"filepackagename"` to set the mode to **Read-Write**.

  This sets the global access permissions. If you require more detail, thus setting permissions on a per-file basis, you can specify this in the filelist section of the file package definition format.

- default_file_mode

Default: **default_file_mode=**

Similar to default_dir_mode but for files. See default_dir_mode.

Command: `wsetfpopts -T gen -m 4 @"filepackagename"` to set the mode to **Read-Only**.

- default_mtime

  Default: **default_mtime=**

  Sets the default modification time and date for files and directories distributed.

  The value must be a number formatted as follows:

  - mmddHHMM[.SSyy]
  - mmddHHMM[yy]

  The variables to the parameter are defined as follows:

  Table 1. Date Parameter Format

Format	Description
mm	Specifies the month number
dd	Specifies the number of the day in the month
HH	Specifies the hour of the day (using a 24-hour notation)
MM	Specifies the minute
SS	Specifies the number of seconds
yy	Specifies the last two digits of the year

  Command: `wsetfpopts -T gen -i 1025133377 @"filepackagename"` to set the default modification time and date to November 25 13:33 (1:33 PM) 1977.

  If you want to specify different mtime values for different files, use the `t` option in the file list section of the file package definition format.

- descend_dirs

  Default: **descend_dirs=n**

  If you specify directories in the file list section of the file package definition format, then all files below this directory will be packed with the distribution depending on this value.

  - **y** means take all files under the directory.
  - **n** means take only the directory.

  Command: `wsetfpopts -T gen -d y @"filepackagename"` to set to **y**.

  If you need different settings for different directories then use the `o` option in the file list section of the file package definition format.

- do_checksum

  Default: **do_checksum=n**

Calculates a check sum on the distribution and verifies this check sum on the target.

Command: `wsetfpopts -T gen -x y @"filepackagename"` to set to **y**.

- do_compress

  Default: **do_compress=n**

  Compresses the file package before distribution.

Note
Be advised that the size might increase if the files are already compressed.

  Command: `wsetfpopts -T gen -c y @"filepackagename"` to set to **y**.

- file_cksums

  Default: **file_cksums=n**

  Use a check sum on the files distributed to determine if they were changed on the target.

  The normal mode of operation only checks mtime, size, owner, group and file mode.

  Command: `wsetfpopts -T gen -F y @"filepackagename"` to set to **y**.

- follow_links

  Default: **follow_links=y**

  If there are symbolic links in the files you distribute, then this option specifies whether to package the files referred to by the symbolic link.

  If you choose not to do so, you must be sure that the directories the links refer to are present on the target.

  Non-UNIX targets do not support the symbolic link concept. Never set this option to **y** when distributing to non-UNIX systems.

  Command: `wsetfpopts -T gen -f n @"filepackagename"` to set to **n**.

- install_progs

  Default: **install_progs=n**

  Controls the placement of the install scripts.

  By default, the install scripts are copied to temporary files on the target. After the distribution has completed, they are removed.

  If you want to keep the scripts permanently on the target, set this option to **y**.

  In this case the scripts get copied to a directory:

  - /xxx_platform_prefix/default_dest/TivoliCntlDir/file_package_name

  with names:

  - architecture_before

    - architecture_after
    - architecture_commit
    - architecture_removal

  Command: `wsetfpopts -T gen -I y @"filepackagename"` to set to **y**.

- keep_paths

  Default: **keep_paths=n**

  This option controls if the full source path of the source files gets re-created on the target below the /xxx_platform_prefix/default_dest directory.

  We think, the default should be **y** as this is what you would expect in normal situations.

  Command: `wsetfpopts -T gen -k y @"filepackagename"` to set to **y**.

- list_path

  Default: **list_path=**

  This is a quite useful feature. When set, it creates a file containing the list of distributed files.

  The name of the file is the file package name with a .log extension. This is the only way to have a record of which files have been distributed or removed.

  Some observations:

    - It does not get appended, just overwritten on consecutive distributions.
    - When doing a commit separated from the distribution, the file is emptied.
    - It resides on the target. It would be nice to have it on the source host instead of on the client.

  Command: `wsetfpopts -T gen -l /some/dir @"filepackagename"` to set to **/some/dir**.

Note
If you want to use this feature, you have to secure it to a different location in your after script. You could send it back to the source in this script, too.

- log_file

  Default: **log_file=**

  Sets the name of the log file to use for the distribution errors and progress.

  The file is created on the host specified by log_host. The information is useful for debugging, but cannot be used for record keeping.

  Command: `wsetfpopts -T gen -L /some/filename @"filepackagename"` to set to **/some/filename**.

- log_file_gid

  Default: **log_file_gid=**

Sets the group for the logfile.

It can be numeric or a group name. A group name gets converted to a numeric value. If you set a group name using the commands or TME 10 desktop, they are evaluated on the TMR server.

If using the export/import facility, they are evaluated on the source host.

Command: `wsetfpopts -T gen -H 123 @"filepackagename"` to set to **123**.

- log_file_mode

  Default: **log_file_mode=**

  Sets the file access permissions for the log file. See default_dir_mode for details on file permissions.

  Command: `wsetfpopts -T gen -j 644 @"filepackagename"` to set to Read-Write for owner, Read-Only for the rest.

Note
You can use this, for example to restrict access to log file information.

- log_file_uid

  Default: **log_file_uid=**

  Sets the owner of the log file.

  Same discussion applies as for log_file_gid.

  Command: `wsetfpopts -T gen -B steef @"filepackagename"` to set to **steef**.

- log_host

  Default: **log_host=**

  The host where the log file gets created. This host must be a TME 10 Managed Node.

  Command: `wsetfpopts -T gen -h rs600024 @"filepackagename"` to set to **rs600024**.

- mail_id

  Default: **mail_id=**

  When set the log file messages get mailed to this user.

Note
This uses UNIX mail, so this must be set up correctly.

  Command: `wsetfpopts -T gen -e user@some.where @"filepackagename"` to set to **user@some.where**.

- modifiers

  Default: **modifiers=0**

  For internal use only.

- nested_first

  Default: **nested_first=n**

  Determines if nested file packages are distributed before or after the files in the top level file pack.

Note
If your current file pack depends on the presence of the nested file packs then set this option to **y**.

  Command: `wsetfpopts -T gen -N y @"filepackagename"` to set to **y**.

- no_overwrite

  Default: **no_overwrite=n**

  If set to **y**, then existing files on the target cannot be overwritten.

  This option only applies when no backup format is in use. If you are using a backup format, then this option has no effect.

  Command: `wsetfpopts -T gen -n y @"filepackagename"` to set to **y**.

- post_notice

  Default: **post_notice=y**

  When set to **y**, then the log file entries will appear in the TME 10 Software Distribution Release 3.1 notice group.

  Command: `wsetfpopts -T gen -a y @"filepackagename"` to set to **y**.

- postproc

  Default: **postproc=**

  This specifies a program that will be used as a filter on the package as it leaves the source host.

  You can use encryption programs to add security. Or, you can use a different compression program. This option is related to the preproc option.

  Both must match. For example, if you use a compression program with one option, you should use the appropriate decompression program with the other.

  Command: `wsetfpopts -T gen -a y @"filepackagename"` to set to **y**.

- preproc

  Default: **preproc=**

  This specifies a program that will be used as a filter on the package as it arrives on the target.

  You can use encryption programs to add security. Or, you can use a different compression program. This option is related to the postproc option.

  Command: `wsetfpopts -T gen -a y @"filepackagename"` to set to **y**.

- prog_env

Default: **prog_env=**

This option allows you to set the run-time environment of the BARC scripts.

You assign a string to this option. The string is evaluated at run time. Then the environment is passed to the script.

The syntax of the string needs some explanation:

The trick is to have the assignment delayed. If you enter `FPNAME=$fpname` then the expression $fpname gets evaluated at the time you enter it.

When you enter `FPNAME=\$fpname` then the $fpname expression is interpreted as it and passed on as $fpname instead of its value.

This is the way you enter this in an exported file package. When using the command line, you have to further protect the backslash from being interpreted by the shell. You must surround it in double quotes.

Command: `wsetfpopts -T gen -E FPNAME="\$"fpname @"filepackagename"` to have the FPNAME set to the file package name at run time.

Note
We use this option in our sample scripts. In fact, when creating serious scripts, this option is essential to bootstrap the rest of the environment.

By default, the environment is rather empty when your scripts execute.

You don't even know the name of the file package you are running the script for. It is our opinion that all the parameters found in the parameter file (the exported file package) should be present as environment variables at script execution time.

If you do not use this information you will have to hard code, for example, the destination directory in your script. If you then change this in the GUI, you will have to change your script again.

It is far easier to have the value of the field in the GUI available as an environment variable in your script.

For an extensive example of how to do this see Figure 220. You will find a sample script that sets up a complete environment before executing the script actions.

- rm_empty_dirs

  Default: **rm_empty_dirs=n**

  If set the empty directories under the destination directory are deleted.

  Command: `wsetfpopts -T gen -r y @"filepackagename"` to set to **y**.

- rm_extraneous

  Default: **rm_extraneous=n**

  When TME 10 Software Distribution Release 3.1 removes files from the target in a remove file package operation, this option influences how files contained in directories of the distribution but not part of the distribution, are treated.

  When set to y they will be deleted.

Command: `wsetfpopts -T gen -R y @"filepackagename"` to set to **y**.

Note
For example, when distributing a Windows dynamic link library to the system directory you do not want the remove file package operation to delete the system directory.

- skip_older_src

  Default: **skip_older_src=n**

  Do not overwrite more recent files on the target.

  You must set this to y when your distribution contains system files.

  In Windows many programs contain system dynamic link libraries like 3Dcntr.dll. You should not overwrite these with older versions.

  Command: `wsetfpopts -T gen -o y @"filepackagename"` to set to **y**.

- src_after_as_uid, src_after_input_path, src_after_prog_path, src_before_as_uid, src_before_input_path, src_before_prog_path, src_before_skip_non_zero

  Defaults: **empty**

Note to Tivoli
These parameters control the before and after script on the source host. In our case these scripts did not work. We tested with a limited availability version of TME 10 Software Distribution Release 3.1.

- src_relpath

  Default: **src_relpath=**

  This option sets the working directory before packing the source files.

  All relative paths (paths not starting with a slash) are evaluated from this position onward. You will almost certainly have to specify this option if you set the keep_paths option.

  If not, all directories are created from the UNIX root on the source host. It must be an absolute path, so the first character must be a slash.

  Command: `wsetfpopts -T gen -S /some/project/dir @"filepackagename"` to set to **/some/project/dir**.

  You should set this option to a directory under which your sources reside.

  Suppose you distribute a program like Netscape for Windows 95. This program uses different subdirectories under C:\Program Files\Netscape\Navigator.

  In this case, you must specify `keep_paths`. Otherwise, all the files in lower directories get distributed to the top level directory on the target.

  Suppose your source files are in a directory called

  ```
  /SoftwareDistribution/windows95/netscape.nav/Netscape/Navigator
  ```

  You want to have

```
/SoftwareDistribution/windows95/netscape.nav/
```

as the src_relpath, C:\Program Files as win95_platform_prefix and Netscape/Navigator in the file list.

Note
Be sure to end the src_relpath with a slash!

- stop_on_error

  Default: **stop_on_error=y**

  Stop the distribution if an error occurs.

  Command: `wsetfpopts -T gen -s y @"filepackagename"` to set to **y**.

7.1.1.2 UNIX Parameters

- UNIX BARC parameters

  Table 2. The UNIX BARC Parameters

Parameter name	Default value
unix_before_prog_path	<empty>
unix_before_prog_from_src	n
unix_before_as_uid	<empty>
unix_before_skip_non_zero	n
unix_before_input_path	<empty>
unix_before_input_from_src	n
unix_after_prog_path	<empty>
unix_after_prog_from_src	n
unix_after_as_uid	<empty>
unix_after_input_path	<empty>
unix_after_input_from_src	n
unix_commit_prog_path	<empty>
unix_commit_prog_from_src	n
unix_commit_as_uid	<empty>
unix_commit_input_path	<empty>
unix_commit_input_from_src	n
unix_removal_prog_path	<empty>
unix_removal_prog_from_src	n
unix_removal_as_uid	<empty>
unix_removal_input_from_src	n
unix_removal_input_path	<empty>
unix_after_removal_prog_path	<empty>
unix_after_removal_prog_from_src	n
unix_after_removal_as_uid	<empty>

unix_after_removal_input_path	<empty>
unix_after_removal_input_from_src	n
unix_on_error_prog_path	<empty>
unix_on_error_prog_from_src	n
unix_on_error_as_uid	<empty>
unix_on_error_input_path	<empty>
unix_on_error_input_from_src	n

These are the UNIX BARC parameters. There are six points at which you can choose to run a script.

- Before distribution
- After distribution
- On commit distribution
- Before removal of distribution
- After removal of distribution
- On error in distribution

Each BARC script is parameterized by five parameters (there is one additional parameter for before scripts, the stop_on_error flag):

- The script file
- The script file location (on the source or target)
- The script input file
- The script input file location (on the source or target)
- The script uid at run time
- The stop on error flag used in before scripts

The script file is an executable file. This can be any valid executable file format.

It must be executable on the target system. For scripts, you must explicitly specify the interpreter in the first line of the script.

We show three examples for Bourne shell scripts, Born again shell scripts and Perl version 5 scripts.

```
#!/bin/sh                (Bourne Shell)
```

or

```
#!/bin/local/bin/bash    (Born again)
```

or

```
#!/bin/local/bin/perl5   (Perl 5)
```

If you do not specify this line, the file will be started as if it were a binary executable image.

You can specify the user under which the script must run on the target system. This user must be valid on the target system. If you do not specify a user, then the user nobody (uid -2) is used.

The input file is a readable file that is passed on standard input to the script.

It can be used for passing information to the script. In our scripts, we do not use this feature, but you may choose to do so if you find a good reason.

We prefer to have the script itself gather the information it needs.

The script gets parameters passed to it. The first parameter contains the reason why the script was called.

Here is a list of possible values:

- before
- after
- commit
- removal
- after_removal

Note

There is a special case when using scripts on the source. These scripts do not fall under the UNIX scripts, but since the source host is a UNIX host, this is the place to mention them.

There are two types of source scripts: before and after scripts.

These are called on two occasions: at install time and at removal time.

We did not get the removal time scripts to run. The scripts get as first parameter either before or after and as a second parameter install or un-install.

Thanks to these features you can write one single script for all occasions.

All the script has to do is parse the arguments. We created the following sample script to demonstrate this method.

It is a skeleton script that carries out no actions.

Note

We will use this skeleton through the course of this chapter and extend it into a general purpose installation and removal script.

```
#!/bin/ksh
before_install()
{
# enter before install actions on source host
 return 0
}

before_uninstall()
{
# enter before removal actions on source host
 return 0
}
```

```
after_install()
{
# enter after install actions on source host
 return 0
}

after_uninstall()
{
# enter after removal actions on source host
 return 0
}

before()
{
# enter before install actions on target host
 return 0
}

after()
{
# enter after install actions on target host
 return 0
}

commit()
{
# enter commit actions on target host
 return 0
}

removal()
{
# enter removal actions on target host
 return 0
}

after_removal()
{
# enter after removal actions on target host
 return 0
}

usage()
{
 echo "Do not use from command line."
}

case $1 in
before )
    case $2 in
    install )
    before_install $1 $2
    RTN=$?
    break;;
    uninstall )
    before_uninstall $1 $2
    RTN=$?
    break;;
    * )
        before $1
    RTN=$?
    break;;
    esac
    break;;
after )
    case $2 in
    install )
    after_install $1 $2
    RTN=$?
    break;;
    uninstall )
    after_uninstall $1 $2
    RTN=$?
    break;;
    * )
        after $1
    RTN=$?
    break;;
    esac
    break;;
commit )
 commit $1
 RTN=$?
 break;;
removal )
 removal $1
 RTN=$?
 break;;
after_removal )
 after_removal $1
 RTN=$?
 break;;
* )
 usage
 RTN=1
 break;;
esac

exit $RTN
```

- UNIX default access privileges

Table 3. UNIX Default Access Privileges

Parameter name	Default value
unix_default_dir_gid	<empty>
unix_default_dir_uid	<empty>
unix_default_file_gid	<empty>
unix_default_file_uid	<empty>

These parameters set the default user and group owners for files and directories distributed. Again, it is best to use numbers instead of names here. The evaluation rules for names vary upon how you enter them.

- UNIX platform prefix

Table 4. UNIX Platform Prefix

Parameter name	Default value
unix_platform_prefix	<empty>

This is the top directory under which the distribution will be placed.

See the discussion on the default_dest general parameter.

This parameter also serves another purpose: When this is empty, the UNIX targets are ignored.

When you distribute to a UNIX managed node and this parameter is empty, then you will get no error message.

Note
The distribution will appear to have succeeded but, in fact, nothing happened. The same is true for the other platforms.

If the platform prefix is empty, the hosts will be skipped. If the platform prefix is not empty, then the distribution will be attempted.

7.1.1.3 NetWare Parameters

Table 5. NetWare Parameters

Parameter name	Default value
nw_after_input_from_src	n
nw_after_input_path	<empty>
nw_after_prog_from_src	n
nw_after_prog_path	<empty>
nw_after_removal_input_from_src	n
nw_after_removal_input_path	<empty>
nw_after_removal_prog_from_src	n
nw_after_removal_prog_path	<empty>
nw_before_input_from_src	n
nw_before_input_path	<empty>
nw_before_prog_from_src	n
nw_before_prog_path	<empty>
nw_before_skip_non_zero	n
nw_bindery	n
nw_broadcast_message	<empty>
nw_broadcast_mode	n
nw_commit_input_from_src	n
nw_commit_input_path	<empty>
nw_commit_prog_from_src	n
nw_commit_prog_path	<empty>
nw_context	<empty>
nw_force_disconnect	n
nw_login_get_from_src	n
nw_login_prog_path	<empty>
nw_login_replace	n
nw_on_error_input_from_src	n

nw_on_error_input_path	<empty>
nw_on_error_prog_from_src	n
nw_on_error_prog_path	<empty>
nw_platform_prefix	<empty>
nw_removal_input_from_src	n
nw_removal_input_path	<empty>
nw_removal_prog_from_src	n
nw_removal_prog_path	<empty>
nw_tree	<empty>
nw_trustee_rights	<empty>

7.1.1.4 DOS Parameters

Table 6. DOS Parameters

Parameter name	Default value
dos_after_input_from_src	n
dos_after_input_path	<empty>
dos_after_option	<empty>
dos_after_prog_from_src	n
dos_after_prog_path	<empty>
dos_after_removal_input_from_src	n
dos_after_removal_input_path	<empty>
dos_after_removal_option	<empty>
dos_after_removal_prog_from_src	n
dos_after_removal_prog_path	<empty>
dos_before_input_from_src	n
dos_before_input_path	<empty>
dos_before_prog_from_src	n
dos_before_prog_path	<empty>
dos_before_skip_non_zero	n
dos_commit_input_from_src	n
dos_commit_input_path	<empty>
dos_commit_option	<empty>
dos_commit_prog_from_src	n
dos_commit_prog_path	<empty>
dos_on_error_input_from_src	n
dos_on_error_input_path	<empty>
dos_on_error_option	<empty>
dos_on_error_prog_from_src	n

dos_on_error_prog_path	<empty>
dos_platform_prefix	<empty>
dos_removal_input_from_src	n
dos_removal_input_path	<empty>
dos_removal_option	<empty>
dos_removal_prog_from_src	n
dos_removal_prog_path	<empty>

7.1.1.5 Windows 3.1 Parameters

Table 7. Windows 3.1 Parameters

Parameter name	Default value
win_after_input_from_src	n
win_after_input_path	<empty>
win_after_option	<empty>
win_after_prog_from_src	n
win_after_prog_path	<empty>
win_after_removal_input_from_src	n
win_after_removal_input_path	<empty>
win_after_removal_option	<empty>
win_after_removal_prog_from_src	n
win_after_removal_prog_path	<empty>
win_before_input_from_src	n
win_before_input_path	<empty>
win_before_prog_from_src	n
win_before_prog_path	<empty>
win_before_skip_non_zero	n
win_commit_input_from_src	n
win_commit_input_path	<empty>
win_commit_option	<empty>
win_commit_prog_from_src	n
win_commit_prog_path	<empty>
win_on_error_input_from_src	n
win_on_error_input_path	<empty>
win_on_error_option	<empty>
win_on_error_prog_from_src	n
win_on_error_prog_path	<empty>
win_optional_dist	n
win_optional_dist_timeout	120

win_platform_prefix	<empty>
win_removal_input_from_src	n
win_removal_input_path	<empty>
win_removal_option	<empty>
win_removal_prog_from_src	n
win_removal_prog_path	<empty>

7.1.1.6 Windows 95 Parameters

Table 8. Windows 95 Parameters

Parameter name	Default value
win95_after_input_from_src	n
win95_after_input_path	<empty>
win95_after_option	<empty>
win95_after_prog_from_src	n
win95_after_prog_path	<empty>
win95_after_removal_input_from_src	n
win95_after_removal_input_path	<empty>
win95_after_removal_option	<empty>
win95_after_removal_prog_from_src	n
win95_after_removal_prog_path	<empty>
win95_before_input_from_src	n
win95_before_input_path	<empty>
win95_before_prog_from_src	n
win95_before_prog_path	<empty>
win95_before_skip_non_zero	n
win95_commit_input_from_src	n
win95_commit_input_path	<empty>
win95_commit_option	<empty>
win95_commit_prog_from_src	n
win95_commit_prog_path	<empty>
win95_on_error_input_from_src	n
win95_on_error_input_path	<empty>
win95_on_error_option	<empty>
win95_on_error_prog_from_src	n
win95_on_error_prog_path	<empty>
win95_optional_dist	n
win95_optional_dist_timeout	0
win95_platform_prefix	<empty>

win95_removal_input_from_src	n
win95_removal_input_path	<empty>
win95_removal_option	<empty>
win95_removal_prog_from_src	n
win95_removal_prog_path	<empty>

7.1.1.7 Windows NT Parameters

Table 9. Windows NT Parameters

Parameter name	Default value
nt_after_input_from_src	n
nt_after_input_path	<empty>
nt_after_option	<empty>
nt_after_prog_from_src	n
nt_after_prog_path	<empty>
nt_after_removal_input_from_src	n
nt_after_removal_input_path	<empty>
nt_after_removal_option	<empty>
nt_after_removal_prog_from_src	n
nt_after_removal_prog_path	<empty>
nt_before_input_from_src	n
nt_before_input_path	<empty>
nt_before_prog_from_src	n
nt_before_prog_path	<empty>
nt_before_skip_non_zero	n
nt_commit_input_from_src	n
nt_commit_input_path	<empty>
nt_commit_option	<empty>
nt_commit_prog_from_src	n
nt_commit_prog_path	<empty>
nt_on_error_input_from_src	n
nt_on_error_input_path	<empty>
nt_on_error_option	<empty>
nt_on_error_prog_from_src	n
nt_on_error_prog_path	<empty>
nt_platform_prefix	<empty>
nt_removal_input_from_src	n
nt_removal_input_path	<empty>
nt_removal_option	<empty>

nt_removal_prog_from_src	n
nt_removal_prog_path	<empty>

7.1.1.8 OS/2 Parameters

Table 10. OS/2 Parameters

Parameter name	Default value
os2_after_input_from_src	n
os2_after_input_path	<empty>
os2_after_option	<empty>
os2_after_prog_from_src	n
os2_after_prog_path	<empty>
os2_after_removal_input_from_src	n
os2_after_removal_input_path	<empty>
os2_after_removal_option	<empty>
os2_after_removal_prog_from_src	n
os2_after_removal_prog_path	<empty>
os2_before_input_from_src	n
os2_before_input_path	<empty>
os2_before_prog_from_src	n
os2_before_prog_path	<empty>
os2_before_skip_non_zero	n
os2_commit_input_from_src	n
os2_commit_input_path	<empty>
os2_commit_option	<empty>
os2_commit_prog_from_src	n
os2_commit_prog_path	<empty>
os2_on_error_input_from_src	n
os2_on_error_input_path	<empty>
os2_on_error_option	<empty>
os2_on_error_prog_from_src	n
os2_on_error_prog_path	<empty>
os2_platform_prefix	<empty>
os2_removal_input_from_src	n
os2_removal_input_path	<empty>
os2_removal_option	<empty>
os2_removal_prog_from_src	n
os2_removal_prog_path	<empty>

7.1.1.9 Included Files Section

The included files section starts after the first percent sign.

Each line lists a file or directory to be packed for distribution.

The format of a line is the following:

```
<file or directory name> [<option>"="<value>]*
```

The options are:

Table 11. Included Files Options

Parameter Name	Parameter Type	Description
d	Full path name	This parameter specifies an other destination directory then set by /xxx_platform_prefix\ /default_dest. This one takes precedence over the default destination. The directory you specify here must be a full path, so starting with a slash. When this path is concatenated with the filename, it must form a valid path name. You might have to include a slash at the end depending on the value of keep_paths.
g	Group Id or Group Name	The group id you wish to assign to the file on the target. Applies to files only.
G	Group Id or Group Name	The group id you wish to assign to the directory on the target. Applies to directories only.
m	octal value	The file permissions for the file on the target. The value is passed to the chmod command. This command is native on UNIX systems and is shipped with TME 10 on others, for example, Windows NT. The interpretation of the value depends on the target operating system. See global parameter default_dir_mode.
M	octal value	Same as m, but for directories.
o	["descend"|"nodescend"]	This parameter overrides the global parameter descend_dirs for this particular directory. If descend is specified, then all files below this directory are included in the file package.
t	numerical string	Set the modification time of the file or directory to the value specified. See the global parameter default_mtime for details on the format.
u	User ID or User Name	The user ID you wish to assign to the

		file on the target. Applies to files only.
U	User ID or User Name	The user ID you wish to assign to the directory on the target. Applies to directories only.

7.1.1.10 Nested File Package Section

This section contains a list of other file packages that should be distributed along with this file package. The names do not need to be prefixed with an at sign (@).

7.1.1.11 Excluded Files Section

Use this section to specify files you do not want to be included in your distribution.

This is very useful when you have set the descend_dirs option to **y**.

For example, if there are only a few files to be excluded, you can choose just the top level directory to be distributed, set the descend into directories option, and then manually exclude the files that are not to be distributed.

This is a lot more efficient than selecting every single file.

7.2 Accessing Install Parameters in BARC Scripts

The BARC scripts do not have direct access to the parameters defined in the file package. In fact, they do not even know the name of the file package they are processing. They also do not know the files contained in the file package.

To show the importance of such information, just consider the following example:

You need to configure a settings file that comes with the distribution. The best place to do this is in the after or commit BARC scripts.

The configuration file is named application.cfg. Your script has to be able to find this file in a fault tolerant way. If the install directory changes, you will have to change the script, too. In other words, no matter what changes someone makes to the file package definition, you want your script to work as planned.

To reach this goal we have to take two steps:

- Setting up the prog_env global parameter
- Setting up the environment

In the following we are going to work with a file package called "C-Program". With this package we will show the installation steps.

7.2.1 Setting Up the prog_env Global Parameter

As you will see in the next two sections, the step we perform here is simple but it will be used as a bootstrap for the rest of the environment.

The global parameter prog_env can be used to set up an environment for the BARC scripts.

You must assign a string to this parameter. The string is evaluated just before the script is executed.

The manual is not very clear about which environment variables are available when the prog_env parameters evaluation occurs. We think that all the variables defined in the export file are available here.

Note
We tried to set up a single string containing all the variables. The command to set this very long string (about 4000 bytes) returned an error. Apparently, you cannot use a string of considerable length.

In our case, we just set up the file package name as an environment variable:

```
wsetfpopts -T gen -E fpname="\$"fpname @C-Program
```

The other parameters are set in the following step.

7.2.2 Setting Up the Environment

In the BARC script, we can use the fpname variable to export the file package.

If you recall from the layout of the export file, the first line contains a comment.

The next lines list the parameters, up to a line containing a single percent sign (%). The lines between are all formatted in the following way:

A number of words separated by underscores, an equal sign and, zero or one word.

We will create environment variables that follow this naming convention. We use the following command to do this:

```
for env_statement in $(wexprtfp -a @$fpname| sed -n '/&hat.;#/,/&hat.;%/p'\
| egrep -v "&hat.;%|&hat.;#")
do
 export $env_statement
done
```

This piece of code exports the file package and selects the lines from the first # sign to the first % sign after the # sign.

Then, all the lines starting with # or % are ignored. We use the export directive to set up each line as an environment variable.

To clarify what we have been doing here, let's try to illustrate this process:

Figure 219. Setting Up Environment Variables

View figure.

We supply the file package name to the BARC script in the file package using the wsetfpopts command.

Within the BARC script, we can then export the file package definition and use the exported file to set the UNIX environment to match the file package options.

The environment variables can then be used within the script.

Using this method, we can access the file package options from within the BARC script.

Now we will build the list of files to be distributed. In fact, we create three lists, called INSTALL_FILES, FULL_SRC_INSTALL_FILES and FULL_TGT_INSTALL_FILES.

- INSTALL_FILES contains the file names used in the file list.
- FULL_SRC_INSTALL_FILES contains the list, as present, in the exported filepack.
- FULL_TGT_INSTALL_FILES contains the list of absolute file names on the target.

We insert the script lines below:

```
   1  #get rid of trailing slash if there is one
   2  INSTALL_DIR=`echo $unix_platform_prefix | sed 's/\/$//'`
   3
   4  if [ x$default_dest = x ]
   5  then
   6      DEFAULT_DEST="."
   7  else
   8      #get rid of trailing slash if there is one
   9      DEFAULT_DEST=`echo $default_dest | sed 's/\/$//'`
  10  fi
  11
  12  #get the install file list
  13  for file in `wexprtfp -a @$fpname | sed -n '/&hat.;%/,/&hat.;%/ p' | egrep -v "&hat.;%"`
  14  do
  15          INSTALL_FILES=$INSTALL_FILES`basename $file`" "
  16          FULL_SRC_INSTALL_FILES=$FULL_SRC_INSTALL_FILES$file" "
  17  done
  18
  19  if [ "$keep_paths" = "n" ]
  20  then
  21      for file in $INSTALL_FILES
  22      do
  23             FULL_TGT_INSTALL_FILES=$FULL_TGT_INSTALL_FILES$INSTALL_DIR/$D\
EFAULT_DEST/$file" "
  24      done
  25  else
  26      for file in $FULL_SRC_INSTALL_FILES
  27      do
  28             FULL_TGT_INSTALL_FILES=$FULL_TGT_INSTALL_FILES$INSTALL_DIR/$D\
EFAULT_DEST/$file" "
  29      done
  30  fi
```

There are three parameters that are used here:

- unix_platform_prefix
- default_dest
- keep_paths

First, we need to validate our input. It is possible that the directory names come with a trailing slash. This is valid. For default_dest it is even mandatory.

To make sure we know what we have, we delete the trailing slash, if one is present. We do this in lines 2 and 9 with a sed command.

The script must test whether the default_dest paramater is being used. If so, we use it. Otherwise, we replace it by a dot. This way, we do not get into trouble when concatenating the directories.

We can now build the two lists INSTALL_FILES and FULL_SRC_INSTALL_FILES. See lines 13 to 17. As we saw earlier, the keep_paths parameter controls whether the path name of the source files is retained on the target. This has an impact on the FULL_TGT_INSTALL_FILES list. See lines 19 to 30.

At this point, we have all the parameters specified in the file package, except for the embedded file packages and the excluded files. In our example, we don't need them.

If you do need them, then you can adapt the previous script slightly to include them.

7.2.3 Including IDL Calls in the Script

What we have seen up to now is pretty straightforward for somebody who is accustomed to scripting.

We can, however, go further than the obvious.

Finding information that is not in the exported file package is one step further. As an example, we would like to find the source host of the file package.

This is appropriate as it shows how to retrieve data from the object database. This is an exciting opportunity to learn a little more about objects and IDL calls:

TME 10 is based on a CORBA design. CORBA is an architecture for supporting distributed objects.

An object has two main components: attributes and methods.

The Object Request Broker (ORB) is the piece of software that is responsible for receiving method requests and sending them to the right object implementation. Physically, the ORB is the oserv process on the TMR server.

Objects can be implemented in a variety of ways. They can be daemons, small C-coded executable files, or even shell scripts.

CORBA is not concerned with the implementation of the objects. It just needs the layout of the methods supported by the objects' implementation. So, all the ORB knows is where the objects' implementation is situated and what parameters are needed to call the methods.

The description of the methods is called the *interface*. An interface is specified in a particular language, called Interface Description Language, or IDL for short.

The TME 10 Framework includes some general purpose commands to call any method of any object.

The main function to do this is called *idlcall*. The idlcall function takes three sets of parameters:

- The object reference
- The method to call
- The parameters needed for the particular method

To be able to use the idlcall command you need to have this information.

The object reference is a number composed of three parts:

1215928592.2.7 is the object reference of the object of class ManagedNode called rs600024 in our environment.

By far the easiest way to retrieve the object reference is through the *wlookup* command.

Try executing `wlookup -R` on a managed node on you system. You should see an output similar to:

```
ActiveDesktopList
Administrator
AdministratorCollection
AutoPack
CheckDB
Classes
EnterpriseClient
EventServer
FilePackage
InventoryProfile
Job
LogfileConfiguration
ManagedNode
NetwareManagedSite
NtRepeat
PatchInfo
PcManagedNode
PolicyRegion
Presentation
ProductInfo
ProfileEndpoint
ProfileManager
Query
QueryLibrary
RIM
RemoteControl
RemoveNode
Repeater
Scheduler
TMF_Notice
TaskLibrary
TaskRepository
TecRuleBuilder
TopLevelPolicyRegion
distinguished
impFormatEdit
```

These are all classes defined in your TMR. If you would like to see all the objects of a certain class, then you can use `wlookup -ar <Class Name>`.

For example:

```
wlookup -ar FilePackage
```

displays all the file packages defined in your TMR.

In our case, the output looks like the following:

```
C-Program       1215928592.1.642#FilePackage::FpoCore#
C-Program2      1215928592.1.643#FilePackage::FpoCore#
FP_Microsoft Office.95.0.a .klh1. Microsoft Office Client 95.0.a\
        1563649996.1.670#FilePackage::FpoCore#
FP_Microsoft Office.95.0.a .klh1. Microsoft Office Server 95.0.a\
        1563649996.1.664#FilePackage::FpoCore#
Files   2106637735.1.529#FilePackage::FpoCore#
FilesR  2106637735.1.530#FilePackage::FpoCore#
Hijaak  2106637735.1.611#FilePackage::FpoCore#
Micro   1215928592.1.707#FilePackage::FpoCore#
Office95        2106637735.1.531#FilePackage::FpoCore#
Scenario 1      2106637735.1.579#FilePackage::FpoCore#
Scenario 2      2106637735.1.612#FilePackage::FpoCore#
sample  1215928592.1.649#FilePackage::FpoCore#
scenario1_R     2106637735.1.580#FilePackage::FpoCore#
```

Each line lists an object. The first part is the object's name as defined in the name registry.

The second part is the object reference, with the class specification appended to the number.

The above-mentioned name registry serves in assigning human-interpretable names to objects.

In a pure object implementation, the name is most likely just an attribute of the object.

So, when you know the name of an object, then you are able to find the object reference.

One parameter down, two more to go.

The methods that an object implements are listed in the TME 10 Programmers Reference Manuals. There are eight volumes. If you use the Tivoli/ADE Master Index, you should be able to find the description of the object's interface.

For the objects that are not part of the basic platform, you will need to find the information elsewhere, for example, in the manuals of the application that implements the objects.

Most of the classes defined in add-on products, like TME 10 Software Distribution Release 3.1, are built on top of basic platform classes. Although the documentation of TME 10 Software Distribution Release 3.1 does not list the objects' interfaces, you can install the TME 10 Software Distribution Release 3.1 Extension API.

With this API come the header, idl and implementation files. These files define exactly what the TME 10 Software Distribution Release 3.1 objects have as methods and attributes.

Before attempting to use these files, you should be somewhat familiar with the TME 10 CORBA implementation. If you are not, you will not be able to use these methods effectively.

Note
We should warn you that this is rather complex and needs careful study before use. If you are new to CORBA and/or TME 10, then we urge you to read this manual completely. You will benefit from it, as you will know afterwards how TME 10 works exactly, thus enabling you to use it much more effectively.

Bare in mind that the CORBA 1.1 implementation uses multiple inheritance, and so does TME 10. This means that the interface of a class can be defined just by stating that the class incorporates the interfaces of other classes.

Let's go through the steps of finding the first method used in our script:

```
_get_src_host.
```

The FilePackage object is described using the Interface Description Language. The Extension API provides this file.

Note
If you have not yet installed the TME 10 Software Distribution Release 3.1 Extension API, do so now. The Extension API comes with TME 10 Software Distribution Release 3.1 and can be selected when installing TME 10 Software Distribution Release 3.1.

It is named <TME10-root>/include/<platform>/tivoli/FpoCore.idl. We describe a bit of the layout of the file without going into detail.

The file starts with some definitions that are used later in the file.

You may skip to the line:

```
module FilePackage {
```

This is the start of the FilePackage class description. The lines that follow this one list all the exceptions that are used in this class.

You can ignore this for now.

Skip to the line:

```
 interface FpoCore : TMF_TNR::Base, TMF_SysAdmin::NestedCollection,
  CourGui::Cbs, TMF_CCMS::Profile, TMF_Application::NodeConfiguration {
```

This starts the interface definition. The interface is called FpoCore and it inherits the interfaces:

- TMF_TNR::Base
- TMF_SysAdmin::NestedCollection
- CourGui::Cbs
- TMF_CCMS::Profile
- TMF_Application::NodeConfiguration

The following lines list constant definitions. Skip them. After the constants, you find the list of attributes:

```
attribute long      destination_flags;
attribute long      behavior_flags;
attribute boolean   check_nested;
attribute boolean   check_no_src_host;
attribute long      default_push_type;
attribute long      default_push_mode;
attribute string    description;
attribute long      description_size;
attribute string    fp_name;
attribute string    fp_info;
attribute long      fp_size;
attribute boolean   lenient_distribution;
attribute long      preview_mode;
attribute long      push_time;
attribute Object    src_host;
attribute string    stage_area;
```

These define the data contained in a class instance or object.

You never have direct access to these variables. You must use accessor and mutator functions to access these variables.

When an implementation of an interface is compiled, then the compiler adds two functions for every attribute that has a simple type (one of the basic types). These functions are named _get_<attribute name> and _set_<attribute name>.

To retrieve the value of src_host you must use the function _get_src_host. The accessor functions don't take any arguments.

The accessor functions are easy and innocent to use. The mutator functions take one argument: the value to set the attribute to.

Note
Be very careful about setting any attribute. You cannot know the semantics involved. Our advice is do not use them.

The fact that the compiler generates default accessor and mutator functions does not mean that the programmer cannot change their implementation. For example, changing the file package name might involve changing this name in the GUI, as well. So, even with these functions, you are not sure what the impact is.

Before you use any of these methods, try them out on your objects in a few situations. This way, you are reasonably sure that the functions do what you intend them to do.

As an example, take the file package attribute "description". One would expect this to be a small explanation of the purpose of the file package.

Try executing the accessor function on one of the file package objects in your TMR.

Type:

```
wlookup -ar FilePackage
```

The output should look similar to:

```
C-Program       1215928592.1.642#FilePackage::FpoCore#
C-Program2      1215928592.1.643#FilePackage::FpoCore#
FP_Microsoft Office.95.0.a .klh1. Microsoft Office Client 95.0.a\
        1563649996.1.670#FilePackage::FpoCore#
FP_Microsoft Office.95.0.a .klh1. Microsoft Office Server 95.0.a\
        1563649996.1.664#FilePackage::FpoCore#
Files   2106637735.1.529#FilePackage::FpoCore#
FilesR  2106637735.1.530#FilePackage::FpoCore#
Hijaak  2106637735.1.611#FilePackage::FpoCore#
Micro   1215928592.1.707#FilePackage::FpoCore#
Office95        2106637735.1.531#FilePackage::FpoCore#
Scenario 1      2106637735.1.579#FilePackage::FpoCore#
Scenario 2      2106637735.1.612#FilePackage::FpoCore#
sample  1215928592.1.649#FilePackage::FpoCore#
scenario1_R     2106637735.1.580#FilePackage::FpoCore#
```

You will see a slighlty different list on your system.

Pick out an object reference. We took the first one: 1215928592.1.642.

Now execute:

```
idlcall 1215928592.1.642 _get_description
```

What do you see? Well, you see the exported file package definition. So, the description is actually a textual representation of the file package definition.

Does this mean that you can use the mutator to change this description? You probably can. But will it work? Probably not.

Setting the file package definition involves several steps. Among them is the verification of the policy. Using the mutator function will only set the textual representation of the file package. It will not set the actual file package definition.

The actual file package definition is probably a variable of type fp_gui_desc_t. This is a private attribute of the object. It is probably set through a method like gui_set_fp_desc.

This function will set the internal or private attributes, and then update the textual representation to be consistent with the real file package definition.

We have used the word "probably" a lot in the last sentences. This is because we can only guess about how the functions will actually work.

We must never assume that we know exactly how they work. This might leave the objects in an inconsistent state, and most probably, jeopardize normal operation of your system.

Note
In our script, we have added a few IDL calls. We retrieve the source host and some information about the source host. We do not know what you, in your situation, might need. Look upon these IDL calls as examples. Study the interface descriptions of the main object classes so you have notions of where what information is stored. You can then put the IDL calls in the script that suits your situation best.

We conclude this chapter by giving the complete script we used for the C-Program file package.

The full script for the C-Program file package is shown below:

Figure 220. General Purpose Install Script (Part 1)

```
#!/bin/ksh
#
# General Purpose Install Script for TME10 Courier
#
# The script should be specified as BARC scriptfile for all
# operations.
# It will setup a complete environment containing all the options
# present in the exportfile of the filepackage.
#
# In addition it will contain:
# INSTALL_FILES: env var that holds the
#    filenames of all the files to be installed.
# FULL_SRC_INSTALL_FILES: env var that holds the
#         full filenames on the source of all the files to b
e installed.
# FULL_TGT_INSTALL_FILES: env var that holds the
#         full filenames on the target of all the files to b
e installed.
# source_host: the name of the sourcehost
#
# RESTRICTION
#    WORKS ONLY ON UNIX (for now)


DO()
{
 echo "EXEC: $*"
 $*
 if [ "$?" != "0" ]
 then
  echo "EXEC failed! aborting."
  exit $?
 fi
}

usage()
{
 echo "Do not use from command line."
}

header()
{
 echo ===========================================================
 echo ===========================================================
 echo "Installing $fpname  Install Step $1"
 echo ___________________________________________________________
 echo "FILEPACK:           $fpname"
 echo "LOGFILE:            $LOGFILE"
 echo "INSTALL_DIR:        $INSTALL_DIR"
 echo "INSTALL_FILES:      $INSTALL_FILES"
 echo "FULL_INSTALL_FILES: $FULL_SRC_INSTALL_FILES"
 echo "FULL_TGT_INSTALL_FILE: $FULL_TGT_INSTALL_FILES"
```

Figure 221. General Purpose Install Script (Part 2)

```
 echo "LOG_HOST:           $log_host"
 echo "LOG_FILE:           $log_file"
 echo "SOURCE_HOST:        $source_host"
     echo "source info:        $source_host_os $source_host_
version $source_host_release"
 echo ==========================================================
}

getfile()
{
    echo $FULL_TGT_INSTALL_FILES |  sed -n -e "s/ /:/g
           s/&hat.;/:/
           s/$/:/
           s/.*:\(.*$1\):.*/\1/p"
}

before()
{
 case $Interpreter_type in
 solaris2 | aix4_r1 | hpux9 )
      echo $Interpreter_type is a valid platform
  break;;
 * )
      echo $Interpreter_type is NOT a valid platform
  return 1
  break;;
 esac

 if [ ! -d $INSTALL_DIR ]
 then
    DO mkdir $INSTALL_DIR
 fi

 echo Installation Preparation Script Succeded.
 return 0
}

after()
{
 if [ ! -d $INSTALL_DIR ]
 then
  echo before install script did not run.
  return 1
 fi
 cd $INSTALL_DIR

 ls -l $FULL_TGT_INSTALL_FILES
 if [ "$?" != "0" ]
 then
  echo Not all files are present, aborting install.
  return 1
```

Figure 222. General Purpose Install Script (Part 3)

```
 fi

 HELLO_1=`getfile hello.1`

 banner `hostname` >> $HELLO_1
 echo Installation script succeded.
 return 0
}

commit()
{
 if [ -d $INSTALL_DIR ]
 then
  cd $INSTALL_DIR
 else
  echo Install product before you can commit
  return 1
 fi

 HELLO_1=`getfile hello.1`
 HELLO_C=`getfile hello.c`
 HELLO=`dirname $HELLO_C`/`basename $HELLO_C .c`

 case $Interpreter_type in
 solaris2 )
       echo Making hello for $Interpreter_type
  /usr/local/bin/gcc -o $HELLO $HELLO_C
  break;;
 aix4_r1|hpux9 )
       echo Making hello for $Interpreter_type
  cc -o $HELLO $HELLO_C
  break;;
 * )
       echo Making hello for $Interpreter_type
  cc -o $HELLO $HELLO_C
  break;;
 esac
 $HELLO $HELLO_1
 echo Installation Commit Script Succeded.
 return 0
}

removal()
{
 if [ -d $INSTALL_DIR ]
 then
  rm -rf $INSTALL_DIR
 else
  echo product was not installed
 fi
```

Figure 223. General Purpose Install Script (Part 4)

```
 echo Installation Removal Script Succeded.
 return 0
}

after_removal()
{
 echo Installation After Removal Script Succeded.
 return 0
}

before_install()
{
 echo Installation Before Install Script Succeded.
 return 0
}

before_uninstall()
{
 echo Installation Before Uninstall Script Succeded.
 return 0
}

after_install()
{
 echo Installation After Install Script Succeded.
 return 0
}

after_uninstall()
{
 echo Installation After Uninstall Script Succeded.
 return 0
}
#
# MAIN
#

echo $* > /tmp/debug.out

case $1 in
before|after|commit|removal )
    break;;
*)
    usage
    exit 1
    ;;
esac

#check to see if we have the fpname environment variable
#this is needed to bootstrap the rest of the environment
```

Figure 224. General Purpose Install Script (Part 5)

```

if [ x$fpname = x ]
then
 exit 1
fi

LOGFILE=/tmp/$fpname.log
```

```

#redirect all output to logfile

exec >> $LOGFILE 2>&1

#set tivoli environment
. /etc/Tivoli/setup_env.sh

#get the rest of the filepackage environment
for env_statement in `wexprtfp -a @$fpname | sed -n '/&hat.;#/,/&hat.;%/ p' | egrep -v "&hat.;%|&hat.;#"`
do
 export $env_statement
done

#get rid of trailing slash if there is one
INSTALL_DIR=`echo $unix_platform_prefix | sed 's/\/$//'`

if [ x$default_dest = x ]
then
    DEFAULT_DEST="."
else
    #get rid of trailing slash if there is one
    DEFAULT_DEST=`echo $default_dest | sed 's/\/$//'`
fi

#get the install file list
for file in `wexprtfp -a @$fpname | sed -n '/&hat.;%/,/&hat.;%/ p' | egrep -v "&hat.;%"`
do
 INSTALL_FILES=$INSTALL_FILES`basename $file`" "
 FULL_SRC_INSTALL_FILES=$FULL_SRC_INSTALL_FILES$file" "
done

if [ "$keep_paths" = "n" ]
then
    for file in $INSTALL_FILES
    do
    FULL_TGT_INSTALL_FILES=$FULL_TGT_INSTALL_FILES$INSTALL_DIR/$DEFAULT_DEST/$file" "
    done
else
    for file in $FULL_SRC_INSTALL_FILES
    do
    FULL_TGT_INSTALL_FILES=$FULL_TGT_INSTALL_FILES$INSTALL_DIR/$DEFAULT_DEST/$file" "
    done
```

Figure 225. General Purpose Install Script (Part 6)

```
fi

#get the filepackage object reference

fpobject=`wlookup -r FilePackage $fpname`

#call the _get_src_host method on the filepackage
#object to get the sourcehost object reference

source_host_ref=`idlcall $fpobject _get_src_host`
```

```

#call the name method on the sourcehost object

source_host=`idlcall $source_host_ref name`

#call other info methods on the sourcehost object

source_host_os=`idlcall $source_host_ref os_name`
source_host_version=`idlcall $source_host_ref os_version`
source_host_release=`idlcall $source_host_ref os_release`

#get rid of the surrounding double quotes
source_host=`echo $source_host | sed 's/\"//g'`

#get the target environment
#you will get all the information found in the odadmin command
#each output line of odadmin gets turned in to a environment var.
#Example:
#    Inter-dispatcher encryption level = simple
#get turned into
#    Inter_dispatcher_encryption_level=simple
for env_statement in `odadmin | fgrep = | sed 's/ = /=/g' |
sed 's/ /_/g
s/-/_/g'`
do
 export $env_statement
done



header $1

case $1 in
before )
    case $2 in
    install )
    before_install $1 $2
    RTN=$?
    break;;
    uninstall )
    before_uninstall $1 $2
```

Figure 226. General Purpose Install Script (Part 7)

```
    RTN=$?
    break;;
    * )
        before $1
    RTN=$?
    break;;
    esac
    break;;
after )
    case $2 in
    install )
    after_install $1 $2
    RTN=$?
    break;;
    uninstall )
    after_uninstall $1 $2
    RTN=$?
    break;;
    * )
        after $1
    RTN=$?
    break;;
    esac
    break;;
commit )
 commit $1
 RTN=$?
 break;;
removal )
 removal $1
 RTN=$?
 break;;
after_removal )
 after_removal $1
 RTN=$?
 break;;
* )
 usage
 RTN=1
 break;;
esac

exit $RTN
```

Note
We will not show how to distribute the file package containing the above BARC script. Instead we will give some general hints on how to use the general purpose install script in 7.4 , "Using the General Purpose Install Script".

7.3 Changing the Policies

Policies are a main focus of Tivoli. Policies enable you to change the behavior of the objects. They allow you to regulate what can and can't be done in a policy region.

In an object oriented framework, policies are implemented by means of objects. If you want to set a new policy, you have to create a policy object.

Policies are highly dependent on the class for which they implement a policy. A policy for a file package may be to set the default source host. A default source host only exists in an object of class FilePackage.

Setting a default user name does not make sense in a FilePackage object, but it does in a TME 10 Admin object. When creating a policy object, you must specify for what class this policy object will serve.

Once created, you can set the policies in the object and assign it to a policy region.

There are two types of policies:

- Default policy
- Validation policy

The default policy is used to set default values. For example, the source host or a value for the prog_env file package setting.

Scripts that implement a default policy write the value of the default to standard output.

The validation policy serves at validating actions performed on the object. For example, only permitting distributions outside office hours. Scripts that implement validations write either TRUE or FALSE to standard output.

The policies for file package objects are executable files on UNIX systems.

Usually, these will be shell scripts. But they can be binary executable images as well.

7.3.1 The File Package Class Policies

It is the class that the policy object will work for that determines which functions are available. For the FilePackage class, these policies are:

- fp_def_excludes

  Sets the default values for the excludes section. The script used here must write lines to standard output.

  Each of these lines is the filename of an excluded file. Suppose you develop a program and you do not want any source files, object files, editor backup files or core files to be distributed.

  Then use a script like:

  ```
  #!/bin/ksh
  echo "*.c"
  echo "*.h"
  echo "[Mm]akefile"
  echo "*.o"
  echo "*~"
  echo "core"
  exit 0
  ```

- fp_def_flist

  Insert files in the include section of the file package definition. For example, use the script:

  ```
  #!/bin/ksh
  echo "/projects/copyrights"
  exit 0
  ```

  This will in clude the file /projects/copyrights in all new file packages.

- fp_def_nestedlist

  Insert default nested file packages.

- fp_def_options

  Sets default options on a new file package. To set the option prog_env to fpname=$fpname, use the following script:

  ```
  #!/bin/ksh
  echo "prog_env=fpname=\$fpname"
  exit 0
  ```

- fp_def_src_host

  Sets the default source host.

- fp_val_delete_src_host

  Validates the removal or change of the source host specification. It gets 2 arguments:

  - File package name
  - Source host name to be deleted

  If your policy needs to prevent administrators from using other hosts as sources, then you could set the default with fp_def_src_host and always echo FALSE in the fp_val_delete_src_host policy script.

  ```
  #!/bin/ksh
  echo "FALSE"
  exit 0
  ```

- fp_val_excludes

  Validates the list of excluded files. The script gets one argument:

  - File package name

  The list of excluded files is passed on standard input.

- fp_val_flist

  Validates the list of included files. The script gets one argument:

  - File package name

  The list of included files is passed on standard input.

- fp_val_name

  Validates the name of the file package. The script gets two arguments:

  - The old file package name
  - The new file package name

- fp_val_nestedlist

  Validates the list of nested file packages. The script gets one argument:

  - File package name

  The list of nested file packages is passed on standard input.

- fp_val_operation

  Validates the operation on the file package. The script gets two arguments:

  - The file package name
  - The requested operation

  The type of operations are:

  - COMMIT
  - DIST:ALL

  - DIST:ANY_CHANGES
  - DIST:SOURCE_CHANGES
  - DIST_AND_COMMIT:ALL
  - DIST_AND_COMMIT:ANY_CHANGES
  - DIST_AND_COMMIT:SOURCE_CHANGES
  - PREVIEW:ALL
  - PREVIEW:ANY_CHANGES
  - PREVIEW:SOURCE_CHANGES
  - REMOVE

- fp_val_options

  Validates the list of file packages options. The script gets one argument:

  - File package name

  The list of file packages options is passed on standard input. The format of the input is:

  ```
  <option name>=<option value>
  ```

  You can parse the list on standard input much the same as we did in the example BARC scripts.

- fp_val_src_host

  Validates the source host for the file package. The script gets two arguments:

  - File package name
  - Source host name

The scripts you write must begin with a line stating the interpreter program to be used for this script. The line is the first line in the script and starts with #! followed by the path name of the interpreter.

For a korn shell script this is:

```
#!/bin/ksh
```

If you do not specify this line, then the framework will assume that the file is a binary executable. You will get exec failures in this case.

Note
Do also check that the scripts have execute permissions set.

The scripts communicate with the TME 10 Framework through standard input and standard output. If you want to use debugging output in your scripts, they may not send it to standard output.

If they do, then all validations will fail. You must use a different file descriptor for debugging or status output.

Note
Do not attempt to communicate a return code other than zero back to the framework. The validation will probably fail.

All policy scripts are executed on the TMR server. This must be remembered, as you will probably be working on another TME 10 Managed Node. For this reason and others, we find that the scripts lack some context information to make them effective.

Suppose you must validate the file list in the file package. Your script gets two parts of information: the file package name, as parameter one, and the list of files, on standard input.

Unless you use global naming conventions, you will not be able to know what you are seeing. You cannot verify if the files exist, as you do not know on which host the files reside.

You do not know the value of descent_dirs. If the file list contains only one directory and descend_dirs is not set, then the package does not make much sense, does it?

The scripts, usually, must have much more context to make them effective for use. It is the same reasoning as for the BARC scripts. We saw, in the 7.2.2 , "Setting Up the Environment", how we can retrieve this context information ourselves.

The only problem in policies is the execution speed. Building large scripts can be done, but it will significantly slow down the user interface when the scripts are called.

7.3.2 Enforcing a Policy

In this section, we describe the steps we used to enforce a policy.

They are:

1. Defining a policy
2. Creating a default policy object
3. Creating a validation policy object
4. Assigning the default policy object to a policy region
5. Assigning the validation policy object to a policy region
6. Updating the policy scripts

7.3.2.1 Defining a Policy

We decide to enforce the following policy:

1. Allow only rs600024 to be used as a source host.
2. All source files must start from the /distrib directory.
3. The prog_env must be set to fpname=$fpname.
4. The UNIX destination must be filled in and be different from /.

7.3.2.2 Creating a Default Policy Object

There are two types of policy objects. One is a default policy object. This is not the default policy object for the class, but it is the policy object that sets the default values for objects of this class that are created under the policy region where the policy object is assigned.

Note

We think that the name is confusing. It would have been better if it were called defaults policy object.

A policy object is created by means of the wcrtpol command. It takes three arguments.

The first, -p or -v, denoting the creation of a default or validation policy object.

Second the class name for which the policy object will serve.

The third is the name of the policy object. You may choose this freely.

We call our object unix_fp_pol:

```
wcrtpol -d FilePackage unix_fp_pol
```

You should not see any output.

7.3.2.3 Creating a Validation Policy Object

The validation policy object is created in much the same way. It is convenient to create it with the same name as the default policy object. This does not cause errors. It is easier to relate them together:

```
wcrtpol -v FilePackage unix_fp_pol
```

Note

Using the same names for both objects is sometimes confusing. If you use the wlspol command to list all policy objects for one class, then you will see just one line for both objects.

The command:

```
wlspol FilePackage
```

produces the following output on our system.

```
BasicFilePackage
unix_fp_pol
```

But you know we just created two policy objects. We recommend that you look upon them as being one and the same.

7.3.2.4 Assigning the Default Policy Object to a Policy Region

Policy objects are assigned to policy regions. The policy region in which we are working is called SwDistrib:

Figure 227. The SwDistrib Policy Region

View figure.

In this policy region, we have a profile manager called Courier:

Figure 228. The Courier Profile Manager

View figure.

Within this profile manager, we can create our file packages. We will see this later when we test the policies.

To assign both unix_fp_pol policy objects to the policy region SwDistrib, we use the command:

```
wsetpr -d unix_fp_pol FilePackage @PolicyRegion:SwDistrib
```

You should not see any output.

From this moment on, all file packages created in this policy region will use the default policies set in the unix_fp_pol object.

7.3.2.5 Assigning the Validation Policy Object to a Policy Region

This is completely similar to assigning the default policy object to the SwDistrib region.

```
wsetpr -v unix_fp_pol FilePackage @PolicyRegion:SwDistrib
```

7.3.2.6 Updating the Policy Scripts

Newly created policy objects are, in fact, copies of the class defaults.

To update them, you have to extract the policy scripts from the database, edit the extracted copy, and when done, import them back into the database.

We show how to do this for both types of policy objects.

The first rule we must implement is setting the source host to rs600024, and denying any change.

Extracting the policy method is done with the wgetpolm command.

The first method we will get is the one that sets the default source host: fp_def_src_host.

```
wgetpolm -d FilePackage unix_fp_pol fp_def_src_host > /tmp/fp_def_src_host.sh
```

The command writes the content of the script to standard output.

We use I/O redirection to write this to a file, called /tmp/fp_def_src_host.sh. You will notice that the file created is actually empty.

This is quite normal, as there is no default set in the global defaults object. A default method does not have to be a script. In our case, the script will be:

```
#!/bin/sh
echo rs600024
exit 0
```

To put this new method in the database, use the command:

```
wputpolm -d FilePackage unix_fp_pol fp_def_src_host < /tmp/fp_def_src_host.sh
```

This is the time for a quick test. We create a new file package profile in the profile manager, Courier. We call it tst.

When looking at the properties, you see that the default is filled out.

Figure 229. The tst Profile Details

View figure.

Default methods do not have to be scripts. They can be just fixed values. If we execute:

```
wputpolm -d -c rs600024 FilePackage unix_fp_pol fp_def_src_host
```

then we accomplish the same effect. The latter will probably execute faster.

Now, we have to see to it that the source host cannot be changed. We can use the validation method, called fp_val_src_host. This is the logical choice.

We found, however, that the only validation methods that are actually executed are:

1. fp_val_options
2. fp_val_flist
3. fp_val_nestedlist
4. fp_val_excludes

They are executed in this particular order.

Note
We experienced that all the other validation methods are not called.

You would not be a professional if you stopped at the first hurdle. So, let's find a work-around. We will validate the source host in the fp_val_flist method. We choose this one as we will need to extend this later, anyway.

As we saw in the BARC script, we can use the idlcall function to retrieve the source host, and then validate it. The script we show at the end of this section also includes some logging facility, so you can see what is going on.

The fp_val_flist gets one parameter: the file package name.

To get the source host use:

Figure 230. fp_val_flist Policy Method

```
#!/bin/ksh
#get the file package object reference
```

```
fpobj=`wlookup -r FilePackage $1`

#call the _get_src_host method on the file package
#object to get the source host object reference

host_ref=`idlcall $fpobj _get_src_host`

#call the name method on the source host object
host=`idlcall $host_ref name`

if [ "$host" != "\"rs600024\"" ]
then
 echo FALSE
else
 echo TRUE
fi

exec >> /tmp/policy.log 2>&1

echo
echo ___________________________________________
date
echo FilePackage:$FilePackage
echo fp_val_flist: $*
echo Source host: $host
echo should be:   \"rs600024\"
echo ___________________________________________
echo
exit 0
```

There is a problem with this approach.

At the time the fp_val_flist script is called, the new settings have not yet been saved. So, the idlcall, to get the source host, returns the old value.

The test is positive as the old value was the default set by the fp_def_src_host method. Because the test is positive, the new value gets saved in the file package profile.

The next time you try to save the profile, the new value is retrieved for the file package profile and, thus, the test is negative. The profile is not saved. You cannot change the profile through the GUI anymore.

The CLI command to change the source host works quite different. This one first saves the value, and then the validations are done. Luckily, this command uses transactions, so after the validation failure the original values are restored. So, how do we resolve this problem? At script execution time, we are not certain that the value received from idlcall <objref> _get_src_host is the right one. There is no way to determine if the script was called as a result of a GUI or CLI command.

We could be bold and just reset the source host to the right value. This could cause a problem because of the transactions. We concluded already that the CLI command is executed in one transaction.

Adding a command that would start another top-level transaction can cause the CLI command to always fail. Using the same command in the validation script means that calling:

```
wsetfpattr -h @rs600020 @tst2
```

would call,

```
wsetfpattr -h @rs600020 @tst2
```

would call,

```
wsetfpattr -h @rs600020 @tst2
```

would call,

```
wsetfpattr -h @rs600020 @tst2
```

and so on. We did not even try this, as it is obvious that it will fail. There is, however, another way to set the source host. If you have installed the TME 10 Software Distribution Release 3.1 Extension API, then you will find the following function in the file /usr/local/Tivoli/include/aix4-r1/tivoli/FpoCore.idl:

Note
The above path is only valid for TME 10 installed on AIX 4.1.

```
void set_src_host(
                  in Object       fp_src_hostobj,
                  in boolean      log_notice);
```

Assuming that lower level functions do not add top-level transactions themselves, we can use this function.

Note
Be reminded that this is a dangerous assumption.

When we tried this, it did not work, either. Using the set_src_host from the command line works just fine.

Try:

```
idlcall 1215928592.1.764 set_src_host 1215928592.2.7 FALSE
```

where 1215928592.1.764 is the file package object reference and 1215928592.2.7 is the object reference for managed node rs600024.

In the script, it works just fine as well. The only problem is that the GUI sets it again after all validations evaluated to TRUE.

The only thing we can do is refuse to do a distribution if the source host is not right. This is not quite the right place to enforce the policy, but seems to be the only chance we have.

The second rule in our policy states that source files must originate from to /distrib directory on the host rs600024. There are two different ways to specify files in the file list:

- Absolute path names. File or directory names that start with a slash.
- Relative path names. File or directory names that do not start with a slash. In this case, the option src_relpath is used as the current directory when packing the source files.

The fp_val_flist policy method must get the value of src_relpath, and then loop through all the files in the list.

If the first char is not "/", then prefix the value of src_path to the file name. Then check to see if the first part of the file name is "/distrib". We could try using the same command that we used in the BARC script to set the environment.

This could, again, cause problems, as it is executed in a transaction, so it might not behave as we expect. If the src_relpath has been changed using the GUI, we might not get the latest version.

Luckily, you cannot set the src_rel path using the GUI. So, we know that the value retrieved is correct. Another option is to create a temporary file with the contents of the options in the fp_val_options method.

Here are the scripts to enforce the policy up to now. The first is the fp_val_options, the second is fp_val_flist.

Figure 231. fp_val_options Policy Method

```
#!/bin/ksh
echo TRUE

exec >> /tmp/policy.log 2>&1

echo
echo ____________________________________________
date
echo FilePackage:$FilePackage
echo fp_val_options: $*

rm -f /tmp/$1.fp_val_options
touch /tmp/$1.fp_val_options
while read line
do
 echo $line >> /tmp/$1.fp_val_options
done

echo ____________________________________________
echo
exit 0
```

This validation script writes the options to a file called: /tmp/"file package name".fp_val_options. We assume that we can write to the /tmp directory and that this file does not exist.

Figure 232. fp_val_flist Policy Method

```
#!/bin/ksh

#get the filepackage object reference
fpobj=`wlookup -r FilePackage $1`

#call the _get_src_host method on the filepackage
#object to get the sourcehost object reference
host_ref=`idlcall $fpobj _get_src_host`

#call the name method on the sourcehost object
host=`idlcall $host_ref name`

#get the rest of the filepackage environment
for env_statement in `cat /tmp/$1.fp_val_options | egrep -v "&hat.;#"`
do
 export $env_statement
done

if [ "$src_relpath" = "" ]
then
 src_relpath="/"
else
 #place a trailing slash if there is none.
 src_relpath=`echo $src_relpath | sed 's/\/$//'`
fi

OK="TRUE"
while read line
do
```

```
30   echo "--->$line<---" >> /tmp/policy.log 2>&1
31   fullfile=`echo $line | sed "s:&hat.;\([&hat.;/].*\):$src_relpath\1:"`
32   RESULT=`echo $fullfile | sed "s:&hat.;/distrib/\(.*\):OK:"`
33   if [ "$RESULT" != "OK" ]
34   then
35    OK="FALSE"
36    break
37   fi
38  done
39
40  echo $OK
41
42  exec >> /tmp/policy.log 2>&1
43  echo
44  echo ___________________________________________
45  date
46  echo FilePackage:$FilePackage
47  echo fp_val_flist: $*
48  if [ "$OK" != "TRUE" ]
49  then
50   echo Offending File: $fullfile
51  fi
52  echo ___________________________________________
53  echo
54  exit 0
```

- Line 1 is the compulsory interpreter statement.
- Lines 3 to 12 get the object references of the file package and the source host.
- Lines 13 to 17 read the file created by the fp_val_options script and set it in the environment.
- Lines 19 to 27 set the src_relpath to a good value for further processing. If it is empty, we set it to slash. We must append a trailing slash, as we will prefix this to the relative file names. The src_relpath_bs (for backslash) protects the forward slash from being interpreted in the sed expression later.
- Lines 28 to 38 parse through the file names. Line 31 creates the full filename. It leaves file names that start with a slash alone, but prefixes the src_relpath to a relative file name. Line 32 sets RESULT to OK if the absolute file name starts with /distrib/, else it is empty. If an empty RESULT is found, we stop further processing.
- Line 40 writes the result back to the platform.
- Lines 42 to 53 write a section in the log file, and optionally, the file name that caused the policy violation.
- Line 54 exits cleanly.

Two more policies to go.

Setting the prog_env to fpname=$fpname and testing that the UNIX destination path exists and is different from slash.

These are quite simple to accomplish. Both are checked in the fp_val_options method.

We adapt the method script we have so far.

You can find the resulting fp_val_options script below:

Figure 233. fp_val_options Policy Method

```
#!/bin/ksh
UX_OK="TRUE"
PE_OK="TRUE"
rm -f /tmp/$1.fp_val_options > /dev/null 2>&1
touch /tmp/$1.fp_val_options > /dev/null 2>&1
while read line
do
 echo $line >> /tmp/$1.fp_val_options
 echo $line | egrep "&hat.;#" > /dev/null 2>&1
 if [ "$?" != "0" ]
 then
  export $line
 fi
done

if [ "$unix_platform_prefix" = "" ]
then
 UX_OK="FALSE"
else
 if [ "$unix_platform_prefix" = "/" ]
 then
  UX_OK="FALSE"
 fi
fi

if [ "$prog_env" != "fpname=\$fpname" ]
then
 PE_OK="FALSE"
fi

if [ "$UX_OK" = "FALSE" ] || [ "$PE_OK" = "FALSE" ]
then
 echo FALSE
else
 echo TRUE
fi

exec >> /tmp/policy.log 2>&1
echo
echo ___________________________________________
date
echo FilePackage:$FilePackage
echo fp_val_options: $*
if [ "$UX_OK" = "FALSE" ]
then
 echo unix_platform_prefix must not be empty or /
 echo it is \"$unix_platform_prefix\"
fi
if [ "$PE_OK" = "FALSE" ]
then
 echo prog_env can not be anything else but fpname=\$fpname
fi
echo ___________________________________________
echo
exit 0
```

We use the fp_def_options method to set the policy values as the default and add some convenient initializations.

Figure 234. fp_def_options Policy Method

```
#!/bin/ksh

#compulsory
echo "prog_env=fpname\=\$fpname"

#for convenience
echo "src_relpath=/distrib/$1"
echo "unix_platform_prefix=/tmp"
echo "unix_before_prog_path=/distrib/$1/setup.sh"
echo "unix_before_skip_non_zero=y"
echo "unix_after_prog_path=/distrib/$1/setup.sh"
echo "unix_removal_prog_path=/distrib/$1/setup.sh"
echo "unix_commit_prog_path=/distrib/$1/setup.sh"
echo "unix_after_removal_prog_path=/distrib/$1/setup.sh"
echo "unix_on_error_prog_path=/distrib/$1/setup.sh"

echo "unix_before_prog_from_src=y"
echo "unix_after_prog_from_src=y"
echo "unix_removal_prog_from_src=y"
echo "unix_commit_prog_from_src=y"
echo "unix_after_removal_prog_from_src=y"
echo "unix_on_error_prog_from_src=y"

exec >> /tmp/policy.log 2>&1

echo
echo ___________________________________________
date
echo fp_def_options
echo argv: $*
echo ___________________________________________
echo

exit 0
```

This last script assumes that you will create a directory bearing the file package name in the /distrib directory. It sets the BARC scripts to the setup.sh file in this directory.

This is a good way to work. You need naming conventions in a real production system. You could have a directory called /distrib/Defaults. In this directory, you place all the files that you want in a new file package, such as the BARC scripts. When you do not use the GUI but a script to create a new file package, you can create a new directory in /distrib and copy the default directory in there.

Now, the defaults make good sense. You have a fully functional file package. You just fill out the files to distribute and adapt the BARC scripts, and you are off.

7.4 Using the General Purpose Install Script

You can use the general purpose install script we developed in this chapter easily for your own file packages by simply modifying it.

We show examples on how to do that in Chapter 8. "Installing WABI on HP-UX and Solaris".

7.5 Conclusion

We demonstrated some uses of the policy methods and BARC scripts. When working with TME 10 Software Distribution Release 3.1, you need to use these features if you want to get the most out of it. Do not hesitate to try out all features and try to find uses for them.

By doing so, you can also further explore other TME 10 Framework components. This will help you fully exploit TME 10 and TME 10 Software Distribution as you enterprise management platform.

[Top of Page | Previous Page | Next Page | Table of Contents | Index]

The TME 10 Deployment Cookbook

Chapter 8. Installing WABI on HP-UX and Solaris

In this chapter, we will use TME 10 Software Distribution Release 3.1 to distribute the WABI application to an HP-UX and Solaris managed node.

The purpose of this chapter is to show how to embed the operating system specific installation programs in HP-UX and Solaris into TME 10 Software Distribution Release 3.1 file packages.

In this chapter, we will use the general purpose install script that we have created in Chapter 7. "Beyond the GUI".

To fully benefit from the examples in this chapter, you should read Chapter 7. "Beyond the GUI" first.

This chapter will only briefly explain the tasks involved in creating and distributing the file packages. The main focus is to show how easily platform specific installation programs can be integrated.

8.1 Installing WABI on HP-UX

In our example, we will install Windows Advanced Binary Interface (WABI) on the HP-UX system in our TMR.

This task is divided into the following steps:

- Creating a Product Specification File
- Creating an input file for the update command
- Creating a TME 10 Software Distribution Release 3.1 profile
- Modifying the general purpose install script

8.1.1 Creating a Product Specification File

We will retrieve the files to be distributed from a CD-ROM that comes with HP-UX.

Unfortunately, we cannot use an AIX system to mount some HP-UX CD-ROMs, as they do not contain a recognized file system type.

Therefore, we have to mount the CD-ROM on the HP-UX system (hp) and retrieve the files from there.

If we have a CD-ROM file system with a mount point of /cdrom, we can mount the CD-ROM by typing:

```
mount /cdrom
```

Note
You can also use the System Administration Manager (SAM) to mount the CD-ROM.

The fpkg command can be used to create a Product Specification File (PSF) that contains a list of all installable software stored on the CD-ROM:

```
fpkg -r /cdrom > /tmp/psf
```

The PSF file contains all installable software on the CD-ROM and is quite large. Since we only want to install WABI, we have to look at the PSF file first.

The file header for the PSF file looks like the following:

```
# PRODUCT SPECIFICATION FILE
# As read from CD-ROM media
# Source media format is: A.B8.05
media_format A.B8.05
```

For each product the PSF file contains a section describing the file set, for example, the TOOL file set:

```
########
# Begin Fileset:  TOOL
#
pn       OS-CORE
pd       "Recommended System Core"
fn       TOOL
fd       "Fileset Update and Removal Tools"
fv       A.B9.04.1A
ff       C
is       PA_RISC_1_0
sys      S700,S800
pr       /cdrom = /
```

The file set description is followed by a list of files contained in that file set:

```
F
system/ -m 755
system/TOOL/ -m 755
system/TOOL/CDFinfo -m 444
system/TOOL/FreeDisk -m 544
system/TOOL/FreeDiskREADME -m 444
system/TOOL/customize -m 544
system/TOOL/decustomize -m 544
system/TOOL/get_kdfile -m 544
 .
 .
 .
etc/lvmmigrate -m 544
etc/lvmupdate -m 544
etc/parse_cdfs.c -m 444
etc/uncluster -m 544
# End of Fileset:  TOOL
```

The above example shows the first file set listed in our PSF file.

This file set contains the tools to install other file sets. If this file set is not installed on your system, you must include this in the distribution.

It is, however, very unlikely that it is not installed, as the initial system install needs it.

8.1.2 Creating a File Set for Use with the update Command

System software on HP-UX is installed using the update command.

Therefore, we have to create a file that can be used as input for the update command. Before doing this, we must find the name of the product we want to install in the PDF file for the entire CD-ROM.

We want to install WABI which is contained in the file set WABI-RUN on the CD-ROM. This is a Microsoft Windows emulator.

Use the following script to create a valid new PSF file that contains only the WABI-RUN file set.

```
head -5 /tmp/psf > /tmp/wabi.psf
sed -n -e '/^# Begin Fileset:.*WABI-RUN$/,/^# End of Fileset:/p'\
 < /tmp/psf >> /tmp/wabi.psf
```

Now you can create the file to be distributed by TME 10 Software Distribution Release 3.1. This file, which can be used by the update command, is actually a tar file.

```
fpkg -m tape -a /tmp/wabi.tar -S700 -v /tmp/wabi.psf 2>&1\
 | tee /tmp/out
```

Note
Use the "2>&1" to write standard error messages to standard output. Pipe the output to the tee command to see it on the terminal and write it to /tmp/out at the same time. The order of the options in the fpkg command is important. Placing the -m and -a option on the end will cause them to be ignored.

The output should look similar to the following:

Figure 235. Output from fpkg Command

```


NOTE:    The media format version has been set to "A.B8.05" by the product
         specification file.
       * The options used for this run are:
          - m (media type)                 tape
          - a (archive file)               /tmp/wabi.tar
          - s (size of output device: MBs)   715
          - V (media format version)       A.B8.00
          - L (logfile)                    /tmp/fpkg.log
          - h (follow symbolic links)      no
          - v (verbose)                    yes
          - M (allow mixed arch filesets)  no
          - S (Series)                     800
         The product specification file is: /tmp/wabi.psf

       * Begin parsing the product specification file.
       * Fileset "WABI-RUN":
          Source location:  "/cdrom"
          Destination location: "/"
       * Finished parsing the product specification file.
       * Begin building the software package for  tape media.
       * Total size for control files: 25088 bytes.
       * Fileset: "WABI-RUN" occupies 15176704 bytes on tape.
       * Begin building the tar tape.
       * a system/INDEX (mode 0000644) 1 blocks
       * a system/INFO (mode 0000644) 44 blocks
       * a system/CDFinfo (mode 0000644) 1 blocks
       * Begin building  fileset "WABI-RUN".
```

```
        * a WABI-RUN/../system/WABI-RUN/CDFinfo (mode 0100444) 1 blocks
        * a WABI-RUN/../system/WABI-RUN/customize (mode 0100544) 5 blocks
        * a WABI-RUN/../system/WABI-RUN/copyright (mode 0100444) 6 blocks
 .
 .
 .
        * a WABI-RUN/../usr/wabi/demo/demo_install (mode 0100755) 2 blocks
        * a WABI-RUN/../etc/newconfig/90RelNotes/Wabi (mode 0100444) 106 blocks
        * Success building the software package.  Review the log file,
          "/tmp/fpkg.log" for details.
```

The option -S700 creates a file set for use on a HP9000/700 machine.

You can determine what your system is running by using the command:

```
uname -a
```

The output on our system is:

```
HP-UX hp A.09.05 A 9000/715 2005547936 two-user license
```

The version dependency is verified by the update command. You can, however, test it yourself in the before_distribution step.

Note
For a full description of the fpkg command, type the following on your HP-UX system: `man fpkg`

We now have a file called /tmp/wabi.tar. We can distribute this file to your HP-UNIX machines.

8.1.3 Creating a TME 10 Software Distribution Release 3.1 Profile

To create the new file package, we use both the script and the policies defined in Chapter 7. "Beyond the GUI".

We will call the file package hp-wabi. In order for the policy to work we must create a directory called /distrib/hp-wabi on the host rs600024. In the directory, we copy the general script used in Chapter 7. "Beyond the GUI". All we need to do is specify the wabi.tar file in the file package definition and specify the appropriate functions in the setup.sh script (the general purpose install script).

In a profile manager, we select **Create** from the menu bar, and then **Profile...** from the pull-down menu.

The following window will appear:

Figure 236. Creating the hp-wabi File Package

View figure.

Enter **hp-wabi** as the Name/Icon Label, and select **FilePackage** as the profile Type. Then press the **Create & Close** button.

This will create a new profile icon called hp-wabi. Double-click on that icon to pop up the following window:

Figure 237. Entering wabi.tar in the hp-wabi File Package

View figure.

Select /distrib/hp-wabi/wabi/tar as the file to be included in the file package.

Note
Since rs600024 has to be the source host (due to our policy) we have to copy the tar file from the HP-UX system to rs600024 first. This can be done, for example, by using ftp.

We set Perform Compression on Distribution to **yes**. The tar file is big enough as it is.

Also, we specify /distrib/hp-wabi/setup.sh in all the BARC options. This is the general purpose install script that we have created in Chapter 7. "Beyond the GUI" and that we will modify for the WABI file package in 8.1.4 , "Modifying the General Purpose Install Script".

You can set the script by selecting **Edit** from the menu bar, then selecting **Platform-Specific Options** from the pull-down menu and **Unix Options...** from the submenu.

Then push the **Before Distribution**, **After Distribution**, **Upon Removal** and **During Commit** buttons in sequence, entering `/distrib/hp-wabi/setup.sh` in the Enter Program Name field for each selection.

8.1.4 Modifying the General Purpose Install Script

The BARC script (which we created in Chapter 7. "Beyond the GUI") needs to be adjusted to specify the appropriate actions necessary to install the tar file.

1. Before distribution checks. The before() function in the /distrib/hp-wabi/setup.sh script will be:

```
before()
{
        case $Interpreter_type in
        hpux9 )
                echo $Interpreter_type is a valid platform
                break;;
        * )
             echo $Interpreter_type is NOT a valid platform
                return 1
                break;;
        esac

        if [ ! -d $INSTALL_DIR ]
        then
           DO mkdir $INSTALL_DIR
        fi

        echo Installation Preparation Script Succeded.
        return 0
}
```

2. Install the distributed tar file.

   The command is `/etc/update -s /tmp/wabi.tar -d / "*"`. So, the after() function in the /distrib/hp-wabi/setup.sh script will be:

```
after()
{
        if [ ! -d $INSTALL_DIR ]
        then
                echo before install script did not run.
                return 1
        fi
        cd $INSTALL_DIR

        ls -l $FULL_TGT_INSTALL_FILES
        if [ "$?" != "0" ]
        then
                echo Not all files are present, aborting install.
                return 1
        fi

        #there is only one distribution file so we can use
        #$FULL_TGT_INSTALL_FILES as the tar file name
        /etc/update -s $FULL_TGT_INSTALL_FILES -d / "*"

        echo Installation script succeded.
        return 0
}
```

3. Use the commit step to clean up the tar file.

```
commit()
{
        if [ -f $FULL_TGT_INSTALL_FILES ]
        then
                rm -f $FULL_TGT_INSTALL_FILES
        else
                echo Install product before you can commit
                return 1
        fi

        echo Installation Commit Script Succeded.
        return 0
}
```

4. Deinstall the wabi software.

```
removal()
{
        /etc/rmfn -l WABI-RUN

        #keep courier happy, it wants to delete the
        #files so give it the files
        touch $FULL_TGT_INSTALL_FILES

        echo Installation Removal Script Succeded.
        return 0
}
```

8.1.5 Distributing the WABI File Package for HP-UX

The file package we created for WABI on HP-UX can be distributed just as any other FilePackage profile.

In the profile manager, just drag and drop the **wabi-hp** icon to the HP-UX subscriber that you want to install.

8.2 Installing WABI on Solaris

We give the same example as we did on HP-UX. WABI is also available in the Solaris distribution.

Solaris has a series of commands that automate installations.

We use:

- `pkgadd` to install a package on Solaris
- `pkgask` to create a response file for unattended installation
- `pkgrm` to remove the package

The distribution CD-ROM in our case contained three products:

1. CDE (Common Desktop Environment)
2. ODBC (Open Data Base Connectivity)
3. WABI (MS Windows subsystem)

The WABI distribution contains the binaries for each of the supported platforms:

- PowerPC
- Sparc
- Intel

The WABI product contains two packages, SUNWaws and SUNWwabi.

The first one is a package containing the documentation. We only distribute the SUNWwabi package.

It is located in the directory /cdrom/Wabi/sparc/pkgs/SUNWwabi where /cdrom is the mount point of the CD-ROM.

Note
You can mount the CD-ROM on any UNIX system that supports the normal ISO9660 file system format. On AIX, you can use the command: `mount -r -v cdrfs /dev/cd0 /cdrom` The distribution is a directory that needs to be packaged entirely. In other words, set the option descend_dirs on.

We will call our file package sun-wabi. Like in the HP-UX example, we use the standard script and the policies we created in Chapter 7. "Beyond the GUI".

The steps to perform are:

- Creating a response file for unattended installation

- Creating the directory /distrib/sun-wabi
- Copying /cdrom/Wabi/sparc/pkgs/SUNWwabi to /distrib/sun-wabi
- Copying the standard BARC script in the /distrib/sun-wabi directory with name setup.sh
- Creating a TME 10 Software Distribution Release 3.1 profile
- Adapting the BARC script to use the appropriate Solaris commands
- Distributing the file package

8.2.1 Creating a Response File for Unattended Installation

The command pkgadd is used to install Solaris system software.

In its normal operation mode the command pkgadd waits for user input. However, when we want to distribute, we do not want the install process to prompt for answers.

For this reason, the command pkgask was introduced. This command will ask the questions that the pkgadd command will normally prompt from the user. It will then create a response file.

This response file can be then specified with the pkgadd command. In this way, the pkgadd command will not prompt for user input. It will, instead, use the response file to get the needed answers.

You can only run the pkgask command on a Solaris or SunOS system. For this reason, you need to mount the CD-ROM on a test system and generate the response file there.

The command we use is:

```
pkgask -d /cdrom/Wabi/sparc/pkgs -r /tmp/SUNWwabi.resp SUNWwabi
```

It creates the following output:

```
Processing package instance <SUNWwabi> from </cdrom/Wabi/sparc/pkgs>

Wabi Application
(sparc) 2.2

Response file </tmp/SUNWwabi.resp> was created.

Processing of request script was successful.
```

We will need to include the /tmp/SUNWwabi.resp file in the distribution.

8.2.2 Setting Up the Directory /distrib/sun-wabi

First, we create the directory on rs600024:

```
mkdir /distrib/sun-wabi
```

We copy the response file in this directory. Depending on how your system is set up, you must use the appropriate commands to do it. We work in an environment where the Berkley R-commands work, so we use the following command on rs600024:

```
rcp sun:/tmp/SUNWwabi.resp /distrib/sun-wabi
```

In your environment you may need to use ftp.

Copy the SUNWwabi package files to the distribution directory. You can use the normal cp command to copy from the mounted CD-ROM.

This will reset most file attributes and permissions. You can use tar commands to preserve the permissions.

```
cd /cdrom/Wabi/sparc/pkgs
tar cvf - SUNWwabi | ( cd /distrib/sun-wabi; tar xvf - )
```

Then we copy the BARC script to /distrib/sun-wabi/setup.sh. This is the general purpose BARC script that we created in Chapter 7. "Beyond the GUI".

8.2.3 Creating the TME 10 Software Distribution Release 3.1 Profile

To create a TME 10 Software Distribution Release 3.1 profile, we open a Profile Manager window. Then we select **Create** from the menu bar, and then **Profile...** from the pull-down menu.

The following window will appear:

Figure 238. Creating the sun-wabi File Package

View figure.

We enter `sun-wabi` as the Name/Icon Label, and select **FilePackage** as the Profile Type. Then we select the **Create & Close** button.

This will create a sun-wabi icon in our profile manager. We double-click this icon to pop up the following window:

Figure 239. The sun-wabi File Package Details

View figure.

We select the files to be included.

Notice that we checked the **Descend into directories** option. You could set the descend-dirs option on the command line using:

```
wsetfpopts -T gen -d y @sun-wabi
```

Note
Do not set any options on the command line while you have the File Package Details window open. All the options are

loaded in the GUI applications. You can set the options on the command line, but they will be overwritten when you select **Save** in the GUI. This will save even those option you can not set using the GUI.

As in the HP-UX example described in 8.1.3 , "Creating a TME 10 Software Distribution Release 3.1 Profile", we specify the general purpose BARC script that we modify in 8.2.4 , "Adapting the BARC Script" for all BARC scripts.

8.2.4 Adapting the BARC Script

We used the pkgask command to create a response file. This response file should answer all the questions an installation might ask. However, there is a problem with the installation of WABI on Solaris.

The installation does explicitly prompt for answers. You cannot specify the -n option with the pkgadd command because the installation will fail.

There is, however, a very nice tool freely available. This tool is called expect. It is an interpreter that serves at automating interactive programs, so that they can run noninteractively. Expect is implemented using the tcl interpreter. This is also freely available.

We used the following versions of these tools:

- expect 5.20.18
- tcl 7.5
- tk 4.1

We obtained these from an anonymous ftp site, SunSite.unc.edu. You can find many interesting tools in pkgadd format.

Just download, unpack, install and play. We obtained the binaries for Solaris 2.

You can also find the complete tools in source form on the Internet. You will have to compile these, though. If you do not want to do this, ask your nearest Internet guru to search for the binaries for your system.

Using the above-mentioned tools, the modified scripts look as follows.

The before distribution function is:

```
before()
{
        case $Interpreter_type in
        solaris2 )
                echo $Interpreter_type is a valid platform
                break;;
        * )
             echo $Interpreter_type is NOT a valid platform
                return 1
                break;;
        esac

        if [ ! -d $INSTALL_DIR ]
        then
           DO mkdir $INSTALL_DIR
        fi

        echo Installation Preparation Script Succeded.
        return 0
}
```

The after distribution function is:

```
after()
{
        if [ ! -d $INSTALL_DIR ]
        then
                echo before install script did not run.
                return 1
        fi
        cd $INSTALL_DIR

        ls -l $FULL_TGT_INSTALL_FILES
        if [ "$?" != "0" ]
        then
                echo Not all files are present, aborting install.
                return 1
        fi


        cat <<E-O-F > $INSTALL_DIR/exp.sh
eval spawn /usr/sbin/pkgadd -d $INSTALL_DIR -r $INSTALL_DIR/SUNWwabi.resp SUNWwabi
expect "Do you want to continue with the installation of <SUNWwabi>"
send "y\r"
interact
E-O-F
        /usr/local/bin/expect $INSTALL_DIR/exp.sh


        echo Installation script succeded.
        return 0
}
```

On commit, we delete the distribution files, as they are not needed on the target anymore. The commit distribution function is:

```
commit()
{
        if [ -f $FULL_TGT_INSTALL_FILES ]
        then
                rm -fr $FULL_TGT_INSTALL_FILES
        else
                echo Install product before you can commit
                return 1
        fi

        echo Installation Commit Script Succeded.
        return 0
}
```

The remove distribution function:

```
removal()
{


        cat <<E-O-F > $INSTALL_DIR/exp.sh
eval spawn /usr/sbin/pkgrm SUNWwabi
expect "Do you want to remove this package?"
send "y\r"
expect "Do you want to continue with the removal of this package"
send "y\r"
interact
E-O-F
```

```
        /usr/local/bin/expect $INSTALL_DIR/exp.sh


        #keep courier happy, it wants to delete the
        #files so give it the files
        touch $FULL_TGT_INSTALL_FILES

        echo Installation Removal Script Succeded.
        return 0
}
```

The pkgadd command will have to run as a superuser. You need to set the unix_after_as_uid option to the user ID of a super user:

```
wsetfpprgs -T unix -u 0 @sun-wabi
```

8.2.5 Distributing the WABI File Package for Solaris

The file package we created for WABI on Solaris can be distributed just as any other FilePackage profile.

In the profile manager, just drag and drop the **wabi-sun** icon to the Solaris subscriber you want to install.

[Top of Page | Previous Page | Next Page | Table of Contents | Index]

The TME 10 Deployment Cookbook

Chapter 9. A Real Customer Environment

In this part, we give an overview of a real customer environment. We describe the customer operating system scenario. Also, we talk about the customer's system management scenario. You can see the concept and the configuration. This will be the basic scenario for our lab scenario later.

After describing the customer environment we will describe the installation and set up of the Windows NT environment and the TME 10 products involved.

If you are familiar with the setup of a TME 10 Software Distribution environment on the Windows NT platform, you might want to directly go to 9.4 , "Distribution of an Application (Scenario 1)". Starting there we will describe the following scenarios:

- Distributing a Windows NT application, using the TME 10 Software Distribution Windows NT Command Line Utilities
- Distributing data to multiple clients
- Upgrading the TME PC agent with TME 10 Software Distribution using the Windows NT SYSDIFF tool
- Using different distribution approaches and compare their performance
- Using different distribution options

9.1 Customer Windows NT Environment

A health insurance company has one headquarters and about 40 head offices. Their client/server applications are running on a Windows NT platform. Each head office has one Windows NT server and about 40 Windows NT workstations. The server is a Windows NT Primary Domain Controller (PDC) and works, also, as a file server and a print server. TCP/IP is the protocol via an Ethernet LAN. All head offices are connected to the headquarters via routers. At the headquarters is also a Windows NT server with the function of a Primary Domain Controller.

The Windows NT domains are the basic unit of a Windows NT Server network structure. The Windows NT master domain concept is used in this enterprise. The headquarters and all head offices have their own domain with their own administrator, All head office domains have a one-direction trust relationship with the domain in the headquarters. The headquarters domain is the trusted domain for all head office domains. The users and resources in the head office domains can be administrated remotely from the headquarters' main administrator.

Figure 240. Health Insurance Map

View figure.

9.2 Customer System Management Environment

TME 10 Framework products are chosen for system management. The TMR server is installed on the PDC in the headquarters and is, by default, a repeater manager. All PDCs in the head offices are managed nodes and configured as repeater sites. The workstations in the head offices are PC managed nodes. Their PC managed node host location is the managed node in their head office domain.

TME 10 Software Distribution 3.1 (Courier 3.1) is used for the software distribution. So you can push the software packages from the TMR server via managed node to the PC managed node.

For the pull function, the TME 10 UserLink application is installed on the TMR server, managed nodes and all PC managed nodes, to allow the user at the PC managed node to decide when a software package will be installed from the managed node.

Figure 241. Health Insurance Scenario

View figure.

9.3 Installation Steps for Our Environment

We assume that you have set up your NT environment properly and that your computers are connected to a LAN via TCP/IP. This book describes the steps you will need for our real customer environment. For more information about installation and configuration of TME 10 Framework, see the *TME 10 Framework Planning and Installation Guide 3.1*.

For our scenario, we used three PCs to simulate the customer environment. See Chapter 9. "A Real Customer Environment" and Figure 241. The PDC and TMR server FOXTROT in the domain REDBOOK simulates the headquarters environment. One head office is simulated by one PDC and managed node, ROMEO, and one workstation and PC managed node, JULIET, in the domain BLUEBOOK.

Figure 242 shows our scenario.

Figure 242. Our Lab Scenario

View figure.

9.3.1 Hardware and Software Environment

FOXTROT

```
Hardware : PS/2 95 (9595-0QT), 80MB (RAM), 1GB (Disk)
OS       : Windows NT Server 4.0 with Service Pack 2
Protocol : TCP/IP
Software : TME 10 Framework 3.1 Revision C (Platform/Desktop)
           TME 10 Software Distribution 3.1
```

ROMEO

```
Hardware : PS/2 95 (9595-0QT), 64MB (RAM), 1GB (Disk)
OS       : Windows NT Server 4.0 with Service Pack 2
Protocol : TCP/IP
Software : TME 10 Framework 3.1 Revision C (Platform/Desktop)
           TME 10 Software Distribution 3.1
```

JULIET

```
Hardware : PS/2 77 (9577-DNC), 32MB (RAM), 540MB (Disk)
OS       : Windows NT Workstation 4.0
Protocol : TCP/IP
Software : TME 10 Agent (4.007)
           Tivoli TCP/IP Agent 3.0 Service Pack 01
```

9.3.2 Windows NT Trust Relationships

A trust relationship is a link between two domains and allows one domain (the trusting domain) to recognize all user and global group accounts from another domain (the trusted domain). You can use two steps to produce a Windows NT trust relationship.

1. First, you allow the head office domains (such as BLUEBOOK) trusting the headquarters domain (REDBOOK). You must do this step at the REDBOOK domain.
2. Then go to the BLUEBOOK domain and configure the REDBOOK domain as the trusted domain.

Figure 243. One-Way Trust Relationship

View figure.

We discovered that you can do these steps from one domain.

1. At the domain REDBOOK, you log on as administrator.

Note
The user ID administrator with the same password must be available in the user manager on the domain REDBOOK and in the User manager on the domain BLUEBOOK. The account must also be enabled on both domains.

2. Select the **User Manager for the Domains** from the Administrative Tools (Common) menu (Figure 244).

Figure 244. Start User Manager for Domains

View figure.

The User Manager - REDBOOK window appears (Figure 245).

Figure 245. User Manager - REDBOOK

View figure.

3. Choose from the Policies menu the **Trust Relationships** option (Figure 246).

   Figure 246. Start Trust Relationships

   View figure.

   The Trust Relationships window opens (Figure 247).

   Figure 247. Trust Relationships (REDBOOK Before)

   View figure.

4. Click on the **Add** button next to the Trusting Domains list. The Add Trusting Domain dialog opens (Figure 248).
5. Enter the domain name in the field Trusting Domain, which is trusting the domain, REDBOOK. We are at the domain REDBOOK, so we enter the name of our other domain, BLUEBOOK.
6. Enter an initial password and confirm the password.

   Figure 248. Add Trusting Domain

   View figure.

7. Select the **OK** button and the Trust Relationships window appears again with the domain BLUEBOOK now in the Trusting Domains list.

8. Close the window by selecting the **Close** button (Figure 249).

Figure 249. Trust Relationships (REDBOOK After)

View figure.

You have given one domain (BLUEBOOK) permission to trust your domain (REDBOOK). The trust relationship is completed when the other domain (BLUEBOOK) actually trusts your domain (REDBOOK).

Now configure the trust relationship for domain BLUEBOOK with the user manager for the domain BLUEBOOK.

1. From the User Manager - REDBOOK window, select from the User menu the **Select Domain** option. The Select Domain dialog appears (Figure 250).

   Figure 250. User Manager - REDBOOK

   View figure.

2. From the Select Domain window, select **BLUEBOOK** in the Select Domain list and select the **OK** button (Figure 251).

   Figure 251. Select Domain

   View figure.

   Now you can use the User Manager - BLUEBOOK. The User Manager - Bluebook window appears on FOXTROT (Figure 252).

   Figure 252. User Manager - BLUEBOOK

   View figure.

3. Select the **Trust Relationships** option from the Policies menu. The Trust Relationships window opens (Figure 253).

   Figure 253. Trust Relationships

View figure.

4. Select the **Add** button next to the Trusted Domains list (Figure 254).

   Figure 254. Trust Relationships (BLUEBOOK Before)

   View figure.

   The Add Trusted Domain dialog appears (Figure 255).

   Figure 255. Add Trusted Domain

   View figure.

5. Enter REDBOOK for the Domain which the Domain BLUEBOOK trusts.

6. Enter the password, as created in the previous step.

7. When you click on the **OK** button and the Trust Relationships completes without errors, the User Manager for Domains window appears (Figure 256).

   Figure 256. User Manager for Domains

   View figure.

8. Select the **OK** button and the Trust Relationships window appears again. Now the Domain REDBOOK is in the Trusted Domains list.

9. Click the **Close** button to close the window (Figure 257).

   Figure 257. Trust Relationships (BLUEBOOK After)

   View figure.

Note
For the next step, it is important that you don't change the User Manager. You are still working with the User Manager, BLUEBOOK.

9.3.3 Give an Administrator Access to Other Domains

To administrate the domain remotely, you must copy the global group `Domain Admins` from the domain REDBOOK to the local group `Administrators` of domain BLUEBOOK. See Figure 258. So the administrator REDBOOK has remotely the same permissions on the domain BLUEBOOK as the local administrator BLUEBOOK.

Figure 258. Add Global Group Domain Admins

View figure.

Note
Do not forget, we are still working with the User Manager, BLUEBOOK.

Figure 259. User Manager - BLUEBOOK

View figure.

1. Double-click on the **Administrators** local group in the Groups list.

   The Local Group Properties window (Figure 260) appears.

   Figure 260. Local Group Properties

   View figure.

2. Click the **Add** button next to the Members list.

   Now the Add User and Groups window (Figure 261) appears.

   Figure 261. Add Users and Groups (BLUEBOOK)

   View figure.

3. Select the **REDBOOK** domain from the List Names From selection list.
4. Select the **Domain Admins** Global Group from the Names list. See Figure 262.

   Figure 262. Add Users and Groups (REDBOOK)

   View figure.

5. Click on the **Add** button and the **Domain Admins** global group. The REDBOOK domain appears on the Add Names list in the Add users and Groups window (Figure 263).

   Figure 263. Add Users and Groups (REDBOOK)

   View figure.

6. Click the **OK** button. See Figure 264. You see in the Local Group Properties window that the `REDBOOK\Domain Admins` global group is a member of the Administrators Local Group in the BLUEBOOK domain.

   Figure 264. Local Group Properties (BLUEBOOK)

   View figure.

7. Click on the **OK** button to establish the trust relationship between REDBOOK and BLUEBOOK domains.

9.3.4 Tivoli Management Region (TMR) Server (FOXTROT) Installation

The Tivoli Management Region Server (TMR Server) is the brain of your Management Region and you have to install this server first. The topics in this section describe the installation the TME 10 Framework on the TMR server on a Windows NT Server. For this task, you have to log on as a Windows NT administrator.

9.3.4.1 TME 10 Framework Installation

Insert the TME 10 Framework 3.1 CD-ROM. We used the TME 10 Framework Version 3.1 Revision C CD-ROM (LK2T-6059-02). Double-click on **Setup.exe** (Figure 265).

Figure 265. Start SETUP.EXE from Explorer

View figure.

After you read the Welcome screen, click on the **Next** button.

Figure 266. TME 10 Welcome Screen

View figure.

TME requires an unprivileged operations user account (tmersrvd). Press **Yes** and the system creates it for you (Figure 267).

Figure 267. Create Account

View figure.

The Tivoli Region Administrator needs two special privileges,

1. Act as part of the operating system
2. Replace a process level token.

The installation program asks you to create a new local group, Tivoli_Admin_Privileges. Click on the **Yes** button, and the system will create this local group for you. See Figure 268.

Figure 268. Local Group

View figure.

The new local group is created, and the user that you currently used is copied as a member of the new group. Now you have to log off and log on again. Press the **Yes** button for logoff. See Figure 269.

Figure 269. Logoff

View figure.

After you log on as the Windows NT administrator, start the SETUP.EXE again. When you see the Welcome screen click on the **Next** button and you will see the User Information window. Type in your name and your company. Click on the **Next** button to go to the next window (Figure 270).

Figure 270. User Information

View figure.

(Ref #1.) You can enter an installation password. In our environment, we do not use an installation password so we left the field blank. See Figure 271. Click on the **Next** button to go to the Remote File Access window (Figure 272).

Figure 271. Installation Password

View figure.

Type in a User Name and the password for the user name. Otherwise you don't have access to the remote file system, such as OS/2 LAN Server. See Figure 272. Click on the **Next** button to go to the Setup Type window (Figure 273).

Figure 272. Remote User File Access

View figure.

We chose **Custom** as our setup type, so that we could see the installation options. With the **Browse** button you can select another install destination directory path. See Figure 273. Click on **Next** to get the Enter License Key window (Figure 274).

Figure 273. Setup Type

View figure.

Choose the Components that you want to install. If disk space is not an issue, you could select all components. This window does show the disk space required and the disk space available on this workstation. See Figure 274.

Figure 274. Select Components

View figure.

Type in the license key. See Figure 275.

Note
To get the license key, you must complete a license key form and send it to the Tivoli customer support. If you have questions regarding this license key, call the US number (512) 436-8398, fax (512) 436-8167, or send an e-mail to keys@tivoli.com on the Internet. For Tivoli Technical Support, call 1-800-TIVOLI8 (848-6548).

Figure 275. Enter License Key

View figure.

You can change the database directory, if necessary. See Figure 276. Click on the **Next** button to start the installation. See Figure 277.

Figure 276. Database Directory

View figure.

While the installation is running, you will see Figure 277.

Figure 277. Installation Is Running

View figure.

When the installation is successful, you will see Figure 278.

Figure 278. Database Installation Completed Successfully

View figure.

Since this is the first time you have installed TME 10 on this system, you are prompted to restart the machine.

Figure 279. Setup Is Complete

View figure.

9.3.4.2 TME 10 Desktop Installation

TME 10 Desktop is the Graphical User Interface (GUI) for the Tivoli Management Environment. From this desktop, you can perform all management functions. You can install the GUI on a Windows, OS/2 or UNIX system. This book guides you through the installation on our Windows NT TMR Server (FOXTROT). For more information about the desktop, refer to the *Desktop for Windows User's Guide 3.1*.

From the Windows NT Explorer window, double-click on **Setup.exe** to start the desktop installation. See Figure 280.

Figure 280. Start SETUP.EXE from Explorer

View figure.

Choose another destination directory by pressing **Browse**, if necessary. Press the **Next** button. See Figure 281.

Figure 281. Destination Path

View figure.

Select the **Program Folder**which is associated with the Tivoli icon. Press the **Next** button. See Figure 282.

Figure 282. Select Program Folder

View figure.

While the installation is running, you will see Figure 283.

Figure 283. Installation Is Running

View figure.

If you see the Installation Complete window (Figure 284), your installation is finished. You can look at the README text by pressing the **Yes** button, or press **No** to complete the installation.

Figure 284. Installation Complete

View figure.

9.3.4.3 Set Tivoli Environment Variable with the Command Line Interface

After we installed the TME Framework and the desktop on the TMR server (FOXTROT), we configured a customized command line interface (CLI). The CLI is another way to start system management tasks. After we configured the CLI, we can control our Tivoli Management Region (TMR) with the desktop, or the CLI.

To build a customized CLI, start the Windows NT Explorer, click on **New**, and then **Shortcut**. See Figure 285.

Figure 285. Build Shortcut

View figure.

To create the CLI, type the following statement in the Command line field in Create Shortcut window (Figure 286).

```
cmd.exe /k %windir%\system32\drivers\etc\tivoli\setup_env
```

This command line `cmd.exe` with the parameters build our Tivoli environment that we need to start management commands. Press the **Next** button to come to the next screen. See Figure 287.

Figure 286. Create Shortcut

View figure.

In Select a Title for the Program window, you can type in your title for the CLI `Tivoli CLI`. Press the **Finish** button to create the shortcut. See Figure 287.

Figure 287. Select a Title for the Program

View figure.

You can start the customized CLI by clicking on **Start** on the Windows NT taskbar, then select **Programs**, **Tivoli**, and **Tivoli CLI**. See Figure 288.

Figure 288. Start CLI

View figure.

To try the CLI, type `odadmin` which is a command that shows you your TMR environment status. See Figure 289.

For more information about the commands you can use with the CLI, refer to the *TME 10 Framework Reference Manual 3.1*.

Figure 289. Command Line Interface

View figure.

When you start the Tivoli CLI, the SETUP_ENV.CMD is executed. See Figure 290.

Figure 290. SETUP_ENV.CMD

```
@echo off
rem (C) COPYRIGHT TIVOLI Systems, Inc. 1994-1996
rem Unpublished Work
rem All Rights Reserved
rem Licensed Material - Property of TIVOLI Systems, Inc.
rem
rem Component Name: Installation shell Environment
rem
rem $Date: 1996/09/30 13:57:36 $ end
rem
rem $Revision: 1.32 $ end
rem
rem Primary Author: Francis Sullivan
rem
rem Wed Feb 12 17:30:40  1997
rem generated at TMP install time
set BINDIR=C:\Tivoli\bin\w32-ix86
set DBDIR=C:\Tivoli\db\foxtrot.db
set o_dispatch=94
set INTERP=w32-ix86
set PERLLIB=%BINDIR%\tools\lib\perl
set TivPath=%BINDIR%\bin;%BINDIR%\tools;%BINDIR%\ADE;%BINDIR%\AEF
set Path=%TivPath%;%Path%
set TMP=%DBDIR%\tmp
set TEMP=%DBDIR%\tmp
set NLSPATH=C:\Tivoli\msg_cat\%%L\%%N.cat
echo Tivoli environment variables configured.
echo on
```

9.3.4.4 Back Up and Restore of the Tivoli Database

Now, we have installed FOXTROT properly with the basic definitions. Whenever we change something in the system, we change the Tivoli database, too. We recommend that you back up the database from time to time. To check the consistency of the database, use the command:

```
wchkdb -u
```

where `wchkdb` is the command to check the TME database and `-u` specifies to update the database and fix any inconsistencies.

If you see an inconsistency, as in Figure 291, you go to the TME 10 desktop, double-click on **Notice** and **Catch Up** all unread messages.

Figure 291. Check Database Command

```
+--------------------------------------------------------------------------------+
|
View figure.
                                                                  |
+--------------------------------------------------------------------------------+
```

Back Up the Tivoli Database

Next, you find a description of how you can back up and restore the database from FOXTROT. Later we have another database on our managed node (ROMEO). If you want to back up this database, it works the same way. You can start your backup from the customized CLI that we just configured. In our example, we did the backup from the Tivoli Desktop.

Click on **Start** on the NT taskbar, then select **Programs**, **Tivoli**, and **Tivoli**. See Figure 292.

Figure 292. Start Tivoli Desktop

View figure.

Type in your user ID (Administrator) and password, and press the **OK** button. See Figure 293.

Figure 293. TME Logon

View figure.

The Tivoli Startup window (Figure 294) appears.

Figure 294. Tivoli Startup

View figure.

After the TME 10 desktop appears, click on **Desktop** and **Maintenance** to start the maintenance mode. See Figure 295. If you start the maintenance mode, the database will be closed for every operation from another administrator.

Figure 295. TME 10 Desktop

View figure.

To inform the other administrators that you are doing a backup and start the Maintenance Mode, you can send a broadcast message. Enter the message in the Broadcast Message field in the TMR Maintenance Mode window, and click on the **Broadcast Message** button. See Figure 296.

Figure 296. TMR Maintenance Mode

View figure.

The TMR Maintenance Mode window with your messages appears on the other TMR desktop screen. See Figure 297.

Figure 297. Maintenance Broadcast Messages

View figure.

Now, Click on **Start Maintenance** to start the maintenance mode. See Figure 296. The Exit Maintenance window (Figure 298) appears.

Note

Don't do it now, but don't forget to exit the maintenance mode after the backup takes place.

Figure 298. Exit Maintenance Mode

View figure.

We are now ready to start the backup. On the TME 10 desktop (Figure 299), click on **Desktop**, and **Backup** to start the Backup window.

Figure 299. TME 10 Desktop

View figure.

Click on the managed node, in our example FOXTROT, that you want to back up. Use the left arrow to move FOXTROT from the right window to the left window (Back up these managed nodes). See Figure 300.

Figure 300. Backup Window

View figure.

On the Backup Tivoli Management Region window (Figure 301), FOXTROT should appear on the left side. In the Device/File field, you can enter the file name of the backup. To start the backup, press the **Start Backup** button.

Figure 301. Backup Window

View figure.

The Backup In Progress window appears on the other TMR desktop screen (Figure 302).

Figure 302. Backup in Progress

View figure.

In the Backup Status window (Figure 303), you can see when the database backup is complete. Click on the **Close** button to leave the screen.

Note
Don't forget to exit the Maintenance Mode.

Figure 303. Backup Status

View figure.

Restore the Tivoli Database

Here, we describe how you can restore a database. If something goes wrong, you may need to restore a database. You cannot restore the database from the desktop. You have to start a command from the CLI. The following is an example of how you can restore the database that we just saved.

```
wbkupdb -r -d c:\tivoli\db\backups\tme_inst_1st foxtrot
```

where `-r` specifies to restore the database for the specified node and `-d` specifies the backup file which will be restored followed by the path and database name and the nodename (FOXTROT).

For more information about the wbkupdb command, refer to the *TME 10 Framework Reference Manual Version 3.1*.

The Restore In Progress window (Figure 304) appears on the other TMR desktop screen.

Figure 304. Restore in Progress

View figure.

9.3.5 Managed Node (ROMEO) Installation

Now, we are going to expand our environment. We want to install the managed node (ROMEO) remotely from our TMR server (FOXTROT). This is possible because we have set up an IP connection and the trusted domain, described in 9.3.2 , "Windows NT Trust Relationships".

After you start the TME 10 desktop, double-click on the **foxtrot-region** icon. See Figure 305.

Figure 305. TME 10 Desktop

View figure.

From the Policy Region window, click on **Create**, **ManagedNode** to create our managed node (ROMEO). See Figure 306.

Figure 306. Foxtrot Region

View figure.

Type your TMR installation password, if you use one. In our example, we do not use a password. On page reference #1, the TMR installation password is set.

Under the Default Access Method, click on **Account** and type the root account (Administrator) and password on the system that you want to install. Using this method, you must know the user ID and password for the Windows NT administrator.

Click on the **Add Clients** button to choose the client (in our example, ROMEO) that you want to install. See Figure 307.

Figure 307. Client Install

View figure.

Type the client name in the Add Client field on the Add Client window.

Note
The Use Default Access Method is checked.

Click on the **Add & Close** button. See Figure 308.

Figure 308. Add Client

View figure.

We are back on the Client Install window (Figure 309). Under the Install These Clients list, you see our managed node, ROMEO. Click on **Select Media** to choose the right source for the installation media.

Figure 309. Client Install

View figure.

We want install ROMEO from FOXTROT, so **foxtrot** is highlighted. Be sure that the TME 10 CD-ROM is in the CD-ROM drive. Click on **Set Media & Close**. See Figure 310.

Figure 310. Installation Path

View figure.

On the Install Options screen, you can alter the installation path. We changed it to match the directory structure in the TME region server. Therefore, it is much easier to find something. Insure that all the Selectable Installation Options have been checked. Click on the **Set** button to start the installation. See Figure 311.

Figure 311. Install Options

View figure.

First, the TME server checks if it is possible to install on ROMEO (access to install drive). In the next step, the TME server installs the Tivoli Remote Execution Program (oserve.exe) on ROMEO and starts the program.

Wait until you can click the **Continue Install** button. See Figure 312.

Figure 312. Client Install

View figure.

Click on **Use Installation Access Method Account**. Otherwise, you can use the **Account** button to choose another account which has access to the remote file system. Click on the **Continue** button. See Figure 313.

Figure 313. Tivoli Remote Access Account

View figure.

Click on **OK** and ROMEO is rebooted for you. If somebody is working on ROMEO, or you would like to change something before the system boots, press the **Close** button. See Figure 314.

Figure 314. Confirm Reboot

View figure.

Click on the **Close** button to end the installation. See Figure 315.

Figure 315. Client Install

View figure.

The managed node ROMEO appears in the Policy Region foxtrot-region window (Figure 316) and is ready to use. All these steps we have done from FOXTROT.

Now you have to move to ROMEO to configure the CLI. Follow the same procedure (9.3.4.3 , "Set Tivoli Environment Variable with the Command Line Interface") that we used for FOXTROT.

Figure 316. Foxtrot Region

View figure.

9.3.6 PC Managed Node (JULIET) Installation

After you have installed the TMR server and a managed node, you may install the TME PC agent for PC managed node. The installation of TME PC managed node is different from the installation of TME managed node and TME applications. You have to first install the TME PC agent by locally because you can not install them remotely from the TMR server. In the second step you create a PC managed node in a policy region.

9.3.6.1 Installing the TME PC Agent

The PC managed node will also run on the Windows NT platform.

1. Insert the TME 10 Framework for NT CD-ROM in your CD drive on the PC.
2. Start the Windows NT Explorer. See Figure 317.

   Figure 317. Exploring - CD

   View figure.

3. Select the CD drive and go to the subdirectory "D:\Pc\Tcpagent\Cd".

4. Select the **Setup** program to start the Tivoli Agent Setup window (Figure 318).

   Figure 318. Tivoli System TME Agent Setup

   View figure.

   Now you get the Welcome window (Figure 319).

   Figure 319. Welcome

   View figure.

5. Select the **Next >** button to continue the installation.

   The Choose Option window (Figure 320) appears.

   Figure 320. Choose Options

   View figure.

6. Choose **Windows NT (SERVICE)**.

   There are two Windows NT agents available. The SERVICE agent runs continually when Windows NT is running. The CONSOLE agent runs only when the user is logged in and it is specified in the Startup group or the user explicitly starts it.

7. Select the **Next >** button to get the Setup Pause window (Figure 321).

   Figure 321. Setup Pause

   View figure.

   Select **Next >** or the **Continue TME Agent Installation** icon.

   Figure 322. Destination Drive

View figure.

8. Enter your choice of destination drive on which the TME agent should be installed at your PC. The default installation drive is `C:`.
9. Select **Next>** to continue. The TME Agent Setup is looking for previous installations.

   Figure 323. Information

   View figure.

10. Click on the **OK** button.

    Figure 324. Destination Directory

    View figure.

11. Enter your destination directory where the agent software should be installed at your PC. The default is the `TIVOLI\TMEAGENT\` directory.
12. Select the **Next >** button.

    Figure 325. Accept Installation Setting

    View figure.

    The setup program prompts you to accept your choice of settings. If you want to accept the settings, select the **Yes** button. If no, select the **No** button and you have the option to change the default installation directory and default drive settings.

13. Select the **Yes >** button.

    Figure 326. Select Startup Functions

View figure.

14. Select **Start Automatically** if you want the PC agent to start every time the system is booted. This option adds a new service, and it will start automatically.

15. Select **Start after install** to run the agent immediately after the installation completes. If you do not select this option, you must manually start the agent later.

16. Select the **Next >** button to continue installation.

Figure 327. Administrator Privileges for Services

View figure.

If you have selected **Start Automatically**, you must be logged in with administrator privileges to place the TME Agent in the services list.

17. Select the **Yes** button to continue with the setup.

Figure 328. Name of the Machine

View figure.

18. Enter the name of the machine where the PC agent should be installed.

19. Select the **Next >** button.

Figure 329. No NetWare Managed Site

View figure.

20. Since we do not operate with a Tivoli NetWare Managed Site, select the **No** button.

Figure 330. DHCP Server

View figure.

21. Since we do not use a DHCP server, select the **No** button.

Figure 331. IP Synchronization

View figure.

22. Since no IP synchronization is necessary, select the **No** button.

Figure 332. Question for RELEASE.TXT

View figure.

23. In this window (Figure 333), you decide to view or not to view the RELEASE.TXT. Since we had viewed the text before, we selected the **No** button.

Figure 333. TME Agent Setup Complete

View figure.

24. Select the **OK** button and the TME Agent setup is complete.

9.3.6.2 Create a PC Managed Node (JULIET)

After installation of the TME Agent on your PC, you must create a PC managed node in a policy region on the TMR server.

- If the PC agent is installed first, when the PC managed node is created, TME 10 will verify that there is a connection to the PC managed node and that the PC agent is running properly.
- If the PC agent is not installed first, the PC managed node will be created, but the verification will not be performed.

You can create a PC Managed Node from the desktop or command line.

Create a PC Managed Node (JULIET) from the Desktop

1. Start the TME 10 desktop.
2. Double-click on the policy region in which you want to create the PC managed node.

Figure 334. TME 10 Desktop

View figure.

3. Select the **PcManagedNode** option from the Create menu. See Figure 335.

   Figure 335. Policy Region

   View figure.

4. The Create PC Managed Nodes window (Figure 336) appears.

5. To add the name of the PC you want to install, select **Add Hosts**.

   Figure 336. Create PC Managed Nodes

   View figure.

6. The Add Hosts window (Figure 337) appears.

7. Enter the PC name in the Add PC Managed Node field.

8. In the Connection Timeout field, enter the number of seconds that pass without a connection before the operation will time out.

9. Select the **Browse** button and select the managed node host for the PC managed node. The default is the TME server. In our scenario, the TMR server is foxtrot.

   Figure 337. Add Hosts

   View figure.

10. The Select Host Location window (Figure 338) appears.

11. Choose **romeo** for the PC Managed Node Location.

12. Click on the **Select & Close** button.

    Figure 338. Select Host Location

View figure.

13. The Add Hosts window (Figure 339) reappears with romeo in the PC Managed Node Location field.
14. In the PC Managed Node Icon field, select the radio button for the icon type (Client or Server) displayed in the Policy Region window.
15. Select the **Yes** radio button and enter the IP address of the PC in the IP Address field. If you use a DHCP server, select the **No** button.
16. If your PC is online, select **Yes** in the Is the PC online field.
17. Select the **Add & Close** button to continue.

    Figure 339. Add Hosts

    View figure.

18. The PC managed node name is displayed in the Create These PC Managed Nodes list box.
19. Select the **Create & Close** button.

    Figure 340. Create PC Managed Nodes

    View figure.

You see that the PC Managed Node juliet is created in the foxtrot-region Policy Region window (Figure 341). Notice the different icon types. The TMR server is a TME server icon with the TMP/NT foxtrot label. The managed node is a TME client icon with the TMP/NT romeo label. The PC managed node is a TME client icon with the WINDOWS/NT juliet label.

Figure 341. Policy Region

View figure.

Create a PC Managed Node (JULIET) from the Command Line

Enter the following line at the Tivoli CLI window:

```
wcrtpcmngnode -h romeo -i 9.24.104.175 -p nt -t 180 juliet foxtrot-region
```

where `-h romeo` specifies the Managed Node Host Location (default TMR server), `-i 9.24.104.175` specifies the PC Managed Node IP Address, `-p nt` specifies the PC Type (Windows NT), `-t 180` specifies the Connection Timeout (180 seconds), `juliet` specifies the PC Managed Node Name, and `foxtrot-region` specifies the Policy Region Name.

9.3.6.3 Tivoli TCP/IP Agent Service Pack Installation

In the following scenario, we install the Tivoli TCP/IP Agent 3.0 Service Pack 01.

Note
Before installing a patch, you should back up any database that will be modified by the patch.

1. Insert the TME 10 Framework for NT CD-ROM in your CD drive on the TMR server.
2. Start the TME 10 desktop (Figure 342) for the TMR administrator on the TMR server.
3. Select the **Install** option from the **Desktop** menu.
4. Select the **Install Product** option.

   Figure 342. TME 10 Desktop (Install Product)

   View figure.

5. The Install Product window (Figure 343) appears.
6. Select **Tivoli TCP/IP Agent 3.0 Service Pack 01** in the Select Product to Install scroll list.
7. The only PC managed node, juliet, is put in the Clients to Install On scroll list.
8. Click on **Install & Close** to install the product.

   Figure 343. Install Product

   View figure.

9. The Install Product window (Figure 344) displays the actions that the install program is about to execute and gives you any error messages.
10. If there are no error messages, click on **Continue Install** to continue.

    Figure 344. Product Install Dialog

View figure.

11. The Product Install window (Figure 345) will display status information during the product installation. At the end of installation, the Product Install window displays that the installation completed.
12. Click on the **Close** button and the installation is completed.

Figure 345. Product Install Dialog at the End of Installation

View figure.

9.3.7 Installation of TME 10 Software Distribution 3.1

Now, we are ready to set up our software distribution scenario.

9.3.7.1 Install Product and Select Media

To start the installation, start the TME 10 Desktop (Figure 346) and click on **Desktop**, **Install**, and **Install Product**.

Figure 346. TME 10 Desktop

View figure.

Our current Media Settings are pointing to the CD-ROM, because our last installation came from CD-ROM. Therefore, we get an error (Figure 347) because the system can't find a file named CONTENTS.LST. The software is located in the directory C:\COU_3.1. If your current Media Settings point to the software that you want to install, you don't get an error. Click on **OK** to get the file browser.

Figure 347. Error - CONTENTS.LST

View figure.

In File Browser window (Figure 348), we choose our installation path. We click on **foxtrot**, and double-click on **C:** and **cou_3.1**. To finish the file browser, we select the **Set Media & Close** button. You can also type the directory in the Path Name field and press the **Set Path** button.

Figure 348. File Browser

View figure.

In the Install Product window (Figure 349), you can see all available products that you can install. We install the first three items. The first item is the base product, followed by the documentation, and then CLI Utilities.

9.3.7.2 Install TME 10 Software Distribution 3.1

From the Install Product window (Figure 349), click on **TME 10 Software Distribution Release 3.1**. In the Clients to Install On list box, you see the clients that you are going to install. Use the right and left arrow button to move the clients from the Available Clients list box to the left list box, and vice versa. Start the installation by pressing the **Install** button.

Figure 349. Install Product

View figure.

The Product Install window (Figure 350) appears. Look through the messages and scroll down to the bottom of the screen. Click on **Continue Install**. All clients you have selected in the last screen are installed now. You see that the installation program installs one client after the other (in sequence and not in parallel). After you see the message, `Finished product installation`, press the **Close** button.

Figure 350. Product Install

View figure.

9.3.7.3 Install TME 10 Software Distribution 3.1 Documentation

Now you have to install product by product. From the Install Product window, click on **TME Software Distribution Release 3.1 Documentation**. After you press the **Install** button, the Install Options window (Figure 351) appears. In the Install Options window, you can alter the installation path of the documentation. Check **When installing, create "Specified Directories"** from the scroll list. Select **Set** to leave the window. Click on **Install** to start the installation. Follow the same procedure that we used for the last installation. See 9.3.7.2 , "Install TME 10 Software Distribution 3.1" for more information.

Figure 351. Install Option - Documentation

View figure.

9.3.7.4 Install TME 10 Software Distribution 3.1 CLI Utilities

The installation of the CLI Utilities for Windows NT works the same as the installation of the base product. See 9.3.7.2 , "Install TME 10 Software Distribution 3.1" for more information. If you install TME 10 Software Distribution 3.1 CLI Utilities for Windows NT, you get the following utilities in the C:\Tivoli\bin\w32-ix86\bin directory:

Table 12. Windows NT CLI Utilities

Command	Description	Platforms
waddicon	Adds an icon to a Windows Program Manager group.	Windows, Windows 95, Windows NT
waddpath	Adds an entry to the path statement in the registry hive of the current control set.	NT
wclrblk	Removes a block of statements from a file.	All supported PC platforms
wclrline	Removes a single line from a file.	All supported PC platforms
wdskspc	Verifies the amount of disk space available.	DOS, Windows, Windows 95, Windows NT, NW
weditini	Modifies the groups, variables, and values in a .INI file.	All supported PC platforms
wgetkey	Retrieves the subkey listing in a registry hive.	Windows 95, Windows NT
wgetval	Retrieves a registry subkey.	Windows 95, Windows NT
winsblk	Inserts a block of statements into a file.	All supported PC platforms
winsline	Inserts a single line into a file.	All supported PC platforms
wmrgini	Merges groups and variables from one .INI file into another.	All supported PC platforms
wrestart	Initiates a system restart and optional reboot.	NT
wrplblk	Replaces a block of statements in a file.	All supported PC platforms
wrplline	Replaces a single line in a file.	All supported PC platforms
wseterr	Sets the return code from a batch file for a configuration program.	All supported PC platforms
wsetval	Sets a registry key value.	Windows 95, Windows NT

We will use some of the utilities later. With the Extension API, you can add new features that you create with the Tivoli ADE (Application Development Environment) to the TME 10 Software Distribution. Therefore, if you intend to use the Extension API you need to install Tivoli ADE first. We will not use the Extension API in this chapter.

Click on the **Install Options** button, and the Install Options window (Figure 352) appears. In the Install Options window, you can alter the installation path of the utilities. The default path is /TIVOLI/TMEAGENT. Click on **Set** to change the path and leave the window. Since this is our last installation, click on the **Install & Close** button in the Install Product window.

Figure 352. Install Option - CLI Utilities

View figure.

After the installation is complete, close all windows and go back to the TME 10 desktop. Now we have to add the Notice Group to the TME administrators and the Managed Resources to the policy regions.

9.3.7.5 Add Notice Groups

First, we add the Notice Group to the TME administrator, Root_foxtrot-region. This enables this TME administrator's bulletin board to receive notices from the Software Distribution process. Double-click on the **Administrators** icon. The Administrators window (Figure 353) appears. Click on **Root_foxtrot-region**, press the right mouse button, and select the **Edit Notice Group Subscriptions** option.

Figure 353. Edit Notice Group Subscriptions

View figure.

The Set Notice Group window (Figure 354) appears. In the Available Notice Groups list box, select the new notice group, **Software Distribution**, and use the left arrow button to move it to the Current Notice Groups list box.

Figure 354. Set Notice Group - Available

View figure.

If you see Software Distribution in the left list box (Figure 355), click the **Change & Close** button.

Figure 355. Set Notice Group - Current

View figure.

Close the administrator window and return to the TME 10 desktop.

9.3.7.6 Add Notice Groups

The next three steps add the TME 10 Software Distribution Release 3.1 resources to the managed resources for the policy region, foxtrot-region. This is very important, because we need the authorization later to create software distribution profiles. Click on the **foxtrot-region**, using the right mouse button, and select **Managed Resources**. See Figure 356.

Figure 356. TME 10 Desktop - Managed Resources

View figure.

In the Set Managed Resources window (Figure 357), select **AutoPack** and **FilePackage**, and add these resources to the Current Resources using the left arrow button. You can select the resources one by one, or hold the **Ctrl** key to select multiple resources.

Figure 357. Set Managed Resources - Available

View figure.

If your screen looks like Figure 358, everything has worked successfully.

Figure 358. Set Managed Resources - Current

View figure.

9.4 Distribution of an Application (Scenario 1)

In scenario 1, we distribute a program named HIJAAK. This is a program to capture screen images. If you want to install a small program, like HIJAAK, you must transfer some files, create a directory and an icon. We show the step-by-step procedure on how you can do this with TME 10 Software Distribution 3.1 (Courier 3.1).

9.4.1 Create File Package Profile (Scenario 1)

1. Start the TME 10 desktop and double-click on the **foxtrot-region** icon.
2. Select the **ProfileManager** option from the Create menu in Figure 359.

   Figure 359. Start Create Profile Manager

   View figure.

   The Create Profile Manager window (Figure 360) appears.
3. Type in the new Profile Manager name, File Package in our example, in the Name/Icon Label field.

4. Click on the **Create & Close** button.

   Figure 360. Create Profile Manager

   View figure.

   You see in Figure 361 the new profile manager icon, named File Package, displayed in the Policy Region, foxtrot-region.

5. Double-click on the **File Package** icon to open the Profile Manager.

   Figure 361. End Create Profile Manager

   View figure.

   The Profile Manager window (Figure 362) appears. In this profile manager, you can create profiles and subscribers. You can create several profiles with different types of file packages. You can select different resources (manged nodes, PC managed nodes, or profile managers) as subscribers. From the Profile Manager window, you add the targets (subscribers) where you want to distribute the file package.

6. Select the **Subscribers**option from the Profile Manager menu.

   Figure 362. Create Subscribers

   View figure.

   The Subscribers window (Figure 363) appears.

7. Select the nodes in the Available to become Subscribers field and click the left arrow button in the middle of the Subscribers window to move the nodes to the Current Subscribers field. See Figure 363.

   Figure 363. Select Subscribers

   View figure.

   The nodes that you selected change from the Available to become Subscribers field to the Current Subscribers field. See Figure 364.

8. Select the **Set Subscriptions & Close** button.

Figure 364. Selected Subscribers

View figure.

The nodes labeled TMP/NT foxtrot (TMR server), TMP/NT romeo (managed node) and WINDOWS NT juliet (PC managed node) are displayed in the Subscribers window (Figure 365).

In the next step, we create a FilePackage profile.

1. Select the **Profile** option from the Create menu in the Profile Manager window (Figure 365).

   Figure 365. Start Create Profile

   View figure.

   The Create Profile window (Figure 366) appears.

2. Type the name you want in the Name/Icon Label field. We specified Scenario 1.

Note
You may not want to assign a label that has embedded blanks. While such labels can be used easily from the desktop, you must enclose such labels in double quotes (") if you use the command line. You can use underscore (_) or minus (-) in place of the blank character.

3. Select from the Type list box the TME 10 application that you need for your profile. See Figure 366 for available profiles. We selected **FilePackage** to distribute software.

Note
If no TME applications have been installed or your administrator desktop is not authorized for the profile type, the Type list box will be empty and you cannot create a profile.

4. Select the **Create & Close** button.

Figure 366. Create Profile

View figure.

The Profile Manager window (Figure 367) reappears and the Scenario 1 profile icon that we just created is displayed in the Profiles field.

Now we build the file package for our Scenario 1.

1. Double-click on the **Scenario 1** profile icon and the File Package Properties window (Figure 368) appears. Next, we specify the source host and the files we want to distribute.

   Figure 367. End Create Profile

   View figure.

2. To select the source host, click on the **Source Host...** button in the Source Host field.

   Figure 368. File Package Properties 1

   View figure.

   The Select Source Host window (Figure 369) appears.

   In the Hosts list box, we could select either TMR server foxtrot or managed node romeo, but the program, HIJAAK, that we want to distribute, is on host romeo.

3. Select **romeo** in the Hosts list box.

4. To complete the selection, click on the **Select & Close** button.

   Figure 369. Select Source Host

   View figure.

5. Click on the **Directories & Files** button in the File Package Properties window (Figure 368) and the Select Directory & Files window (Figure 370) appears.

6. Select the path in the Directories list where the files that we want to distribute are located. The correct directory path name must be in the Path Name field. You will see the files in the Files list box.

7. For the HIJAAK program, we have selected all files in the Files list box.

Note
If there are several subdirectories under the application root directory, all subdirectories and their subdirectories with all files must be separately selected. So, you add step by step, one subdirectory with all files and the other subdirectory with all files in the Source Directories & Files list boxes. See Figure 371. In this way, you do not have to select all of the subdirectories.

8. Click on the **Select & Close** button.

   Figure 370. Select Directory & Files

   View figure.

   The File Package Properties window (Figure 371) appears. You will see, in the Source Directories & Files list box, the selected directories and files.

   Figure 371. File Package Properties 2

   View figure.

9. If the bottom of the window is not displayed, you must scroll the File Package Properties window down to the bottom in order to set Log Information Options.
10. Click on the **Send to Software Distribution notice group** radio button in the Log Information Option field.
11. Click on the **Send to log file** on radio button and select the **Hosts**, **Path** and enter the log file name in the Log Information Options field, as shown in Figure 372.

Figure 372. File Package Properties 3

View figure.

In the next steps, we specify the Platform-Specific Options for our Windows NT environment. We select the destination directory path and set the After Distribution option to add an application icon on the desktop after the distribution.

1. From the File Package Properties window (Figure 373), select the **Platform-Specific Options** from the Edit menu.
2. Choose **Windows NT Options** in the pop-up menu.

   Figure 373. File Package Properties 4

   View figure.

   The File Package Windows NT Options (Figure 374) appears.

3. Enter the destination directory path in the Destination Directory Path field. In our example, we specified C:\. The source directory, HJWIN, will be appended to the destination path because we have selected the **Append source path to remote path** radio button in the General Option field of the File Package Properties window (Figure 371).

4. To generate a program icon after file package distribution, select the **After Distribution** button in the Run a Script field to specify the script.

5. Select the **Subscribers** radio button in the Get BAT/EXE/CDM file from field to specify the node where the script file is stored.

6. Enter the directory path, script file name, and the parameters in the Enter BAT/EXE/COM file name field.

   ```
   c:\tivoli\tmeagent\win32\cli\waddicon.exe "HiJaak for Windows"
                                  -c \hjwin\hjwin.exe -t "HiJaak"
   ```

   where `waddicon.exe` adds an icon to Windows Program Manager group, `-g "HiJaak for Windows"` specifies the group name to which the icon is added, `-c \hjwin\hjwin.exe` specifies the command line invoked by the icon, and `-t "HiJaak"` specifies the title (description) below the icon in the Program Manager.

7. Scroll down the File Package Windows NT Options window, if necessary, and click on the **Set & Close button**.

   Figure 374. File Package Windows NT Options

   View figure.

The create file package profile for Scenario 1 has been completed.

9.4.2 Distribute File Package

In the next step, we distribute the file package Scenario 1 to the PC managed node juliet.

1. From the Profile Manager window (Figure 375), select the **Scenario 1** profile in the Profiles field.

2. Select the **WINDOWS NT juliet** subscriber in the Subscribers field.

3. Select the **Distribute** from the Profile Manager menu.

   Figure 375. Start Distribute File Package

   View figure.

   The Distribute Profiles window (Figure 376) appears. You can schedule the job or distribute immediately.

4. We selected the **Distribute Now** button to distribute immediately.

   Figure 376. Distribute Profiles

View figure.

Now, the file package, HIJAAK, is distributed from the source host managed node romeo to the subscriber PC managed node juliet. Also, a program icon, HiJaak, in the HiJaak for Windows group on the PC managed node juliet has been created.

To see what is going on while distributing, it is helpful to watch the Windows NT Task Manager (Figure 377) on the managed node romeo. At first, you see the fp_endpoint.exe running in the Windows NT Task Manager. The reason for this is that the managed node romeo is the source host. Some seconds later, the pc_mannode_skel1.exe is running. This happens because the managed node romeo is the PC Managed Node Location for the PC managed node juliet. When the distribution completes, both tasks disappear (in a reverse order).

Figure 377. Windows NT Task Manager Managed Node

View figure.

After the distribution is completed, you can read the messages in the log file hj.txt as shown in Figure 378. This log file was specified in the Log Information Options field in the File Package Properties window (Figure 372).

Figure 378. Log File hj.txt

View figure.

With the Windows NT Exploring - Desktop (Figure 379), you can now see the new directory Hjwin in the All Folders list box, and all the files in the Contents of 'Hjwin' list.

Figure 379. Exploring - Desktop

View figure.

In Figure 380, you see the new program icon, HiJaak, in the new HiJaak for Windows group. This icon was generated by the script specified in the After Distribution Option, as shown in Figure 374.

Figure 380. HiJaak for Windows Group

View figure.

The distribution file package, HiJaak, is completed.

9.4.3 Clone File Package

In this step we describe how to clone a file package profile. We clone the profile Scenario 1 which was created in 9.4.1 , "Create File Package Profile (Scenario 1)".

1. Select the **Scenario 1** profile in the Profiles list in the Profile Manager window (Figure 381).
2. Select the **Profiles** from the Edit menu.
3. Choose the **Clone** pop-up menu.

   Figure 381. Profile Manager

   View figure.

   The Clone Profile window (Figure 382) appears. We use this profile to remove file package Scenario 1. We named the profile Scenario1_R.

4. Enter the profile name `Scenario1_R` in the Name/Icon Label field.
5. Select **File Package** from the Clone to Profile Manager list box.
6. Click on the **Clone & Close** button.

   Figure 382. Clone Profile

   View figure.

The clone file package process is complete. Now you can see the second profile, named scenario1_R, in the Profiles list of the Profile Manager window (Figure 383).

Figure 383. Profile Manager

View figure.

9.4.4 Edit File Package (Scenario1_R)

We want to use this profile to remove the file package Scenario 1 from the PC managed node juliet.

Note

Normally you do not use a separate profile for the remove operation. You only have to configure the Upon Removal Option in the Scenario 1 profile, but we discovered that the PC managed node also boots after the remove operation if we:

1. Select the Reboot machine radio button in the After Distribution option, and
2. Select the Do nothing radio button in the Upon Removal option.

1. Select the **Platform-Specific Options** from the Edit menu.
2. Choose **Windows NT Options** in the pop-up menu, as shown in Figure 384.

   Figure 384. File Package Properties

   View figure.

3. To remove the program icon from the desktop, select the **Upon Removal** button in the Run a Script box, as shown in Figure 385.
4. Select the **Subscribers** radio button in the Get BAT/EXE/COM file in which the script file is stored.
5. Enter the directory path, script file name, and the parameters in the Enter BAT/EXE/COM file name field, as shown in Figure 385.

```
c:\tivoli\tmeagent\win32\cli\waddicon.exe -g "HiJaak for Windows" -r

waddicon.exe             = Adds and removes an icon to Windows
                           Program Manager group.
-g "HiJaak for Windows"  = Specifies the group name from which the
                           icon is removed.
-r                       = Removes the specified icon.
                           If no icon is specified, attempts to
                           remove the entire program group.
```

6. Scroll down the File Package Windows NT Options window, if necessary, and click on the **Set & Close** button.

   Figure 385. File Package Windows NT Options

   View figure.

9.4.5 Remove File Package

Here, we describe how to start the remove of the file package.

1. Click with the right mouse button on the **scenario1_R** profile icon in the Profiles list of the Profile Manager window (Figure 386).
2. Select **Remove from Hosts** from the pop-up menu.

   Figure 386. Profile Manager

   View figure.

   The Remove File Package window (Figure 387) appears.
3. Select **juliet** in the Available Subscribers scrolling list.
4. Click on the left arrow button in the middle of the Remove File Package window, to copy the PC managed node juliet from the Available Subscribers list to the Remove File Package From list.
5. Select the **Remove Empty Directories** radio button to remove the empty directories.
6. Click on the **Remove & Close** button to start the remove of the file package.

   Figure 387. Remove File Package

   View figure.

   When the remove of the file package is completed, the application HiJaak files, the program icon HiJaak, and the HiJaak for Windows group are removed. You can read the messages in the log file hj_r.txt as shown in Figure 388.

   Figure 388. Log File hj_r.txt

   View figure.

9.5 Data Transfer to Multiple Clients (Scenario 2)

In Scenario 2, we show how you can back up the old data and replace the old data on a target with new data. The following description guides you through the steps you will need to do.

1. We check the disk space of the client.

2. If the space on the target client is available, we transfer the new data to a service area on the client.
3. After the transfer, we set a path for the later access of the data.

These three steps are executed together. At a later time, we will:

1. Back up the current version of the data.
2. Copy the new data to the directory of the current data.
3. Remove the service area.

The new version of the data is available.

We perform all steps from foxtrot (the TMR server). The data files and the procedure that we want to use are on romeo (a managed node). The data files we want to replace are on juliet (a PC managed node).

9.5.1 Create File Package Profile

To create a new file package, start the TME 10 desktop, double-click on the **foxtrot-region**, and double-click on **File Package**. The Profile Manager window appears. Click on **Create**, **Profile** to get the Create Profile window. In this window, type in the name of the new file package, and click on **FilePackage** to choose the type of the package. After you press the **Create & Close** button, the File Package Properties window (Figure 389) appears. We describe this procedure in detail in Scenario 1. See 9.4.1 , "Create File Package Profile (Scenario 1)" for more information.

With the button **Source Host**, choose the managed node with the data you want to transfer. In our example, we chose romeo.

Note
The Source Host must be a managed node, not a PC managed node.

Click on **Directory & Files** to select the data from romeo that you want to distribute. In the General Option box, select the **Append source path to remote path** option. Selecting this box allows you to append the directory, \Data, to the \service directory that we will specify later in the File Package Options window (Figure 390).

In our experience, log information is very important to have if something goes wrong. For this reason, check **Send to Software Distribution notice group** and **Send to log on** in the Log Information Options box. Choose a host and a path on the host for the log data. We created the directory c:\tivoli\log to handle our log files. To build the log file name, we used the name of the Profile and added a .log suffix.

Now we need to fill out options for the platform where we want to distribute the data, in our example Windows NT. Click on **Edit**, **Platform-Specific Option** and **Windows NT Options**.

Figure 389. File Package Properties

View figure.

In the File Package Windows NT Options window (Figure 390), you can specify a procedure (BAT/EXE/COM files for Windows NT) that is run before and after a distribution, or before you remove a file package from a target. With Commit, you can execute a procedure independently from a distribution or removal.

Before we use all of the BAT/EXE/COM options, we must type in the directory, c:\service, in the Destination Directory Path field. You can distribute data to an existing directory or create a new directory on the target. In our example, we create the directories \service and \Data on juliet.

Click on **Before Distribution** and enter the following procedure in the Enter BAT/EXE/COM file name box, as shown in Figure 390.

```
c:\tivoli\tmeagent\win32\cli\wdskspc -s 18m c:\
```

where `wdskspc` is the command to check the available space on the target, `-s 18m` is the required disk space in megabytes, and `c:\` is the disk drive which will be checked.

Note

The wdskspc command is part of the TME 10 Software Distribution CLI Utilities component. You have to enter the fully qualified path name. By default, the path is not included.

Check the **Skip distribution to a host on a non-zero exit code of file** box. If the installation disk drive does not have enough space, you will get a return code 1 and the distribution will fails.

The log file entry will look like this:

```
juliet:FAILED (fatal error)
starting script: c:\tivoli\tmeagent\win32\cli\wdskspc -s 18m c:\
'c:\tivoli\tmeagent\win32\cli\wdskspc -s 18m c:\' script complete:
status=1
before script failure
FATAL.
```

Click on **After Distribution** to configure this option.

Figure 390. NT Option before Distribution

View figure.

After the distribution, we want to set a new path. Therefore, we enter the command in the Enter BAT/EXE/COM File name field, as shown in Figure 391.

```
c:\tivoli\tmeagent\win32\cli\waddpath c:\data
```

where `waddpath` is the command to create the path and `c:\data` is the directory that is added to the path.

Note

The waddpath command is part of the TME 10 Software Distribution CLI Utilities component.

Because we changed the path, we have to reboot the machine. Click on the **Reboot machine** button in the After Distribution box.

Note

There is a variation between the Windows NT and the Tivoli expressions.

- Shut down the computer (NT) = Restart Windows NT (Tivoli)

  This means that the machine performs a shutdown. If you use this button, your machine will not appear again in the TME Desktop unless somebody boots the computer again.

- Restart the computer (NT) = Reboot Machine (Tivoli)

  This means to reboot the machine and starts all tasks again. This is the function that we need.

Click on the **Upon Removal** button.

Figure 391. NT Option after Distribution

View figure.

The Remove Distribution BAT/EXE/COM File Options window (Figure 392) appears. We will use Upon Removal, but we do not specify a procedure. So you do not have to fill in anything. Make sure that the **Do nothing** within the After Removal box has been checked. Click on the **During Commit** button.

Figure 392. NT Option Upon Removal

View figure.

During Commit, we start a procedure called commit.bat. The Subscribers radio button in the Get BAT/EXE/COM file from checkbox is checked, which means our commit.bat procedure will be retrieved from our target. See Figure 393. Therefore, the procedure must be distributed before the procedure can be used. You can also execute a procedure that is stored on your source node by clicking on the **Source Host** button. Click on **Set & Close** to leave this window.

Figure 393. File Package Windows NT Options - during Commit

View figure.

In the Figure 394, you see our commit.bat procedure. With this procedure, we back up the current data version and replace it with the new version.

Figure 394. commit.bat

View figure.

9.5.2 Distribute File Package

Now we are ready for our distribution. In the Profile Manager window (Figure 395), click on **Scenario 2** with the right mouse button and select **Distribute**. The Distribute File Package window (Figure 396) appears.

Figure 395. Profile Manager - Distribute

View figure.

Make sure that the **Distribution Only** button is selected. Click on **juliet** and move it with the left arrow button from the Available Subscribers box to the Distribute File Package To box, as shown in Figure 396. Click on **Distribute** to start the distribution. Remember that we have configured Before Distribution and After Distribution options. The Before Distribution procedure checks the available disk space on juliet. If 18 MB are free, the distribution from romeo to juliet will be started. The After Distribution procedure executes the waddpath command to add c:\Data to the system path. After this phase, juliet boots.

Figure 396. Distribute File Package

View figure.

When juliet completes the boot, log on to Windows NT and start the Windows NT Explorer. In the Figure 397, you can see the new directories, \service\Data. If you execute the path command on a command prompt, you will see that the new directory, \Data, has been added.

Figure 397. Explorer

View figure.

9.5.3 Commit File Package

In the next step, we want to back up the current data from \data in \old and copy the new data from \service\Data to \Data. Therefore we execute our commit.bat procedure with the During Commit option. Maybe you are thinking, why can't we use Distribute & Commit as the distribution type? In our example, we are installing only one machine, but consider a real environment with slow links and you want to be sure that the old data is replaced with new data by Friday at 7 am. For this reason, you start the transfer of the data on Monday, for example. Because of the slow links, the last data file does not arrive until Thursday at 3 pm. On Friday at 7 am, you can send the commit to all targets. The commit.bat procedure is executed in parallel and all targets get the new data at nearly the same time. We want to simulate this with the scheduler. Click on the **Schedule** button. See Figure 398.

Figure 398. Distribute File Package

View figure.

With the scheduler, you can specify the start time of a job in the future. With this feature, you can transfer data at night, without disturbing the daytime traffic. Enter the date and time in the Schedule Job for box to start the commit.

Note
The default date is the next day. Be sure to change the date to the current day, or you may waste your time waiting for the procedure to run.

Remember, if something goes wrong, you need a log file. Check **Log to File** and enter a host and a filename, as shown in Figure 399. Check **Post Tivoli Notice** and click on the **Available Groups** button.

Figure 399. Add Scheduled Job

View figure.

The Select Notice Groups window (Figure 400) appears. Choose the group that should contain your log data. Click on **Set** to return to the last window (Figure 399). Click on **Schedule Job & Close** to launch the job.

Figure 400. Select Notice Groups

View figure.

Look at juliet when the job is executing. Start the Windows NT Explorer and you can see that a new directory, \old, appears. This directory now contains the current data and \Data contains the new data. The service area is still there. To remove these areas, go back to the Profile Manager window on foxtrot.

Figure 401. Windows NT Explorer

View figure.

9.5.4 Remove File Package

From the Profile Manager window (Figure 402), click on **Scenario 2** with the right mouse button, and select **Remove From Hosts**.

Figure 402. Profile Manager

View figure.

Click on **juliet** in the Available Subscribers box, and move it with the left arrow to the Remove File Package From box. Check **Remove Empty Directories**. Click on the **Remove & Close** button.

Note
We did not select the **Reboot machine** button in the After Removal option in Figure 392; however, juliet booted. If you see the same problem, you can split the task into two profiles, as we did in Scenario 1.

Figure 403. Remove File Package

View figure.

Now juliet is ready. With the Windows NT Explorer, you can see that the service area has disappeared.

Figure 404. Windows NT Explorer

View figure.

9.6 Upgrade TME Agent

In a production environment you might face the problem of upgrading the TME PC Agent on many machines. In this section we will show how this can be achieved using TME 10 Software Distribution Release 3.1.

We will upgrade the TME PC Agent from Version 4.005 to 4.007. The TME agent version upgrade is very similar to the installation of TME agent. See 9.3.6.1 , "Installing the TME PC Agent". It was easy for us to upgrade the TME agent locally, because the PC managed node was very close to the managed node and TMR server in our lab environment.

If the PC managed nodes were far away, we would want to do this installation remotely with the TME 10 Software Distribution 3.1 (Tivoli/Courier 3.1) application.

9.6.1 Upgrade TME Agent from 4.005 to 4.007

For the upgrade of TME agent, we used the program, SYSDIFF. SYSDIFF is on the Windows NT 4.0 Server CD and is also available on the Windows NT 4.0 Workstation CD. This is a program with a snapshot function similar to the DiskCamera and AutoPack applications.

To make snapshots with the SYSDIFF application, we first locally upgraded a PC with the TME Agent, Version 4.007. The following is a brief description of the steps we took to upgrade the TME agent:

1. Copy the SYSDIFF application from CD-ROM to PC (preparation site PC) where the snapshot is to be taken.
2. Start the SYSDIFF application (snapshot) before upgrade.
3. Perform the manual upgrade.
4. Generate a difference file between snapshot before upgrade and after upgrade.
5. Create a profile to remotely upgrade PC managed nodes.
6. Start TME 10 Software Distribution to upgrade PC managed node juliet.

In the first step, we copied the SYSDIFF.EXE and the SYSDIFF.INF file from the Windows NT 4.0 Workstation CD \SUPPORT\DEPTOOL\I386 directory to the Preparation Site PC C:\SYSDIFF directory (Figure 405). We also copied these files to the managed node, romeo, so that we could use romeo later as source host for the upgrade profile.

Figure 405. Windows NT Explorer

View figure.

Before we start the upgrade, we will make a snapshot of all INI files, registries, directories and files. We will do this using the following SYSDIFF command:

```
SYSDIFF.EXE /SNAP C:\SYSDIFF\BASIS.SNP
```

See Figure 406.

BASIS.SNP includes all the information of the snapshot before upgrade.

Figure 406. SYSDIFF Snapshot Before Upgrade

View figure.

After the snapshot is completed, the snapshot complete window (Figure 407) appears.

Figure 407. Snapshot Complete

View figure.

To upgrade the TME agent on the preparation site PC, use the same steps as we have used to install the TME agent juliet (see 9.3.6.1 , "Installing the TME PC Agent"). Only two new windows appear because Setup recognizes a previously installed version of TME agent.

1. Insert the CD-ROM with the new TME agent version in your CD drive on the PC. Start the Windows NT Explorer. Select the CD drive and select the subdirectory with the Setup command. See Figure 317.
2. Select the **Next >** button to continue. See Figure 319.
3. Choose Windows NT (SERVICE).
4. Select the **Next >** button to get the Set Pause panel. See Figure 320.
5. Select **Next >** or **Continue TME Agent Installation**. See Figure 321.
6. Enter the destination drive, where the TME agent will be installed.
7. Select the **Next >** button to continue. See Figure 322. The TME agent setup program has recognized a previous installation of the TME Agent in the location C:\TIVOLI\TMEAGENT\WIN32\TIVNTSVC.EXE. See Figure 408.
8. Select the **Yes** button to Continue.

   Figure 408. Upgrade Question

   View figure.

   In the next Question window (Figure 409), we decided not to overwrite the current TMEAGENT.CFG file. In the TMEAGENT.CFG file is the TME agent name we have entered during the installation.

9. Select the **No** button to prevent destroying the installation inputs. See Figure 409.

   Figure 409. Change TMEAGENT.CFG

   View figure.

   The Enter Information window (Figure 410) appears.

10. Ignore the name CLIENTNAME in the input field, and select the **Next >** button to continue the upgrade.

    Figure 410. Enter Information

    View figure.

11. Select **Start Automatically** and **Start after install**.
12. Select **Next** button to continue the upgrade. See Figure 326.

13. Select the **No** button if this site does not operate under a NetWare Managed Site. See Figure 329.

14. Select the **No** button for no DHCP Server. See Figure 330.

15. Select the **No** button for no DHCP synchronization. See Figure 331.

16. Select the **No** button if you do not wish to view the RELEASE.TXT. See Figure 332.

    Now the Information panel appears.

17. Select the **OK** button to complete the TME agent upgrade. See Figure 333.

    The upgrade from TME agent Version 4.005 to TME agent Version 4.007 on the Preparation Site PC is completed.

After upgrade, we must build a difference file from the system environment of the Preparation Site PC before upgrade snapshot (BASIS.SNP), and after upgrade snapshot. We named the difference file, AGENT007.DIF. The following SYSDIFF command generates the difference file:

```
SYSDIFF.EXE /DIFF C:\SYSDIFF\BASIS.SNP C:\SYSDIFF\AGENT007.DIF
```

See Figure 411.

Figure 411. SYSDIFF Build Difference File

View figure.

After building the difference file, the Sysdiff window (Figure 412) appears.

Figure 412. Difference Complete

View figure.

Since we will use romeo later as the source host for distributing the SYSDIFF application files and the difference file to the PC managed node juliet, we copied this AGENT007.DIF file and the UPDAGENT.BAT script file to the managed node romeo in the C:\SYSDIFF directory.

The UPDAGENT.BAT will start the SYSDIFF function on the PC managed node in the After Distribution option, which upgrades the TME agent in unattended mode.

UPDAGENT.BAT

```
c:
cd \sysdiff
sysdiff.exe /apply /m agent007.dif
exit
```

where `SYSDIFF.EXE` specifies the snapshot application, `/APPLY` specifies to apply the AGENT007.DIF file, `/M` specifies installing possible with a different user logged in, and `AGENT007.DIF` specifies add or change files for upgrade.

Before we create a profile, we generate a dump file to see which files have been changed by upgrading the TME agent.

```
SYSDIFF.EXE /DUMP C:\SYSDIFF\AGENT007.DIF C:\SYSDIFF\AGENT007.DMP
```

AGENT007.DMP

```
; Dump of sysdiff package agent007.dif
; File created with sysdiff Version 40006
; Sysroot: C:\WINNT
; Usrroot: C:\WINNT\Profiles\Administrator.000
; Usrroot: C:\WINNT\Profiles\ADMINI 1.000
; TotalDiffCount: 43

C:\ETC
    Add/change TMEAGENT.BAK
    Add/change AGTMSG.CAT
    Add/change TMEAGENT.CFG

C:\TEMP

    Add/change AGENT.TIV
    Add/change error.tiv

C:\TIVOLI\TMEAGENT

    Add/change DEISLOG.2

C:\TIVOLI\TMEAGENT\WIN32

    Add/change AGTOOL32.DLL
    Add/change IDLE.ICO
    Add/change INSTSVC.EXE
    Add/change RELEASE.TXT
    Add/change TIVNTSVC.EXE
    Add/change TIVWIN32.EXE
    Add/change TMEAGENT.CFG
    Add/change WIN32.TXT

C:\TIVOLI\TMEAGENT\WIN32\CLI

    Add/change WADDICON.EXE
    Add/change WADDPATH.EXE
    Add/change WCLRBLK.EXE
    Add/change WCLRLINE.EXE
    Add/change WDSKSPC.EXE
    Add/change WEDITINI.EXE
    Add/change WGETKEY.EXE
    Add/change WGETVAL.EXE
    Add/change WINSBLK.EXE
    Add/change WINSLINE.EXE
    Add/change WMRGINI.EXE
    Add/change WRESTART.EXE
    Add/change WRPLBLK.EXE
    Add/change WRPLLINE.EXE
    Add/change WSETERR.EXE
    Add/change WSETVAL.EXE

C:\TIVOLI\TMEAGENT\WIN32\MSGCAT

    Add/change AGTMSG.CAT
```

```
C:\WINNT

    Add/change AGTOOL32.DLL

C:\WINNT\Profiles\All Users\Start Menu\Programs\Tivoli
    SFN: C:\WINNT\Profiles\ALLUSE 1\STARTM 1\Programs\Tivoli

    Add/change TME Agent Release Notes.lnk (SFN: TMEAGE 1.LNK)

HKLM\SYSTEM\CurrentControlSet\Services\TME Agent\Security

    Security: binary data of type 3

HKCU\Software\Microsoft\Windows\CurrentVersion\Explorer\StreamMRU

    MRUList: REG_SZ/REG_EXPAND_SZ }hcq�iaovpxrgymknfbt{luzdewjs


End of dump of agent007.dif
```

We now create a profile to upgrade the TME agent remotely. The name of the profile is Update PC Agent to 4.007. See Figure 413.

1. To configure the profile, double-click on the new **Update PC Agent to 4.007** profile icon.

   Figure 413. Profile Manager

   View figure.

   The File Package Properties window (Figure 414) appears.

2. Select **romeo** as the Source Host.

3. Select the four files that we previously copied, to distribute them to the PC managed nodes. See Figure 414.

   Figure 414. File Package Properties

   View figure.

   We use these four files to upgrade the TME agents:

   ```
   sysDIFF.EXE    = Sysdiff application.
   sysDIFF.INF    = Sysdiff INI file.
   agent007.dif   = Difference file for upgrade.
   updagent.bat   = Script file to start upgrade with SYSDIFF.
   ```

4. From the File Package Properties window (Figure 414), select the **Platform-Specific Options** from the Edit menu.

5. Choose **Windows NT Options** in the pop-up menu.

The File Package Windows NT Options window (Figure 415) appears.

6. Enter the Destination Directory Path. We wanted the source directory appended to the C:\ directory.
7. Select the **After Distribution** button.
8. Choose the **Subscribers** radio button.
9. Enter the directory and script file name that we want to start after software distribution.
10. Set the **Reboot machine** button in the After Distribution field.
11. To complete the Create Update PC Agent to 4.007 profile, select the **Set & Close** button. You are back in the File Package Properties window.
12. Select the **Save & Close** button to complete creating the profile.

Figure 415. File Package Window NT Options

View figure.

Before we upgrade the TME agent on the PC managed node juliet, we view the properties of the PC managed node juliet. In Figure 416, in the second row of the Properties field, you see that the TME Windows NT Agent version is 4.005.

Figure 416. Windows NT PC Managed Node Properties

View figure.

Now we upgrade the TME agent Version 4.005 to TME agent Version 4.007 remotely on the PC managed node juliet.

1. Select the **Update PC Agent to 4.007** profile icon in the profiles list of the Profile Manager window (Figure 417).
2. Select PC managed node **juliet** in the Subscribers list.
3. Select the **Distribute** option from the **Profile Manager** menu. The Distribute Profiles window (Figure 418) appears.

   Figure 417. Profile Manager

   View figure.

4. Select the **Distribute Now** button (see Figure 418) to upgrade the TME agent on PC managed node juliet.

Figure 418. Distribute Profiles

View figure.

The four files are copied to the PC managed node juliet. After distributing the files, the UPDAGENT.BAT procedure is started on juliet, and the upgrade of the TME agent begins. The Windows NT Setup window (Figure 419) appears on the PC managed node juliet screen.

Figure 419. Windows NT Setup

View figure.

When the upgrade is finished, the PC managed node juliet is booted automatically. After juliet has been booted, we again view the PC managed node properties. You can now see, in Figure 420, that the TME agent is upgraded to Version 4.007.

Figure 420. Windows NT PC Managed Node Properties

View figure.

9.6.2 Downgrade TME Agent From 4.007 To 4.005

To downgrade the TME agent Version 4.007 to TME agent Version 4.005 we do exactly the same steps as described in 9.6.1 , "Upgrade TME Agent from 4.005 to 4.007". We also use the preparation site PC to prepare the difference file for remote downgrade.

1. Make the SYSDIFF snapshot before downgrade. See Figure 406.
2. Start **Setup** in the \Pc\Tcpagent\Cd directory from TME 10 Framework CD with the TME agent Version 4.005.
3. To all questions give the same answers, as shown in Figure 408, Figure 409, and Figure 410.
4. Make the SYSDIFF difference file AGENT005.DIF. See Figure 411.
5. Copy the UPDAGENT.BAT to DWNDAGENT.BAT and change the difference file AGENT007.DIF to AGENT005.DIF.

   DWNDAGENT.BAT

   ```
   c:
   cd \sysdiff
   sysdiff.exe /apply /m agent005.dif
   exit
   ```

6. Copy the AGENT005.DIF file from the preparation site PC to managed node romeo.
7. Clone the Update PC Agent to 4.007 profile. See 9.4.3 , "Clone File Package".
8. Name the profile Dwndate PC Agent to 4.005. See Figure 421.

   Figure 421. Profile Manager

   View figure.

9. Double-click on the **Dwndate PC Agent to 4.005** profile icon.
10. Remove c:/sysdiff/agent007.dif from the Source Directories & Files list.
11. Add c:/sysdiff/agent005.dif into the Source Directories & Files list. See Figure 414.
12. Open the File Package Windows NT Options window (Figure 415).
13. Change the script file name updagent.bat to dwndagent.bat in the After Distribution BAT/EXE/COM File Options field.
14. Select the **Set & Close** button.
15. Select the **Save & Close** button in the File Package Properties window to complete cloning the profile.

Now you can downgrade the TME agent Version 4.007 to TME agent Version 4.005 remotely on the PC managed node juliet.

9.7 Using File Package Block and Compression

In our real customer environment, we have a slow link between the Tivoli Management Region (TMR) server and the several managed nodes. Because of this circumstance, we want to distribute the data once from the TMR server over the slow link to the managed nodes, but start the distribution to the PC managed node from the TMR server. To avoid inadvertently altering the data on the PC managed nodes, we create a file package block from our file package. With this example, we also show how the compression option works. To keep the systems busy, we distribute the entire MS Office 95 code.

9.7.1 Create File Package

First, we have to set up a file package. To create a new file package, start the TME 10 desktop, double-click on the **foxtrot-region**, and double-click on **File Package**. The Profile Manager window appears. Click on **Create**, **Profile** to get the Create Profile window. In this Create Profile window, type in the name of the new file package and click on **FilePackage** to choose the type of profile. After you press the **Create & Close** button, the File Package Properties window (Figure 422) appears.

How to create a file package is described in 9.4.1 , "Create File Package Profile (Scenario 1)".

Fill out the window as shown in Figure 422. It is very important that you have checked **Descend into directories** and the **Append source path to remote path**. Our remote directory is set to c:\ms. The Descend and Append Option that we described in detail is in 9.8.1 , "Using Descend and Append Options".

Remember you can set the remote path by clicking on **Edit**, **Platform-Specific Options**, and **Windows NT Options**.

Click the **Save & Close** button to leave the File Package Properties window.

Figure 422. File Package Properties

View figure.

9.7.2 Calculate File Package Size

Before we use this package for further operations, we want to calculate the size. To calculate, click on our new profile **MSOffice_Files**, click on the right mouse button and choose **Calculate Size**.

Figure 423. Profile Manager

View figure.

The Calculate File Package Size window (Figure 424) appears. Click on **Calculate Size** and you get the actual size of the file package. Click on **Close** and you are back on the File Package Properties screen.

Note

The wgetfpattr command returns a zero value for file package size until you calculate the file package size in this window (Figure 424).

```
wgetfpattr -S @MSOffice_Files
```

If the file package name has embedded blanks in the name, you must enclose the name in double quotes(").

Figure 424. Calculate Size

View figure.

9.7.3 Create a File Package Block File and Use Compression

Now we want to create a file package block file from our File Package MSOffice_Files. The difference between a file package and a file package block is that the file package contains only pointers to the files which are going to be distributed. The file package block contains all files. Therefore, after you build the file package block, you can alter or delete the source files and nothing happens to the file package block. However, you cannot alter a file package block. You must create a new one. For this reason, a file package block is a safe way for a main administrator to prepare file package blocks, distribute them to the several managed nodes and be certain what was sent to the targets. The administrators of the managed nodes can now distribute the file package blocks to the PC managed nodes, but they are not able to change the content of the package.

To create a file package block, open a command line interface (CLI) window. Type the following command:

```
wcrtfpblock -a @MSOffice_Files \uwe\offpack @foxtrot
```

where `wcrtfpblock` specifies the command that creates a file package block from an existing file package, `-a` specifies the file package block contains all files of the file package, `@MSOffice_Files` specifies the existing file package, `\uwe\offpack` specifies the directory and name of the file package block we want to create, and `@foxtrot` specifies the managed node on which the package will be created.

For further information about the command, refer to the *TME 10 Software Distribution Reference Manual*.

You can see in Figure 424 that our package has a size of over 42 MB (42,873,270 bytes). To compress the package, check **Perform compression on distribution** in the File Package Properties window (Figure 425). Click on **Save & Close** to leave the window.

Figure 425. File Package Properties

View figure.

Note
We cannot calculate the new size of our package (with compression) as we did in Figure 424 because the compression takes place only when you distribute the package or when you create a file package block.

We want to create a new file package block of our changed file package. Type in the following command in a CLI window:

```
wcrtfpblock -a @MSOffice_Files \uwe\offpackc @foxtrot
```

where `wdistfpblock` specifies the command that creates a file package block from an existing file package, `-a` specifies the file package block that contains all files of the file package, `@MSOffice_Files` specifies our existing file package, `\uwe\offpackc` specifies the directory and name of the file package block we want to create, and `@foxtrot` specifies the managed node on which the package will be created.

In Figure 426, you see the two packages that we have created. Compare the size of the file package blocks. Using the compress option, we save approximately 40 percent of disk space which is a big advantage when the distribution is over our slow link between the TMR server and the managed nodes.

Figure 426. Compression Results

View figure.

9.7.4 Evaluate Alternate Distribution Approaches

For the distribution we want to use our compressed package offpackc. To demonstrate the different load of our systems, we prepare performance charts of foxtrot (Figure 427), romeo (Figure 428) and juliet (Figure 429). Remember, our package is located on the TMR server foxtrot. The host of the PC managed node juliet is our managed node romeo.

We want to show two different ways to distribute the files to juliet. First we want to start a distribution from foxtrot directly to juliet. Therefore, start a CLI and type in the following command:

```
wdistfpblock @foxtrot:\uwe\offpackc @juliet
```

where `wdistfpblock` specifies the command to distribute files from a file package block, `@foxtrot:\uwe\offpackc` specifies the managed node, directory and name of the file package block, and `@juliet` specifies the target.

Look through the performance charts (Figure 427 to Figure 429). As you can see, when we start the command on foxtrot, the load on foxtrot grows to 100 percent. On romeo you can see a peak where romeo talks to foxtrot and juliet. After a short conversation, romeo is idle. The load on juliet grows to 100 percent and stays there until the distribution is finished. After the start of the conversation, the load on foxtrot reduces from 100 percent to between 4 and 20 percent during the distribution.

In this example, you see that the most work is done over the link between foxtrot and romeo. If this link is slow, you could have a network performance problem should you try this distribution with many managed nodes.

Figure 427. Performance foxtrot

View figure.

Figure 428. Performance romeo

View figure.

Figure 429. Performance juliet

View figure.

To improve the network performance, we distribute our file package block to the managed node, romeo. Therefore, type the following command in a CLI window:

```
wcpfpblock @foxtrot:\uwe\offpackc \gerhard\offpackc @romeo
```

where `wcpfpblock` specifies the command to transfer the file package block from one managed node to another managed node, `@foxtrot:\uwe\offpackc` specifies the name of the source managed node, directory and name of the file package block, `\gerhard\offpackc` specifies the directory and name of the file package block on the target, and `@romeo` specifies the name of the target managed node.

You can see the load on foxtrot (Figure 430) and romeo (Figure 431). The PC managed node juliet is not involved in this operation.

Figure 430. Performance foxtrot

View figure.

Figure 431. Performance romeo

View figure.

Now, we want to start the distribution to juliet. The difference from our first distribution, the file package block is on romeo. From your CLI window on foxtrot, issue the following command:

```
wdistfpblock @romeo:\gerhard\offpackc @juliet
```

where `wdistfpblock` specifies the command to distribute files from a file package block, `@romeo:\gerhard\offpackc` specifies the managed node, directory and name of the file package block, and `@juliet` specifies the target.

In Figure 432 through Figure 434, you can see the load of our systems. The load on foxtrot grows to 100 percent, as we saw in our first distribution. The load on romeo grows to 44 percent. After a short time the load decreases to approximately 10 percent and stays there during the distribution. The load on juliet is the same as we saw in our first distribution.

In this example, most of the work is done on romeo and juliet. The TMR server foxtrot is only involved at the command launch time.

Figure 432. Performance foxtrot

View figure.

Figure 433. Performance romeo

View figure.

Figure 434. Performance juliet

View figure.

In a small window (Figure 435) on juliet at the distribution time, you see the status (percent complete) of the distribution.

Figure 435. Distribution Status

View figure.

If you open the Windows NT Explorer (Figure 436) on juliet, you see the files that we have just distributed.

Figure 436. Windows NT Explorer

View figure.

To delete the files from juliet, issue the following command from a CLI on foxtrot:

```
wrmfpblock @romeo:\gerhard\offpackc @juliet
```

where `wrmfpblock` specifies the command to remove files from a file package block, `@romeo:\gerhard\offpackc` specifies the managed node, directory and name of the file package block, and `@juliet` specifies the target.

In Figure 437 through Figure 439, you see the load of the systems. Most of the work is done on romeo and juliet. The TMR server foxtrot is available for other jobs.

Figure 437. Performance foxtrot

View figure.

Figure 438. Performance romeo

View figure.

Figure 439. Performance juliet

View figure.

If you open the Windows NT Explorer (Figure 440) on juliet, you see that our files have been deleted correctly, except for the directory \ms.

Note
The subdirectory is not a part of our file distribution, but is the target directory. The target directory could exist on the target before a distribution begins. Therefore, wrmfpblock cannot remove the subdirectory because it could be used by other programs.

Figure 440. Windows NT Exploring - C:\ms

View figure.

9.8 Using File Package Distribution Options

In this section, we show how the distribution options work. We also use the Preview function.

9.8.1 Using Descend and Append Options

Create a file package, as shown in Figure 441, and click on **Save**.

The directory c:\test contains the files file1.txt and file2.txt.

Figure 441. File Package Properties

View figure.

To distribute these files, click on **File Package** and **Distribute**. See Figure 442.

Figure 442. File Package Properties

View figure.

Note
You can use either the forward slash (/) or the backward slash (\) as the directory separator in the directories and files or the log file path specifications.

In Distribute File Package window (Figure 443), we use the Distribution Options. First, we distribute file1.txt and file2.txt to juliet. Click on **juliet** and move this subscriber to the Distribute File Package To list box by using the left arrow button. Click on **Distribute all entries** and press the **Preview** button.

In the File Package Distribution Preview box (Figure 443), you see the two files which are going to be distributed. Press the **Distribute** button to distribute the files.

Figure 443. Distribute File Package

View figure.

In the Figure 444, you see the results of our distribution. The directory \test has been created and contains our two files. We use the attrib command to show the differences between our distributions. With the command

```
attrib -a *.*
```

you clear the a (archive) attribute, as shown in Figure 444.

Figure 444. Command Prompt on juliet

View figure.

For our next distribution, we added a file named newfile.txt to our directory \test on foxtrot (Figure 445).

Figure 445. Command Prompt on foxtrot

View figure.

Now click on **Distribute entries with changed source files** to change the distribution option (Figure 446). Press the **Preview** button and look at the File Package Distribution Preview box. As you see, no files are going to be distributed. This option only distributes changed source files, but not new files, and this option makes no difference that we distribute the entire subdirectory.

Figure 446. Distribute File Package

View figure.

To show that changed files are going to be distributed, we change the file1.txt. Press the **Preview** button again. Now you see in Figure 447 that file1.txt appears in the File Package Distribution Preview box. Click on **Distribute** to launch the distribution.

Figure 447. Distribute File Package

View figure.

In Figure 448, you can see that the archive attribute is only set on file1.txt.

Figure 448. Command Prompt on juliet

View figure.

For last distribution, clear the attributes in the directory \test on juliet by using the command:

```
attrib -a *.*
```

To demonstrate the Distribute entries with ANY changes option, we changed file2.txt. Remember that we copied newfile.txt to the \test directory.

Click on **Distribute entries with ANY change** and press the **Preview** button. With this option, you distribute changed files and new files to your targets. Click on **Distribute & Close**.

Figure 449. Distribute File Package

View figure.

In Figure 450, you see that the archive attributes are set on file2.txt and newfile.txt. Nothing has happened with file1.txt.

Figure 450. Command Prompt on juliet

View figure.

With these three options, you can control your software distributions conveniently.

[Top of Page | Previous Page | Next Page | Table of Contents | Index]

The TME 10 Deployment Cookbook

Appendix A. Special Notices

This publication is intended to help technical personnel to understand and use TME 10 Software Distribution. The information in this publication is not intended as the specification of any programming interfaces that are provided by TME 10 Software Distribution. See the PUBLICATIONS section of the IBM Programming Announcement for TME 10 Software Distribution for more information about what publications are considered to be product documentation.

References in this publication to IBM products, programs or services do not imply that IBM intends to make these available in all countries in which IBM operates. Any reference to an IBM product, program, or service is not intended to state or imply that only IBM's product, program, or service may be used. Any functionally equivalent program that does not infringe any of IBM's intellectual property rights may be used instead of the IBM product, program or service.

Information in this book was developed in conjunction with use of the equipment specified, and is limited in application to those specific hardware and software products and levels.

IBM may have patents or pending patent applications covering subject matter in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to the IBM Director of Licensing, IBM Corporation, 500 Columbus Avenue, Thornwood, NY 10594 USA.

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact IBM Corporation, Dept. 600A, Mail Drop 1329, Somers, NY 10589 USA.

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

The information contained in this document has not been submitted to any formal IBM test and is distributed AS IS. The information about non-IBM ("vendor") products in this manual has been supplied by the vendor and IBM assumes no responsibility for its accuracy or completeness. The use of this information or the implementation of any of these techniques is a customer responsibility and depends on the customer's ability to evaluate and integrate them into the customer's operational environment. While each item may have been reviewed by IBM for accuracy in a specific situation, there is no guarantee that the same or similar results will be obtained elsewhere. Customers attempting to adapt these techniques to their own environments do so at their own risk.

Any performance data contained in this document was determined in a controlled environment, and therefore, the results that may be obtained in other operating environments may vary significantly. Users of this document should verify the applicable data for their specific environment.

The following document contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples contain the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to the names and addresses used by an actual business enterprise is entirely coincidental.

Reference to PTF numbers that have not been released through the normal distribution process does not imply general availability. The purpose of including these reference numbers is to alert IBM customers to specific information relative to the implementation of the PTF when it becomes available to each customer according to the normal IBM PTF distribution process.

The following terms are trademarks of the International Business Machines Corporation in the United States and/or other countries:

AIX	AS/400	BookManager	Business Partner	FFST	First Failure Support Technology	IBM	IMS	NetView	OS/2	PowerPC	PS/2	PSF	RS/6000	SystemView	System/390	ThinkPad	

The following terms are trademarks of other companies:

```
C-bus is a trademark of Corollary, Inc.

Java and HotJava are trademarks of Sun Microsystems, Incorporated.

Microsoft, Windows, Windows NT, and the Windows 95 logo are trademarks
or registered trademarks of Microsoft Corporation.

PC Direct is a trademark of Ziff Communications Company and is used
by IBM Corporation under license.

Pentium, MMX, ProShare, LANDesk, and ActionMedia are trademarks or
registered trademarks of Intel Corporation in the U.S. and other
countries.

Tivoli, TME, TME 10, Tivoli Management Environment,
Tivoli/Enterprise Console, Tivoli/Courier, Tivoli Management Platform,
Tivoli/AEF, Tivoli/ADE, Tivoli Management Framework, and TME Desktop
for Windows are trademarks of Tivoli Systems Inc., an IBM Company

UNIX is a registered trademark in the United States and other
countries licensed exclusively through X/Open Company Limited.

Other company, product, and service names may be trademarks or
service marks of others.
```

CORBA	Object Management	Freelance, Freelance	Lotus Development	Hewlett-Packard,	Hewlett-Packard	Netscape, Netscape	Netscape Communications	NetWare	Novell, Incorporated	Network File System, NFS,	Sun Microsystems	Oracle	Oracle Corporation	X/Open	X C

Group, Incorporated	Graphics, Lotus, Lotus Notes	Corporation	HP	Company Navigator Corporation	Solaris, Sun, Sun Microsystems, SunOS, Wabi	L

[Top of Page | Previous Page | Next Page | Table of Contents | Index]

The TME 10 Deployment Cookbook

Appendix B. Related Publications

The publications listed in this section are considered particularly suitable for a more detailed discussion of the topics covered in this redbook.

B.1 International Technical Support Organization Publications

For information on ordering these ITSO publications see Appendix C. "How to Get ITSO Redbooks".

- *TME 10 Cookbook for AIX*, SG24-4867
- *TME 10 Software Distribution - Mobile Clients*, SG24-4854
- *Migrating NetView DM/6000 to TME 10 SD for AIX*, SG24-4621
- *NetView DM/6000 Agents and Advanced Scenarios*, GG24-4490
- *Software Distribution for AIX: Experiences with Pristine Installation and Configuration*, SG24-4508
- *Setting Up a TME 3.0 NT Environment*, SG24-4819
- *TME 3.0 NT - Automated Processes*, SG24-4793

B.2 Redbooks on CD-ROMs

Redbooks are also available on CD-ROMs. **Order a subscription** and receive updates 2-4 times a year at significant savings.

CD-ROM Title	**Subscription Number**	**Collection Kit Number**
System/390 Redbooks Collection	SBOF-7201	SK2T-2177
Networking and Systems Management Redbooks Collection	SBOF-7370	SK2T-6022
Transaction Processing and Data Management Redbook	SBOF-7240	SK2T-8038
AS/400 Redbooks Collection	SBOF-7270	SK2T-2849
RS/6000 Redbooks Collection (HTML, BkMgr)	SBOF-7230	SK2T-8040
RS/6000 Redbooks Collection (PostScript)	SBOF-7205	SK2T-8041
Application Development Redbooks Collection	SBOF-7290	SK2T-8037
Personal Systems Redbooks Collection	SBOF-7250	SK2T-8042

B.3 Other Publications

These publications are also relevant as further information sources:

- *TME 10 Software Distribution Documentation Kit*, SK2T-6046
- *Tivoli/Management Platform Documentation Kit*, SK2T-6058
- *Tivoli/ADE Documentation Kit Volume I*, SK2T-6062
- *Tivoli/ADE Documentation Kit Volume II*, SK2T-6063
- *Tivoli/ADE Documentation Kit Volume III*, SK2T-6064
- *Tivoli/ADE Documentation Kit Volume IV*, SK2T-6065
- *TME 10 Remote Control User's Guide Release 2*, GC31-8437
- *TME 10 AEF User's Guide*, GC31-8345
- *TME 10 Enterprise Console Documentation Kit*, SK2T-6050
- *Tivoli TME 10 Software Distribution (3.1.3) for AIX*, SH19-4333

[Top of Page | Previous Page | Next Page | Table of Contents | Index]

The TME 10 Deployment Cookbook

Appendix C. How to Get ITSO Redbooks

This section explains how both customers and IBM employees can find out about ITSO redbooks, CD-ROMs, workshops, and residencies. A form for ordering books and CD-ROMs is also provided.

This information was current at the time of publication, but is continually subject to change. The latest information may be found at URL `http://www.redbooks.ibm.com`.

How IBM Employees Can Get ITSO Redbooks

Employees may request ITSO deliverables (redbooks, BookManager BOOKs, and CD-ROMs) and information about redbooks, workshops, and residencies in the following ways:

- **PUBORDER** -- to order hardcopies in United States
- **GOPHER link to the Internet** - type `GOPHER.WTSCPOK.ITSO.IBM.COM`
- **Tools disks**

  To get LIST3820s of redbooks, type one of the following commands:

  ```
  TOOLS SENDTO EHONE4 TOOLS2 REDPRINT GET SG24xxxx PACKAGE
  TOOLS SENDTO CANVM2 TOOLS REDPRINT GET SG24xxxx PACKAGE (Canadian users only)
  ```

  To get BookManager BOOKs of redbooks, type the following command:

  ```
  TOOLCAT REDBOOKS
  ```

  To get lists of redbooks:

  ```
  TOOLS SENDTO USDIST MKTTOOLS MKTTOOLS GET ITSOCAT TXT
  TOOLS SENDTO USDIST MKTTOOLS MKTTOOLS GET LISTSERV PACKAGE
  ```

  To register for information on workshops, residencies, and redbooks:

  ```
  TOOLS SENDTO WTSCPOK TOOLS ZDISK GET ITSOREGI 1996
  ```

  For a list of product area specialists in the ITSO:

  ```
  TOOLS SENDTO WTSCPOK TOOLS ZDISK GET ORGCARD PACKAGE
  ```

- **Redbooks Home Page on the World Wide Web**

  `http://w3.itso.ibm.com/redbooks`

- **IBM Direct Publications Catalog on the World Wide Web**

  `http://www.elink.ibmlink.ibm.com/pbl/pbl`

  IBM employees may obtain LIST3820s of redbooks from this page.

- **REDBOOKS category on INEWS**
- **Online** -- send orders to: USIB6FPL at IBMMAIL or DKIBMBSH at IBMMAIL
- **Internet Listserver**

  With an Internet e-mail address, anyone can subscribe to an IBM Announcement Listserver. To initiate the service, send an e-mail note to `announce@webster.ibmlink.ibm.com` with the keyword `subscribe` in the body of the note (leave the subject line blank). A category form and detailed instructions will be sent to you.

How Customers Can Get ITSO Redbooks

Customers may request ITSO deliverables (redbooks, BookManager BOOKs, and CD-ROMs) and information about redbooks, workshops, and residencies in the following ways:

- **Online Orders** (Do not send credit card information over the Internet) -- send orders to:

	IBMMAIL	**Internet**
In United States:	usib6fpl at ibmmail	usib6fpl@ibmmail.com
In Canada:	caibmbkz at ibmmail	lmannix@vnet.ibm.com
Outside North America:	dkibmbsh at ibmmail	bookshop@dk.ibm.com

- **Telephone orders**

United States (toll free)	1-800-879-2755
Canada (toll free)	1-800-IBM-4YOU
Outside North America	(long distance charges apply)

```
(+45) 4810-1320 - Danish  (+45) 4810-1020 - German
(+45) 4810-1420 - Dutch   (+45) 4810-1620 - Italian
(+45) 4810-1540 - English (+45) 4810-1270 - Norwegian
(+45) 4810-1670 - Finnish (+45) 4810-1120 - Spanish
(+45) 4810-1220 - French  (+45) 4810-1170 - Swedish
```

- **Mail Orders** -- send orders to:

IBM Publications
Publications Customer Support
P.O. Box 29570
Raleigh, NC 27626-0570
USA

IBM Publications
144-4th Avenue, S.W.
Calgary, Alberta T2P 3N5
Canada

IBM Direct Services
Sortemosevej 21
DK-3450 Allerød
Denmark

- **Fax** -- send orders to:

United States (toll free)	1-800-445-9269
Canada	1-403-267-4455
(+45) 48 14 2207 (long distance charge)	Outside North America

- **1-800-IBM-4FAX (United States)** or **(+1)001-408-256-5422 (Outside USA)** -- ask for:

```
    Index # 4421 Abstracts of new redbooks
    Index # 4422 IBM redbooks
    Index # 4420 Redbooks for last six months
```

- **Direct Services** - send note to `softwareshop@vnet.ibm.com`
- **On the World Wide Web**

  Redbooks Home Page
      http://www.redbooks.ibm.com
  IBM Direct Publications Catalog
      http://www.elink.ibmlink.ibm.com/pbl/pbl

- **Internet Listserver**

  With an Internet e-mail address, anyone can subscribe to an IBM Announcement Listserver. To initiate the service, send an e-mail note to `announce@webster.ibmlink.ibm.com` with the keyword `subscribe` in the body of the note (leave the subject line blank).

IBM Redbook Order Form

Please send me the following:

Title	**Order Number**	**Quantity**

First name Last name

Company

Address

City Postal code Country

Telephone number Telefax number VAT number

Credit card expiration date Card issued to Signature

We accept American Express, Diners, Eurocard, Master Card, and Visa. Payment by credit card not available in all countries. Signature mandatory for credit card payment.

DO NOT SEND CREDIT CARD INFORMATION OVER THE INTERNET.

[Top of Page | Previous Page | Next Page | Table of Contents | Index]

The TME 10 Deployment Cookbook

Appendix D. List of Abbreviations

ACF
T/EC Adapter Configuration Facility

ADE
Application Development Environment

AEF
Application Extension Facility

aka
also known as

AMS
Application Management Specification

BARC
before, after, removal, and commit configuration program(s)

BAROC
BAsic Recorder of Objects in C

BOA
Basic Object Adapter

CDF
component description file

CORBA
Common Object Request Broker Architecture

DES
Data Encryption Standard

DHCP
Dynamic Host Configuration Protocol

DM
Distribution Manager (or Management)

DMI
Desktop Management Interface

DMTF
Desktop Management Task Force

DSL
Dialog Specification Language

EIF
Event Integration Facility

FFST
First Failure Support Technology

IBM
International Business Machines Corporation

IDL
Interface Definition Language

IIS
Microsoft Internet Information Server

IMS
Internet Management Specification

ITSO
International Technical Support Organization

JMAPI
Java Management Application Programming Interface

MDist
multiplexed distribution

MIF
Management Information File

MLM
Systems Monitor Mid-Level Manager

MTS
Multi-thread Server (Oracle)

NFS
Network File System

NIS
Network Information Services (formerly called "NFS yellow pages")

OID
object identifier

OMG
Object Management Group

ORB

object request broker

PDF
Portable Document File

PDF
Product Description File

RCS
Revision Control System

RDBMS
relational database management system

RIM
RDBMS interface module

SID
Oracle System Identifier

T/EC
Tivoli/Enterprise Console

TLL
Task Library Language

TME
Tivoli Management Environment

TMF
Tivoli Management Framework

TMP
Tivoli Management Platform

TMR
Tivoli Management Region

TNS
Transparent Network Substrate (Oracle)

TNWR
Tivoli NetWare repeater

[Top of Page | Previous Page | Next Page | Table of Contents | Index]

The TME 10 Deployment Cookbook

Index

Special Characters
Numerics
A B C D E F G H I J K L M N O P R S T U V W X

[Top of Page | Previous Page | Next Page | Table of Contents | Index]

The TME 10 Deployment Cookbook

Appendix E. ITSO Redbook Evaluation

```
The TME 10 Deployment Cookbook: Courier and Friends
SG24-4976-00
```

Your feedback is very important to help us maintain the quality of ITSO redbooks. **Please complete this questionnaire and return it using one of the following methods:**

- Use the online evaluation form found at http://www.redbooks.com
- Fax this form to: USA International Access Code + 1 914 432 8264
- Send your comments in an Internet note to redeval@vnet.ibm.com

Please rate your overall satisfaction with this book using the scale:
(1 = very good, 2 = good, 3 = average, 4 = poor, 5 = very poor)
Overall Satisfaction ____________

Please answer the following questions:

Was this redbook published in time for your needs? Yes____ No____

If no, please explain:

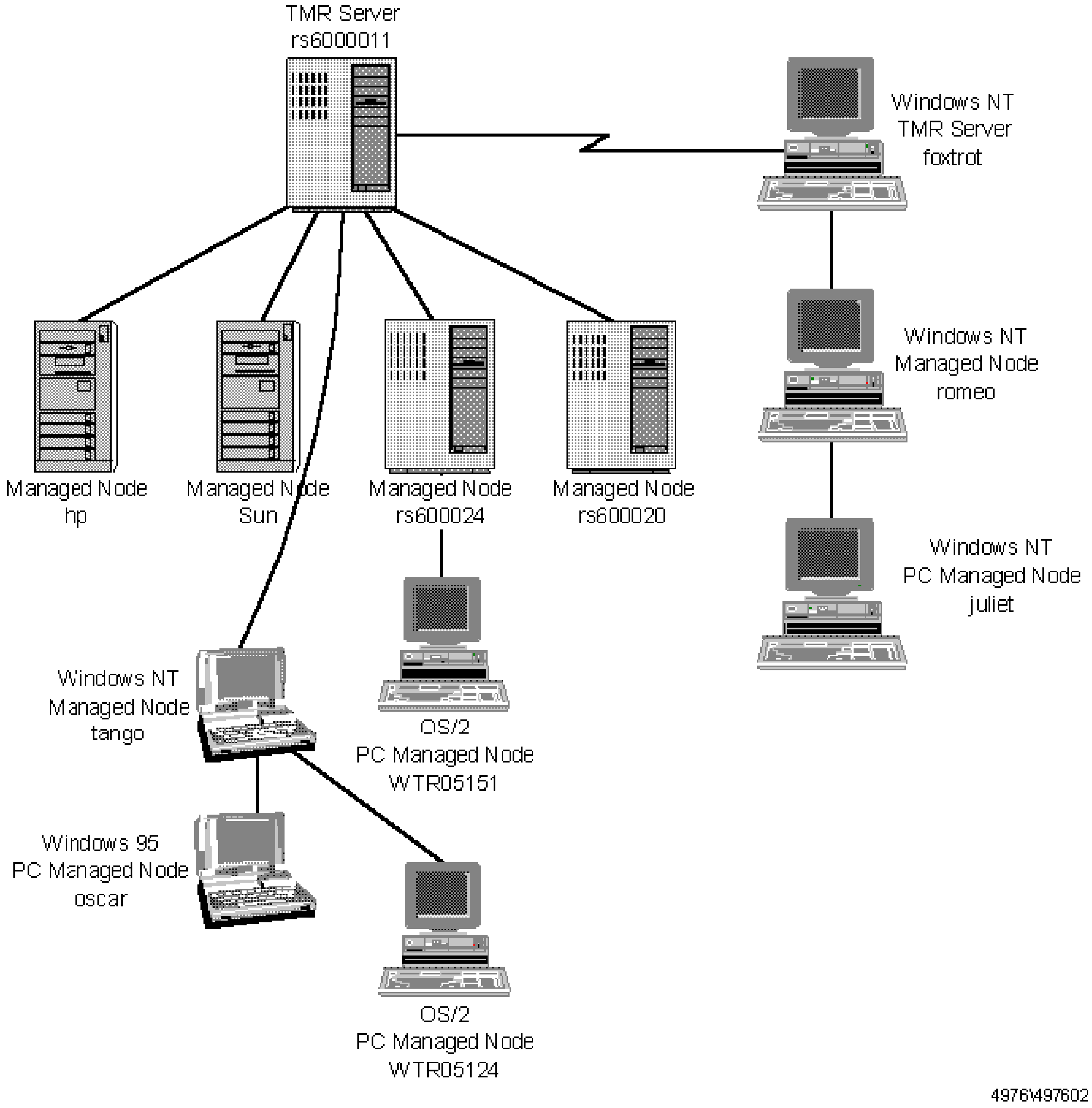
____
____
____
____

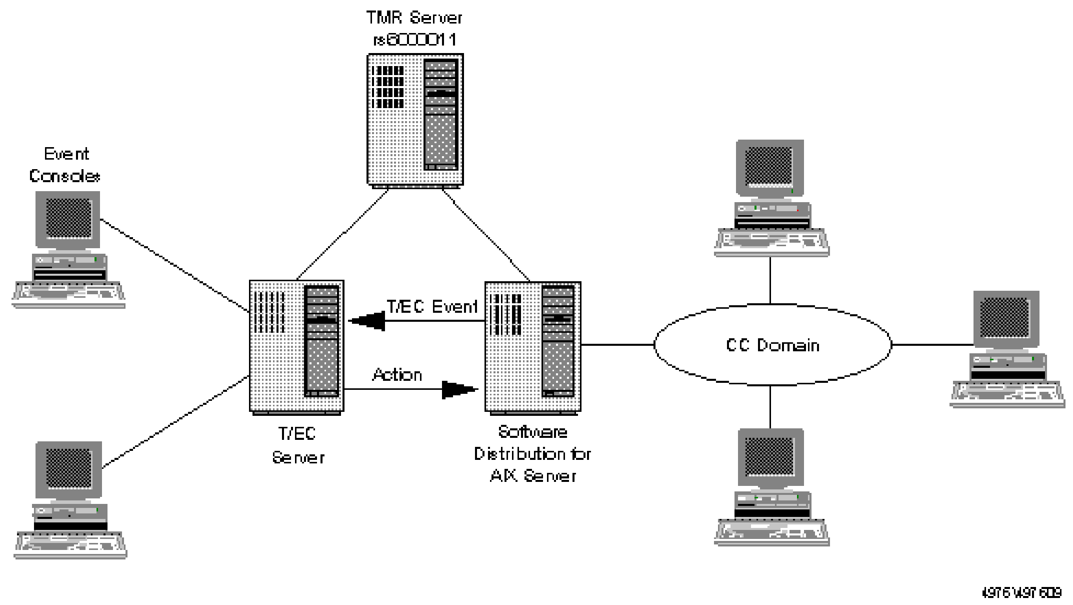
What other redbooks would you like to see published?

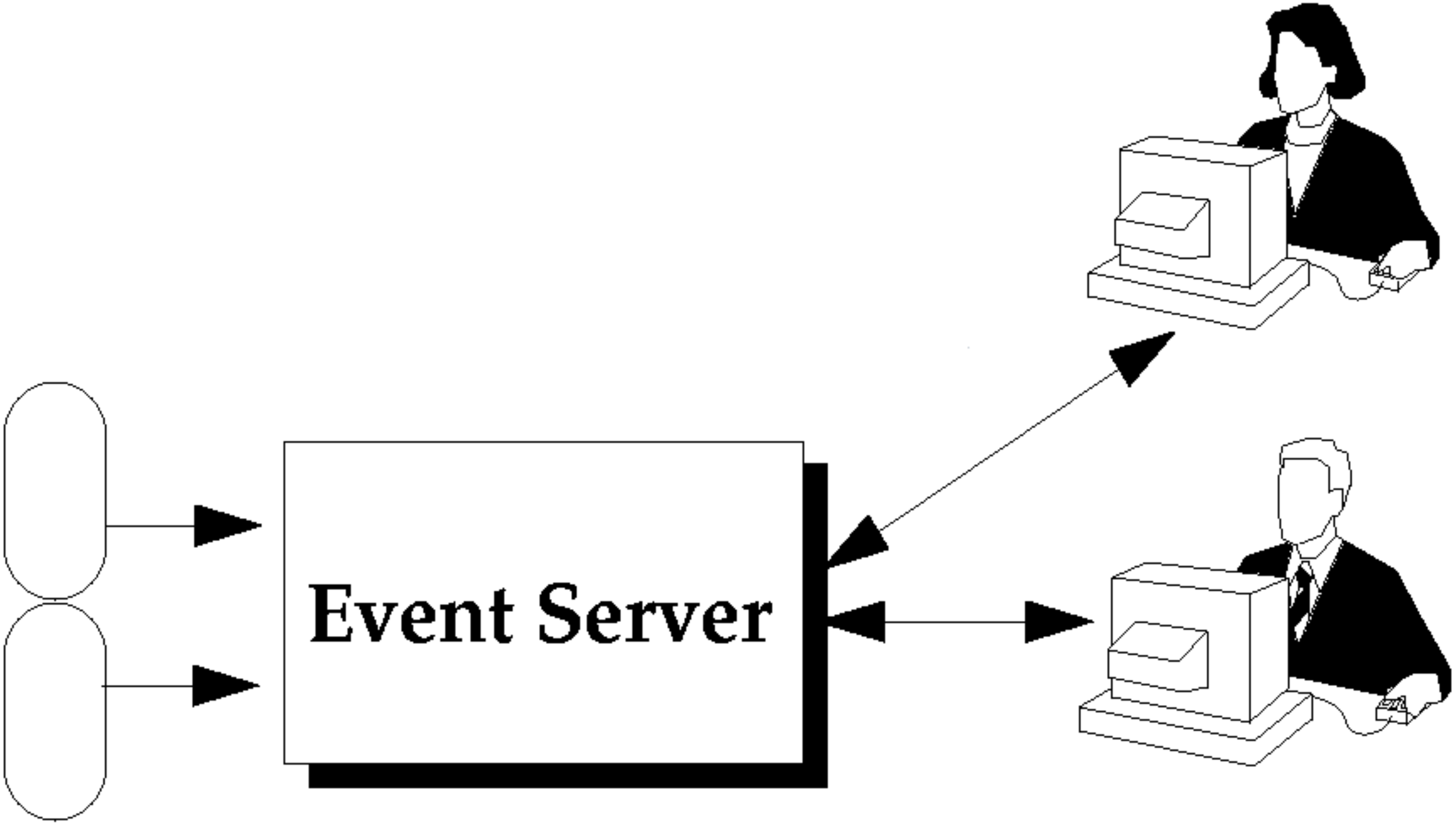
____
____
____

Comments/Suggestions: (THANK YOU FOR YOUR FEEDBACK!)

____
____
____
____
____


TMR Server
rs6000011
Windows NT
TMR Server
foxtrot
Windows NT
Managed Node
romeo
Windows NT
PC Managed Node
juliet
Managed Node
hp
Managed Node
Sun
Managed Node
rs600024
Managed Node
rs600020
Windows NT
Managed Node
tango
OS/2
PC Managed Node
WTR05151
Windows 95
PC Managed Node
oscar
OS/2
PC Managed Node
WTR05124
4976\497602


TMR Server
rs600011
Event
Consoles
T/EC Event
Action
T/EC
Server
Software
Distribution for
AIX Server
CC Domain
4976\497609


Event Server

http://www.redbooks.ibm.com:80/SG244976/adapovw.gif

Latest

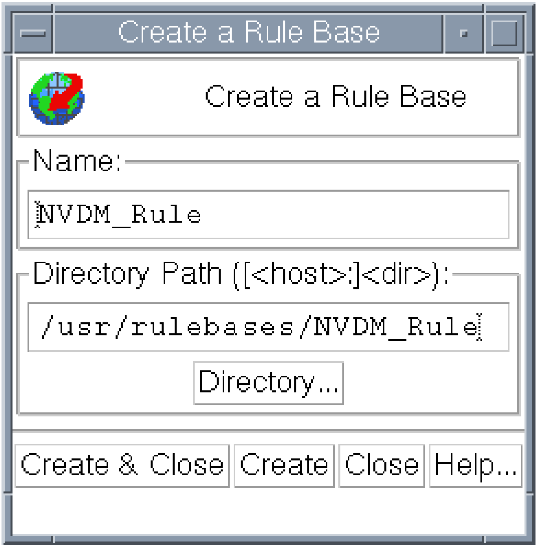
Show All

Hrm.

Wayback Machine doesn't have that page archived.
Want to search for all archived pages under
http://www.redbooks.ibm.com:80/SG244976/ ?

This page is available on the web!

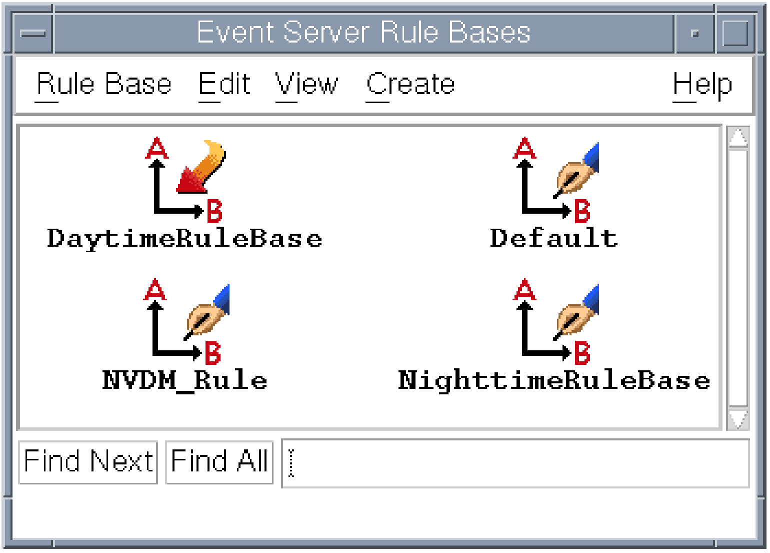
Help make the Wayback Machine more complete!
Save this url in the Wayback Machine

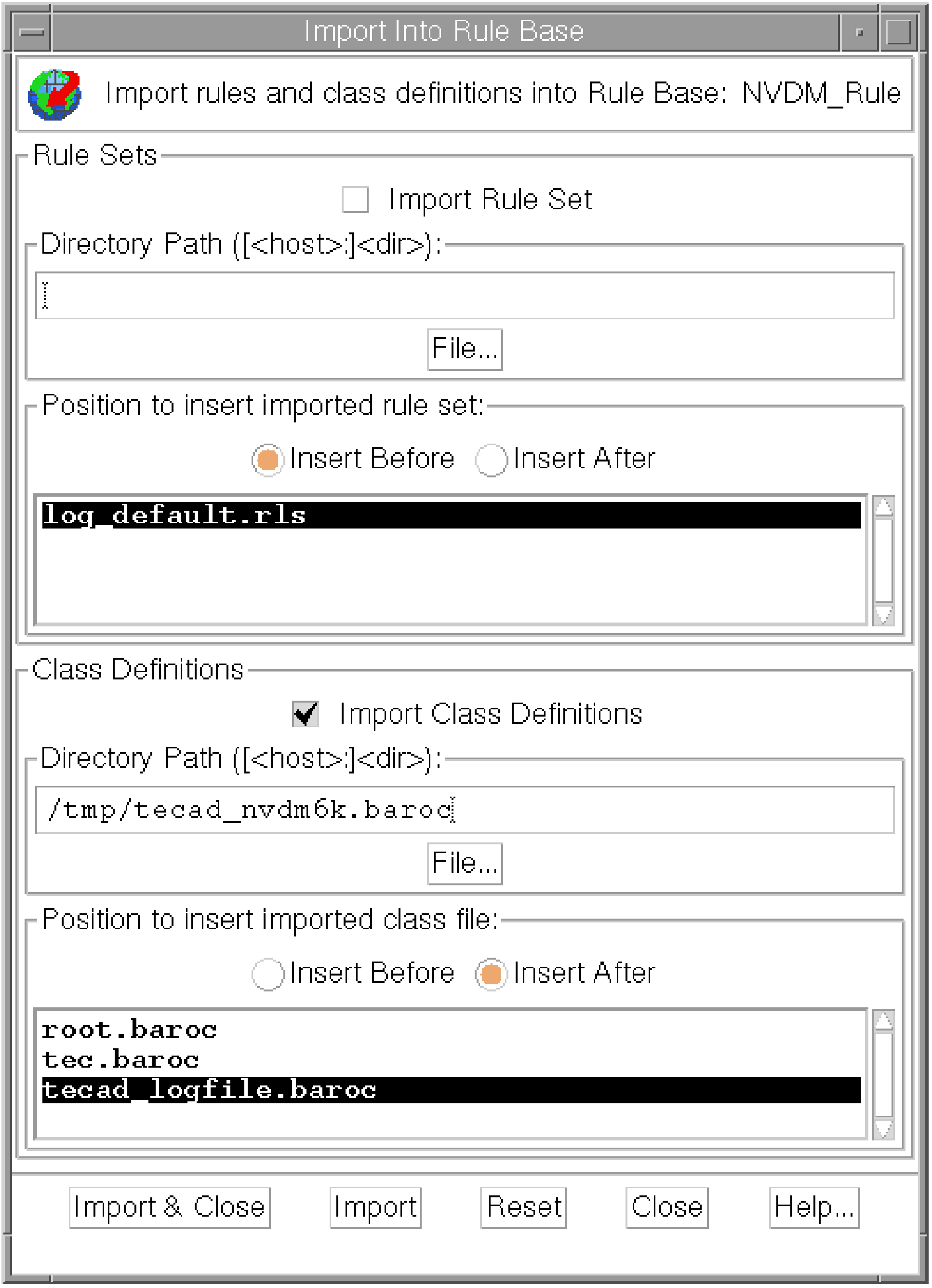


Create a Rule Base

Name: NVDM_Rule

Directory Path ([<host>:]<dir>): /usr/rulebases/NVDM_Rule


Event Server Rule Bases
Rule Base
Edit
View
Create
Help
DaytimeRuleBase
Default
NVDM_Rule
NighttimeRuleBase
Find Next
Find All



Import rules and class definitions into Rule Base: NVDM_Rule

Rule Sets

□ Import Rule Set

Directory Path ([<host>:]<dir>):

Position to insert imported rule set:

● Insert Before ○ Insert After

```
log_default.rls
```

Class Definitions

☑ Import Class Definitions

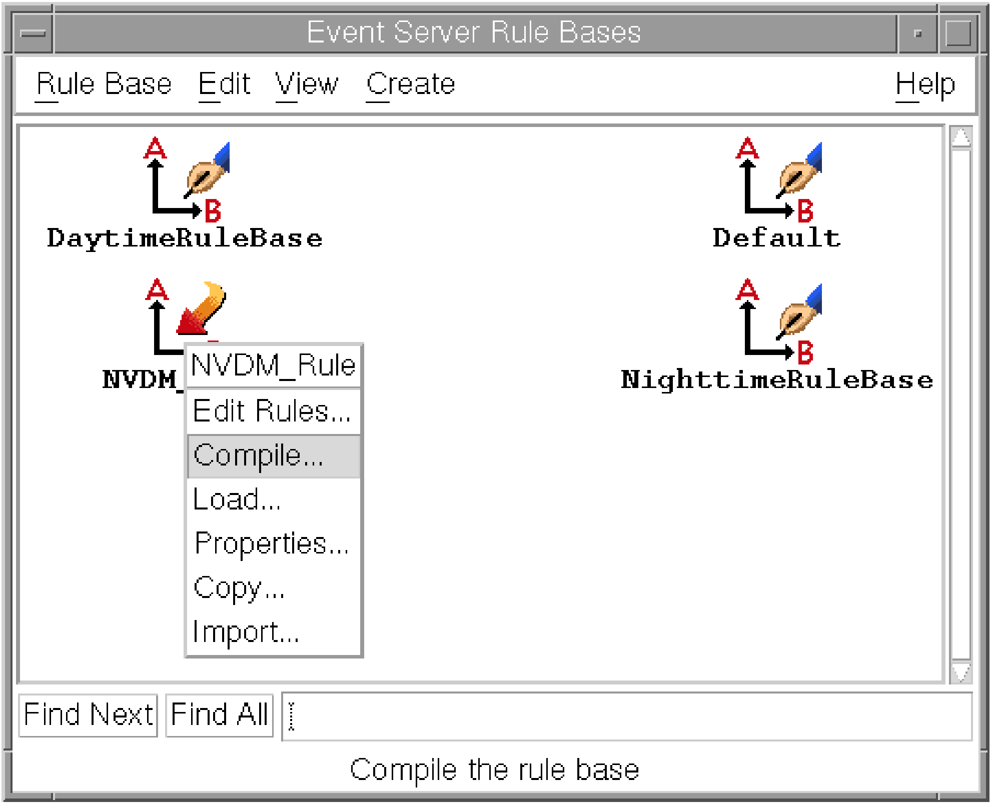
Directory Path ([<host>:]<dir>):

/tmp/tecad_nvdm6k.baroc

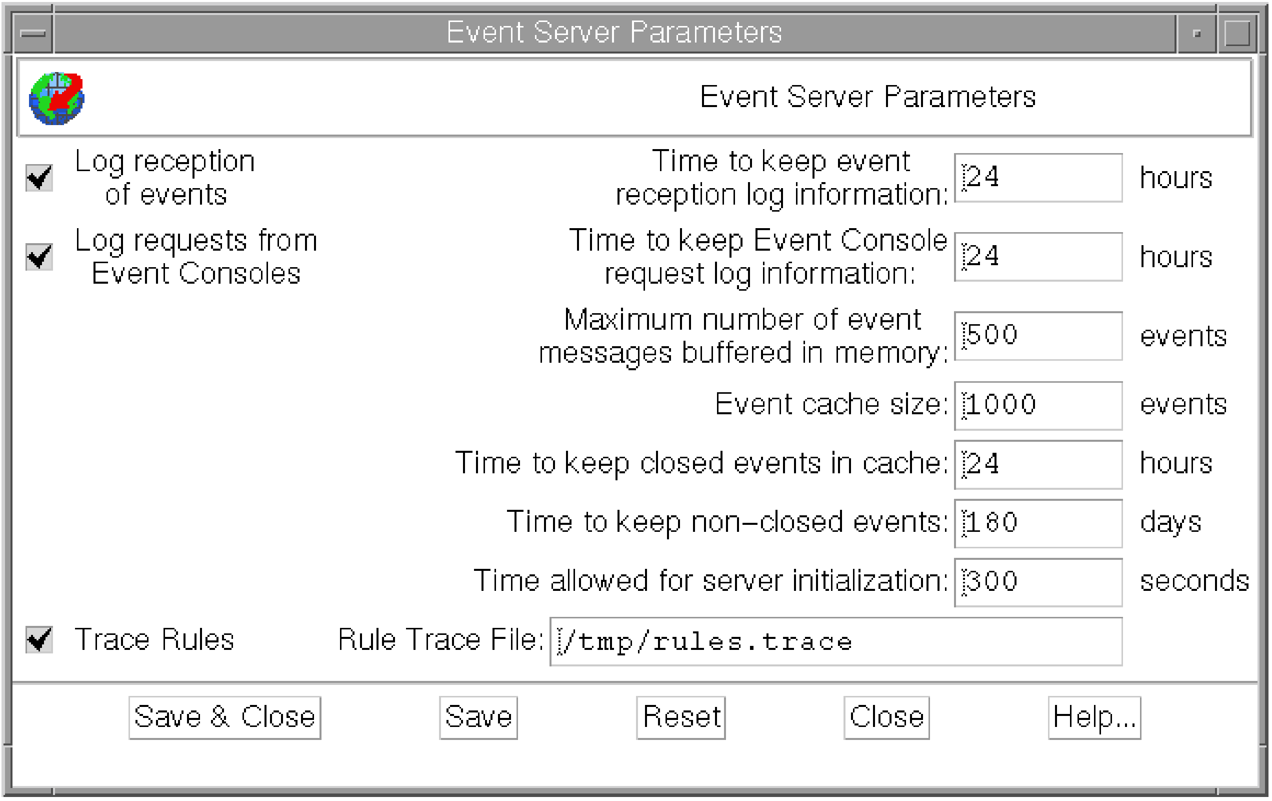
Position to insert imported class file:

○ Insert Before ● Insert After

```
root.baroc
tec.baroc
tecad_logfile.baroc
```



Compile the rule base



Event Server Parameters

Event Server Parameters

☑ Log reception of events

☑ Log requests from Event Consoles

Time to keep event reception log information: 24 hours

Time to keep Event Console request log information: 24 hours

Maximum number of event messages buffered in memory: 500 events

Event cache size: 1000 events

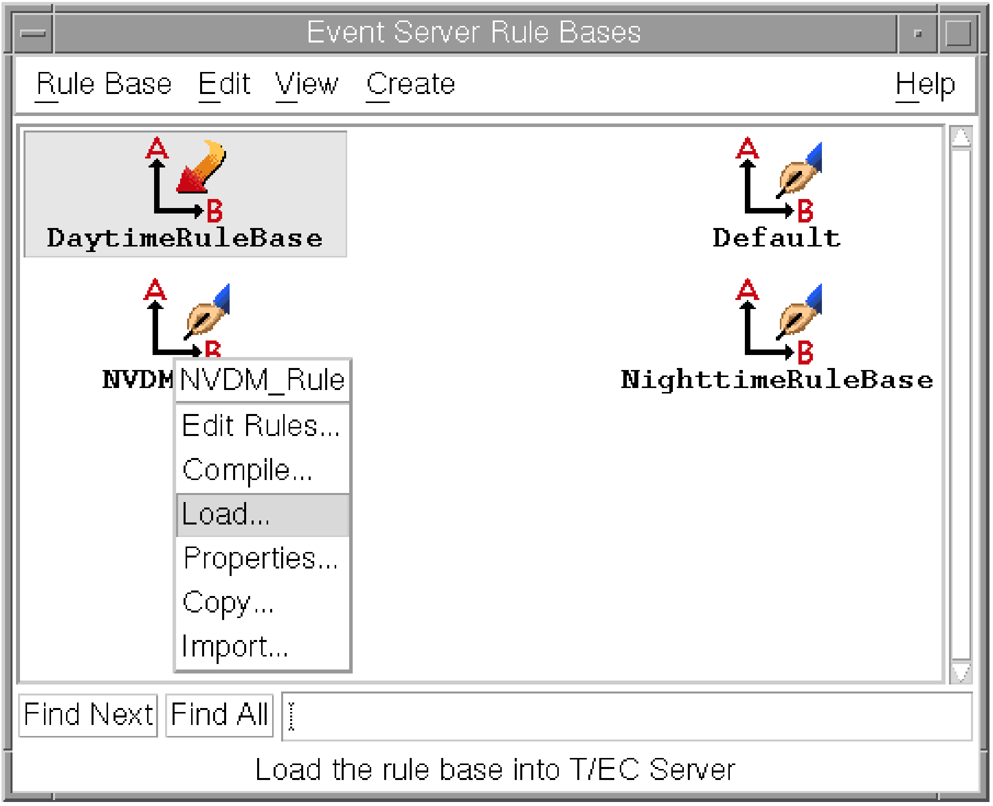
Time to keep closed events in cache: 24 hours

Time to keep non–closed events: 180 days

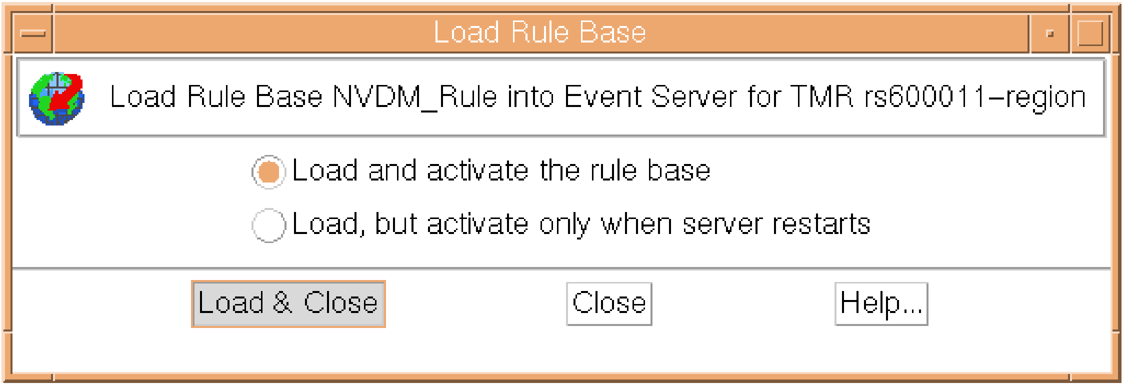
Time allowed for server initialization: 300 seconds

☑ Trace Rules

Rule Trace File: /tmp/rules.trace



Load the rule base into T/EC Server

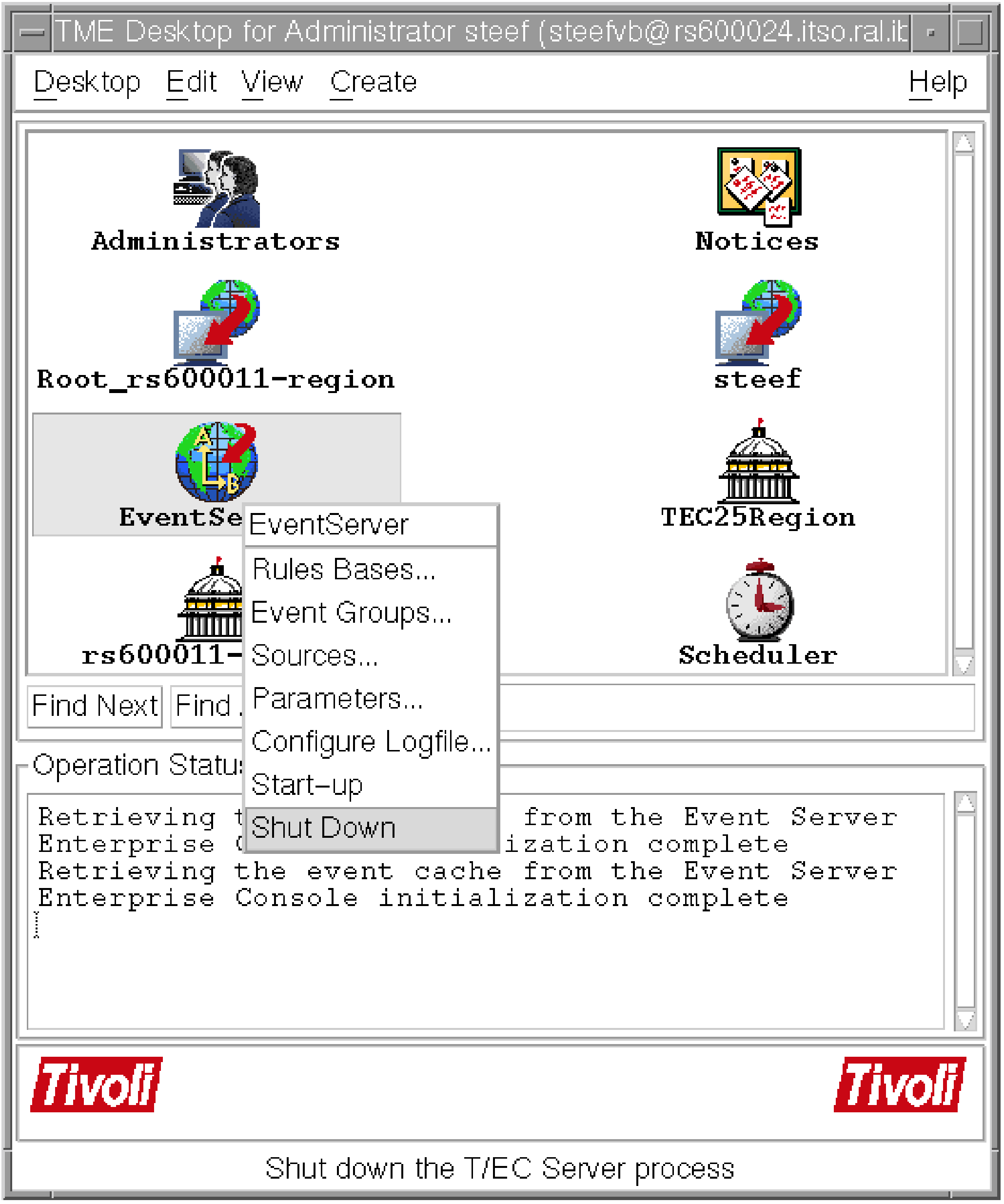


Load Rule Base

Load Rule Base NVDM_Rule into Event Server for TMR rs600011–region

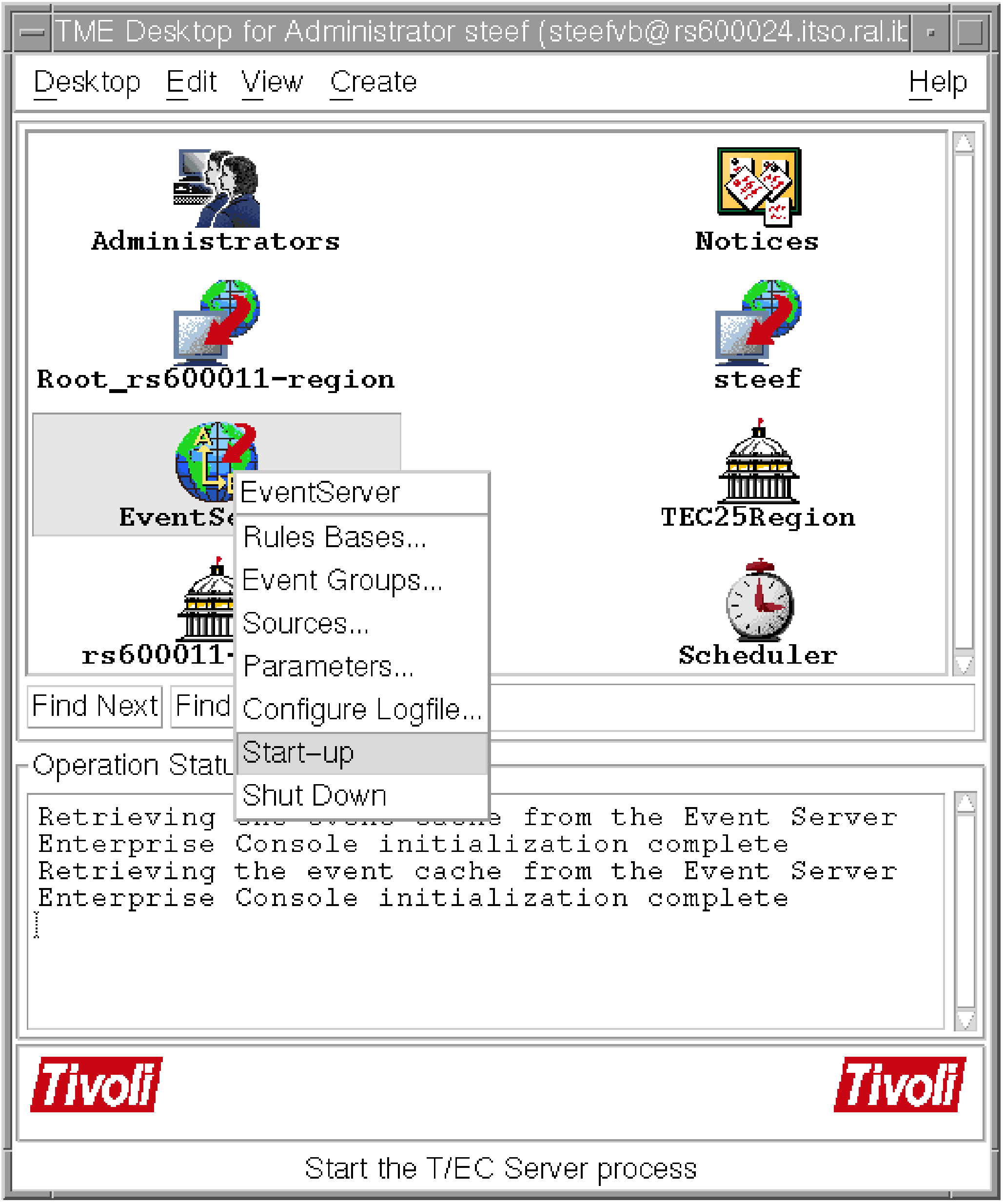
● Load and activate the rule base

○ Load, but activate only when server restarts



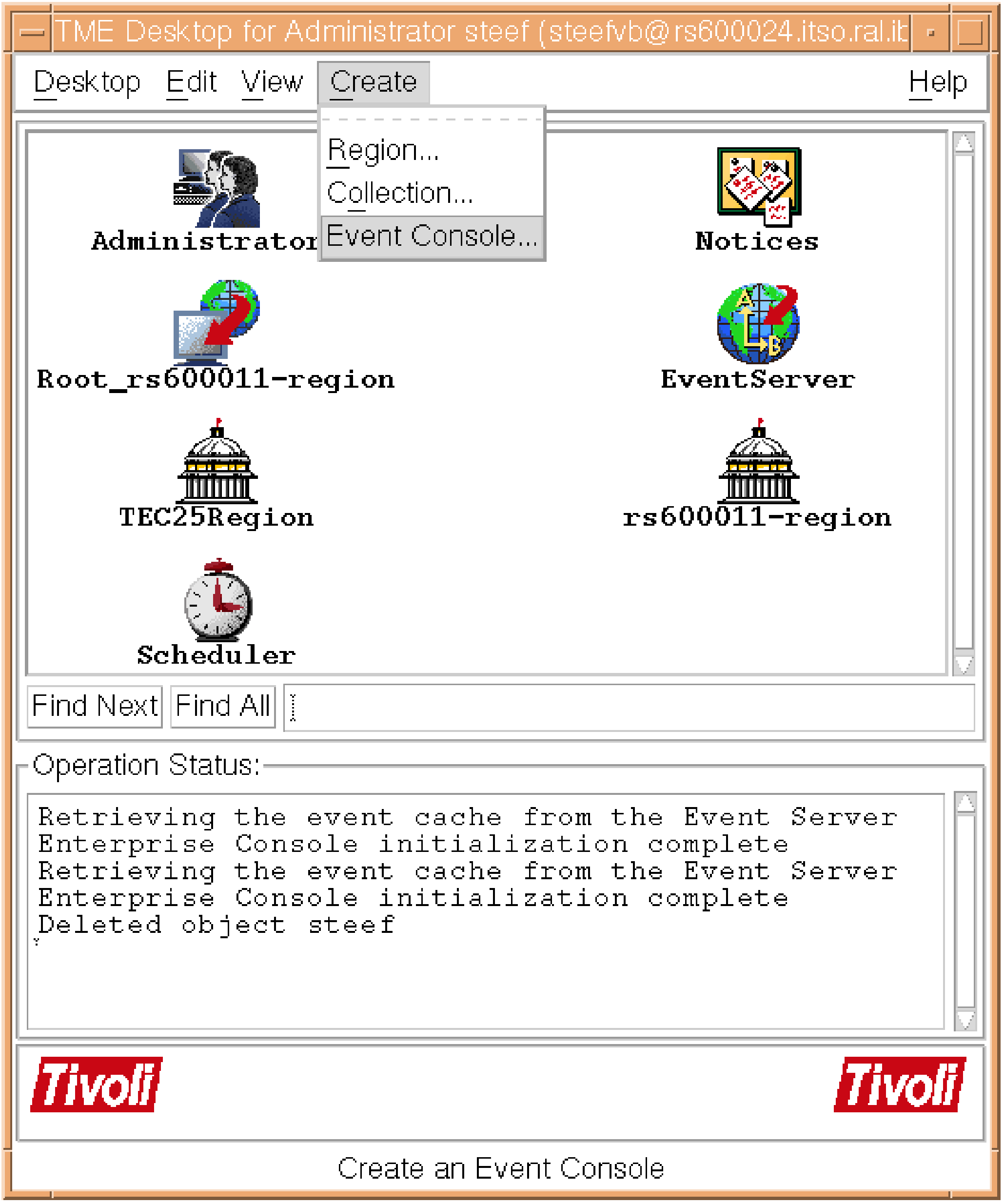
```
Retrieving t                 from the Event Server
Enterprise C               ization complete
Retrieving the event cache from the Event Server
Enterprise Console initialization complete
```

Shut down the T/EC Server process

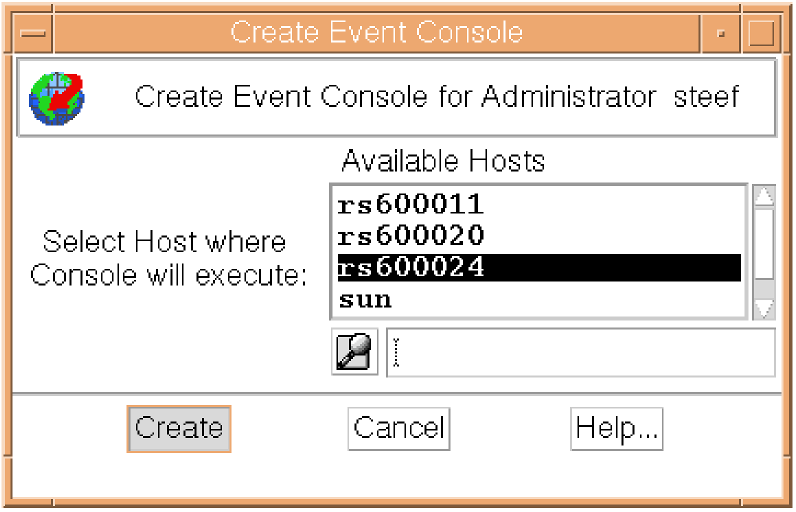


```
Retrieving the event cache from the Event Server
Enterprise Console initialization complete
Retrieving the event cache from the Event Server
Enterprise Console initialization complete
```

Start the T/EC Server process



```
Retrieving the event cache from the Event Server
Enterprise Console initialization complete
Retrieving the event cache from the Event Server
Enterprise Console initialization complete
Deleted object steef
```



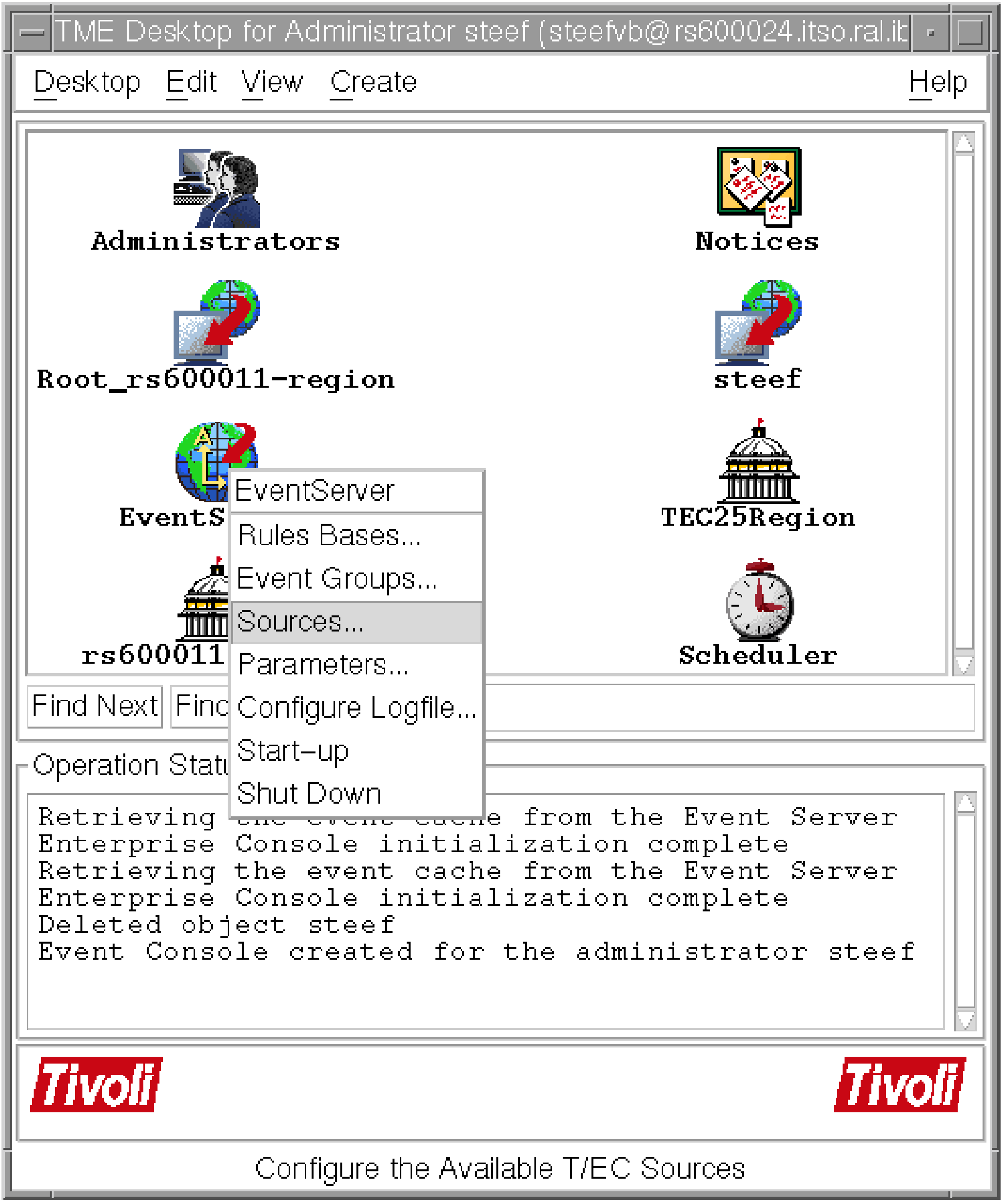
Create Event Console

Create Event Console for Administrator steef

Available Hosts

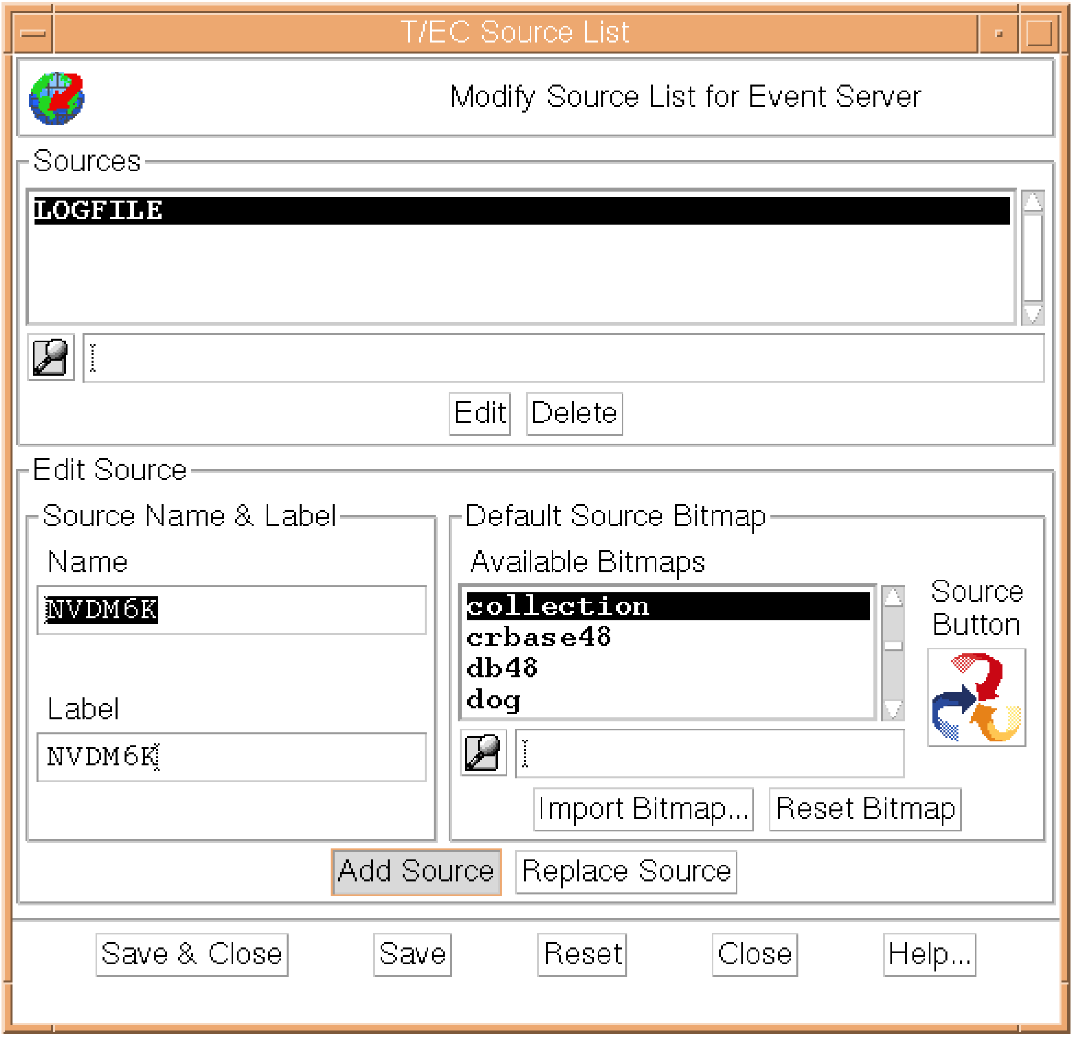
Select Host where Console will execute:

rs600011
rs600020
rs600024
sun



```
Retrieving the event cache from the Event Server
Enterprise Console initialization complete
Retrieving the event cache from the Event Server
Enterprise Console initialization complete
Deleted object steef
Event Console created for the administrator steef
```

Configure the Available T/EC Sources

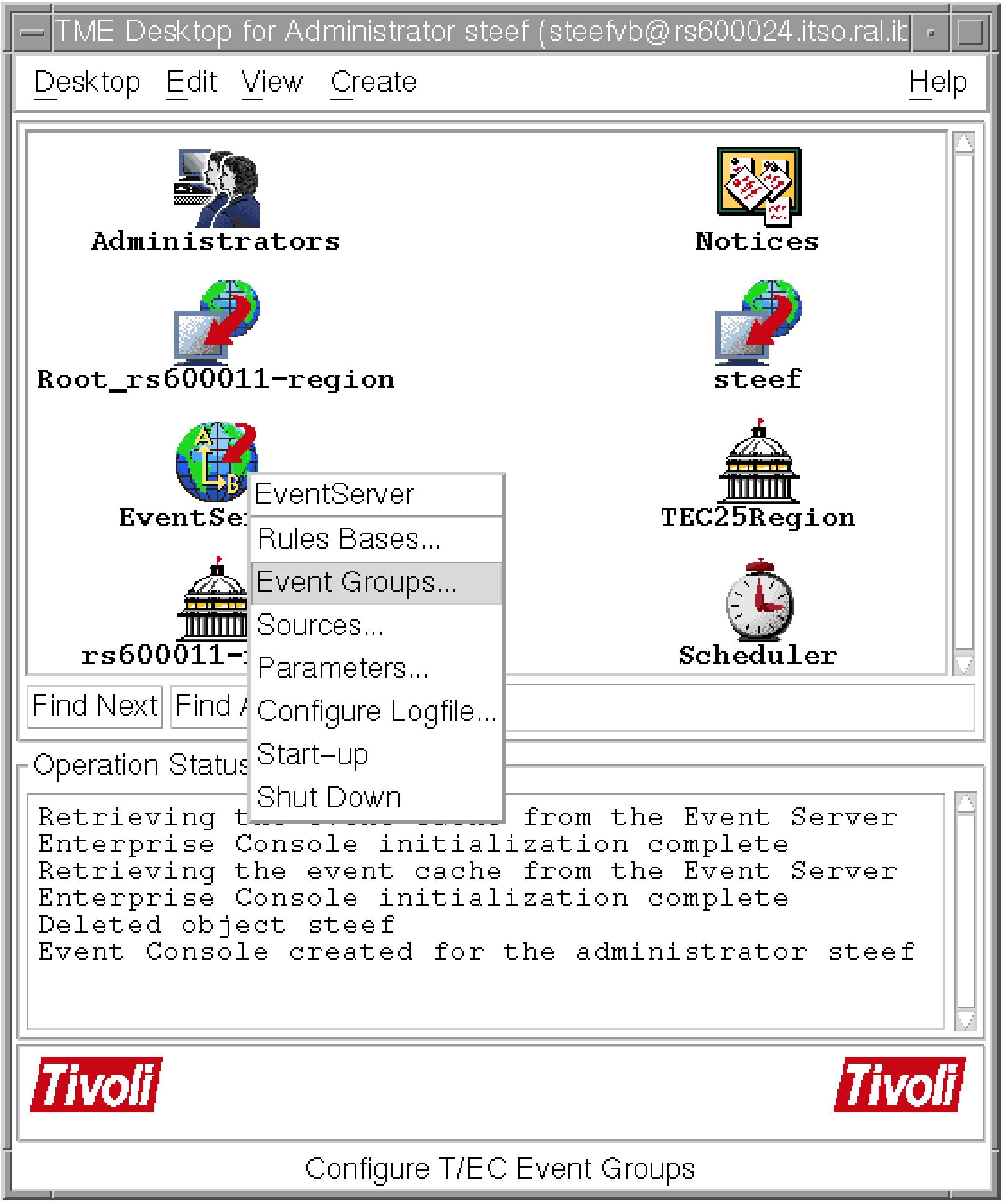


Sources: LOGFILE

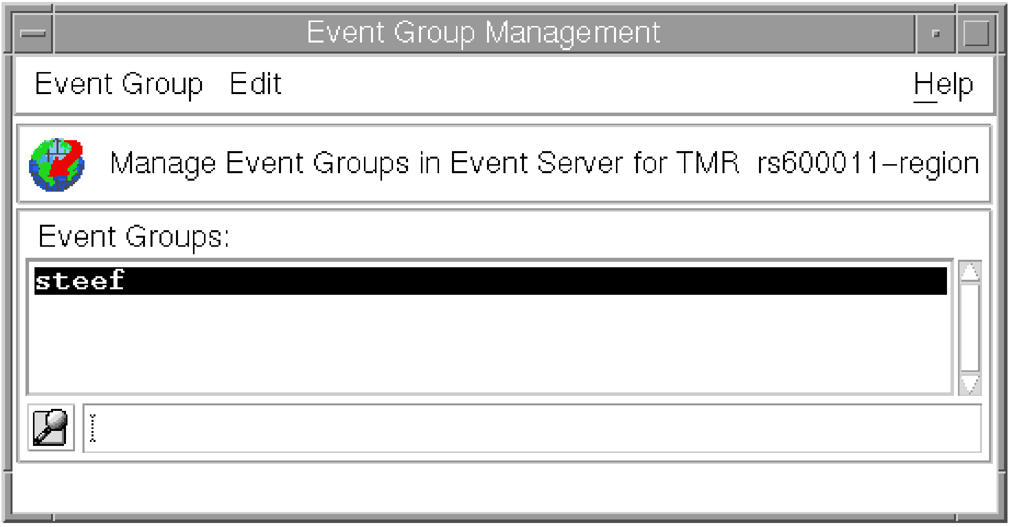
Name: NVDM6K

Label: NVDM6K

Available Bitmaps:
collection
crbase48
db48
dog



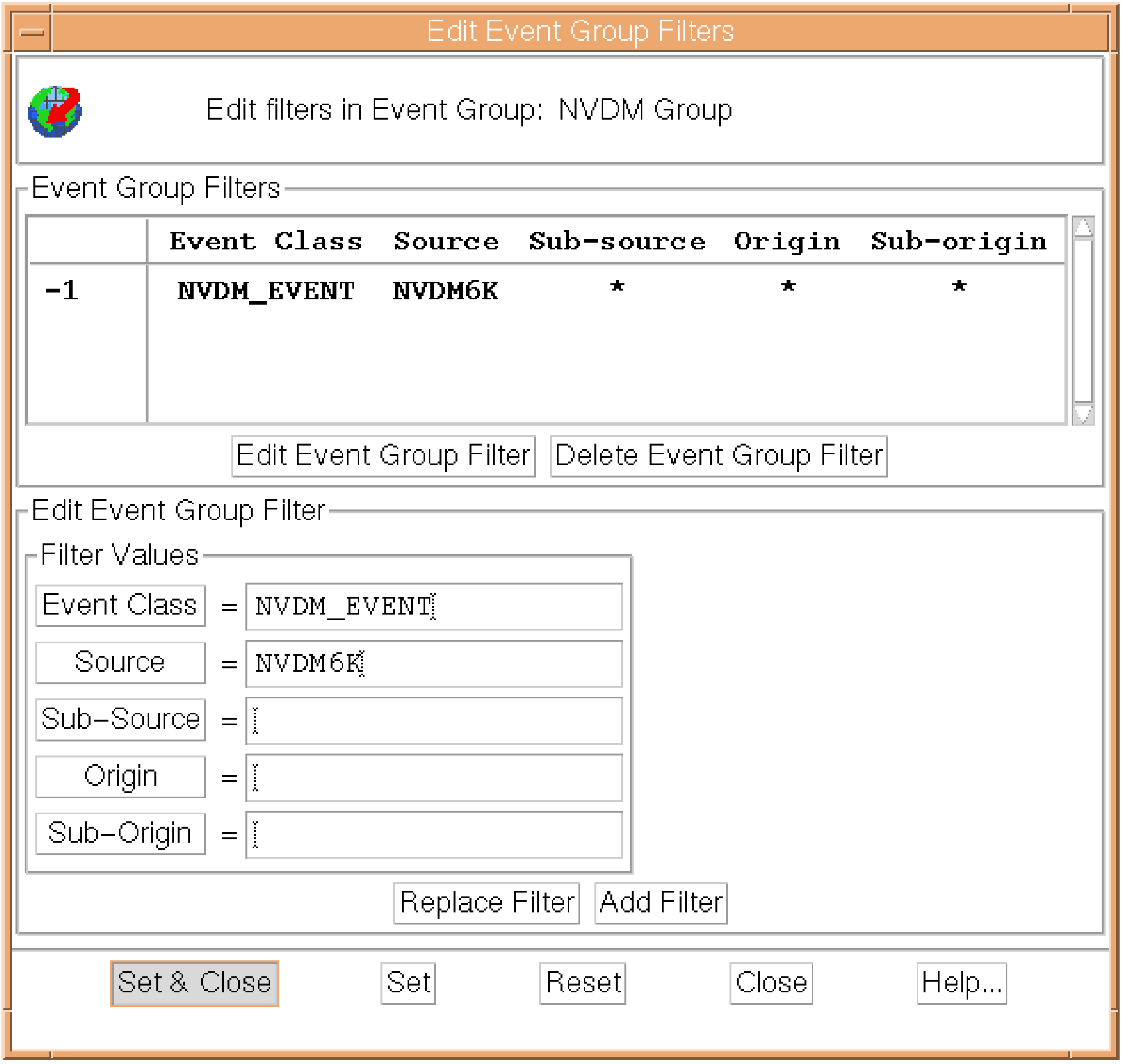
```
Retrieving t                from the Event Server
Enterprise Console initialization complete
Retrieving the event cache from the Event Server
Enterprise Console initialization complete
Deleted object steef
Event Console created for the administrator steef
```



Manage Event Groups in Event Server for TMR rs600011-region

Event Groups:

steef



Edit Event Group Filters

Edit filters in Event Group: NVDM Group

Event Group Filters

	Event Class	Source	Sub-source	Origin	Sub-origin
-1	NVDM_EVENT	NVDM6K	*	*	*

Edit Event Group Filter

Filter Values

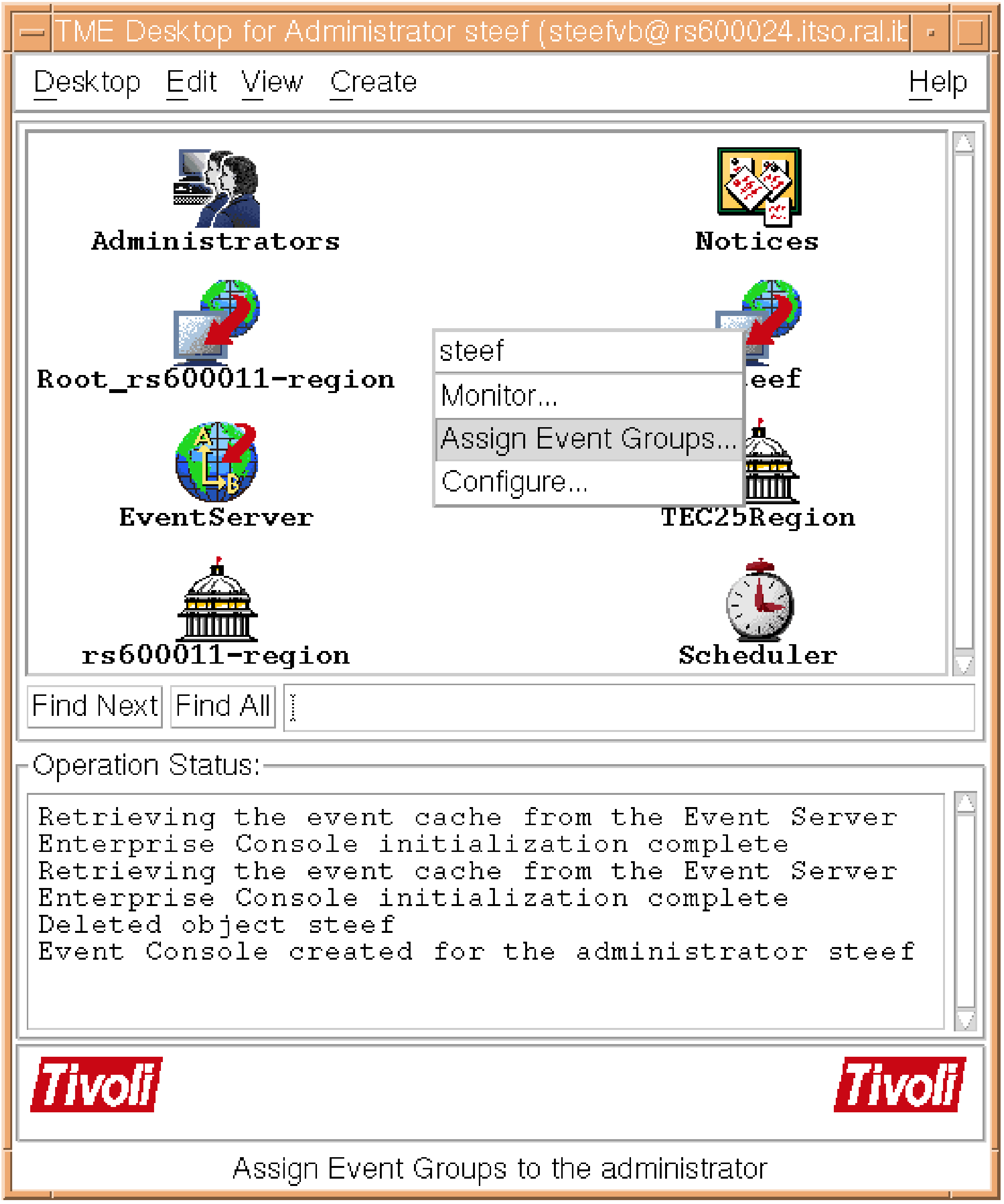
Event Class = NVDM_EVENT

Source = NVDM6K

Sub–Source =

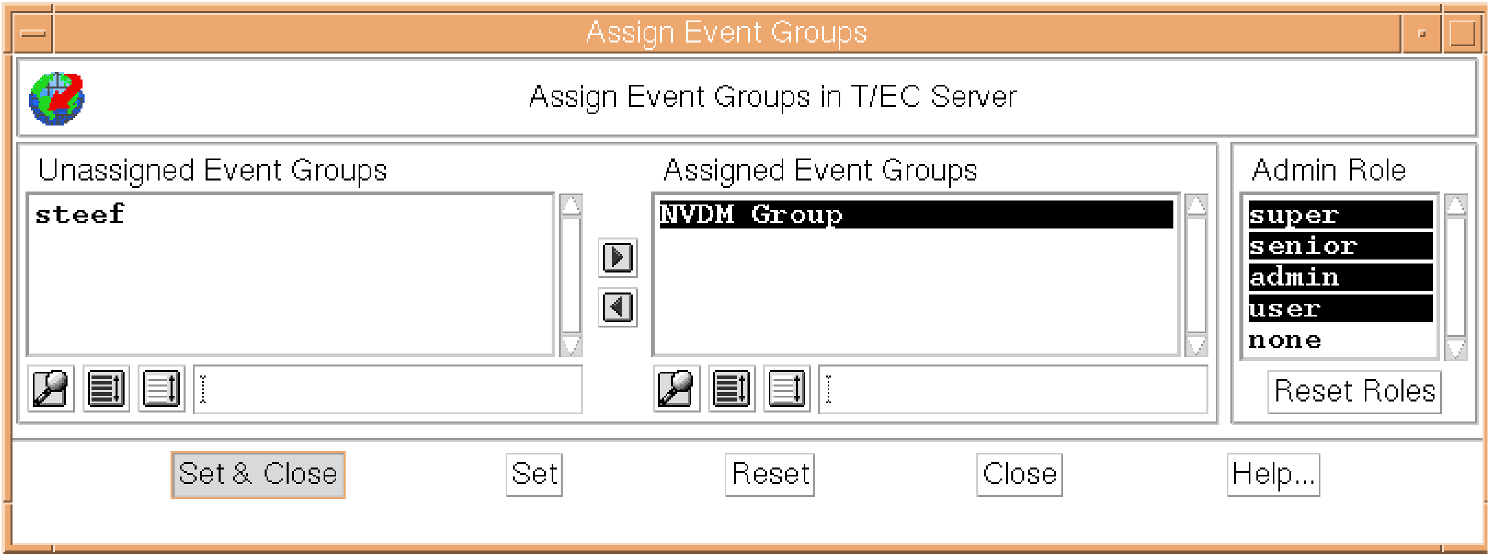
Origin =

Sub–Origin =



```
Retrieving the event cache from the Event Server
Enterprise Console initialization complete
Retrieving the event cache from the Event Server
Enterprise Console initialization complete
Deleted object steef
Event Console created for the administrator steef
```

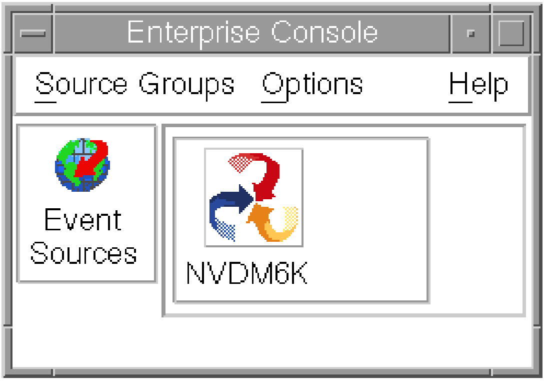
Assign Event Groups to the administrator

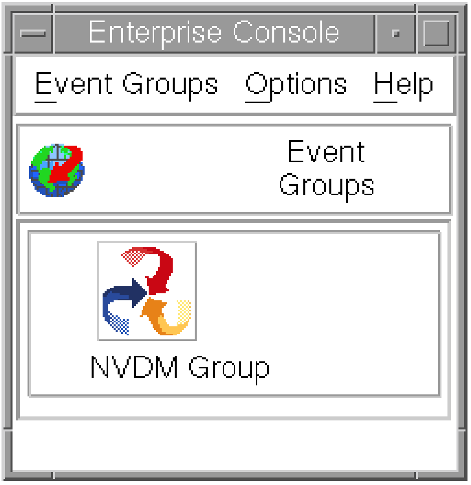


Unassigned Event Groups: steef

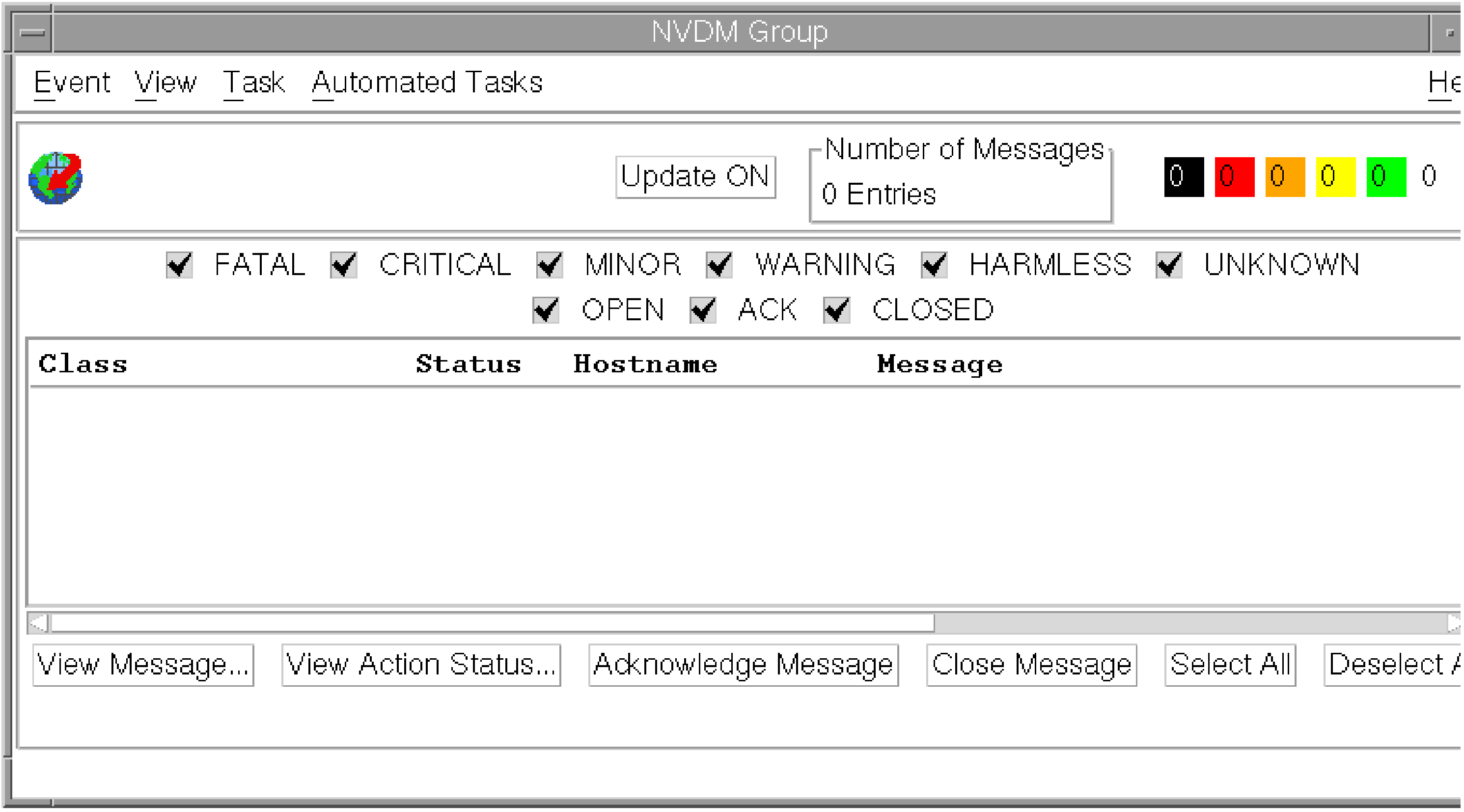
Assigned Event Groups: NVDM Group

Admin Role: super, senior, admin, user, none


Enterprise Console
Source Groups
Options
Help
Event Sources
NVDM6K



Enterprise Console
Event Groups
Options
Help
Event Groups
NVDM Group



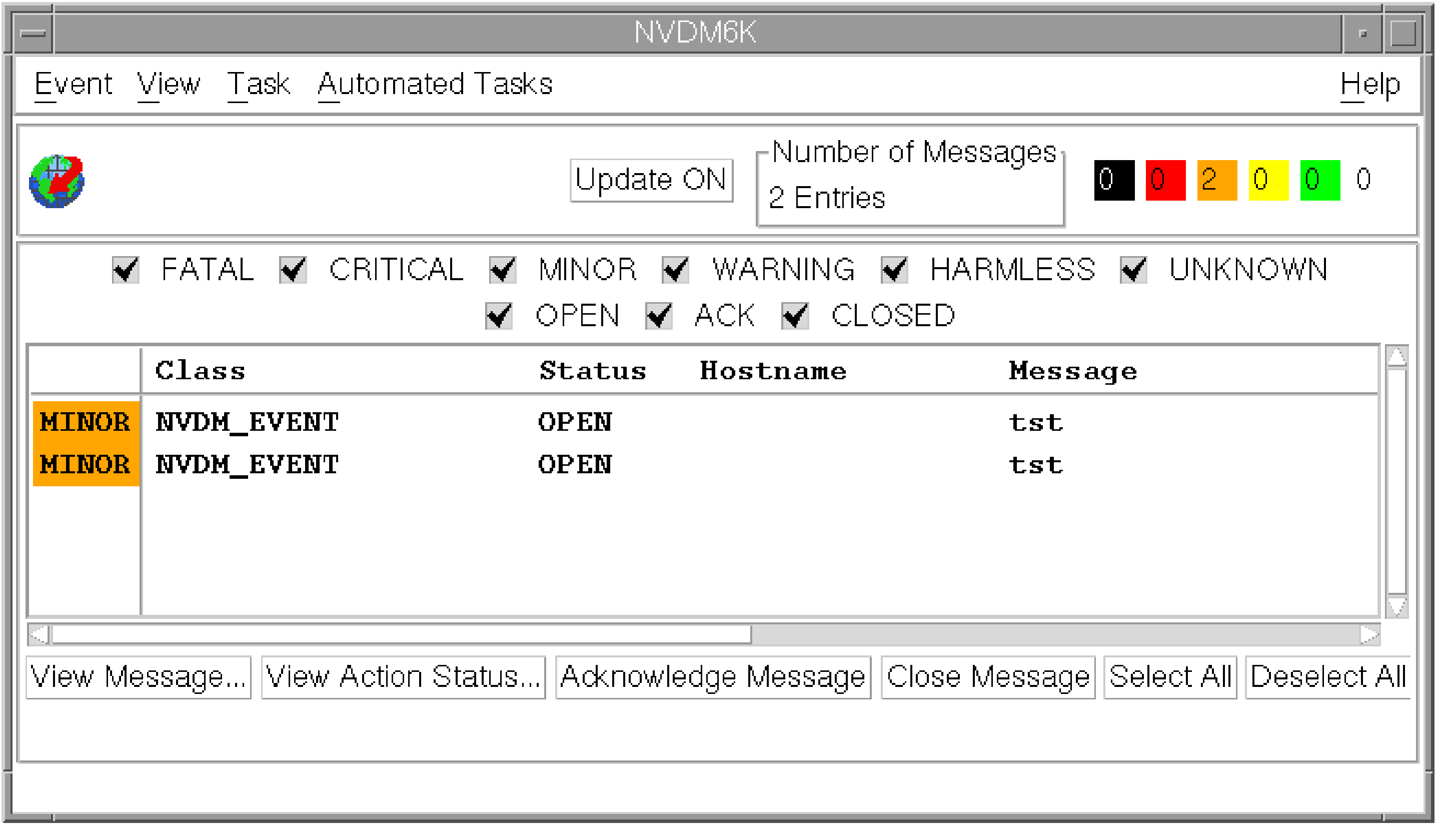
Number of Messages
0 Entries

0 0 0 0 0 0

☑ FATAL ☑ CRITICAL ☑ MINOR ☑ WARNING ☑ HARMLESS ☑ UNKNOWN

☑ OPEN ☑ ACK ☑ CLOSED

Class	Status	Hostname	Message



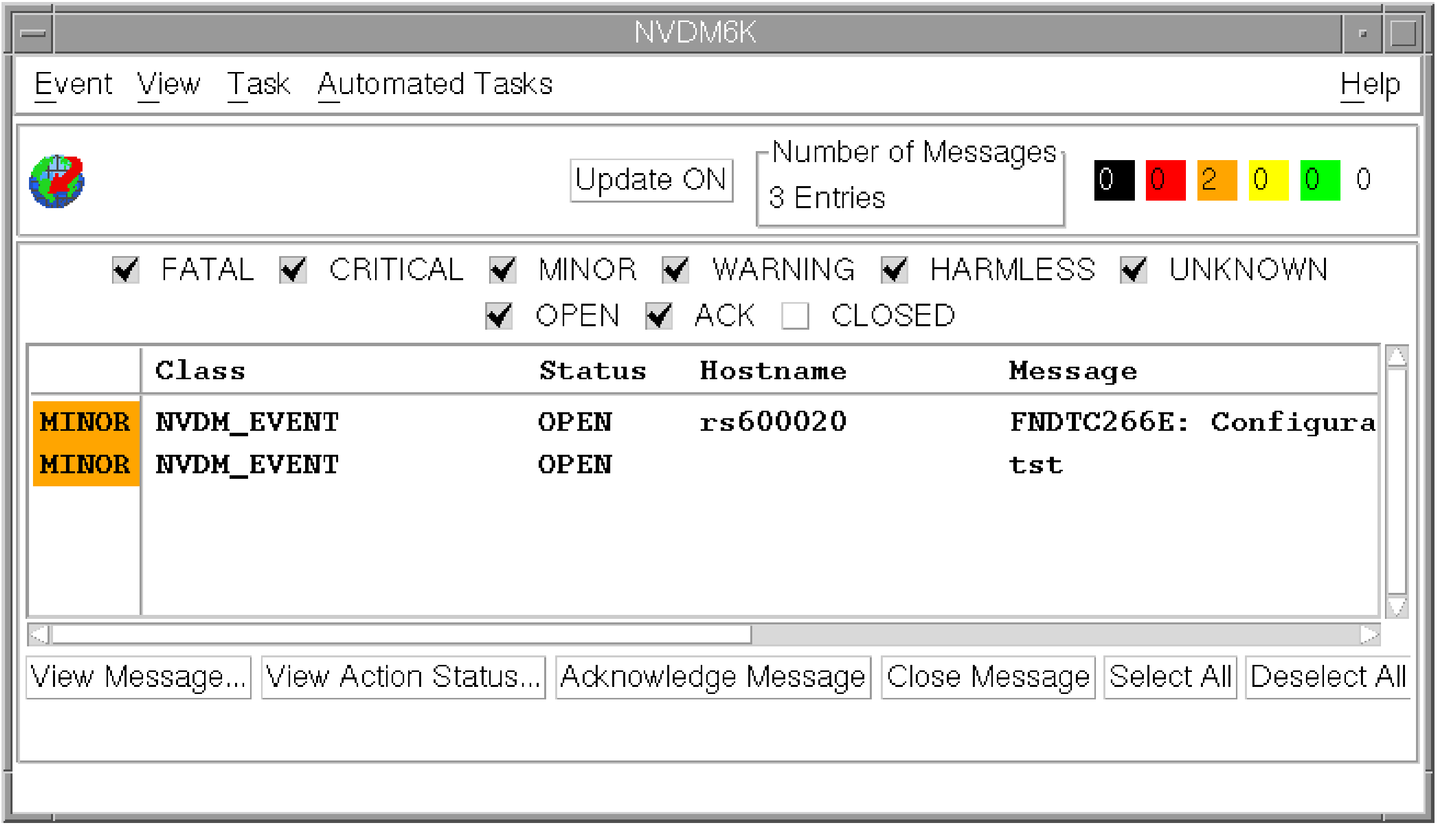
Number of Messages
2 Entries

0 0 2 0 0 0

☑ FATAL ☑ CRITICAL ☑ MINOR ☑ WARNING ☑ HARMLESS ☑ UNKNOWN

☑ OPEN ☑ ACK ☑ CLOSED

	Class	Status	Hostname	Message
MINOR	NVDM_EVENT	OPEN		tst
MINOR	NVDM_EVENT	OPEN		tst



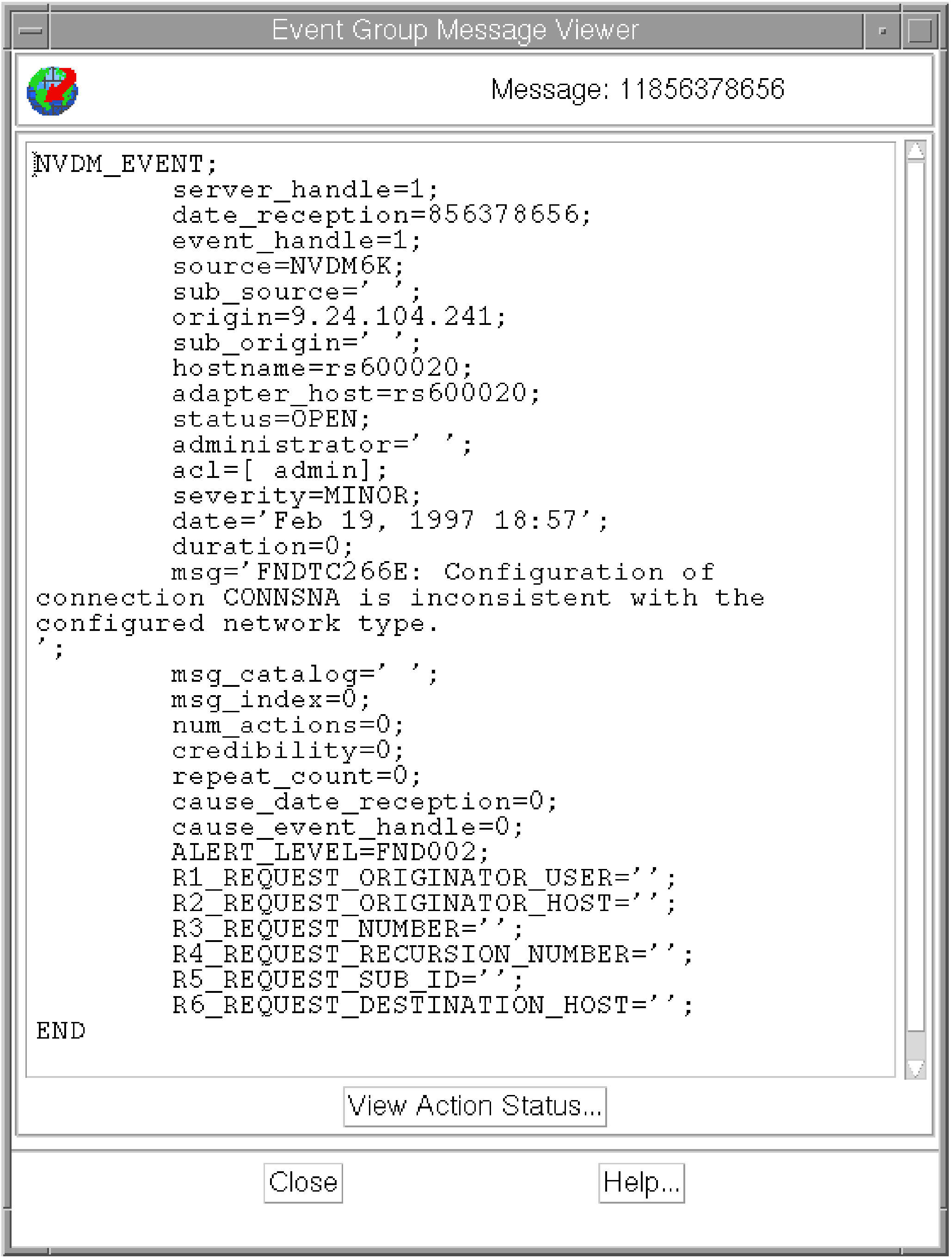
Number of Messages
3 Entries

0 0 2 0 0 0

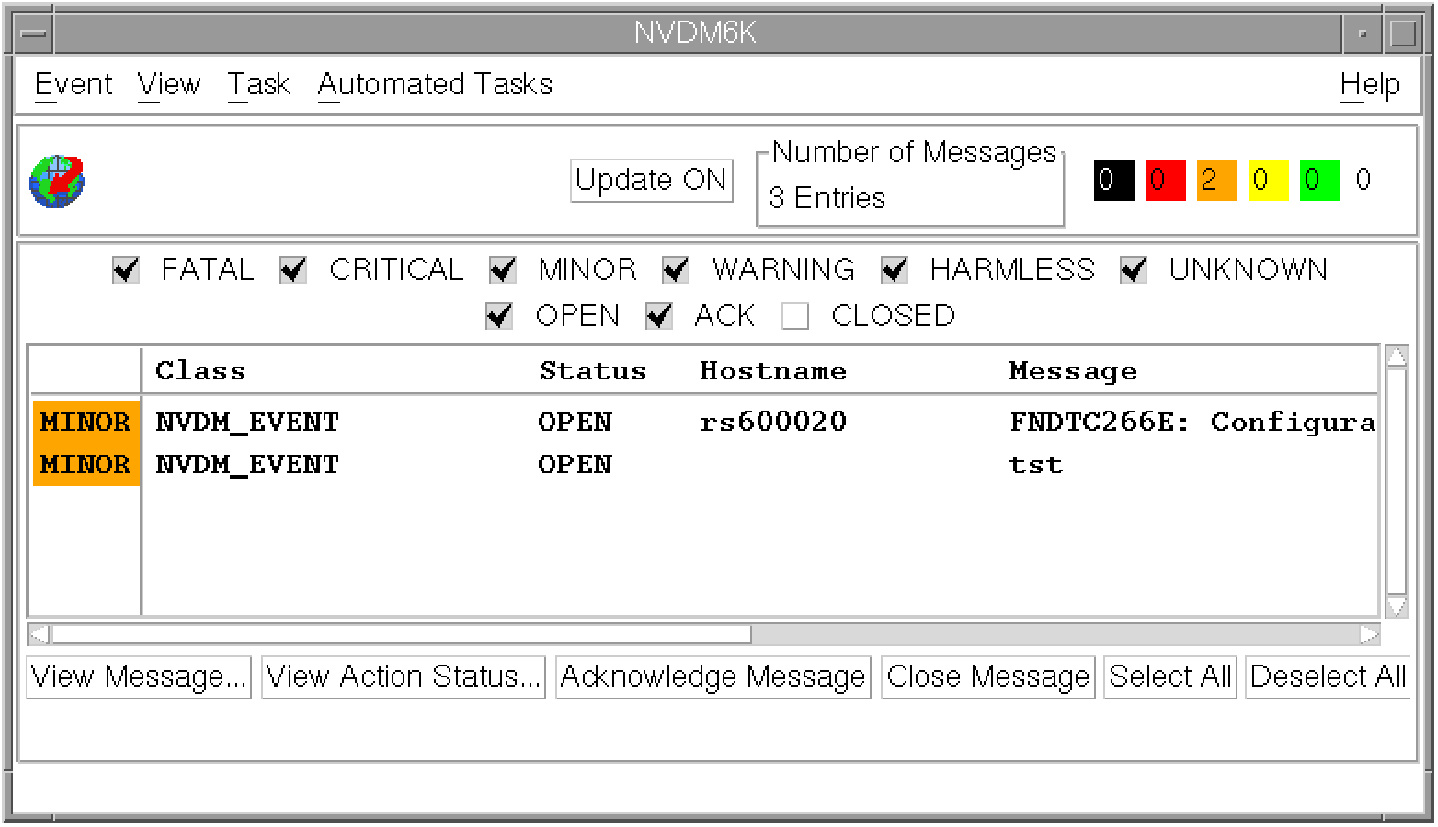
☑ FATAL ☑ CRITICAL ☑ MINOR ☑ WARNING ☑ HARMLESS ☑ UNKNOWN

☑ OPEN ☑ ACK □ CLOSED

	Class	Status	Hostname	Message
MINOR	NVDM_EVENT	OPEN	rs600020	FNDTC266E: Configura
MINOR	NVDM_EVENT	OPEN		tst



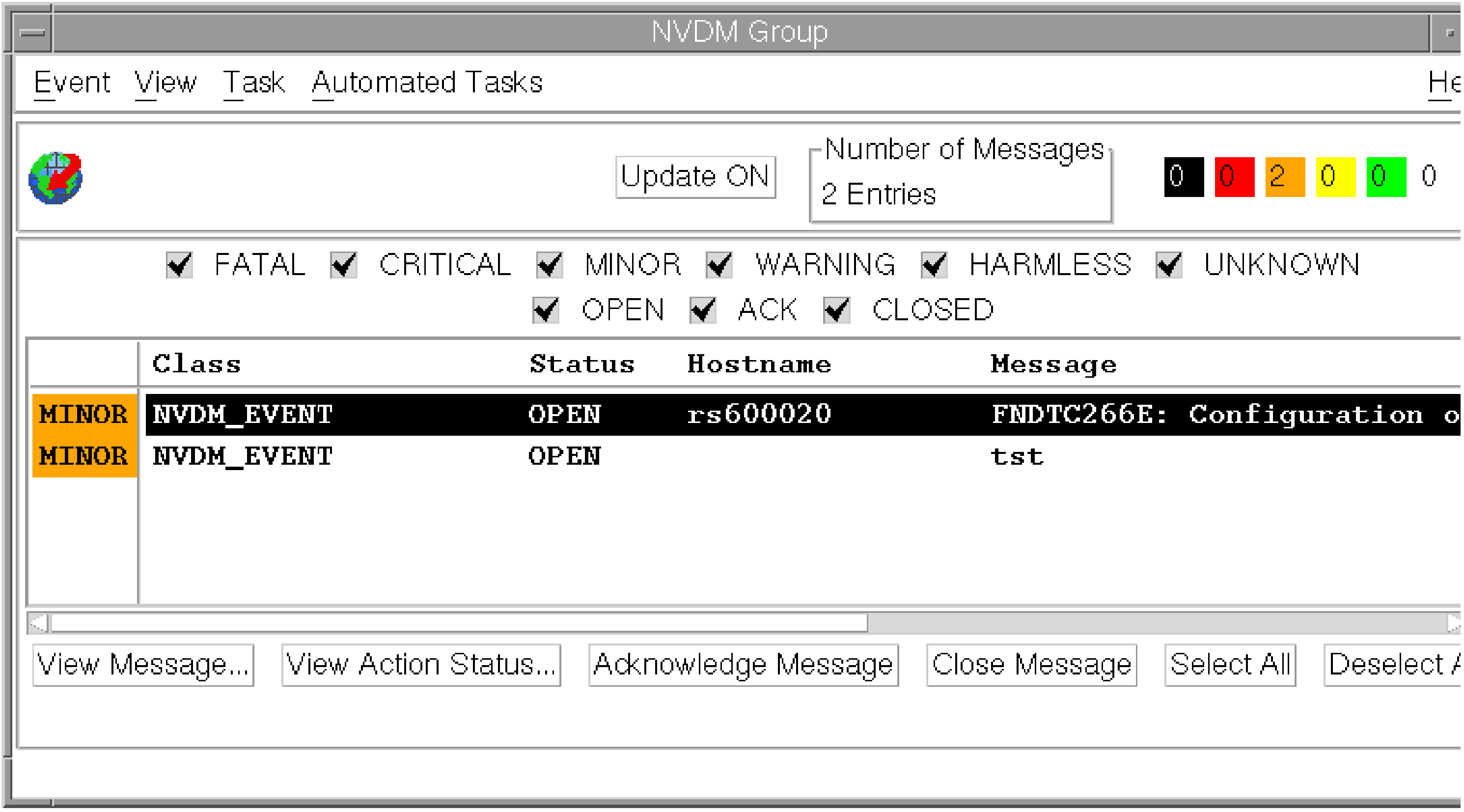
```
NVDM_EVENT;
        server_handle=1;
        date_reception=856378656;
        event_handle=1;
        source=NVDM6K;
        sub_source=' ';
        origin=9.24.104.241;
        sub_origin=' ';
        hostname=rs600020;
        adapter_host=rs600020;
        status=OPEN;
        administrator=' ';
        acl=[ admin];
        severity=MINOR;
        date='Feb 19, 1997 18:57';
        duration=0;
        msg='FNDTC266E: Configuration of
connection CONNSNA is inconsistent with the
configured network type.
';
        msg_catalog=' ';
        msg_index=0;
        num_actions=0;
        credibility=0;
        repeat_count=0;
        cause_date_reception=0;
        cause_event_handle=0;
        ALERT_LEVEL=FND002;
        R1_REQUEST_ORIGINATOR_USER='';
        R2_REQUEST_ORIGINATOR_HOST='';
        R3_REQUEST_NUMBER='';
        R4_REQUEST_RECURSION_NUMBER='';
        R5_REQUEST_SUB_ID='';
        R6_REQUEST_DESTINATION_HOST='';
END
```



Number of Messages
3 Entries

☑ FATAL ☑ CRITICAL ☑ MINOR ☑ WARNING ☑ HARMLESS ☑ UNKNOWN
☑ OPEN ☑ ACK □ CLOSED

	Class	Status	Hostname	Message
MINOR	NVDM_EVENT	OPEN	rs600020	FNDTC266E: Configura
MINOR	NVDM_EVENT	OPEN		tst

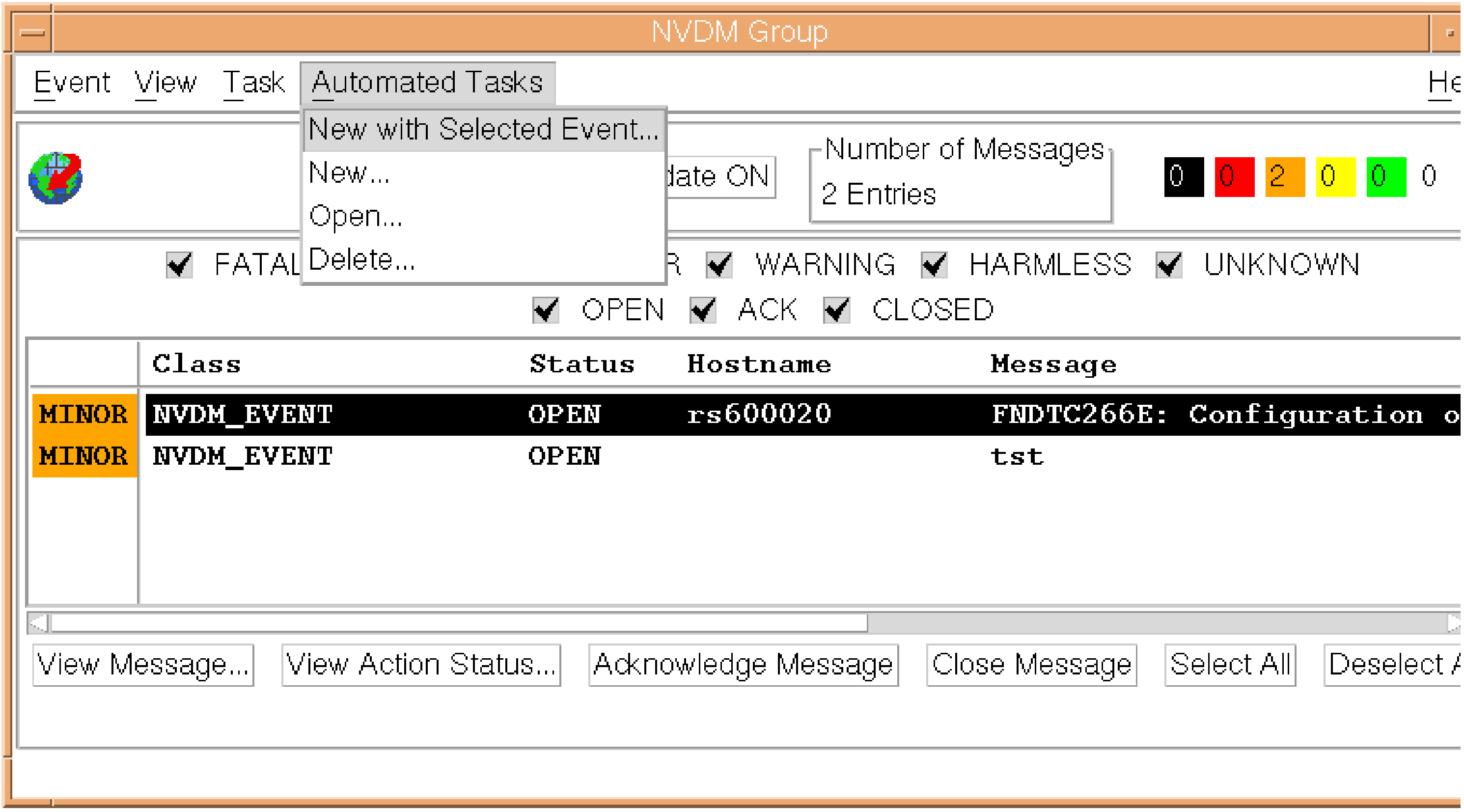


Number of Messages
2 Entries

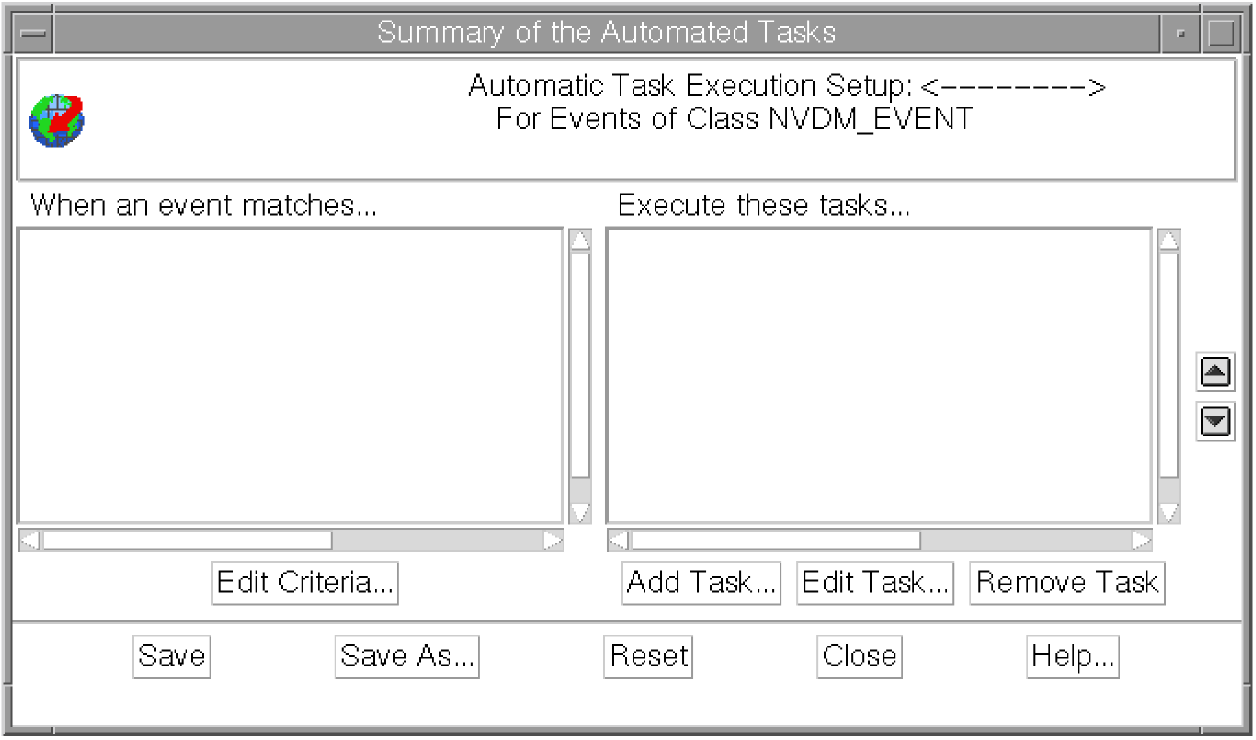
0 0 2 0 0 0

☑ FATAL ☑ CRITICAL ☑ MINOR ☑ WARNING ☑ HARMLESS ☑ UNKNOWN
☑ OPEN ☑ ACK ☑ CLOSED

	Class	Status	Hostname	Message
MINOR	NVDM_EVENT	OPEN	rs600020	FNDTC266E: Configuration o
MINOR	NVDM_EVENT	OPEN		tst

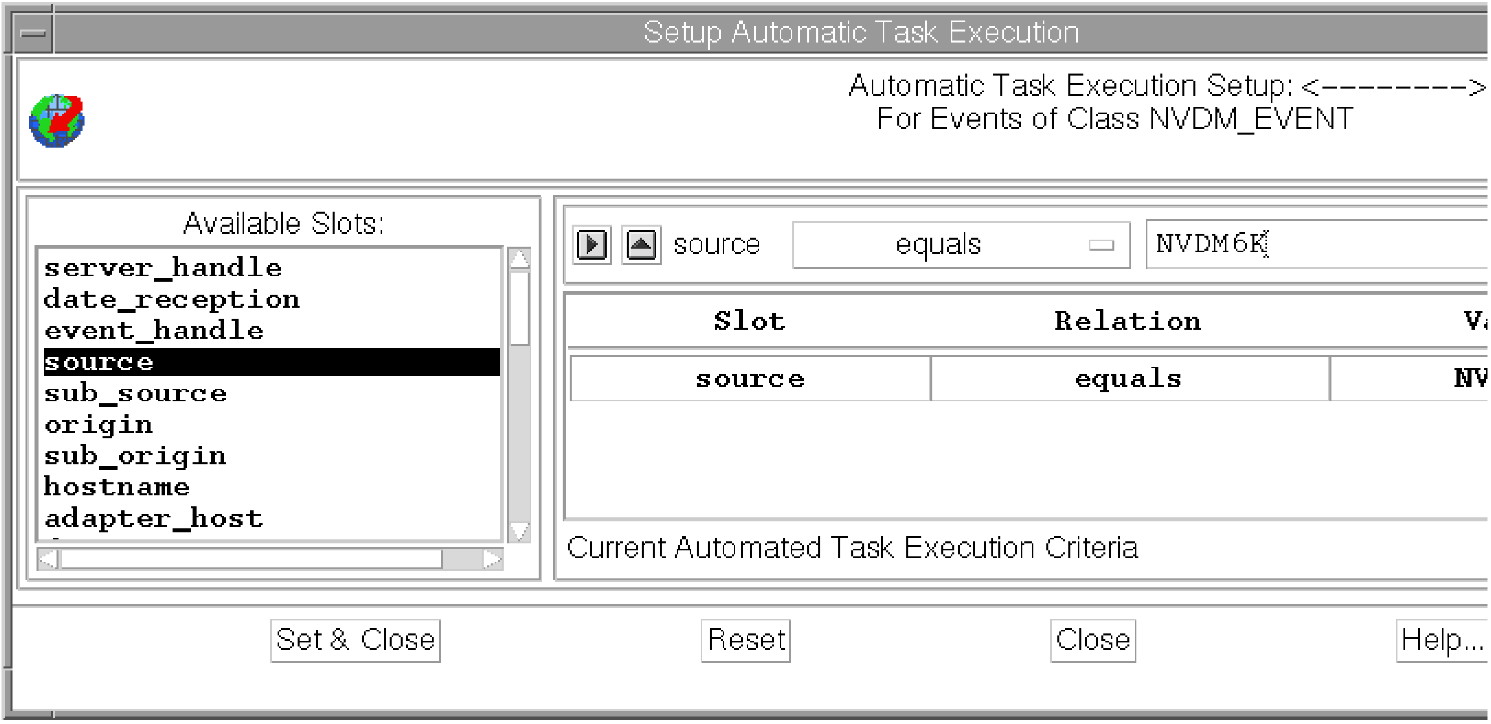


	Class	Status	Hostname	Message
MINOR	NVDM_EVENT	OPEN	rs600020	FNDTC266E: Configuration o
MINOR	NVDM_EVENT	OPEN		tst



Summary of the Automated Tasks

Automatic Task Execution Setup: <--------->
For Events of Class NVDM_EVENT



Setup Automatic Task Execution

Automatic Task Execution Setup: <--------->
For Events of Class NVDM_EVENT

Available Slots:

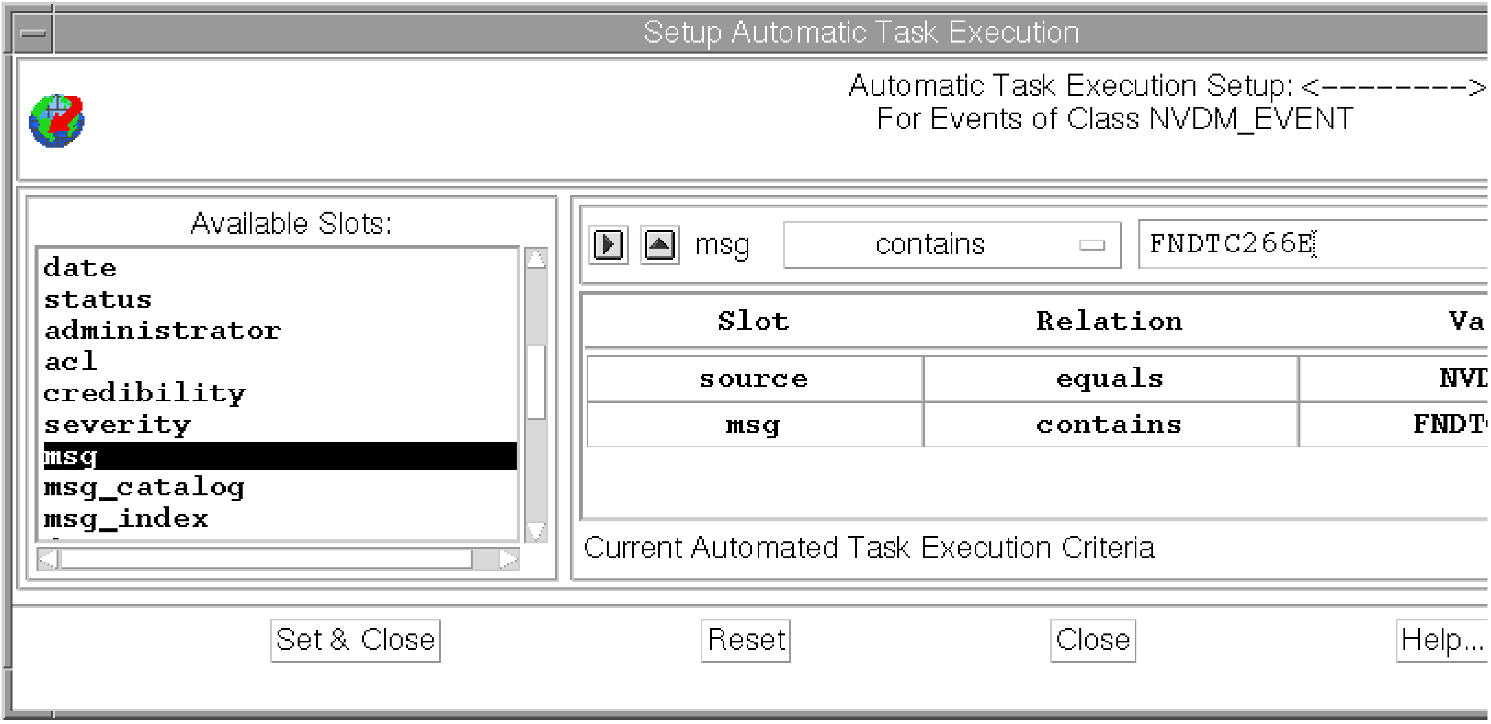
- server_handle
- date_reception
- event_handle
- source
- sub_source
- origin
- sub_origin
- hostname
- adapter_host

source equals NVDM6K

Slot	Relation	Va
source	equals	NV

Current Automated Task Execution Criteria

Figure 36



Setup Automatic Task Execution

Automatic Task Execution Setup: <--------->
For Events of Class NVDM_EVENT

Available Slots:

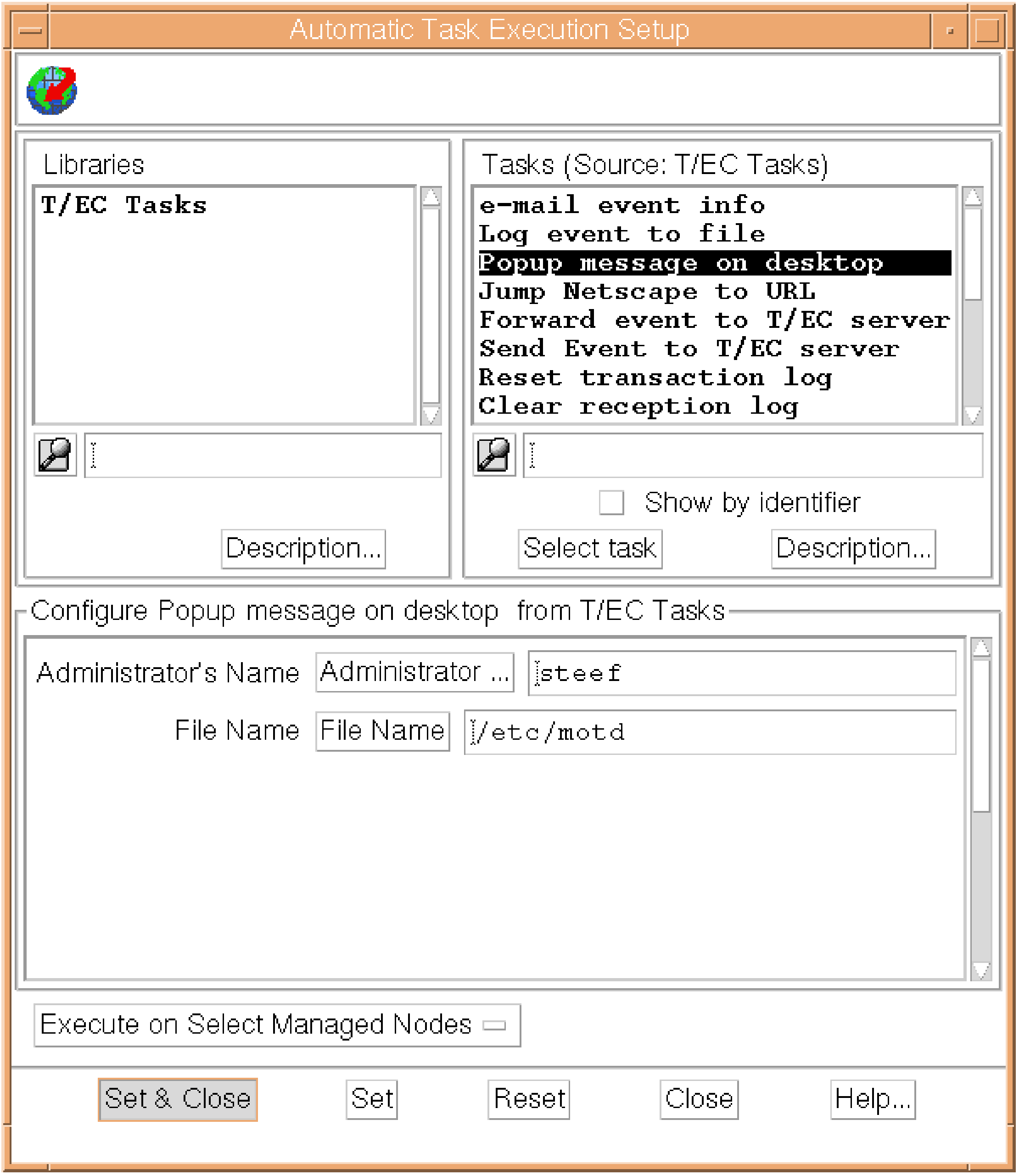
date
status
administrator
acl
credibility
severity
msg
msg_catalog
msg_index

msg | contains | FNDTC266E

Slot	Relation	Va
source	equals	NVI
msg	contains	FNDT

Current Automated Task Execution Criteria

Figure 37



Libraries: T/EC Tasks

Tasks (Source: T/EC Tasks)

- e-mail event info
- Log event to file
- Popup message on desktop
- Jump Netscape to URL
- Forward event to T/EC server
- Send Event to T/EC server
- Reset transaction log
- Clear reception log

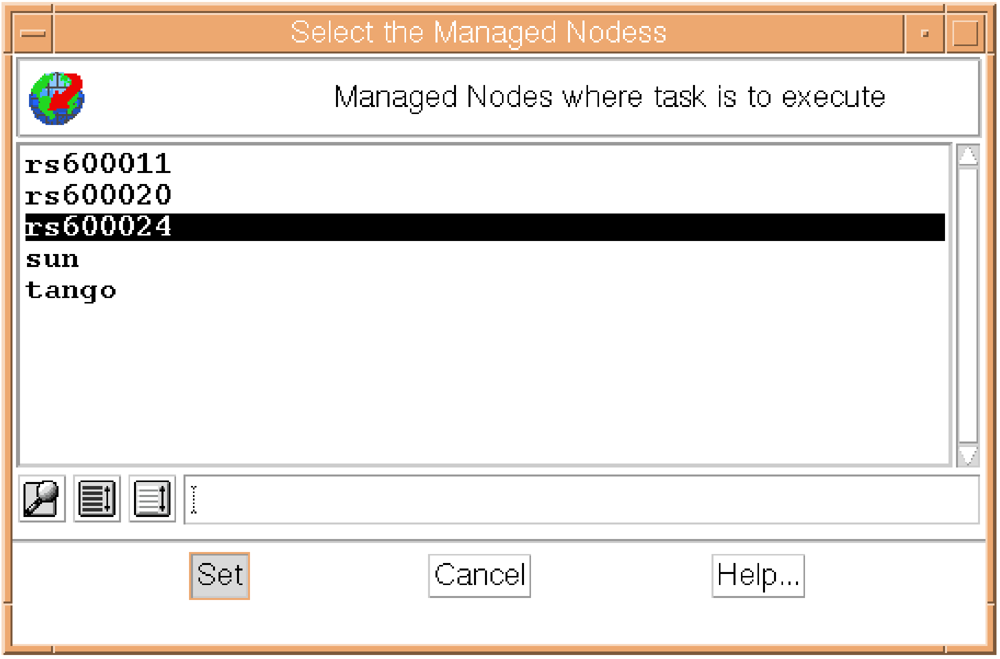
□ Show by identifier

Configure Popup message on desktop from T/EC Tasks

Administrator's Name | Administrator ... | steef

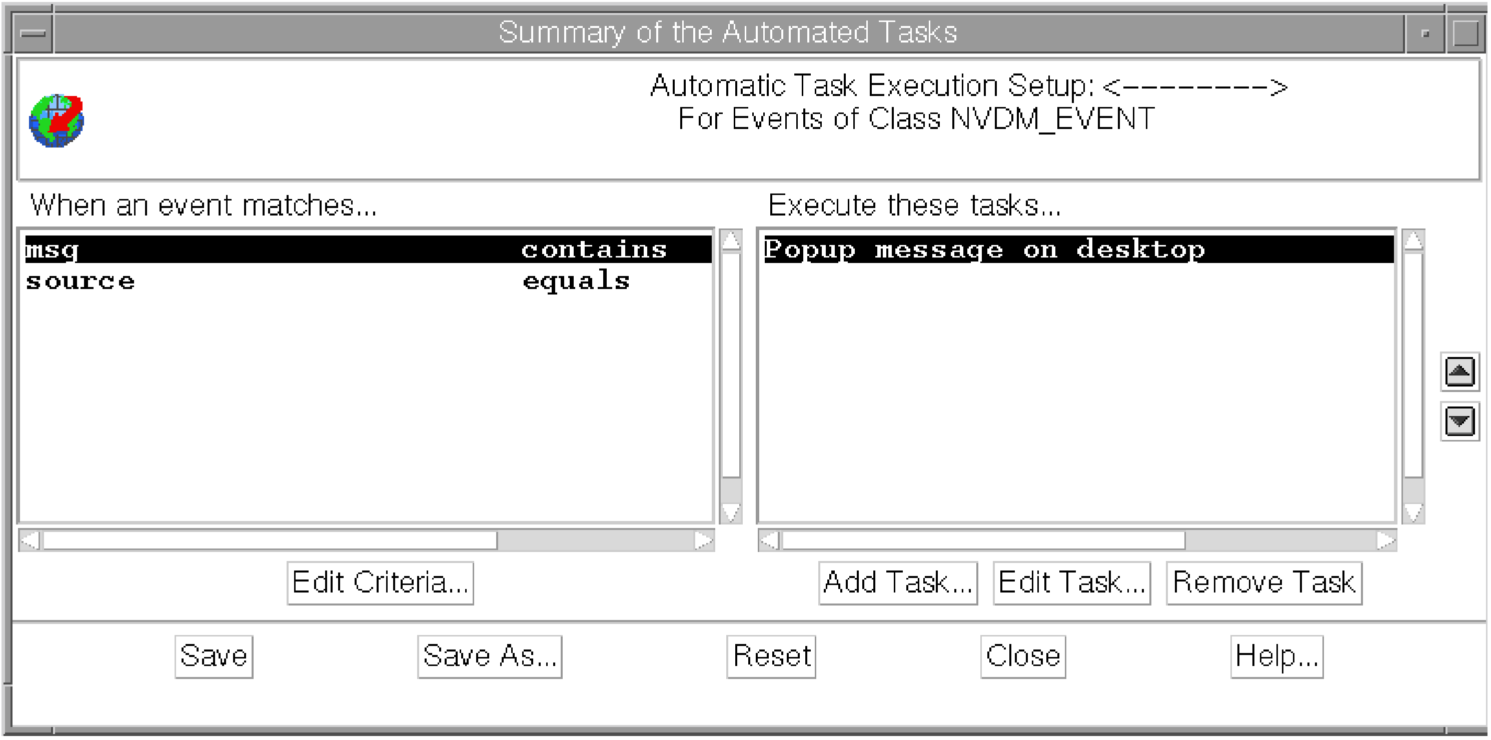
File Name | File Name | /etc/motd

Execute on Select Managed Nodes


Select the Managed Nodess
Managed Nodes where task is to execute
Set
Cancel
Help...

rs600011
rs600020
rs600024
sun
tango

Figure 39



Summary of the Automated Tasks

Automatic Task Execution Setup: <--------->
For Events of Class NVDM_EVENT

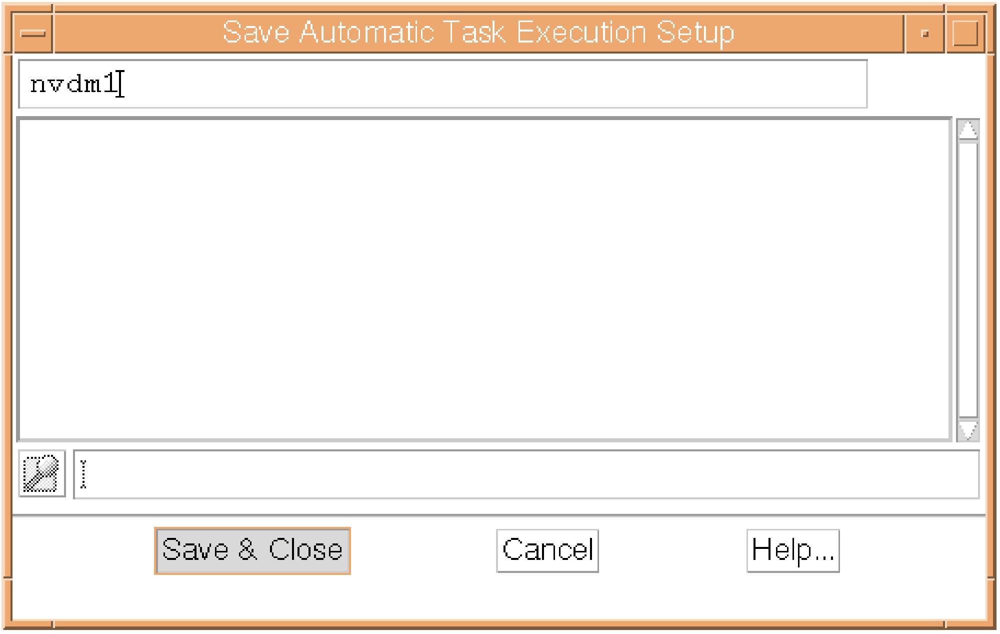
When an event matches...

```
msg                                contains
source                             equals
```

Execute these tasks...

```
Popup message on desktop
```

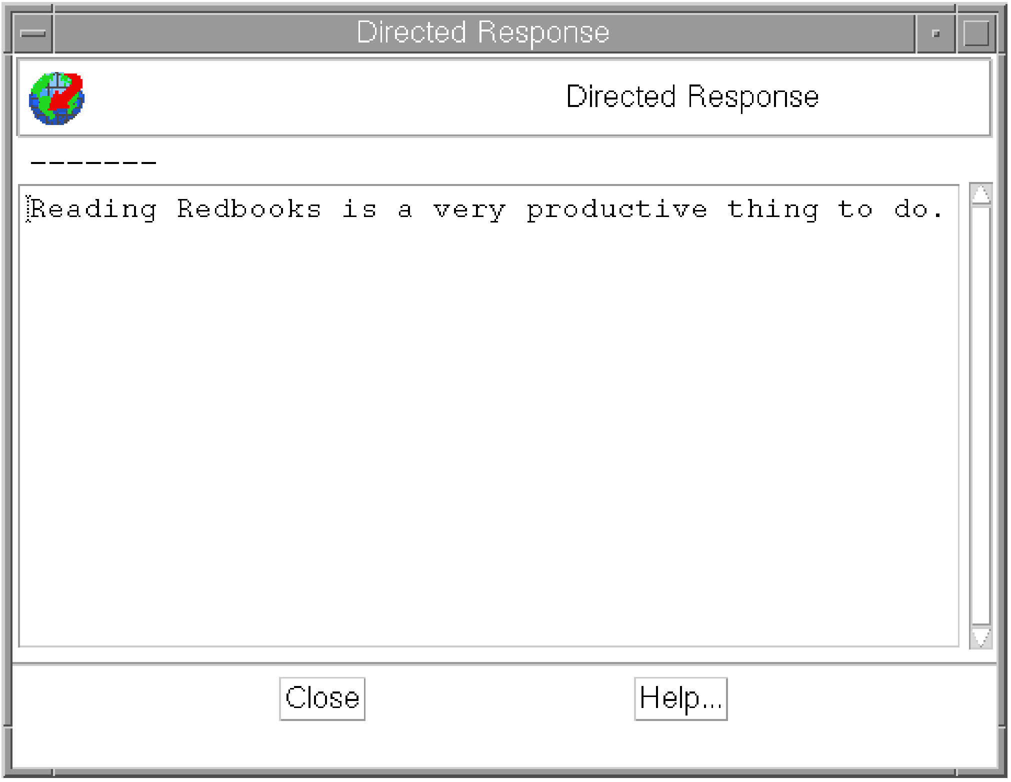
Figure 40



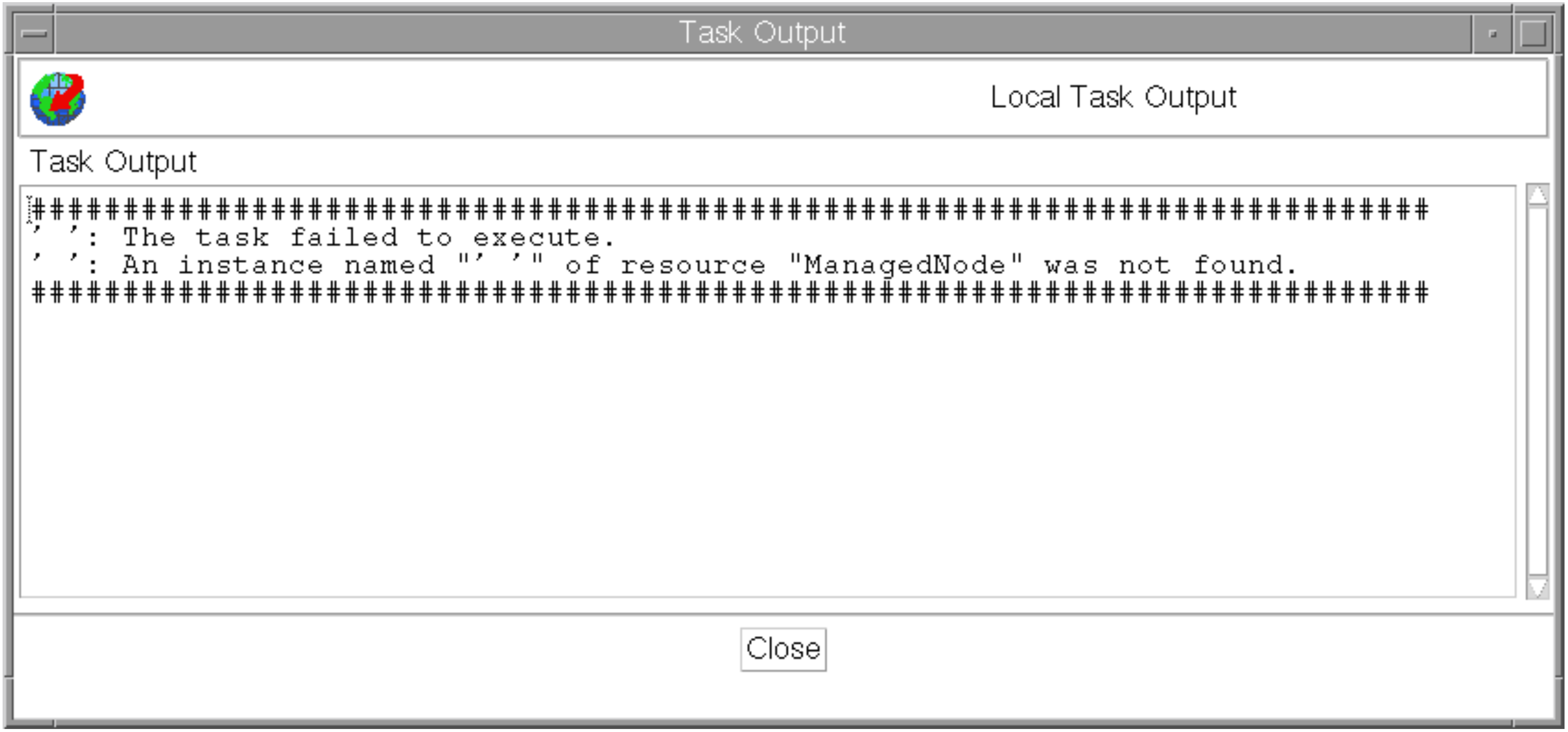
Save Automatic Task Execution Setup

nvdm1

Figure 41



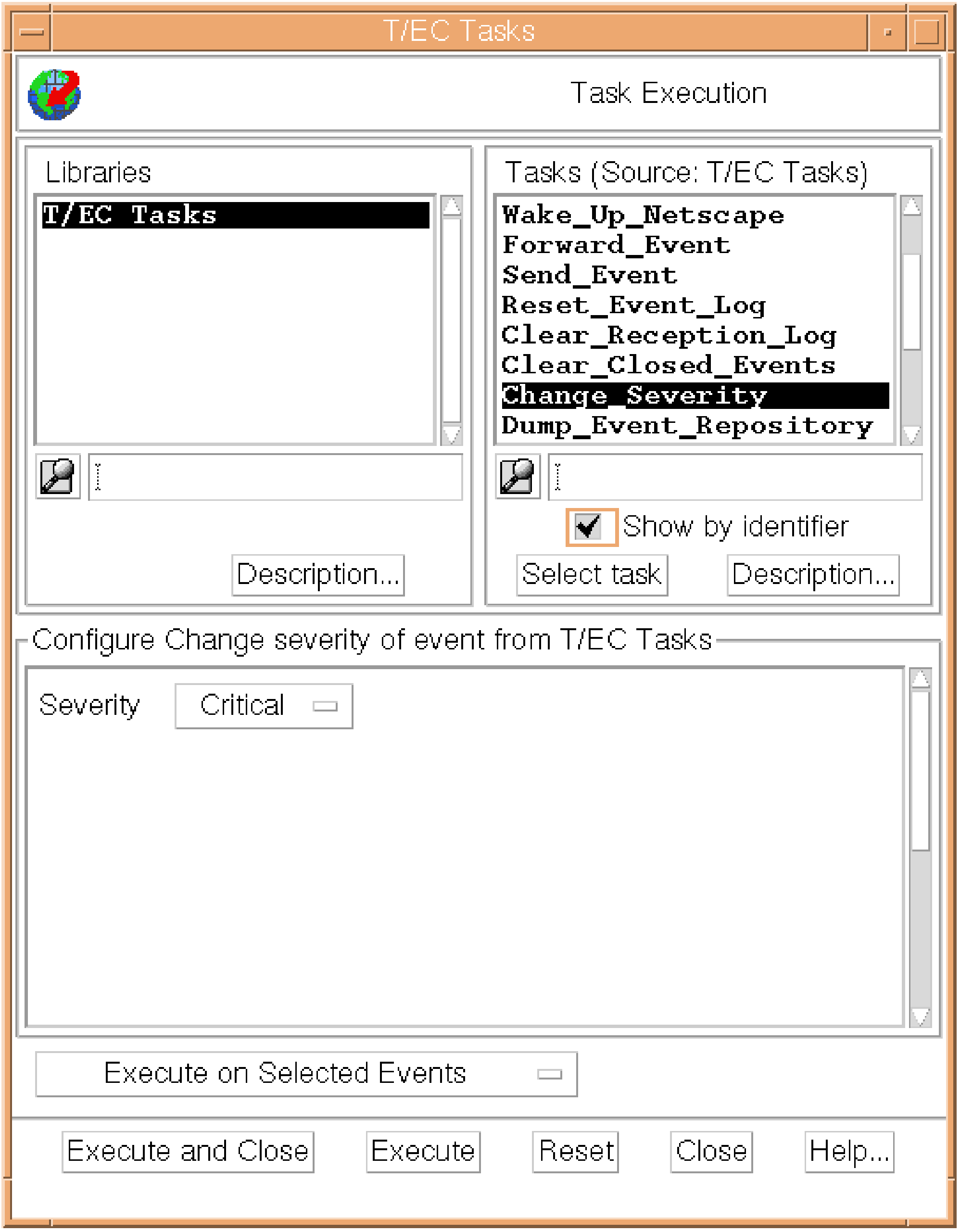
Reading Redbooks is a very productive thing to do.



```
############################################################################
' ': The task failed to execute.
' ': An instance named "' '" of resource "ManagedNode" was not found.
############################################################################
```

Figure 43

Figure 43



T/EC Tasks

Wake_Up_Netscape
Forward_Event
Send_Event
Reset_Event_Log
Clear_Reception_Log
Clear_Closed_Events
Change_Severity
Dump_Event_Repository

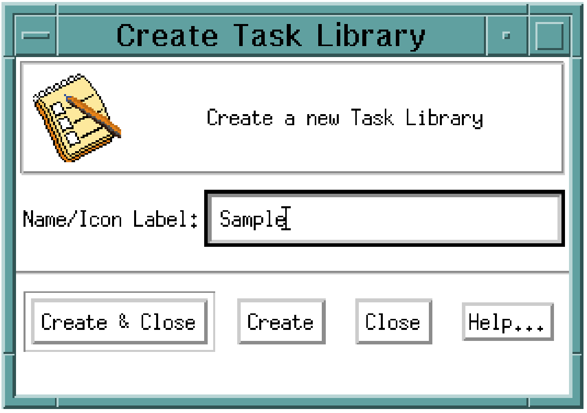
☑ Show by identifier

Configure Change severity of event from T/EC Tasks

Severity: Critical

Execute on Selected Events

Figure 44



Create a new Task Library

Name/Icon Label: Sample

Figure 45

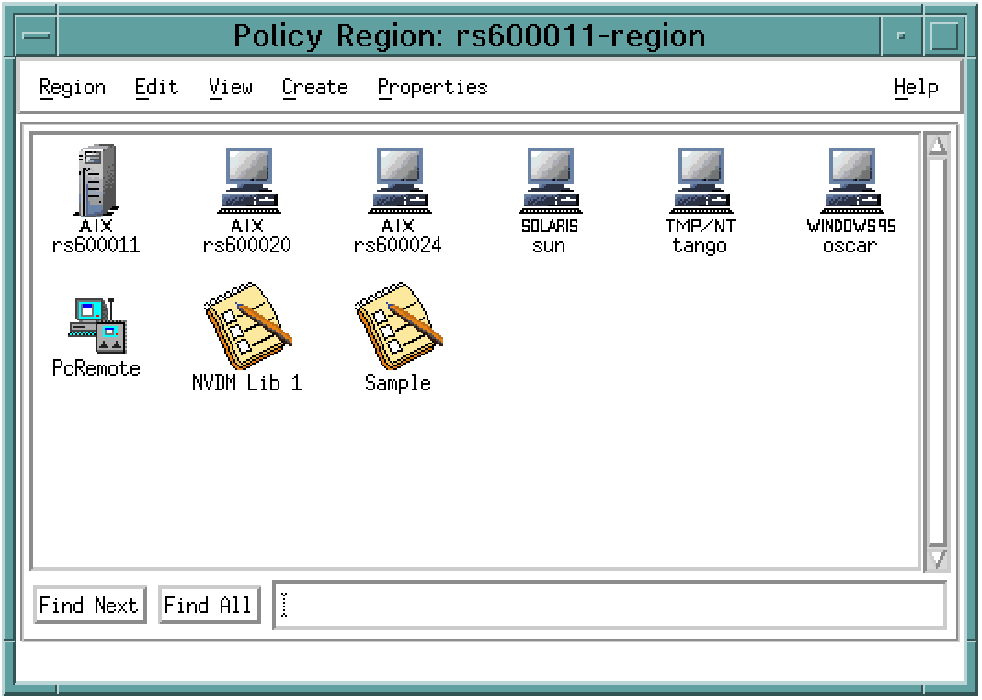

Policy Region: rs600011-region
Region
Edit
View
Create
Properties
Help
AIX
rs600011
AIX
rs600020
AIX
rs600024
SOLARIS
sun
TMP/NT
tango
WINDOWS95
oscar
PcRemote
NVDM Lib 1
Sample
Find Next
Find All

Figure 46

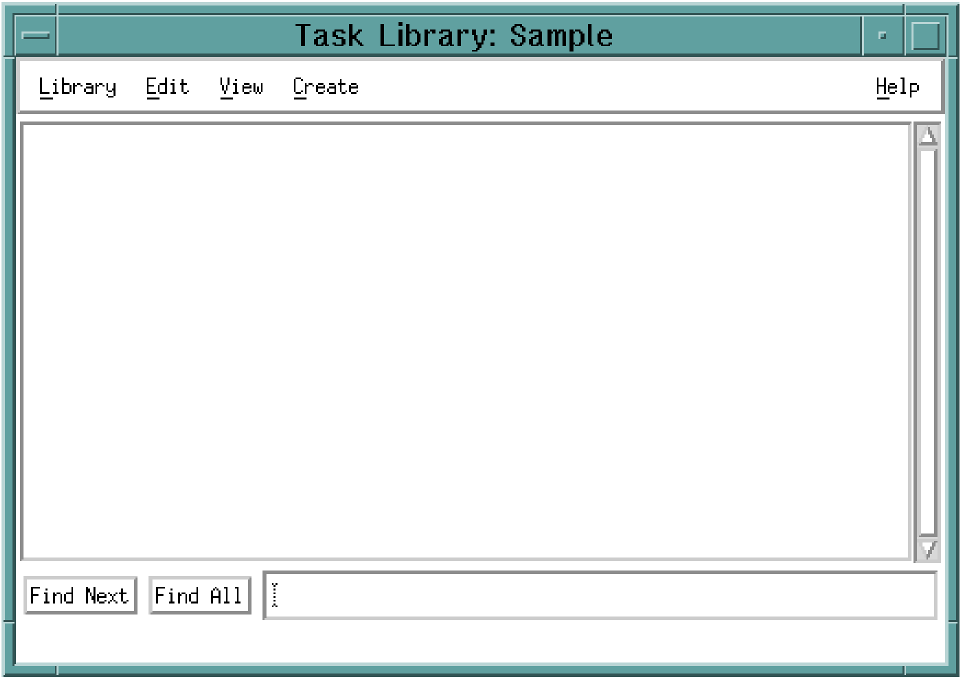
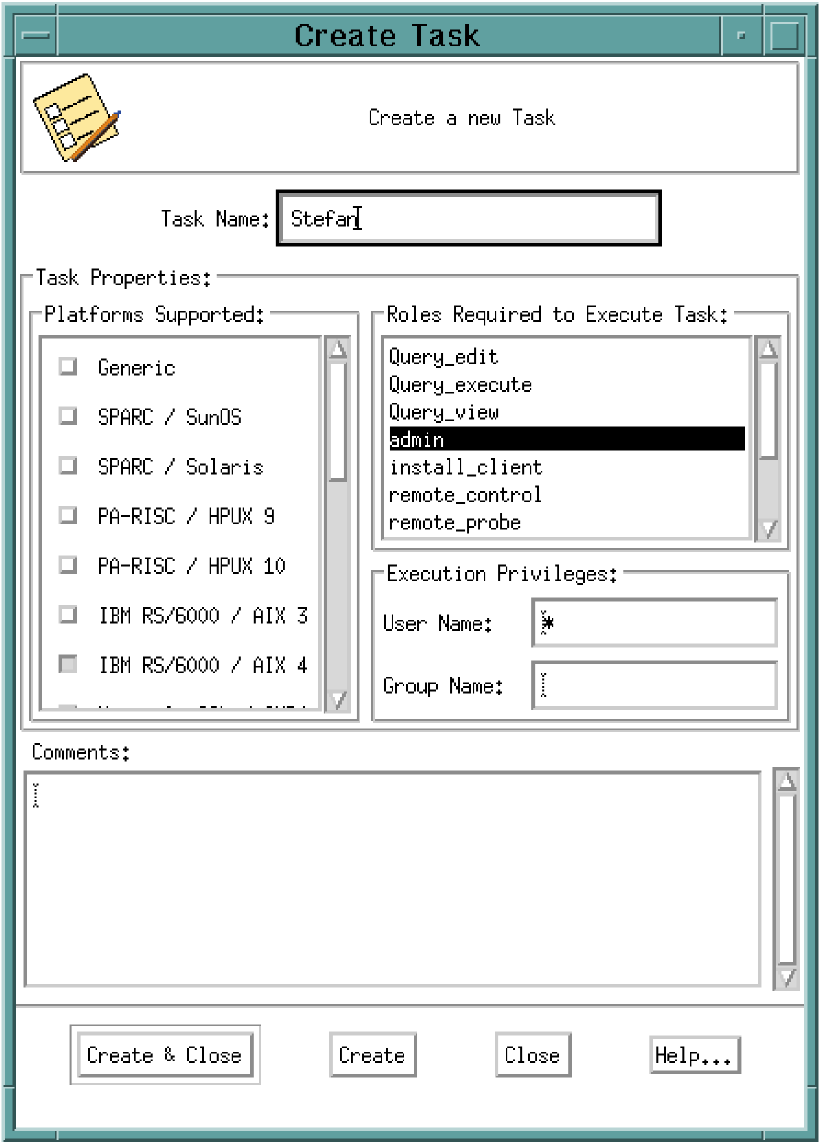

Task Library: Sample
Library
Edit
View
Create
Help
Find Next
Find All

Figure 47



Create a new Task

Task Name: Stefan

Task Properties:

Platforms Supported:

□ Generic
□ SPARC / SunOS
□ SPARC / Solaris
□ PA-RISC / HPUX 9
□ PA-RISC / HPUX 10
□ IBM RS/6000 / AIX 3
☑ IBM RS/6000 / AIX 4

Roles Required to Execute Task:

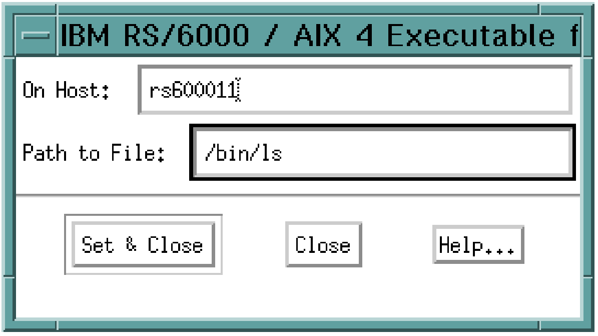
- Query_edit
- Query_execute
- Query_view
- admin
- install_client
- remote_control
- remote_probe

Execution Privileges:

User Name: *

Group Name:

Comments:

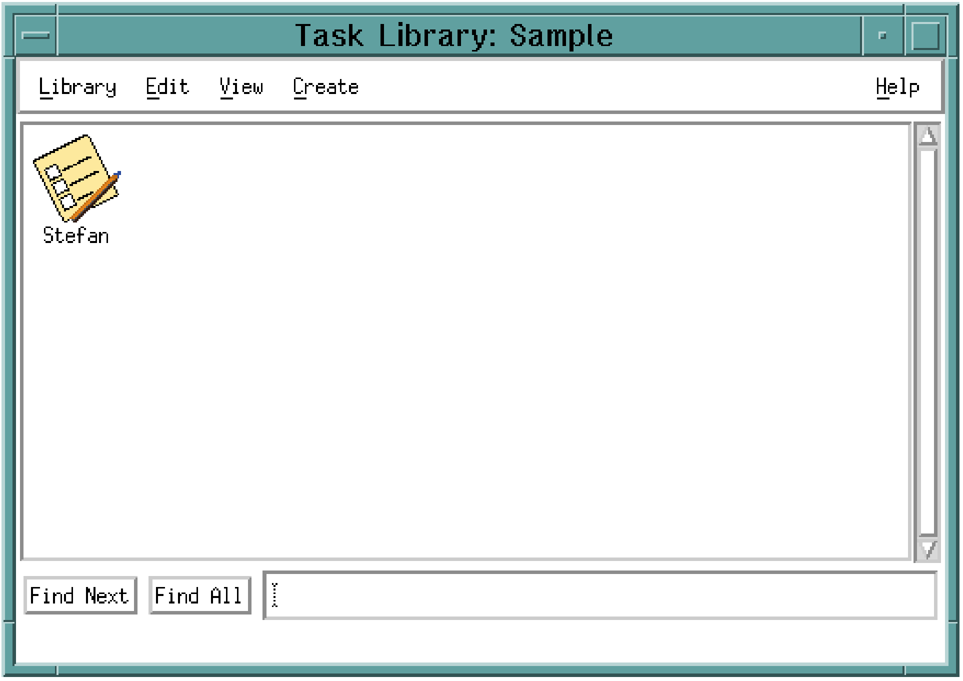


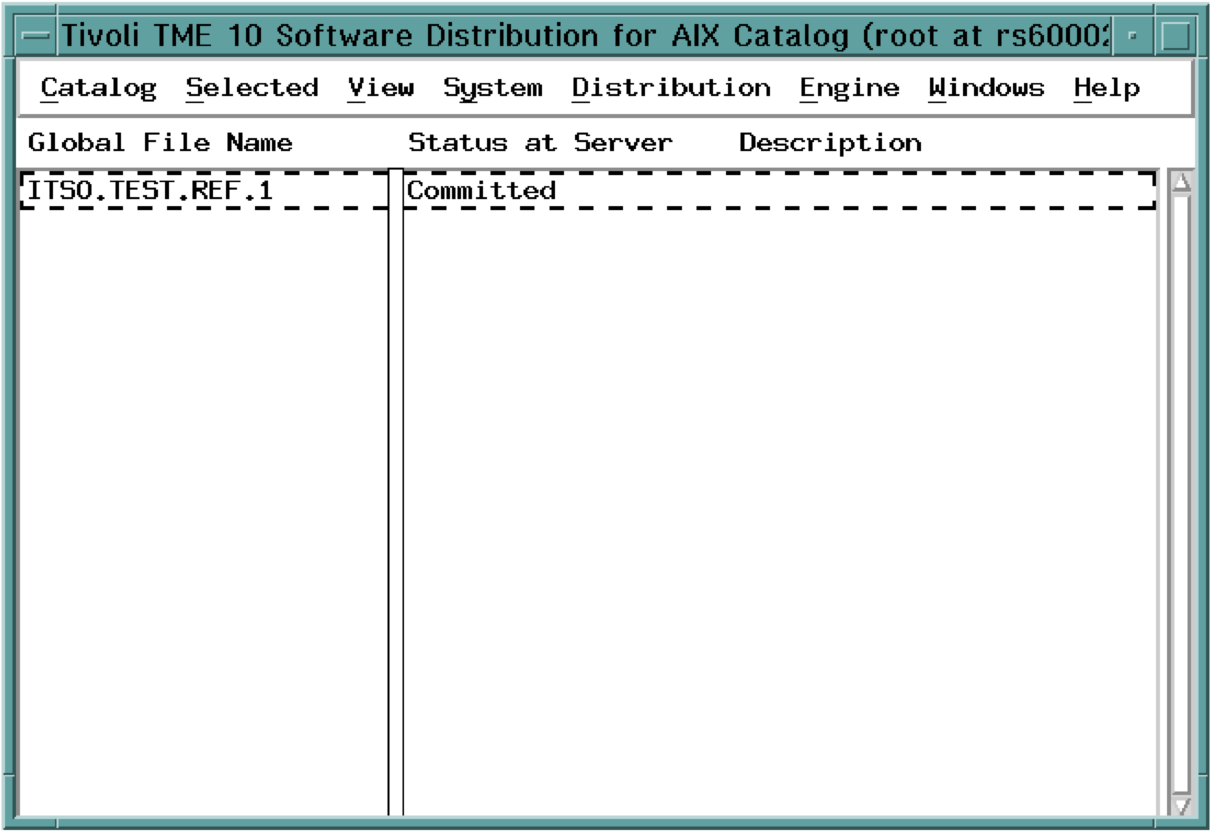
IBM RS/6000 / AIX 4 Executable f

On Host: rs600011

Path to File: /bin/ls

Figure 49


Task Library: Sample
Library
Edit
View
Create
Help
Stefan
Find Next
Find All


Tivoli TME 10 Software Distribution for AIX Catalog (root at rs6000
Catalog Selected View System Distribution Engine Windows Help

Global File Name	Status at Server	Description
ITSO.TEST.REF.1	Committed	

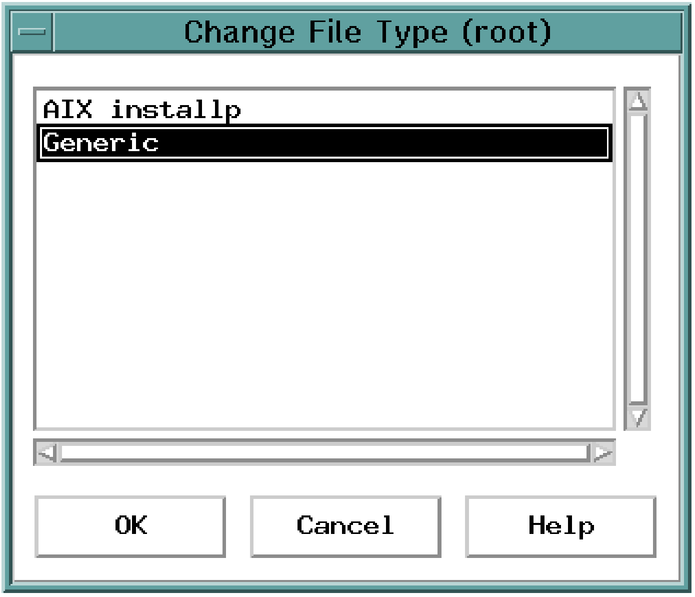
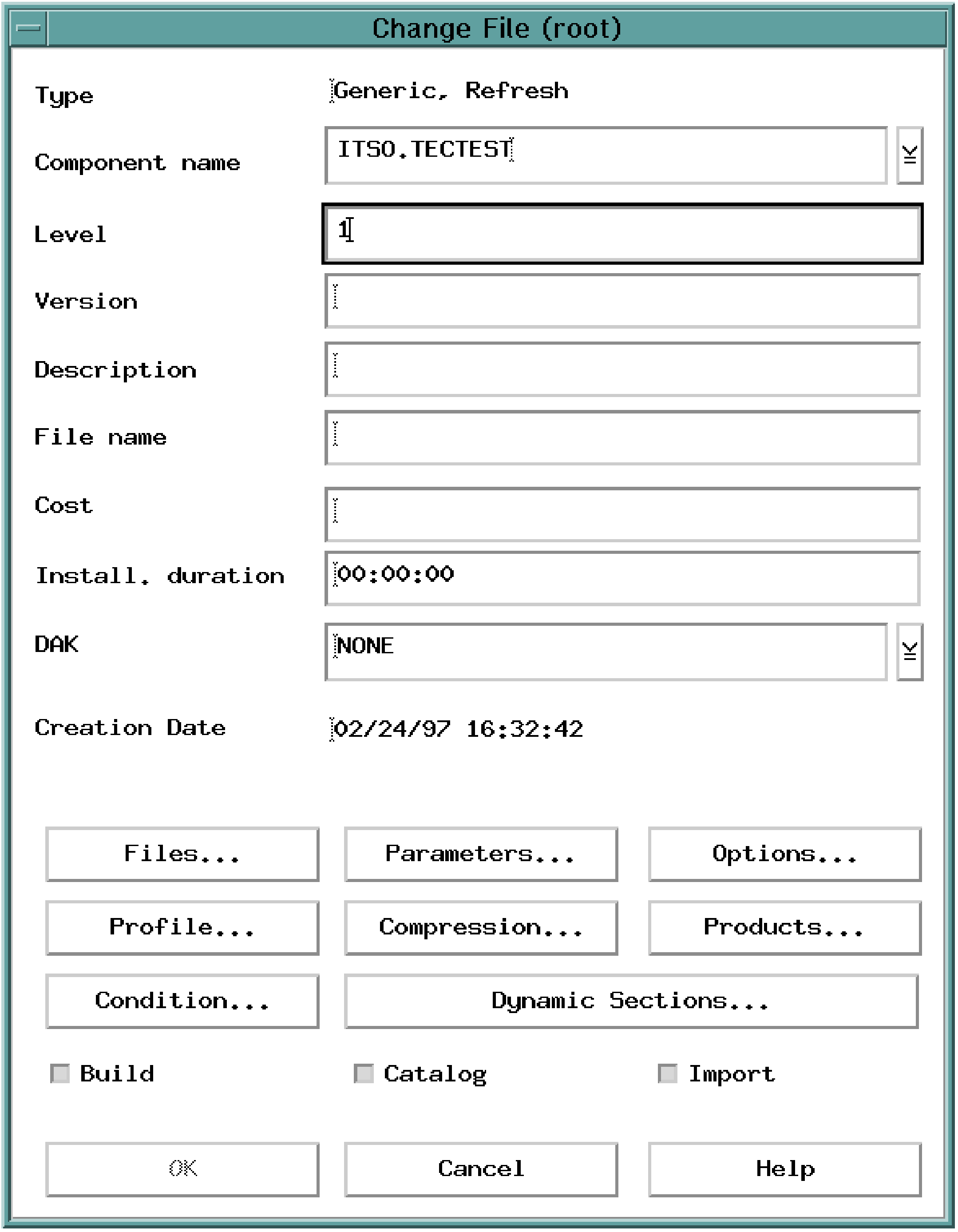


Figure 52



Change File (root)

Type Generic, Refresh

Component name ITSO.TECTEST

Level 1

Version

Description

File name

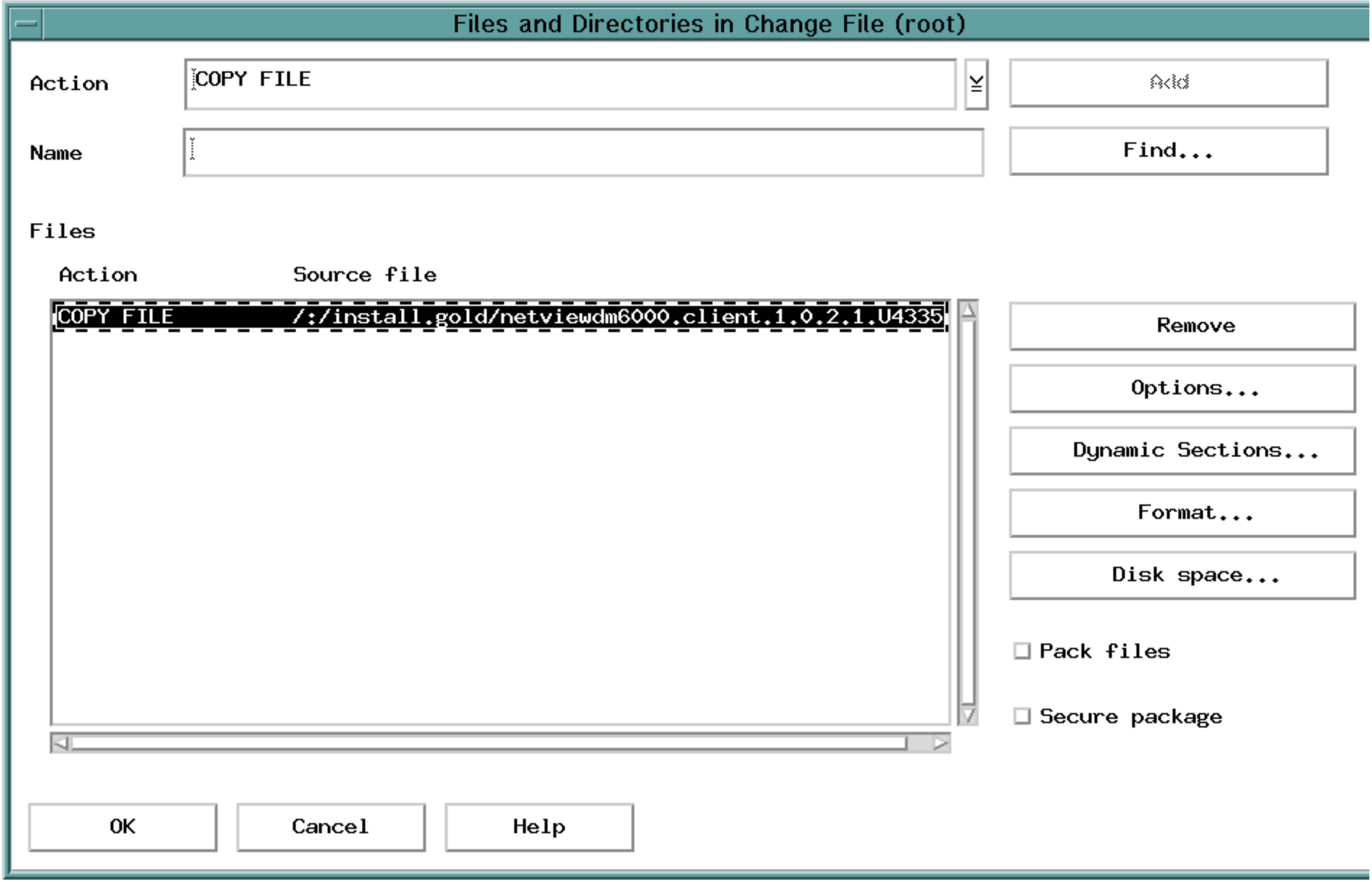
Cost

Install. duration 00:00:00

DAK NONE

Creation Date 02/24/97 16:32:42

□ Build □ Catalog □ Import



Action: COPY FILE

Name:

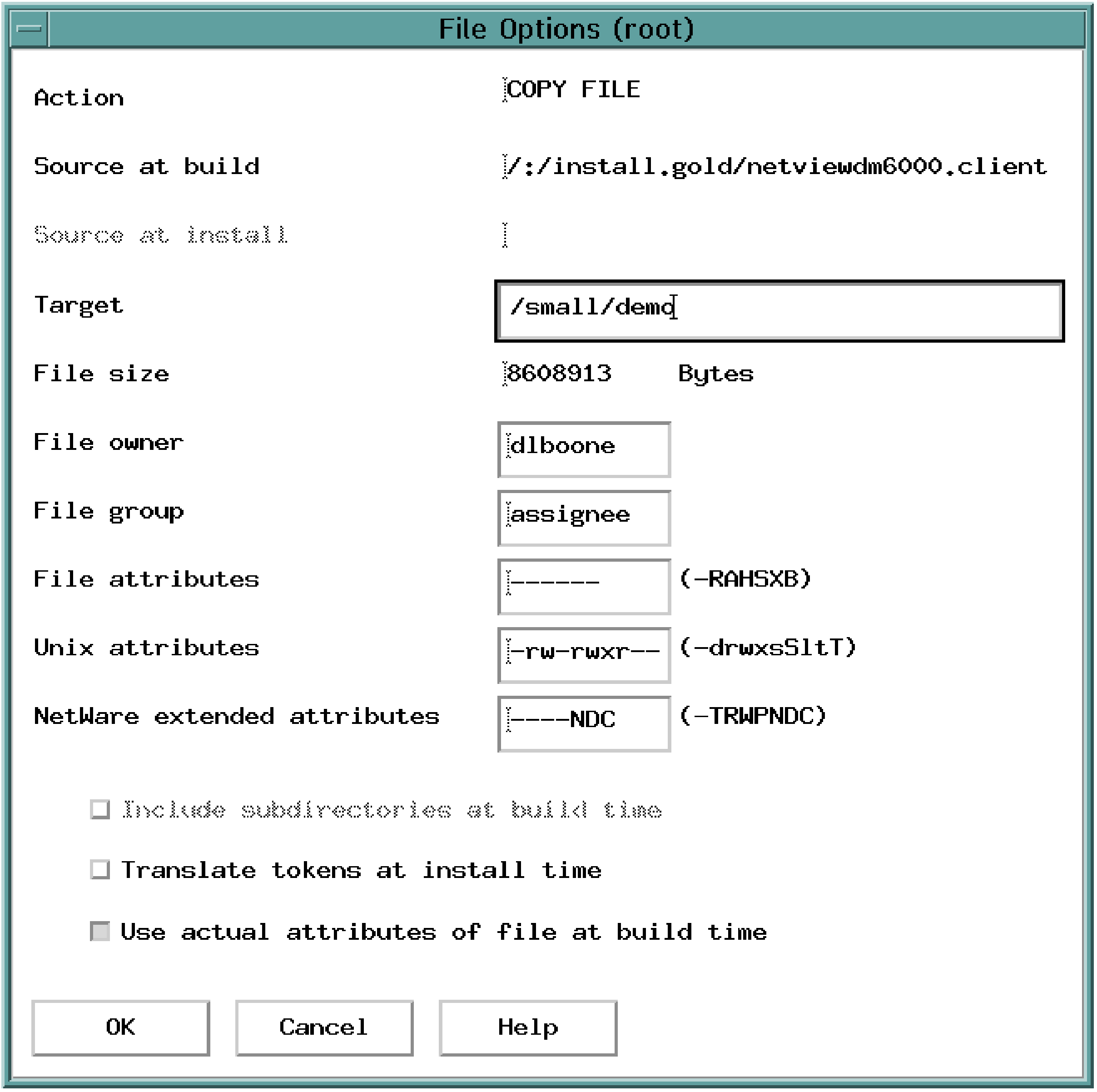
Files

Action	Source file
COPY FILE	/:/install.gold/netviewdm6000.client.1.0.2.1.U4335

□ Pack files

□ Secure package

Figure 54



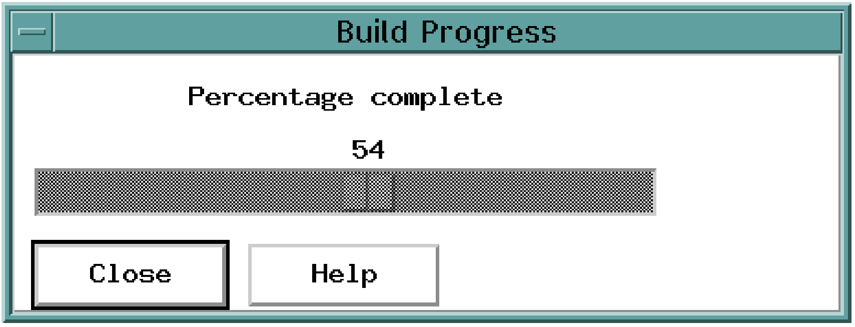
File Options (root)

Action	COPY FILE
Source at build	/:/install.gold/netviewdm6000.client
Source at install	
Target	/small/demo
File size	8608913 Bytes
File owner	dlboone
File group	assignee
File attributes	------- (-RAHSXB)
Unix attributes	-rw-rwxr-- (-drwxsSltT)
NetWare extended attributes	----NDC (-TRWPNDC)

□ Include subdirectories at build time

□ Translate tokens at install time

☑ Use actual attributes of file at build time

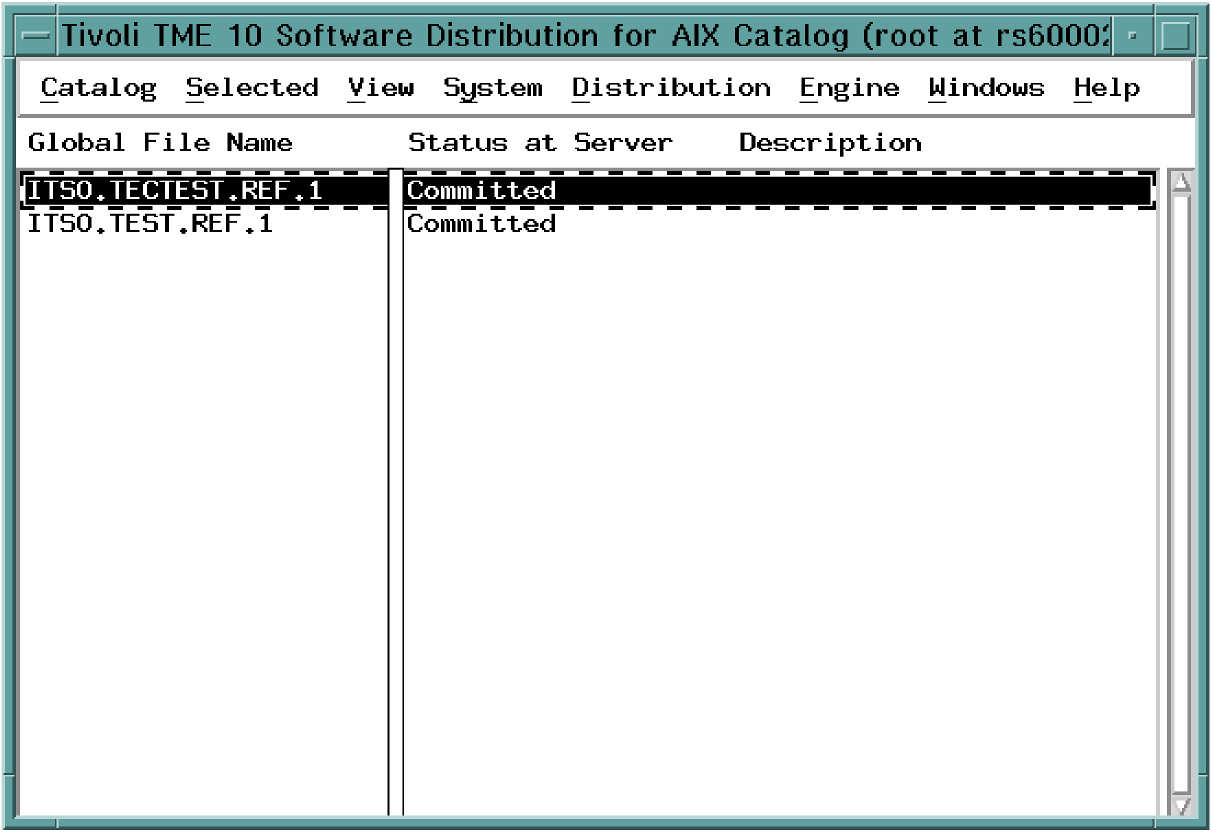


Build Progress

Percentage complete

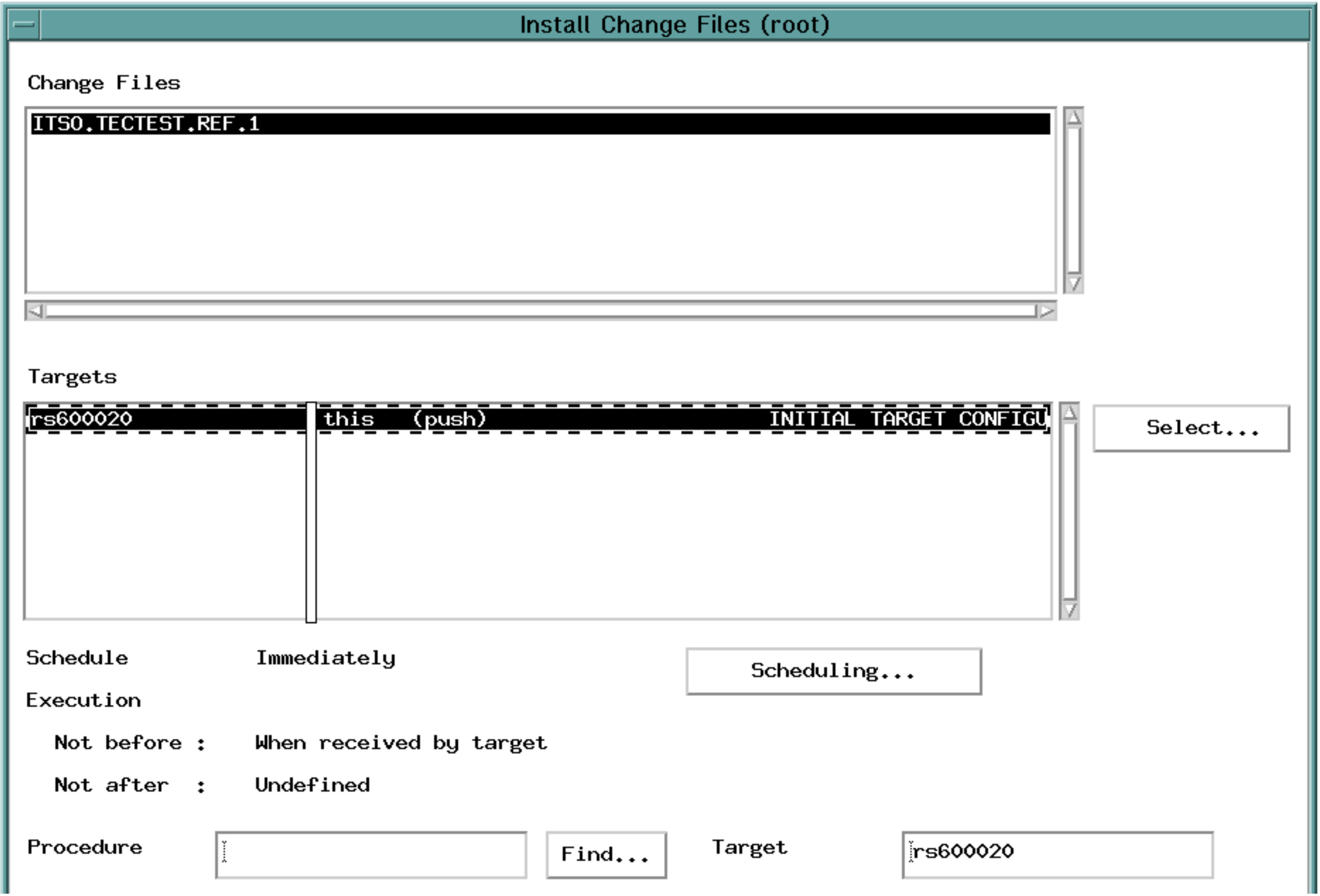
54

Figure 56



Tivoli TME 10 Software Distribution for AIX Catalog (root at rs6000
Catalog
Selected
View
System
Distribution
Engine
Windows
Help

```
Global File Name        Status at Server    Description
ITSO.TECTEST.REF.1      Committed
ITSO.TEST.REF.1         Committed
```



Install Change Files (root)

Change Files

ITSO.TECTEST.REF.1

Targets

rs600020	this (push)	INITIAL TARGET CONFIGU

Schedule Immediately

Execution

Not before : When received by target

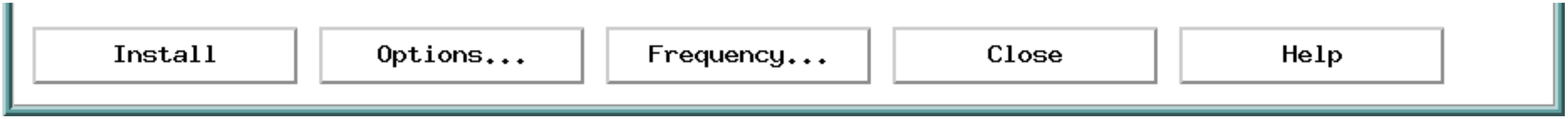
Not after : Undefined

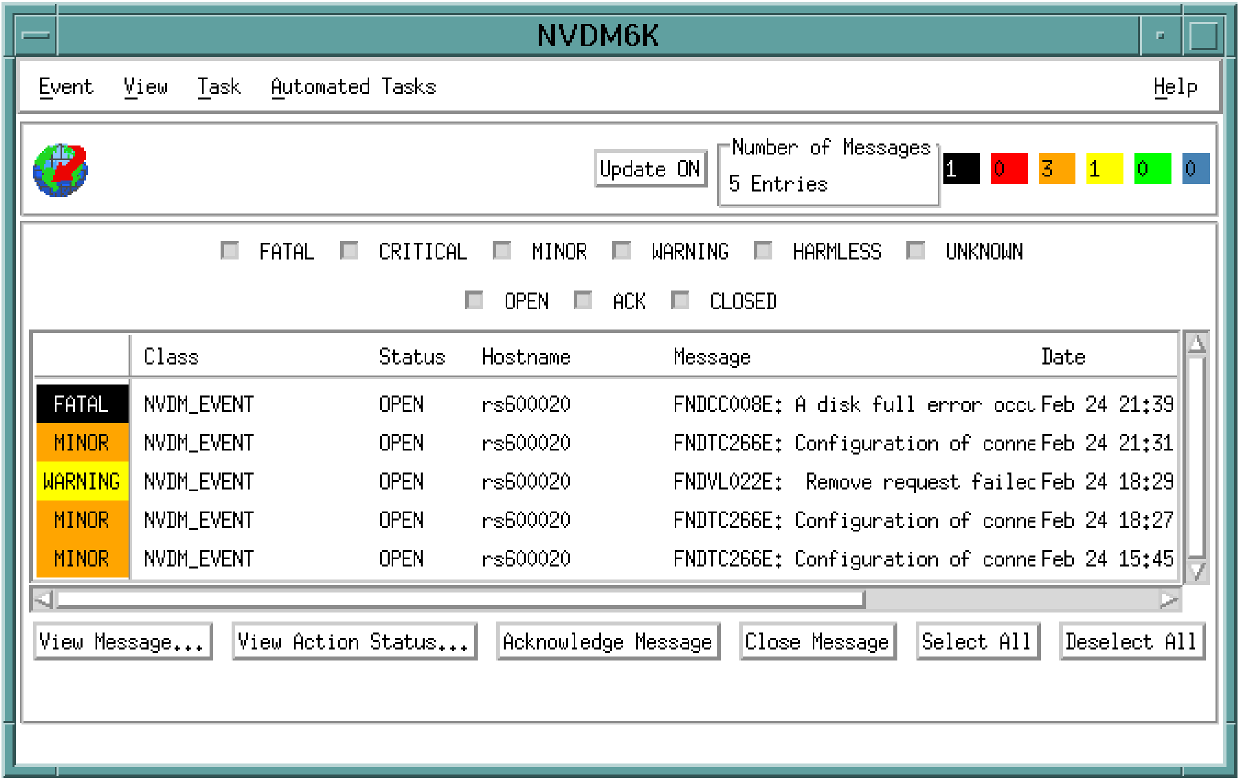
Procedure

Target rs600020

https://web.archive.org/web/19970803064056/http://www.redbooks.ibm.com:80/SG244976/tecaut07.gif

Figure 58


Install
Options...
Frequency...
Close
Help

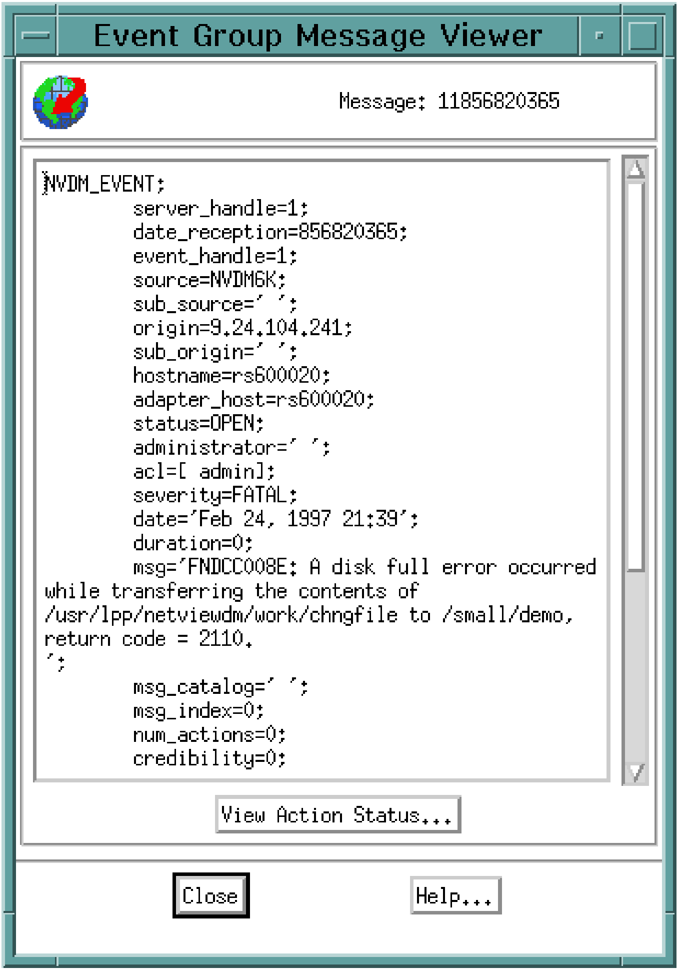


Number of Messages
5 Entries

1	0	3	1	0	0

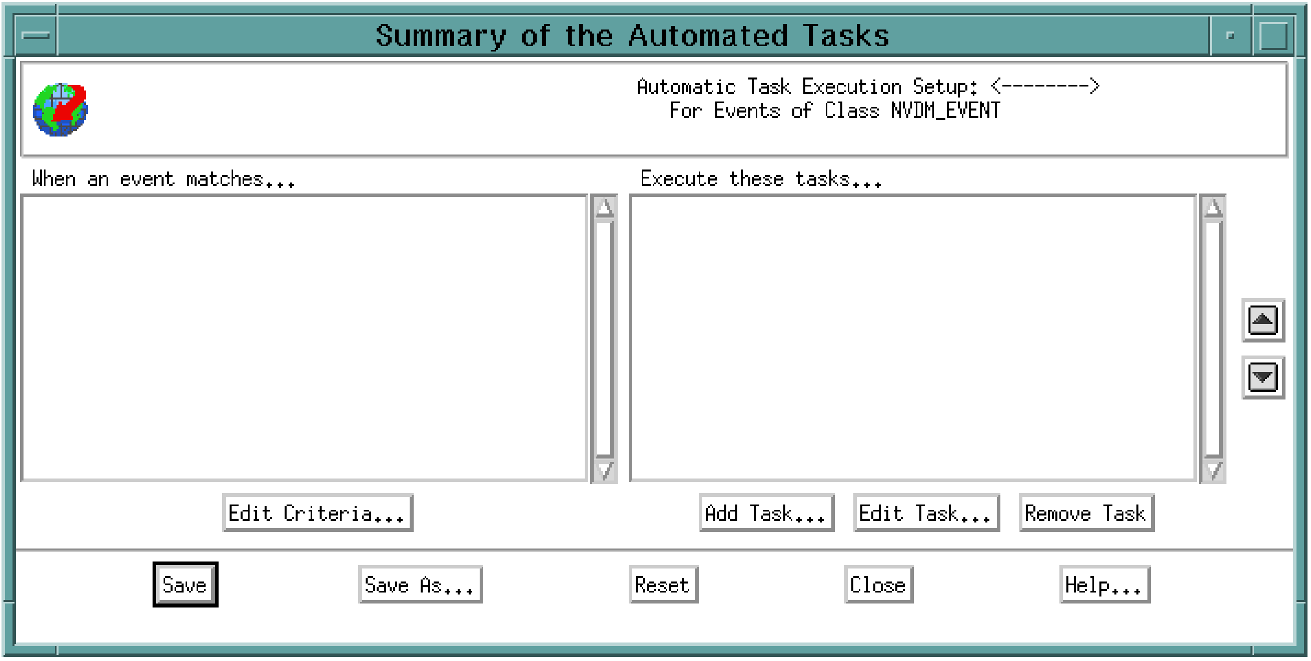
	Class	Status	Hostname	Message	Date
FATAL	NVDM_EVENT	OPEN	rs600020	FNDCC008E: A disk full error occu	Feb 24 21:39
MINOR	NVDM_EVENT	OPEN	rs600020	FNDTC266E: Configuration of conne	Feb 24 21:31
WARNING	NVDM_EVENT	OPEN	rs600020	FNDVL022E: Remove request failec	Feb 24 18:29
MINOR	NVDM_EVENT	OPEN	rs600020	FNDTC266E: Configuration of conne	Feb 24 18:27
MINOR	NVDM_EVENT	OPEN	rs600020	FNDTC266E: Configuration of conne	Feb 24 15:45

Figure 59



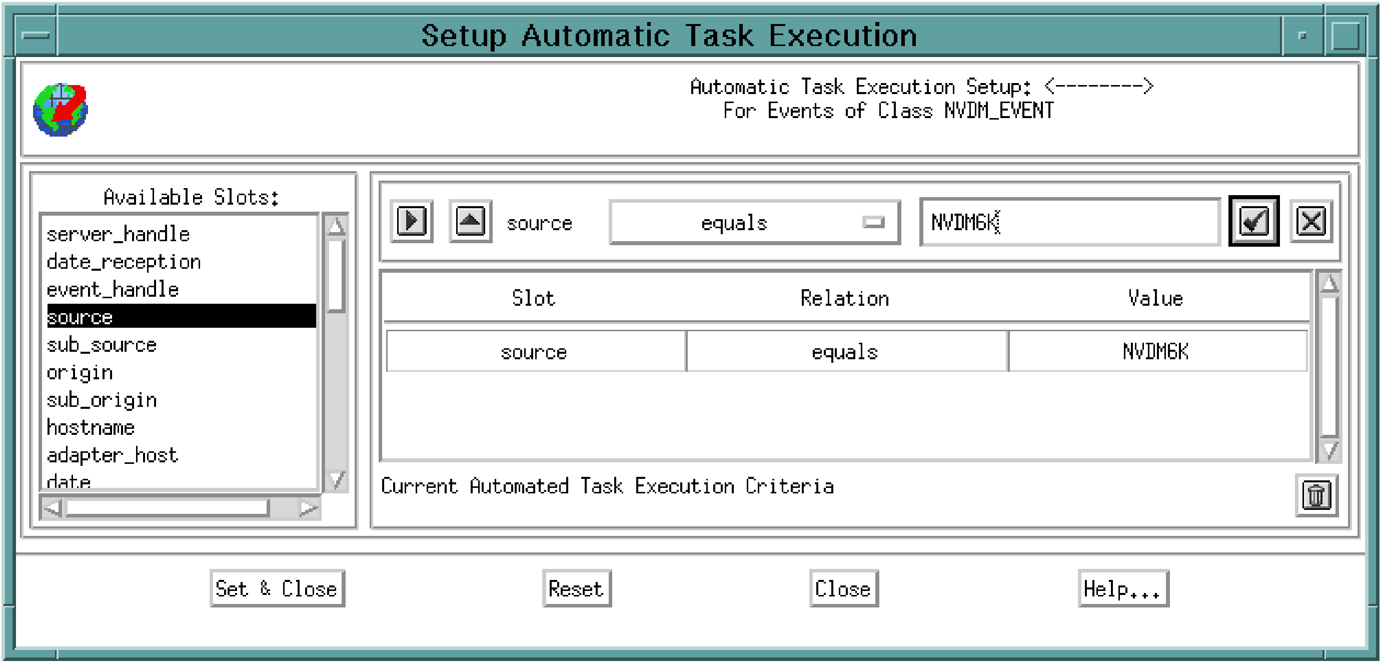
Message: 11856820365

```
NVDM_EVENT;
        server_handle=1;
        date_reception=856820365;
        event_handle=1;
        source=NVDM6K;
        sub_source=' ';
        origin=9.24.104.241;
        sub_origin=' ';
        hostname=rs600020;
        adapter_host=rs600020;
        status=OPEN;
        administrator=' ';
        acl=[ admin];
        severity=FATAL;
        date='Feb 24, 1997 21:39';
        duration=0;
        msg='FNDCC008E: A disk full error occurred
while transferring the contents of
/usr/lpp/netviewdm/work/chngfile to /small/demo,
return code = 2110.
';
        msg_catalog=' ';
        msg_index=0;
        num_actions=0;
        credibility=0;
```



Summary of the Automated Tasks

Automatic Task Execution Setup: <-------->
For Events of Class NVDM_EVENT



Automatic Task Execution Setup: <-------->
For Events of Class NVDM_EVENT

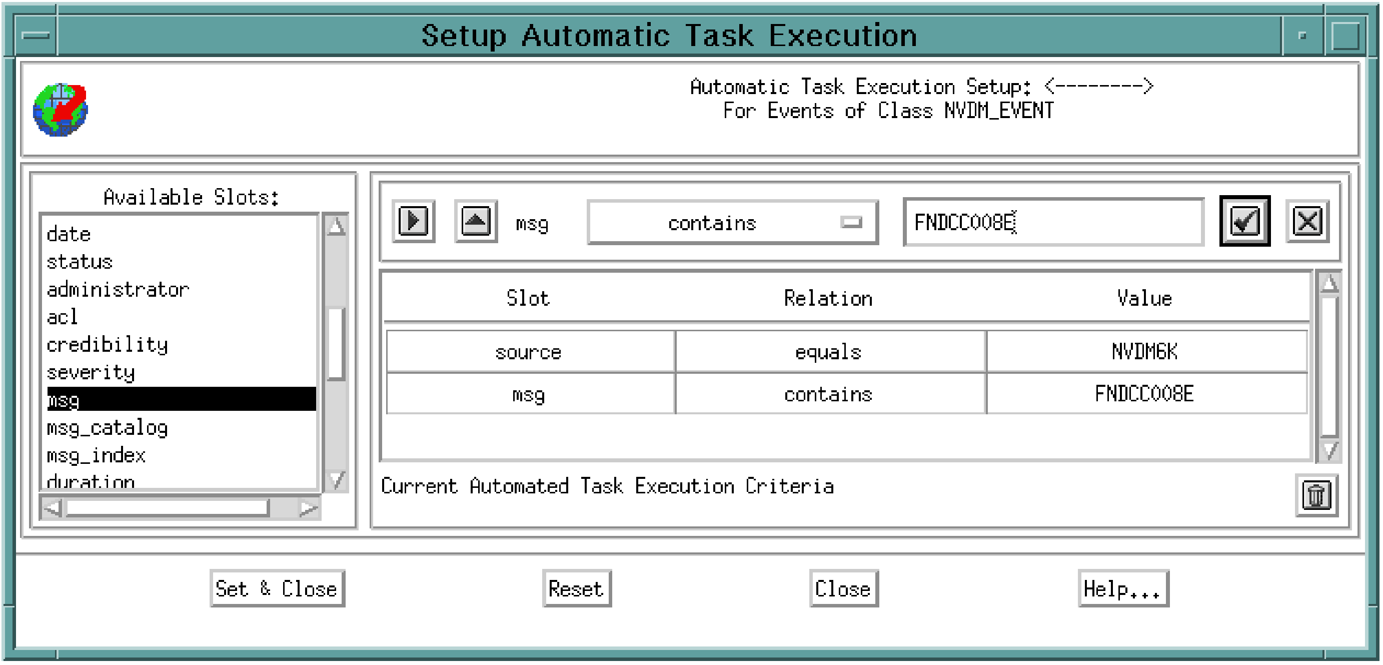
Available Slots:

- server_handle
- date_reception
- event_handle
- source
- sub_source
- origin
- sub_origin
- hostname
- adapter_host
- date

source equals NVDM6K

Slot	Relation	Value
source	equals	NVDM6K

Current Automated Task Execution Criteria



Setup Automatic Task Execution

Automatic Task Execution Setup: <-------->
For Events of Class NVDM_EVENT

Available Slots:

- date
- status
- administrator
- acl
- credibility
- severity
- msg
- msg_catalog
- msg_index
- duration

msg contains FNDCC008E

Slot	Relation	Value
source	equals	NVDM6K
msg	contains	FNDCC008E

Current Automated Task Execution Criteria

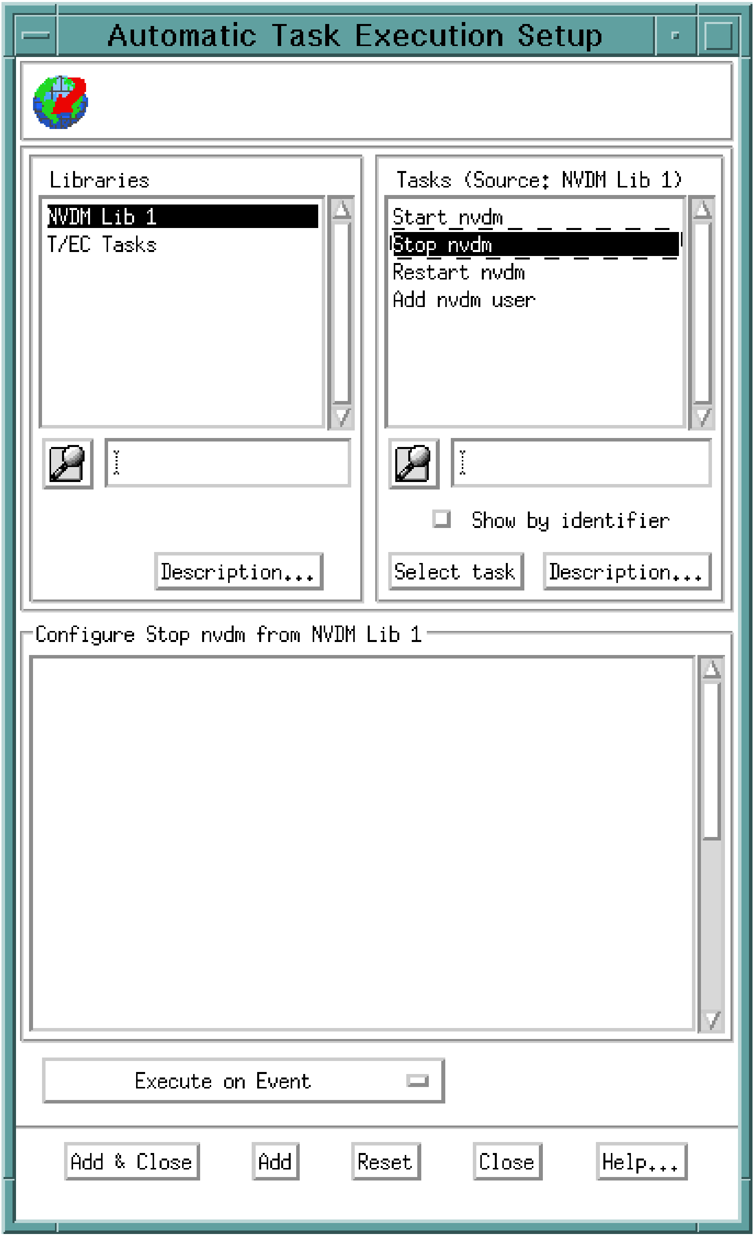
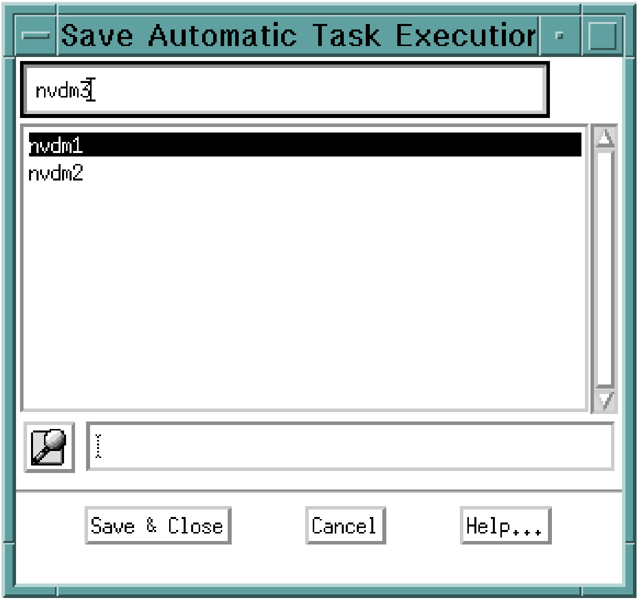

Automatic Task Execution Setup
Libraries
NVDM Lib 1
T/EC Tasks
Description...
Tasks (Source: NVDM Lib 1)
Start nvdm
Stop nvdm
Restart nvdm
Add nvdm user
□ Show by identifier
Select task
Description...
Configure Stop nvdm from NVDM Lib 1
Execute on Event
Add & Close
Add
Reset
Close
Help...

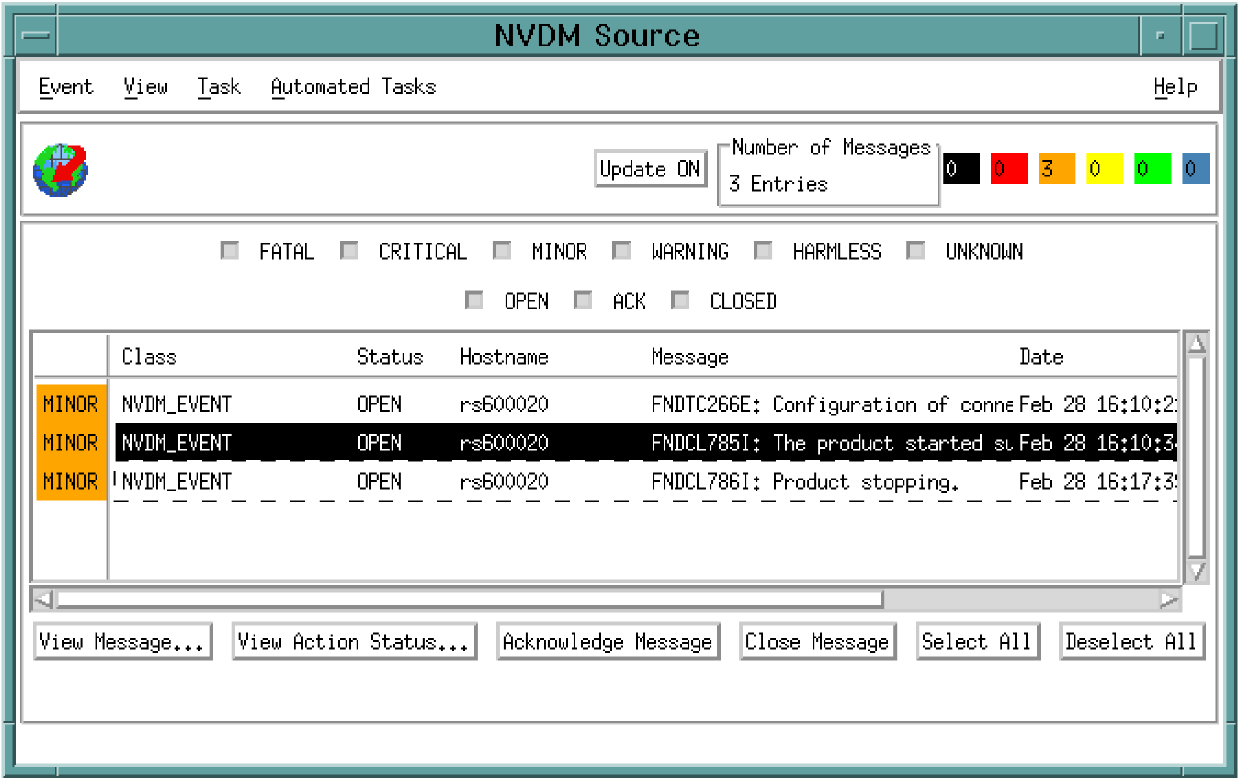
Figure 64



nvdm3

nvdm1
nvdm2

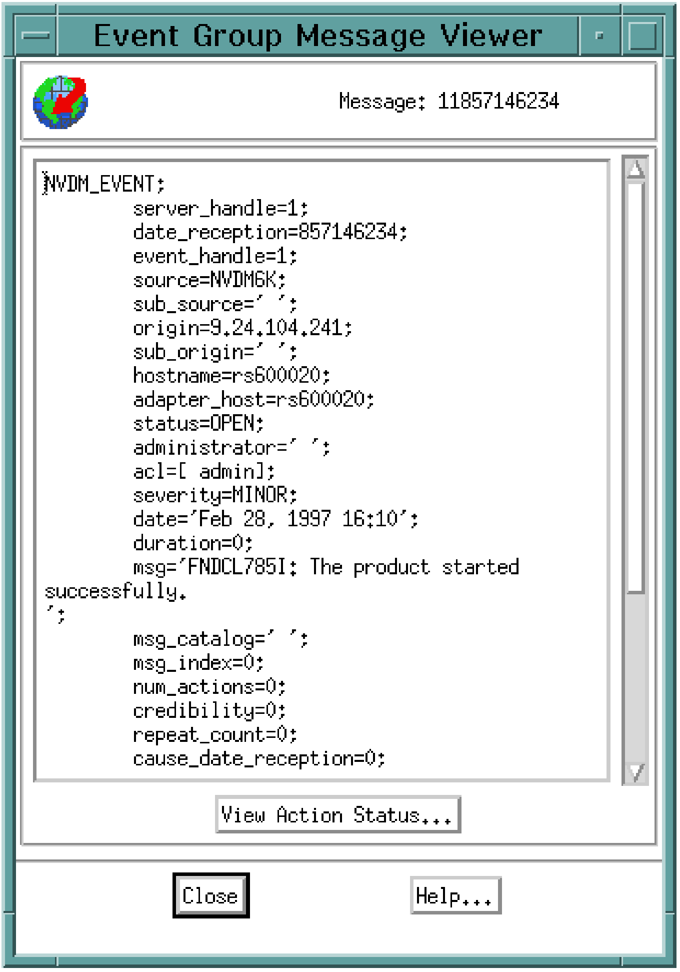
Figure 65



Number of Messages
3 Entries

0 0 3 0 0 0

	Class	Status	Hostname	Message	Date
MINOR	NVDM_EVENT	OPEN	rs600020	FNDTC266E: Configuration of conne	Feb 28 16:10:2
MINOR	NVDM_EVENT	OPEN	rs600020	FNDCL785I: The product started su	Feb 28 16:10:3
MINOR	NVDM_EVENT	OPEN	rs600020	FNDCL786I: Product stopping.	Feb 28 16:17:3



Message: 11857146234

```
NVDM_EVENT;
        server_handle=1;
        date_reception=857146234;
        event_handle=1;
        source=NVDM6K;
        sub_source=' ';
        origin=9.24.104.241;
        sub_origin=' ';
        hostname=rs600020;
        adapter_host=rs600020;
        status=OPEN;
        administrator=' ';
        acl=[ admin];
        severity=MINOR;
        date='Feb 28, 1997 16:10';
        duration=0;
        msg='FNDCL785I: The product started
successfully.
';
        msg_catalog=' ';
        msg_index=0;
        num_actions=0;
        credibility=0;
        repeat_count=0;
        cause_date_reception=0;
```

Figure 67

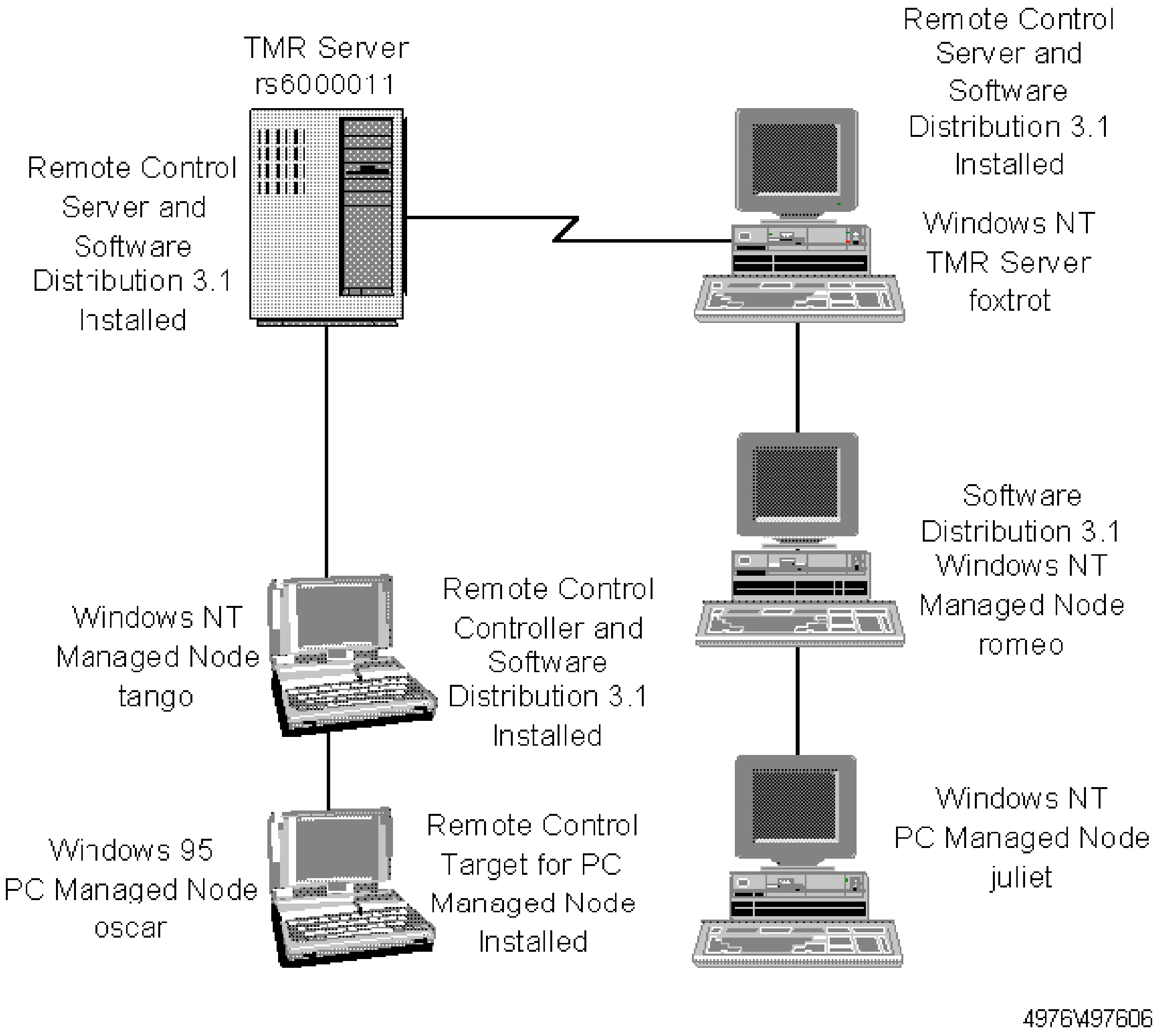
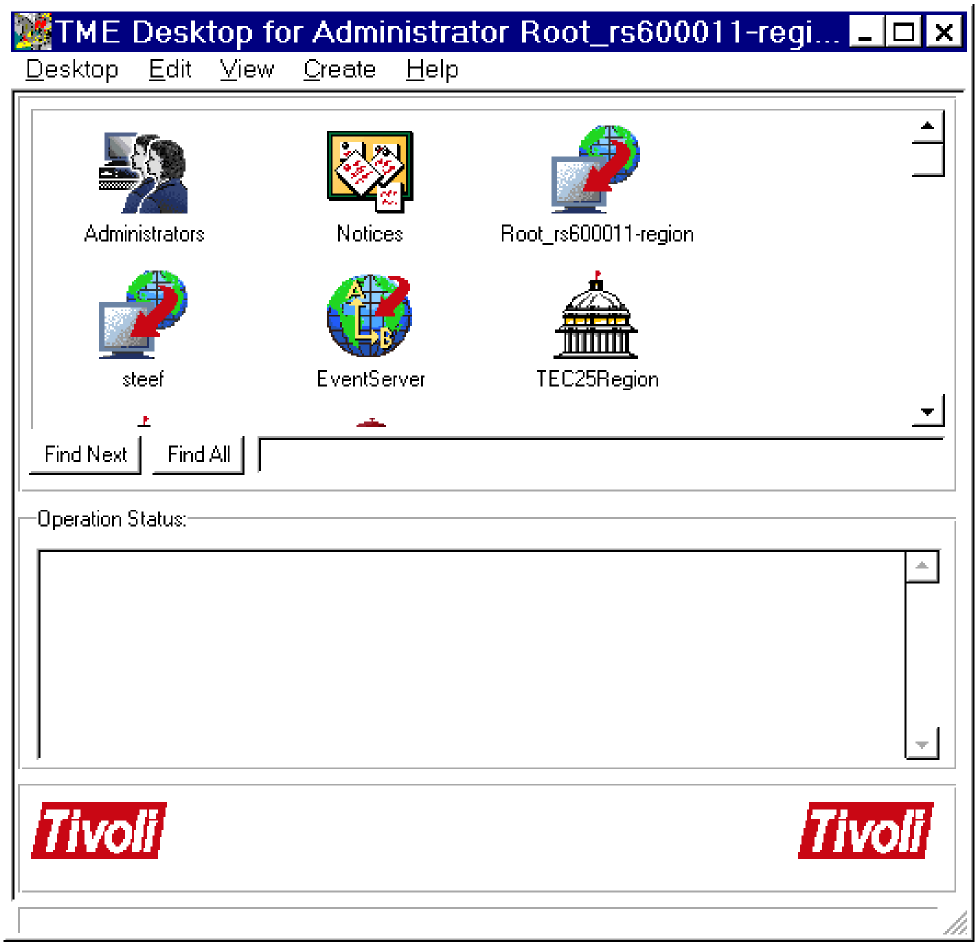
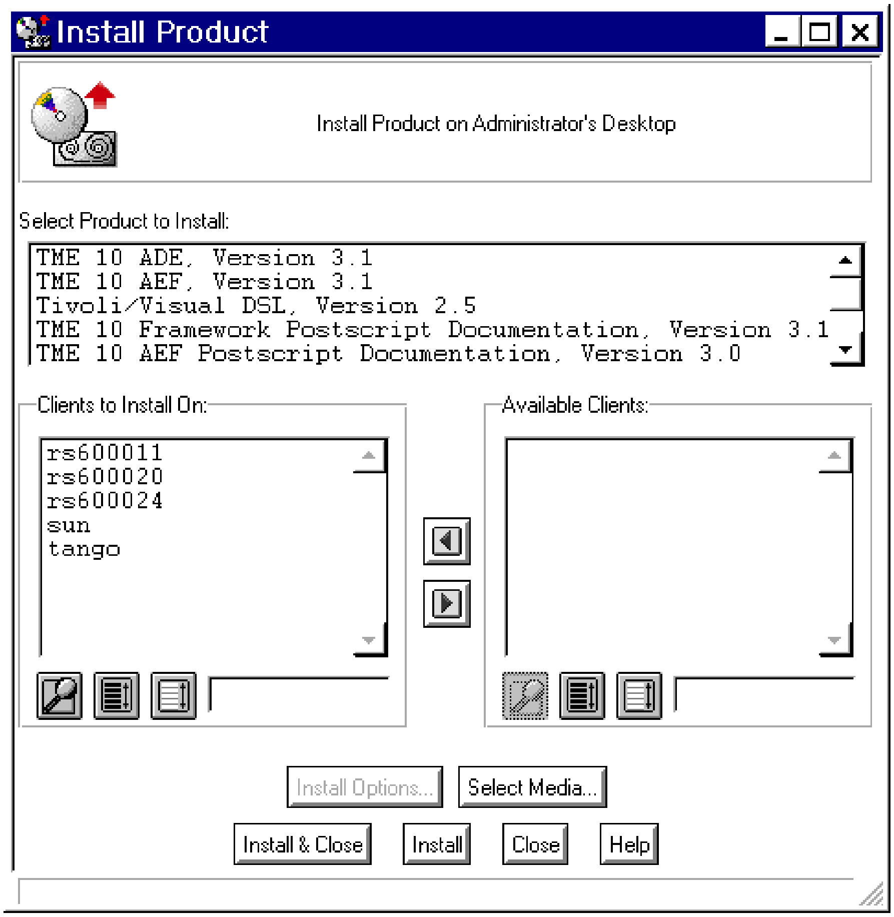

TMR Server
rs6000011
Remote Control
Server and
Software
Distribution 3.1
Installed
Remote Control
Server and
Software
Distribution 3.1
Installed
Windows NT
TMR Server
foxtrot
Software
Distribution 3.1
Windows NT
Managed Node
romeo
Windows NT
Managed Node
tango
Remote Control
Controller and
Software
Distribution 3.1
Installed
Windows 95
PC Managed Node
oscar
Remote Control
Target for PC
Managed Node
Installed
Windows NT
PC Managed Node
juliet
4976\497606

Figure 68


TME Desktop for Administrator Root_rs600011-regi...
Desktop
Edit
View
Create
Help
Administrators
Notices
Root_rs600011-region
steef
EventServer
TEC25Region
Find Next
Find All
Operation Status:
Tivoli
Tivoli



Install Product

Install Product on Administrator's Desktop

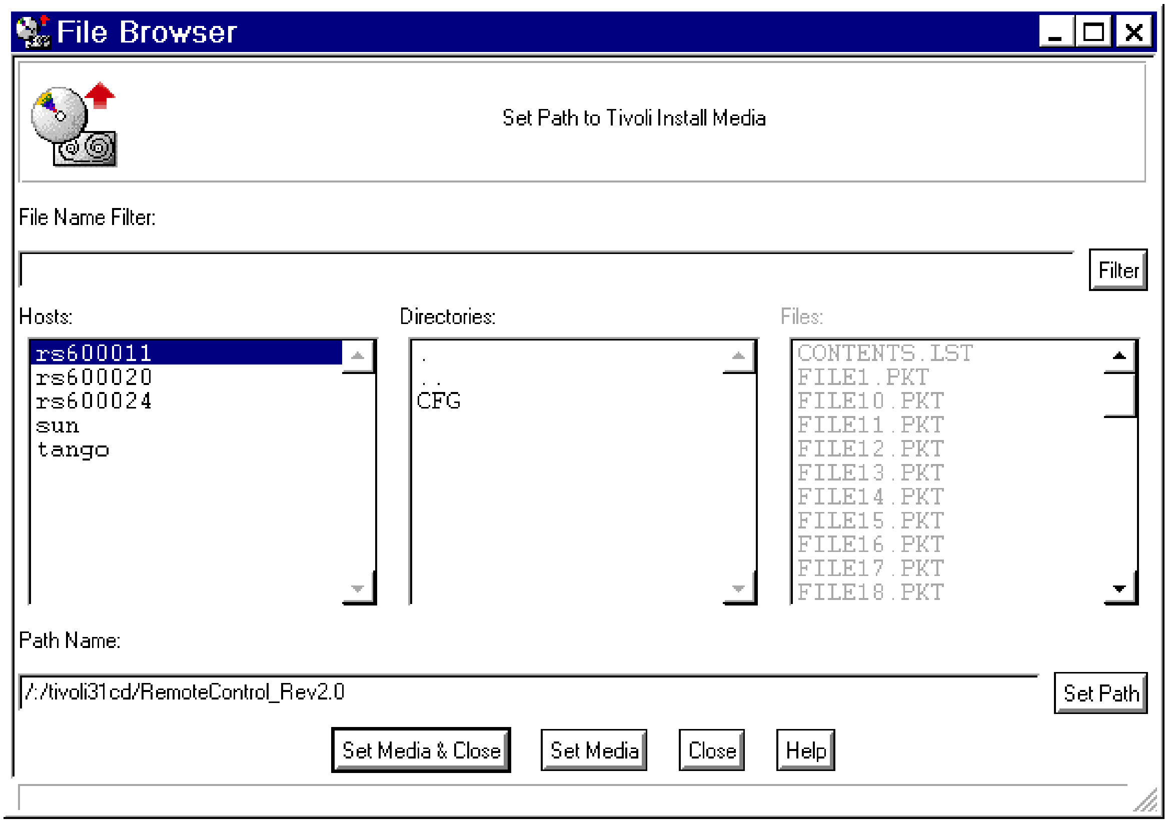
Select Product to Install:

```
TME 10 ADE, Version 3.1
TME 10 AEF, Version 3.1
Tivoli/Visual DSL, Version 2.5
TME 10 Framework Postscript Documentation, Version 3.1
TME 10 AEF Postscript Documentation, Version 3.0
```

Clients to Install On:

```
rs600011
rs600020
rs600024
sun
tango
```

Available Clients:



Set Path to Tivoli Install Media

File Name Filter:

Filter

Hosts:

rs600011
rs600020
rs600024
sun
tango

Directories:

.
..
CFG

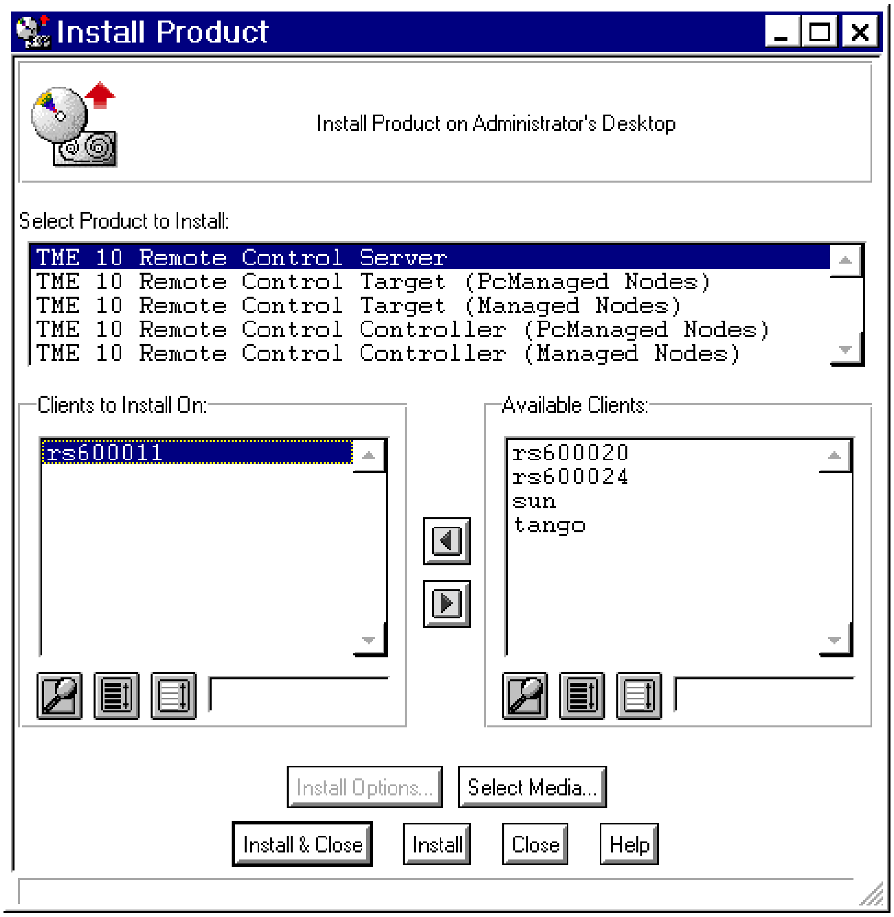
Files:

CONTENTS.LST
FILE1.PKT
FILE10.PKT
FILE11.PKT
FILE12.PKT
FILE13.PKT
FILE14.PKT
FILE15.PKT
FILE16.PKT
FILE17.PKT
FILE18.PKT

Path Name:

/:/tivoli31cd/RemoteControl_Rev2.0

Figure 71



Install Product

Install Product on Administrator's Desktop

Select Product to Install:

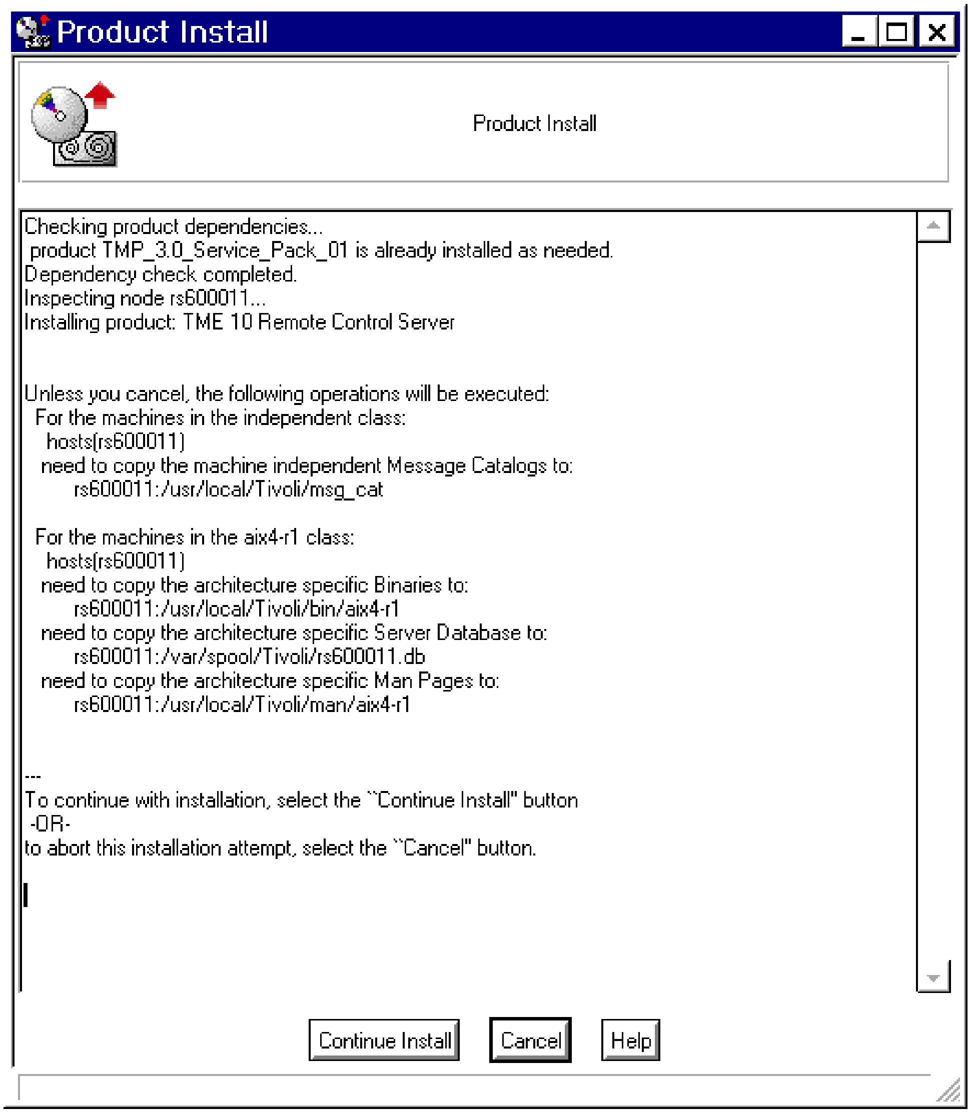
```
TME 10 Remote Control Server
TME 10 Remote Control Target (PcManaged Nodes)
TME 10 Remote Control Target (Managed Nodes)
TME 10 Remote Control Controller (PcManaged Nodes)
TME 10 Remote Control Controller (Managed Nodes)
```

Clients to Install On:

```
rs600011
```

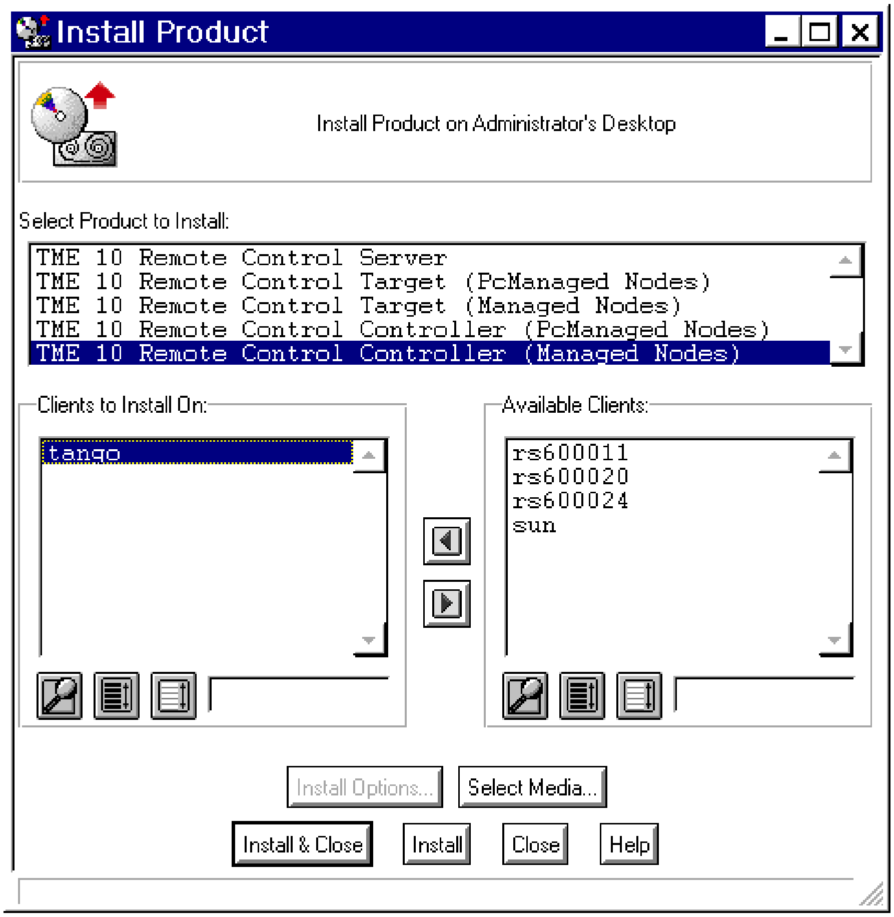
Available Clients:

```
rs600020
rs600024
sun
tango
```



```
Checking product dependencies...
 product TMP_3.0_Service_Pack_01 is already installed as needed.
Dependency check completed.
Inspecting node rs600011...
Installing product: TME 10 Remote Control Server


Unless you cancel, the following operations will be executed:
  For the machines in the independent class:
    hosts(rs600011)
   need to copy the machine independent Message Catalogs to:
        rs600011:/usr/local/Tivoli/msg_cat

  For the machines in the aix4-r1 class:
    hosts(rs600011)
   need to copy the architecture specific Binaries to:
        rs600011:/usr/local/Tivoli/bin/aix4-r1
   need to copy the architecture specific Server Database to:
        rs600011:/var/spool/Tivoli/rs600011.db
   need to copy the architecture specific Man Pages to:
        rs600011:/usr/local/Tivoli/man/aix4-r1


---
To continue with installation, select the ``Continue Install'' button
 -OR-
to abort this installation attempt, select the ``Cancel'' button.
```

Figure 73



Install Product

Install Product on Administrator's Desktop

Select Product to Install:

```
TME 10 Remote Control Server
TME 10 Remote Control Target (PcManaged Nodes)
TME 10 Remote Control Target (Managed Nodes)
TME 10 Remote Control Controller (PcManaged Nodes)
TME 10 Remote Control Controller (Managed Nodes)
```

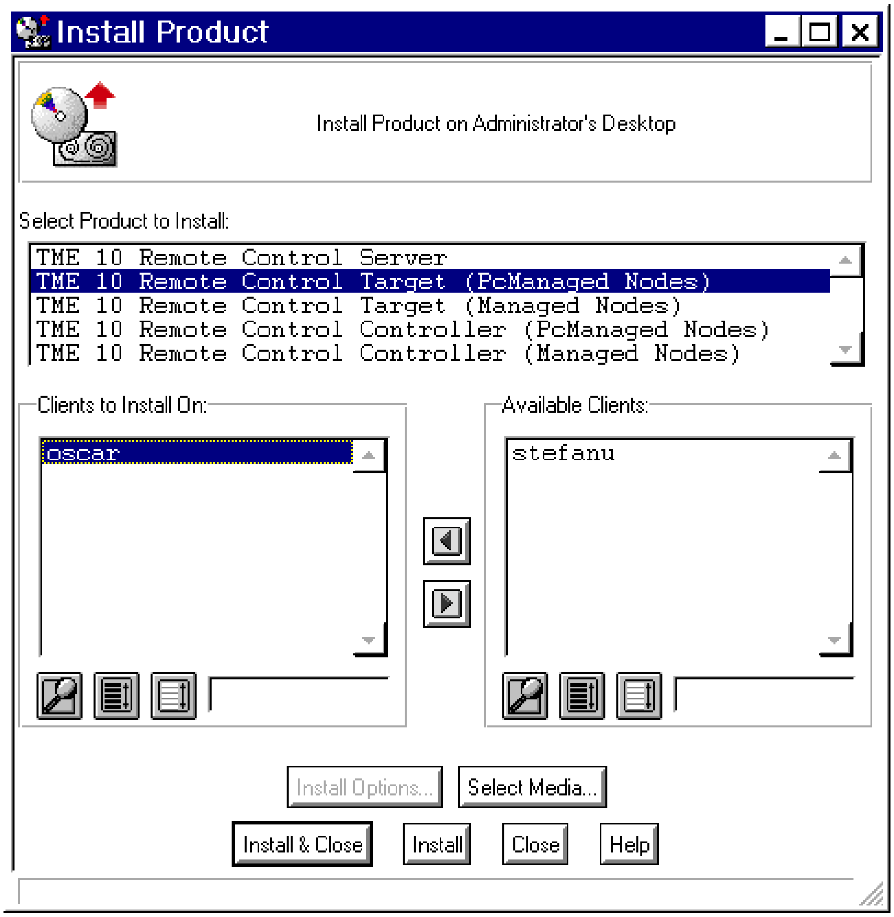
Clients to Install On:

```
tango
```

Available Clients:

```
rs600011
rs600020
rs600024
sun
```

Figure 74



Install Product

Install Product on Administrator's Desktop

Select Product to Install:

```
TME 10 Remote Control Server
TME 10 Remote Control Target (PcManaged Nodes)
TME 10 Remote Control Target (Managed Nodes)
TME 10 Remote Control Controller (PcManaged Nodes)
TME 10 Remote Control Controller (Managed Nodes)
```

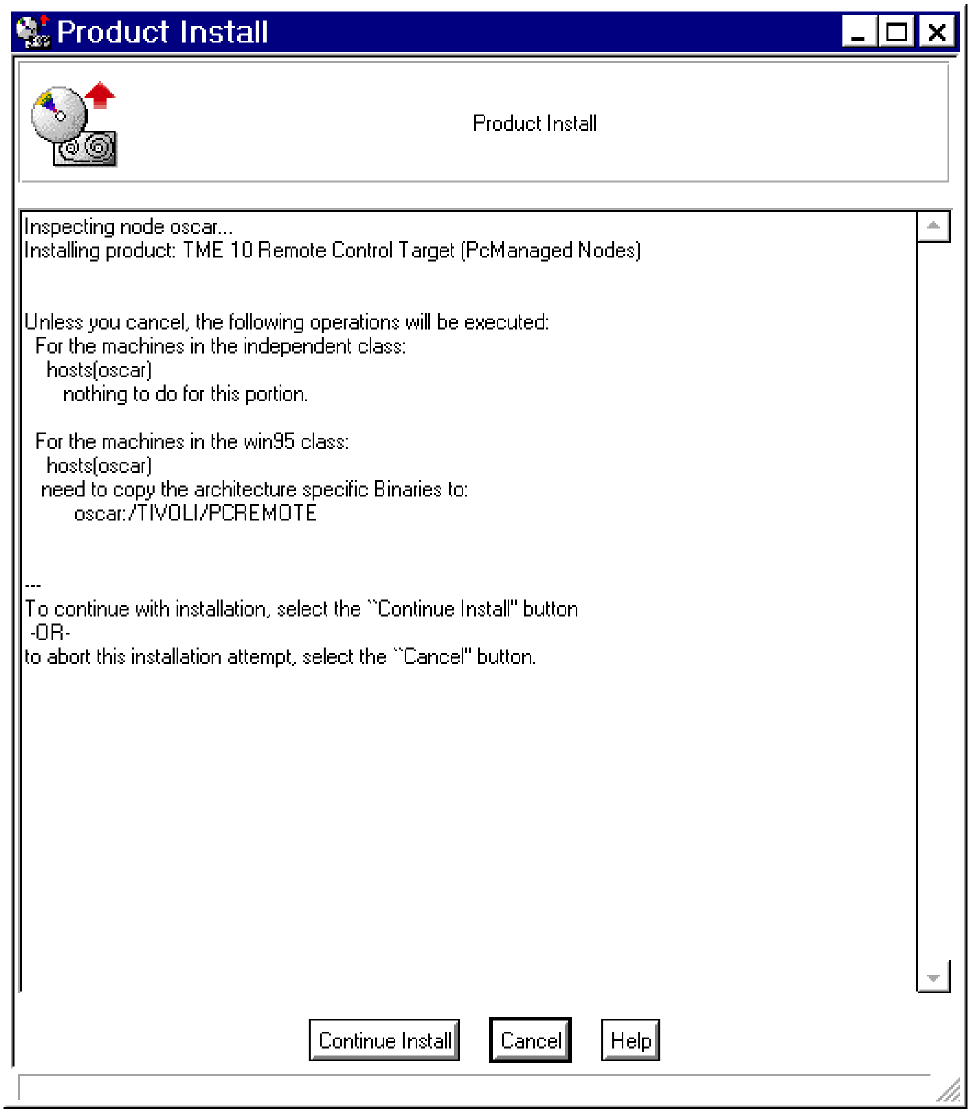
Clients to Install On:

oscar

Available Clients:

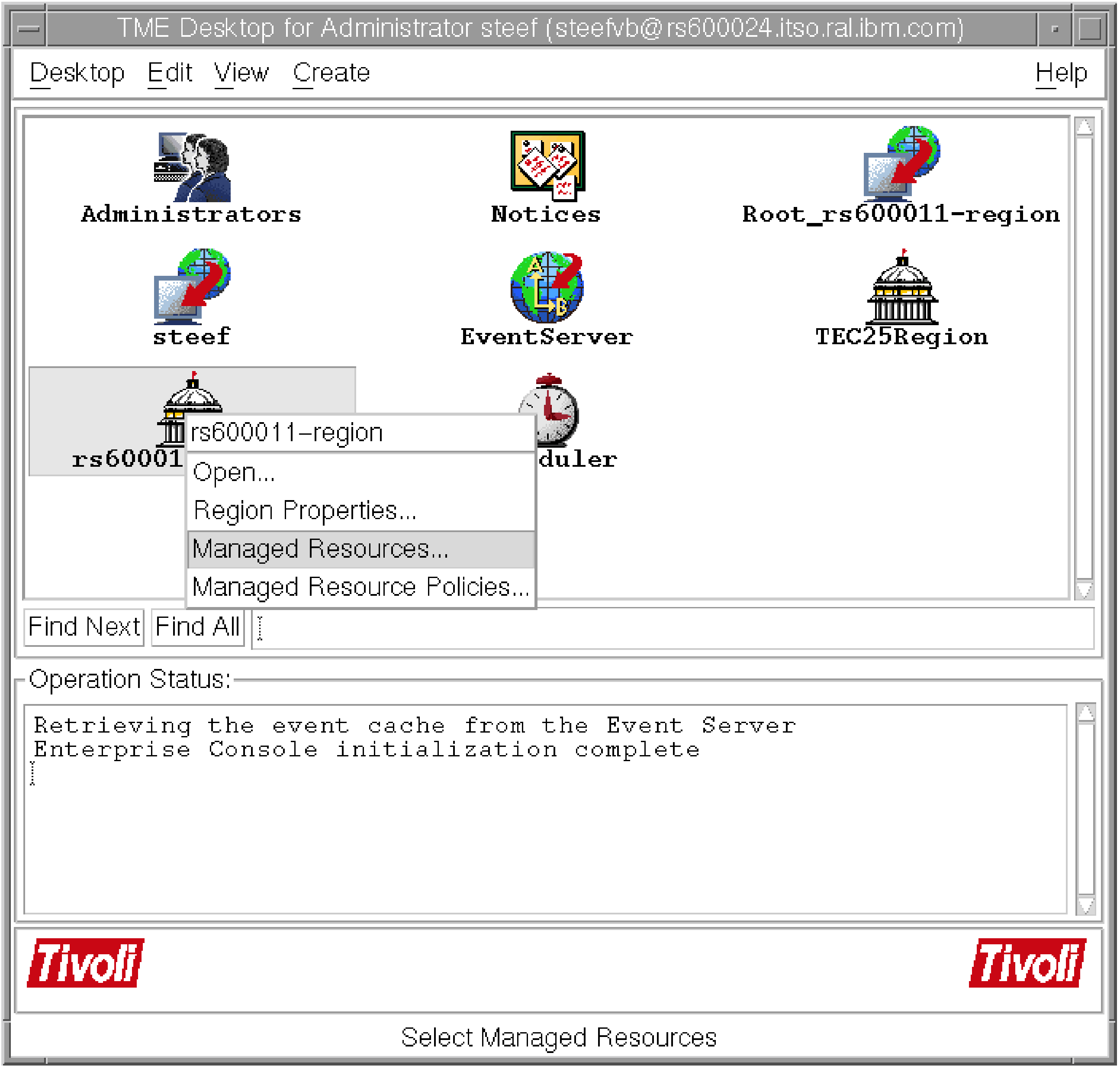
stefanu

https://web.archive.org/web/19970803064347/http://www.redbooks.ibm.com:80/SG244976/gtl1007.gif

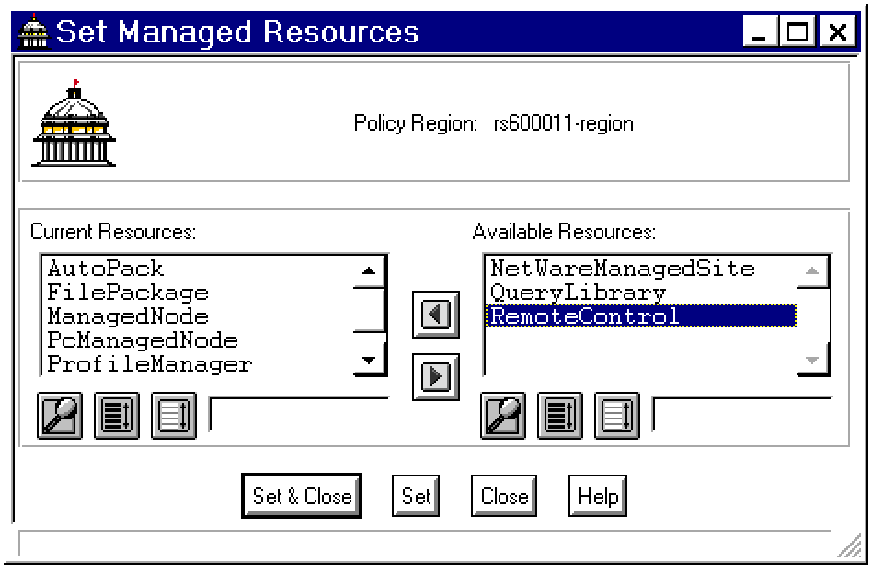


```
Inspecting node oscar...
Installing product: TME 10 Remote Control Target (PcManaged Nodes)


Unless you cancel, the following operations will be executed:
  For the machines in the independent class:
    hosts(oscar)
       nothing to do for this portion.

  For the machines in the win95 class:
    hosts(oscar)
   need to copy the architecture specific Binaries to:
         oscar:/TIVOLI/PCREMOTE


---
To continue with installation, select the ``Continue Install'' button
 -OR-
to abort this installation attempt, select the ``Cancel'' button.
```

Figure 73



```
Retrieving the event cache from the Event Server
Enterprise Console initialization complete
```



Set Managed Resources

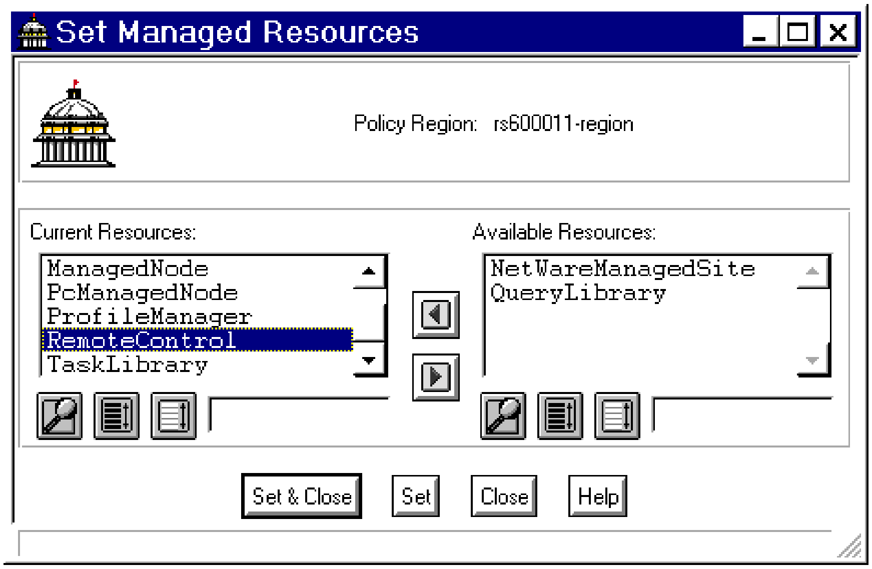
Policy Region: rs600011-region

Current Resources:

AutoPack
FilePackage
ManagedNode
PcManagedNode
ProfileManager

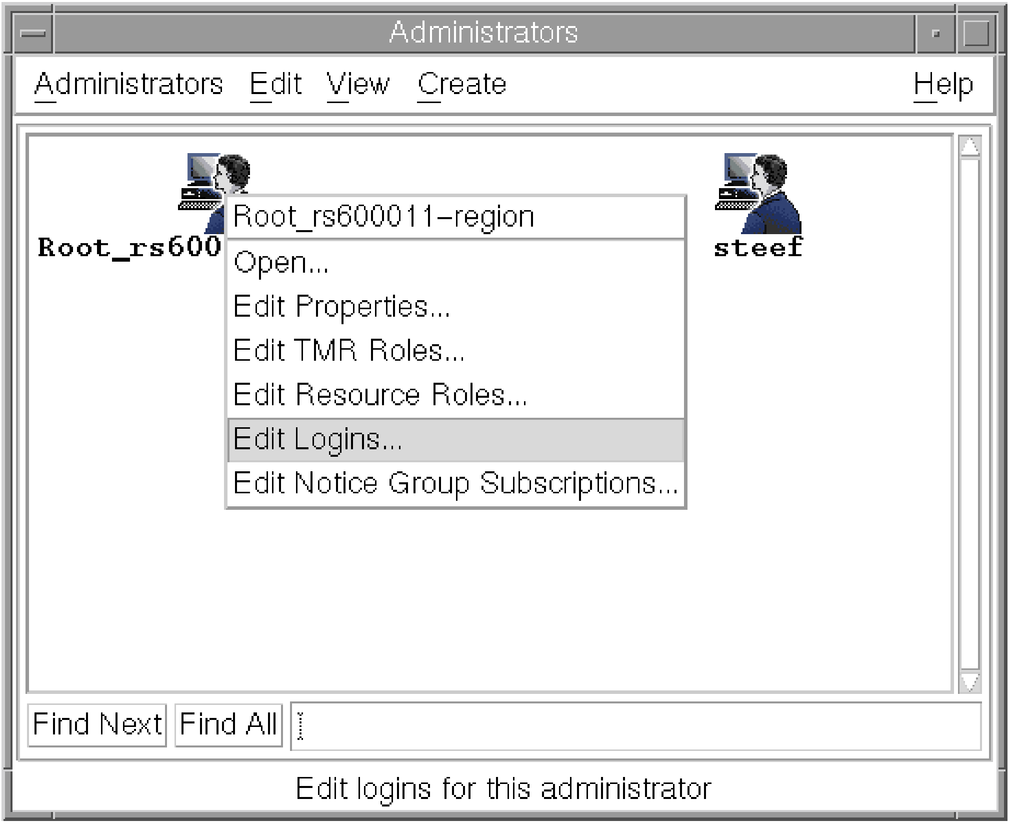
Available Resources:

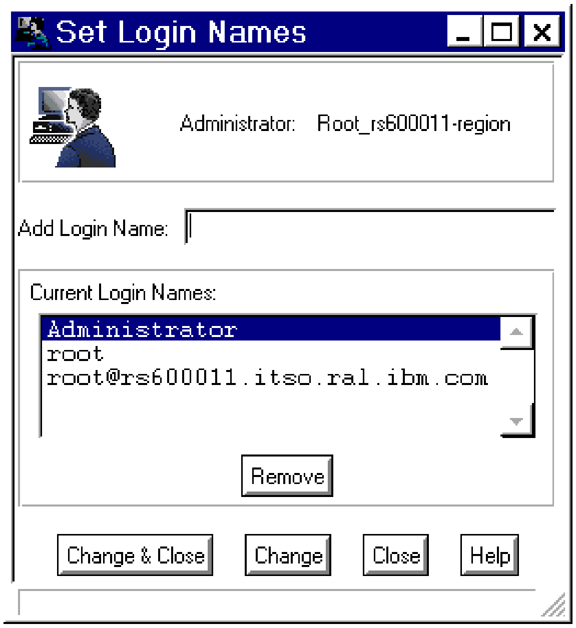
NetWareManagedSite
QueryLibrary
RemoteControl



Set Managed Resources
Policy Region: rs600011-region
Current Resources:
ManagedNode
PcManagedNode
ProfileManager
RemoteControl
TaskLibrary
Available Resources:
NetWareManagedSite
QueryLibrary
Set & Close
Set
Close
Help

Figure 79


Administrators
Administrators Edit View Create Help
Root_rs600
steef
Root_rs600011-region
Open...
Edit Properties...
Edit TMR Roles...
Edit Resource Roles...
Edit Logins...
Edit Notice Group Subscriptions...
Find Next
Find All
Edit logins for this administrator



Set Login Names

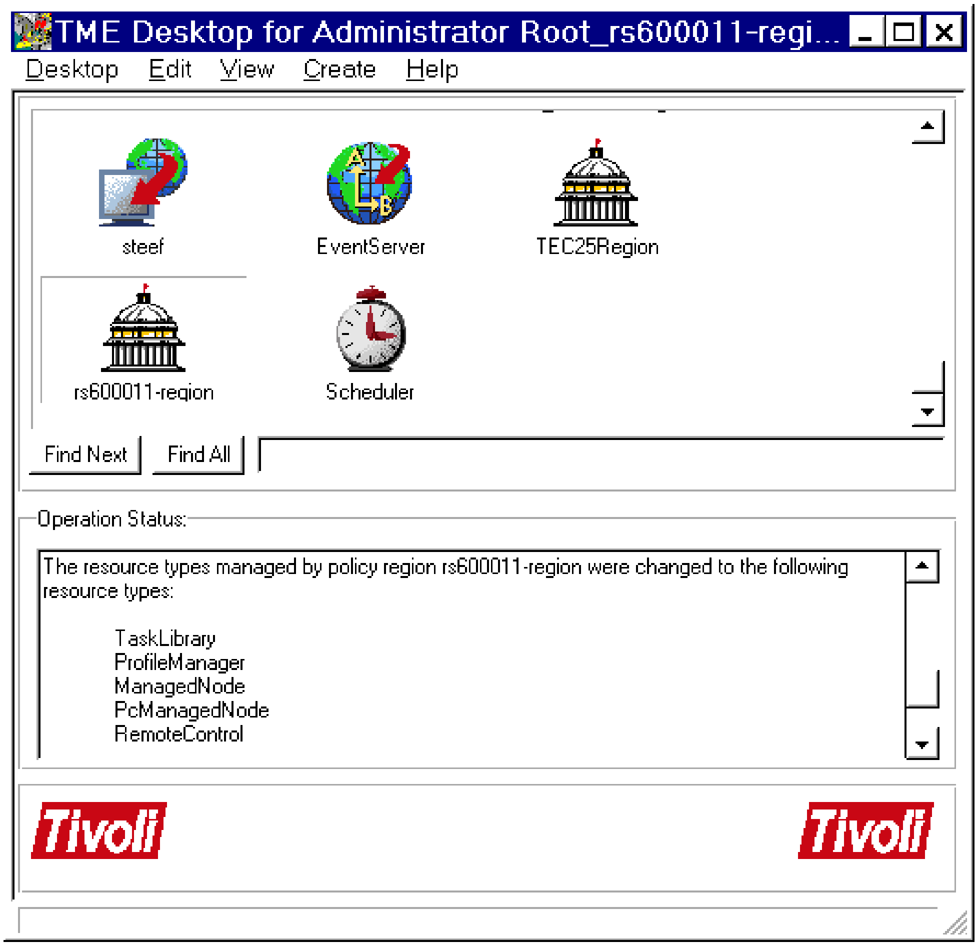
Administrator: Root_rs600011-region

Add Login Name:

Current Login Names:

```
Administrator
root
root@rs600011.itso.ral.ibm.com
```

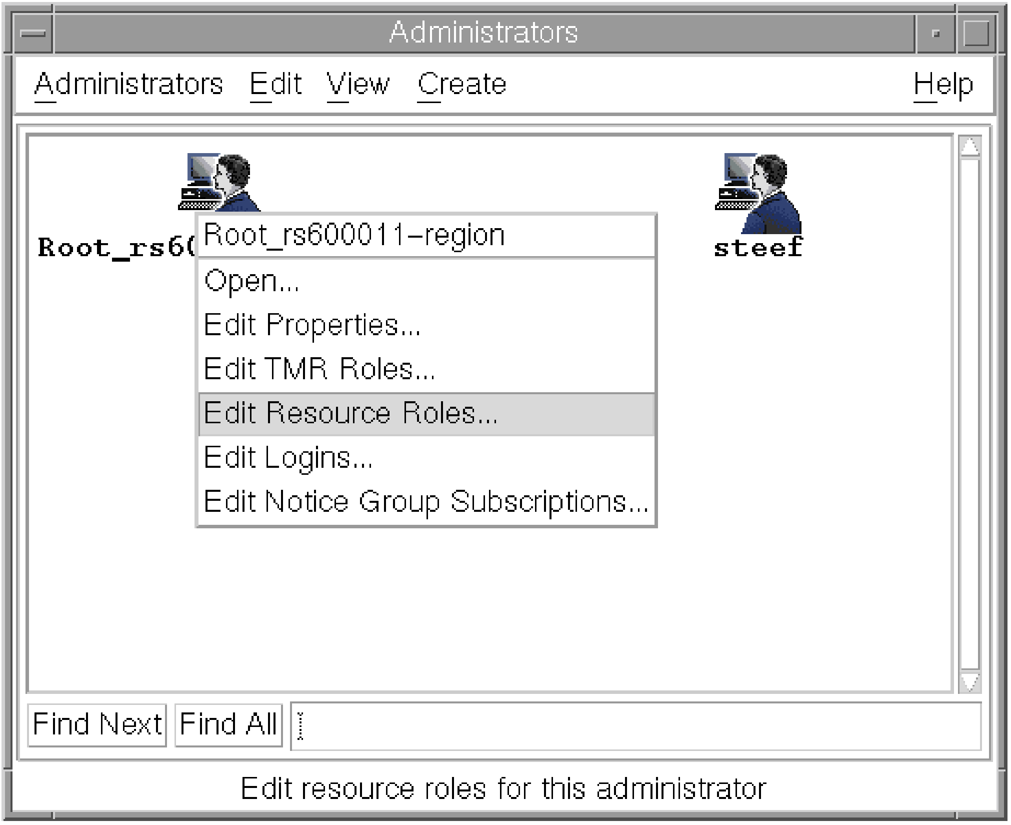
Figure 81

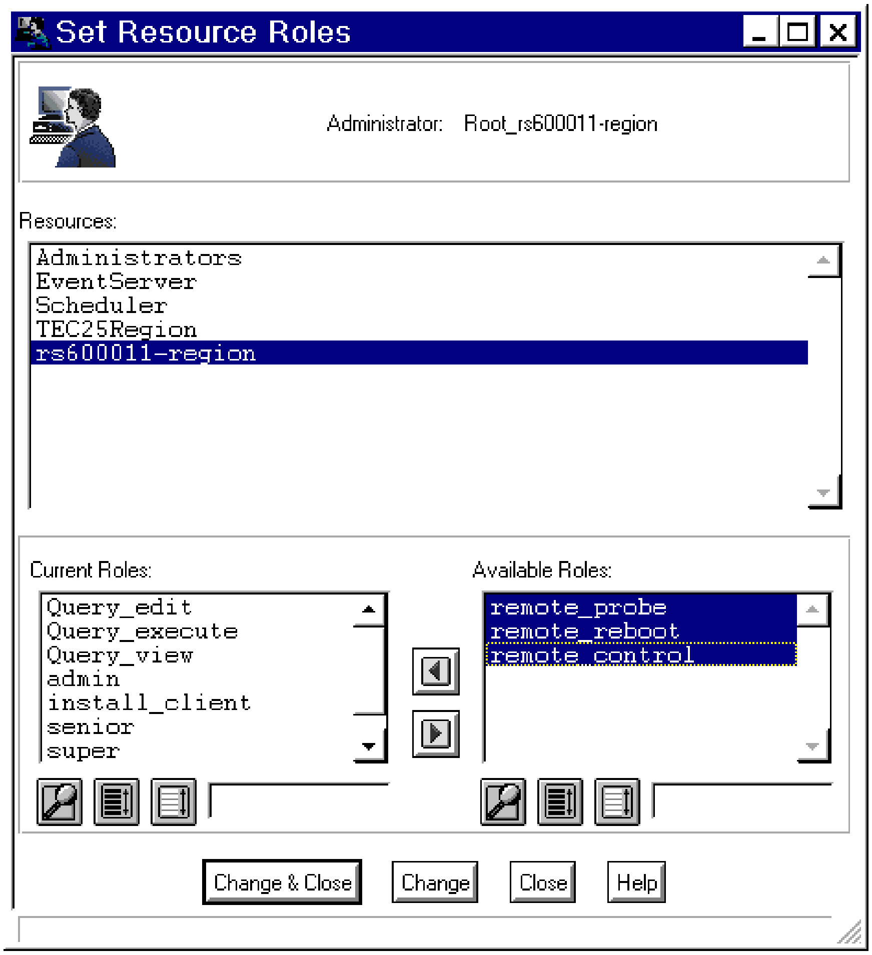


The resource types managed by policy region rs600011-region were changed to the following resource types:

TaskLibrary
ProfileManager
ManagedNode
PcManagedNode
RemoteControl

Figure 82


Administrators
Administrators Edit View Create Help
Root_rs60
steef
Root_rs600011-region
Open...
Edit Properties...
Edit TMR Roles...
Edit Resource Roles...
Edit Logins...
Edit Notice Group Subscriptions...
Find Next
Find All
Edit resource roles for this administrator



Administrator: Root_rs600011-region

Resources:

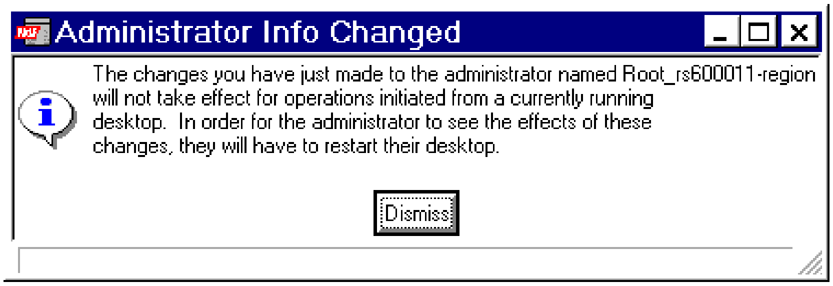
```
Administrators
EventServer
Scheduler
TEC25Region
rs600011-region
```

Current Roles:

```
Query_edit
Query_execute
Query_view
admin
install_client
senior
super
```

Available Roles:

```
remote_probe
remote_reboot
remote_control
```



The changes you have just made to the administrator named Root_rs600011-region will not take effect for operations initiated from a currently running desktop. In order for the administrator to see the effects of these changes, they will have to restart their desktop.

Figure 85

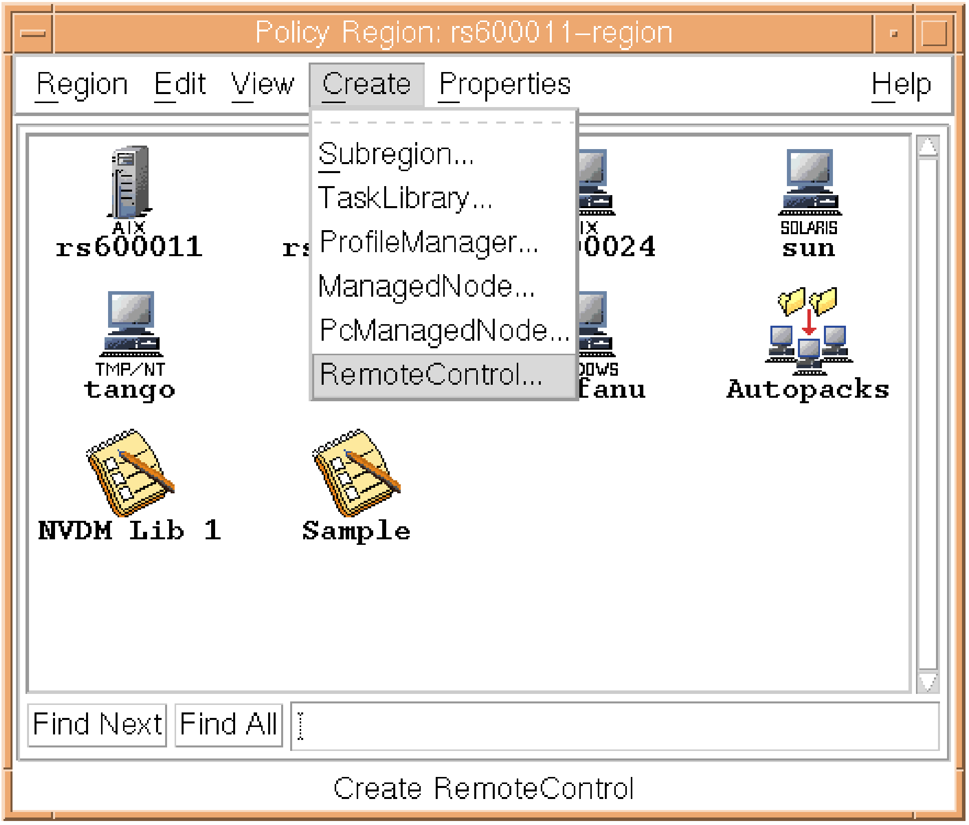
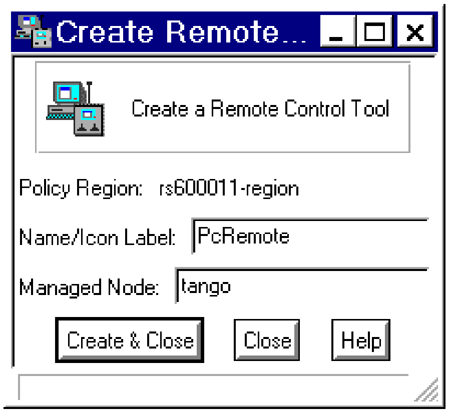

Policy Region: rs600011–region
Region
Edit
View
Create
Properties
Help
Subregion...
TaskLibrary...
ProfileManager...
ManagedNode...
PcManagedNode...
RemoteControl...
AIX
rs600011
rs
IX
0024
SOLARIS
sun
TMP/NT
tango
DOWS
fanu
Autopacks
NVDM Lib 1
Sample
Find Next
Find All
Create RemoteControl

Figure 86



Policy Region: rs600011-region

Name/Icon Label: PcRemote

Managed Node: tango

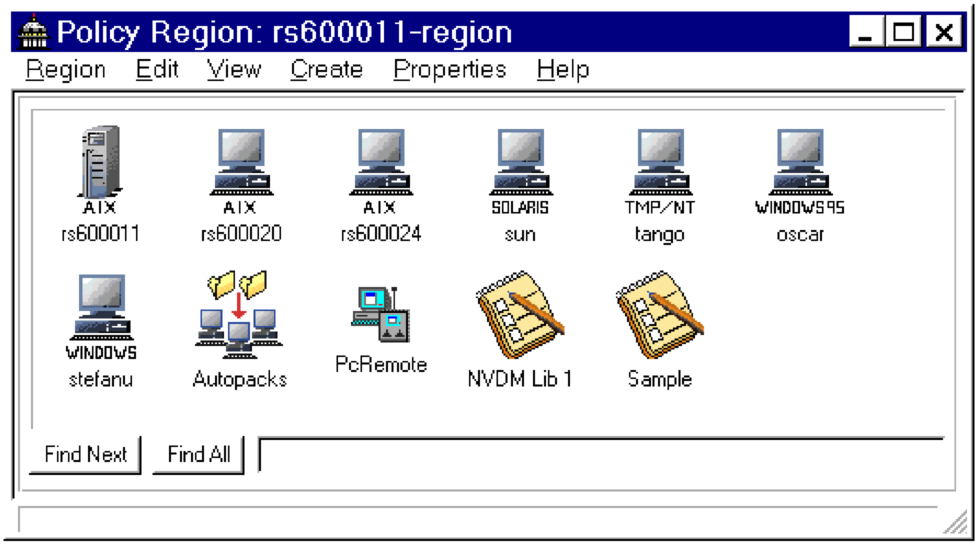
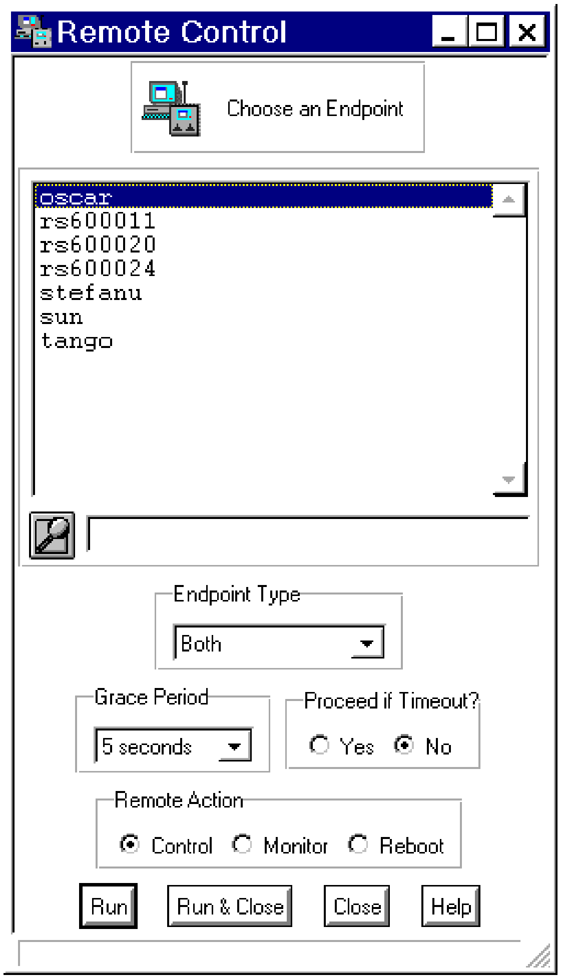

Policy Region: rs600011-region
Region
Edit
View
Create
Properties
Help
AIX
rs600011
AIX
rs600020
AIX
rs600024
SOLARIS
sun
TMP/NT
tango
WINDOWS95
oscar
WINDOWS
stefanu
Autopacks
PcRemote
NVDM Lib 1
Sample
Find Next
Find All

Figure 88



Remote Control

Choose an Endpoint

oscar
rs600011
rs600020
rs600024
stefanu
sun
tango

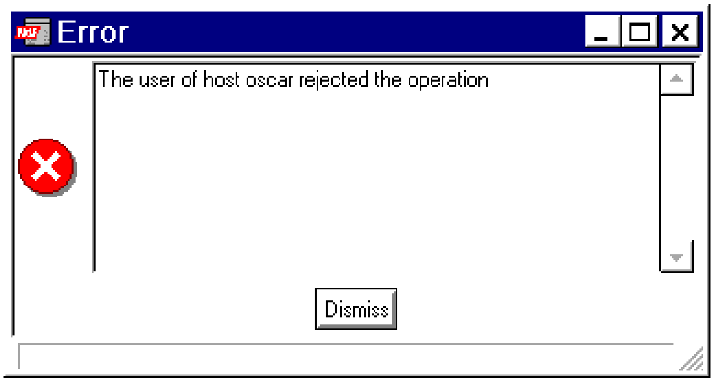
Endpoint Type: Both

Grace Period: 5 seconds

Proceed if Timeout? ○ Yes ● No

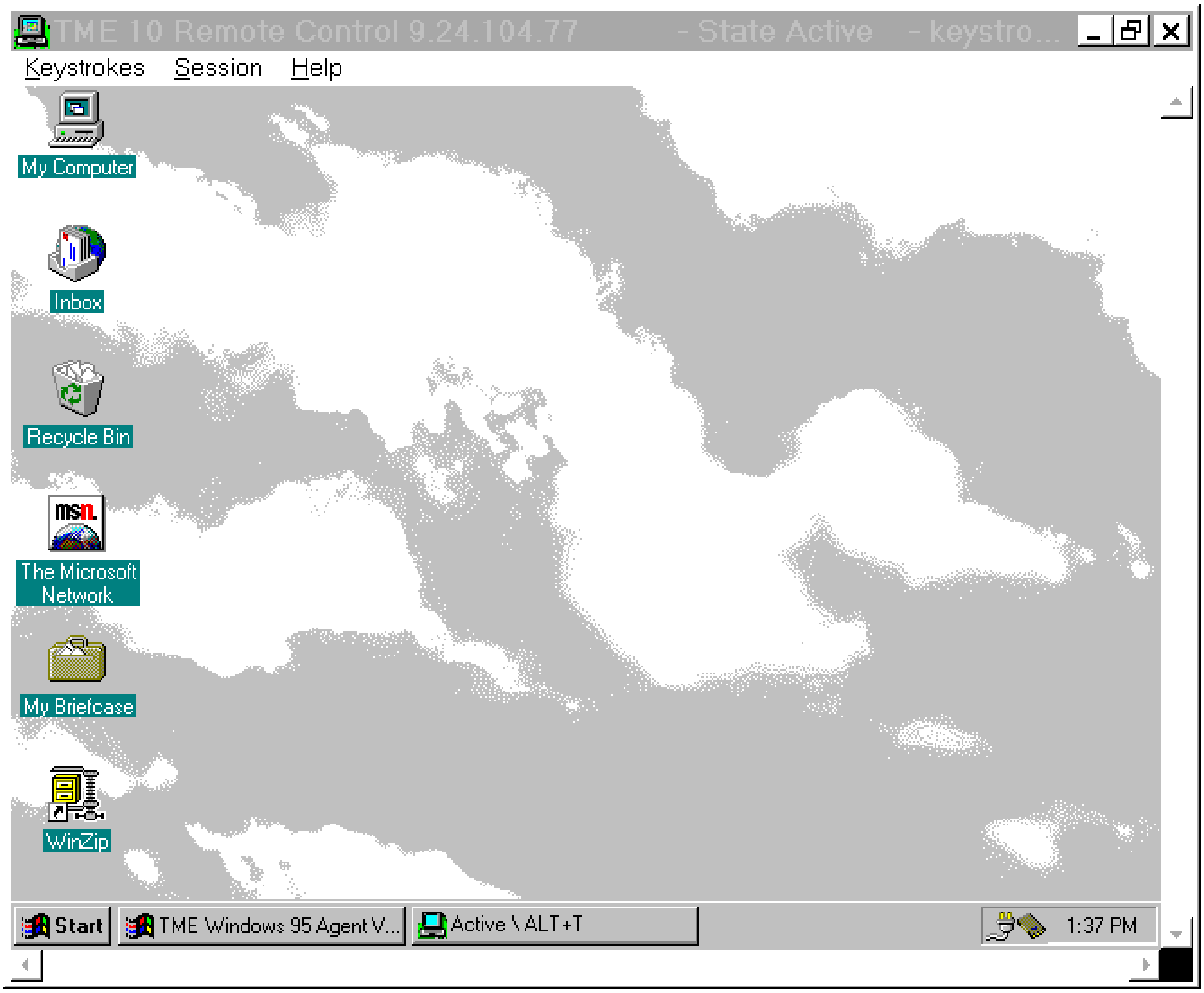
Remote Action: ● Control ○ Monitor ○ Reboot

Figure 89



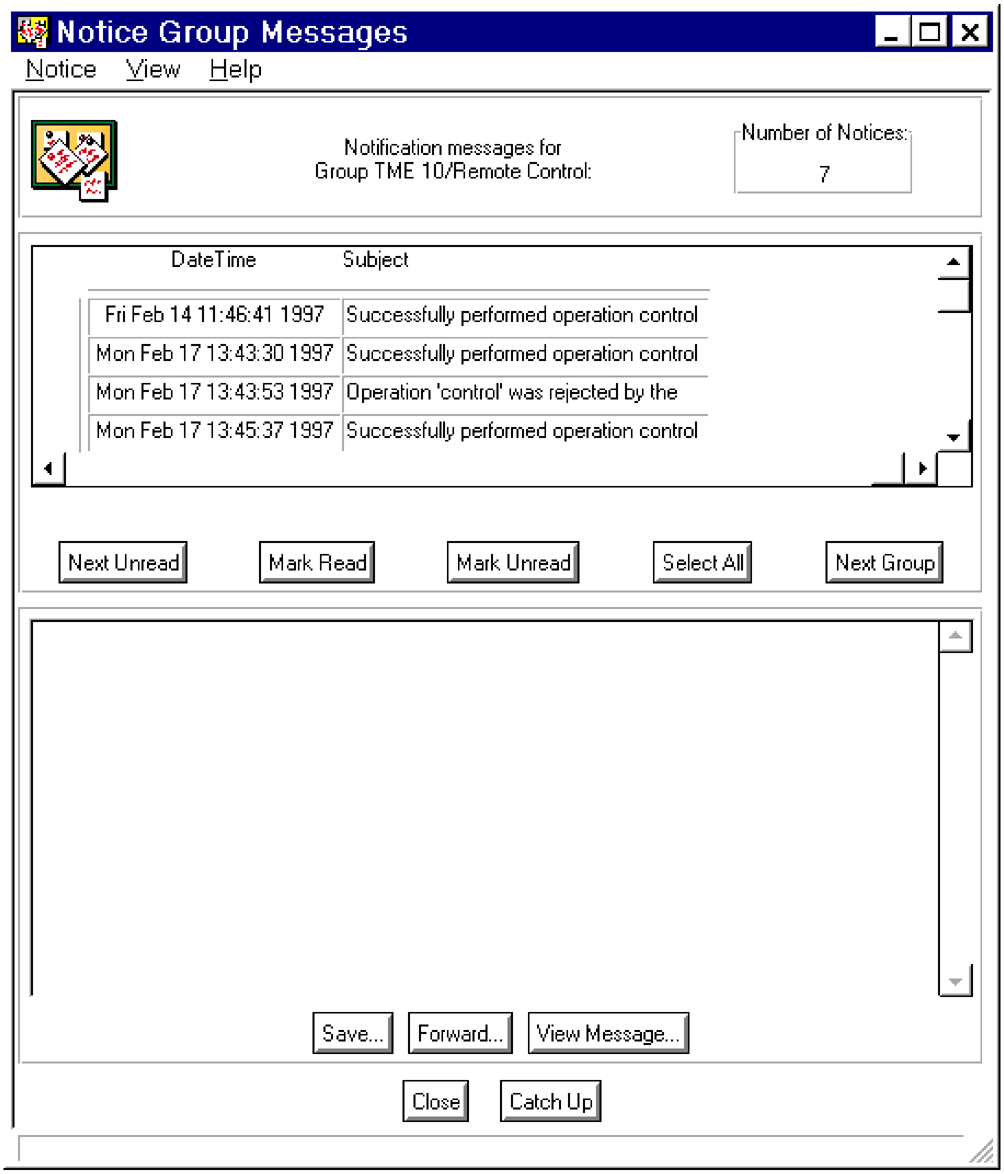
The user of host oscar rejected the operation

Figure 90



TME 10 Remote Control 9.24.104.77 - State Active - keystro...
Keystrokes
Session
Help
My Computer
Inbox
Recycle Bin
The Microsoft Network
My Briefcase
WinZip
Start
TME Windows 95 Agent V...
Active \ ALT+T
1:37 PM

Figure 91



Notification messages for
Group TME 10/Remote Control:

Number of Notices: 7

DateTime	Subject
Fri Feb 14 11:46:41 1997	Successfully performed operation control
Mon Feb 17 13:43:30 1997	Successfully performed operation control
Mon Feb 17 13:43:53 1997	Operation 'control' was rejected by the
Mon Feb 17 13:45:37 1997	Successfully performed operation control

Figure 94

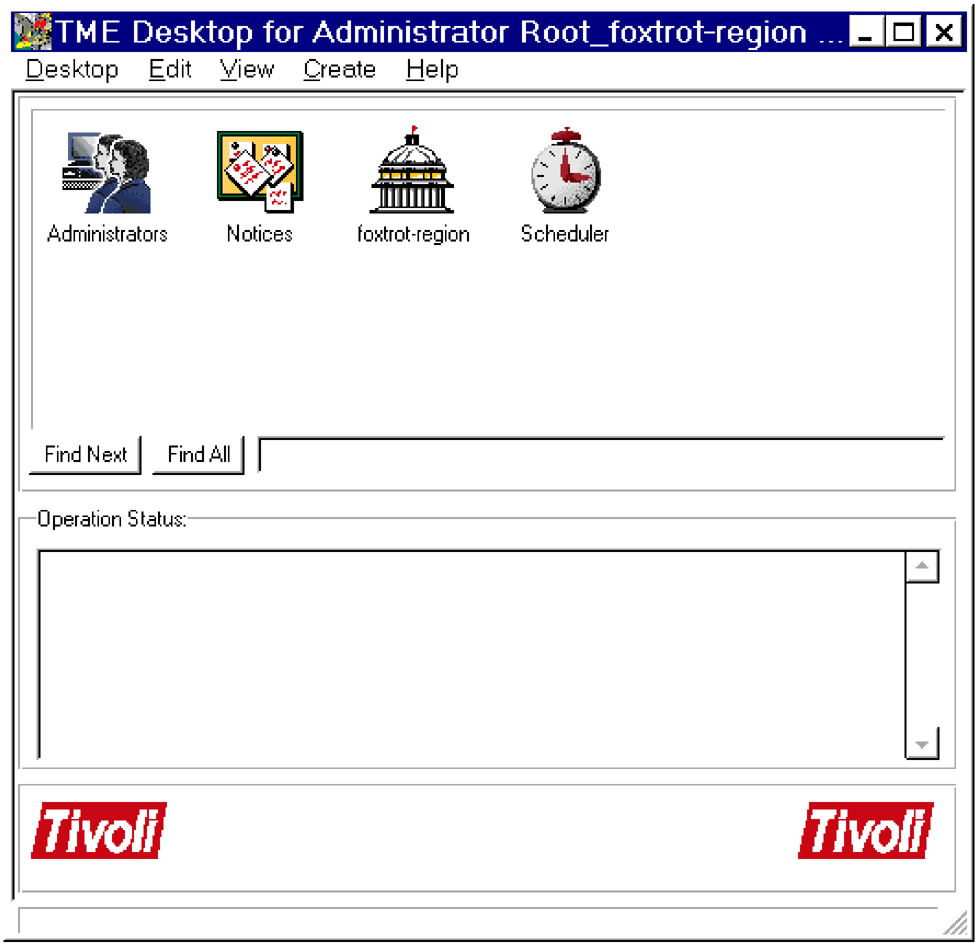
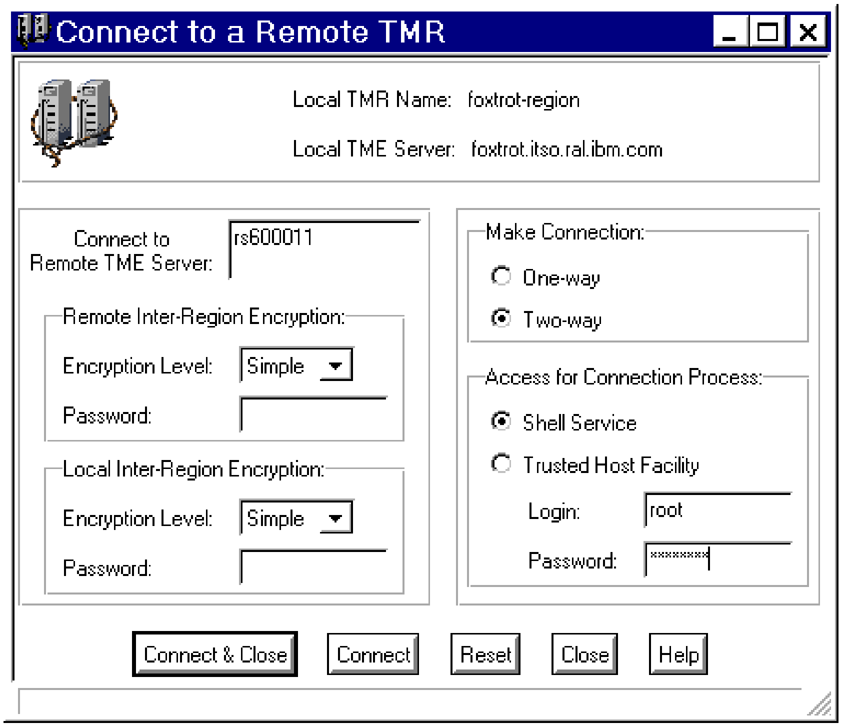

TME Desktop for Administrator Root_foxtrot-region ...
Desktop
Edit
View
Create
Help
Administrators
Notices
foxtrot-region
Scheduler
Find Next
Find All
Operation Status:
Tivoli
Tivoli

Figure 95



Connect to a Remote TMR

Local TMR Name: foxtrot-region

Local TME Server: foxtrot.itso.ral.ibm.com

Connect to Remote TME Server: rs600011

Remote Inter-Region Encryption:

Encryption Level: Simple

Password:

Local Inter-Region Encryption:

Encryption Level: Simple

Password:

Make Connection:

○ One-way

● Two-way

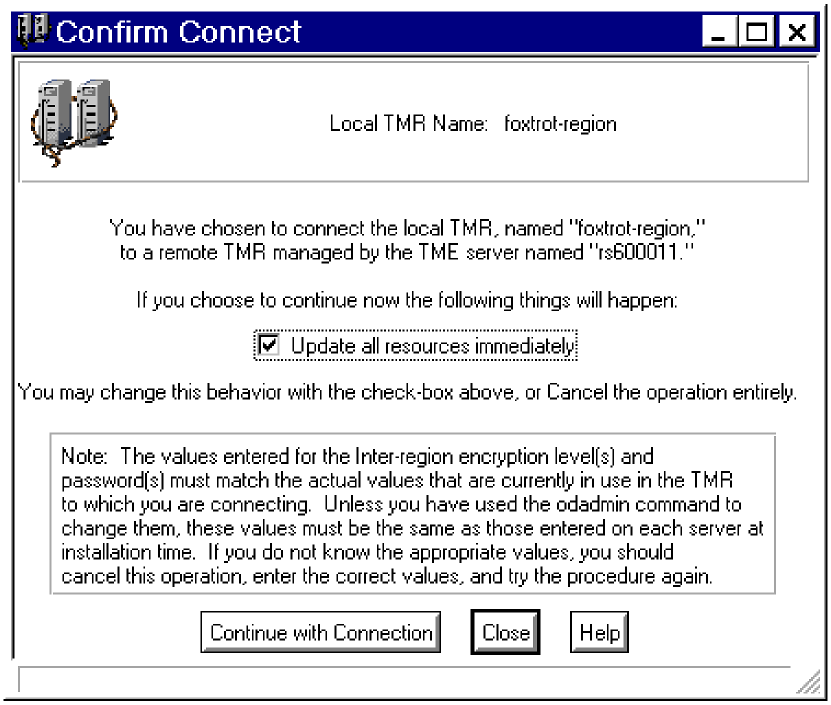
Access for Connection Process:

● Shell Service

○ Trusted Host Facility

Login: root

Password: *********



Local TMR Name: foxtrot-region

You have chosen to connect the local TMR, named "foxtrot-region," to a remote TMR managed by the TME server named "rs600011."

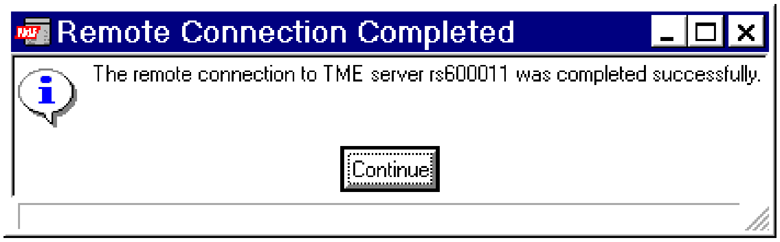
If you choose to continue now the following things will happen:

☑ Update all resources immediately

You may change this behavior with the check-box above, or Cancel the operation entirely.

Note: The values entered for the Inter-region encryption level(s) and password(s) must match the actual values that are currently in use in the TMR to which you are connecting. Unless you have used the odadmin command to change them, these values must be the same as those entered on each server at installation time. If you do not know the appropriate values, you should cancel this operation, enter the correct values, and try the procedure again.

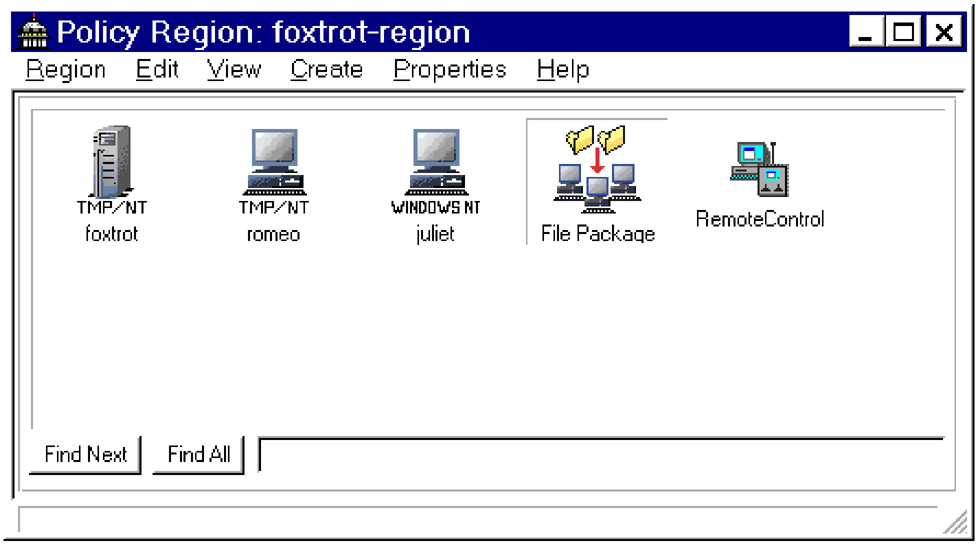
Figure 97

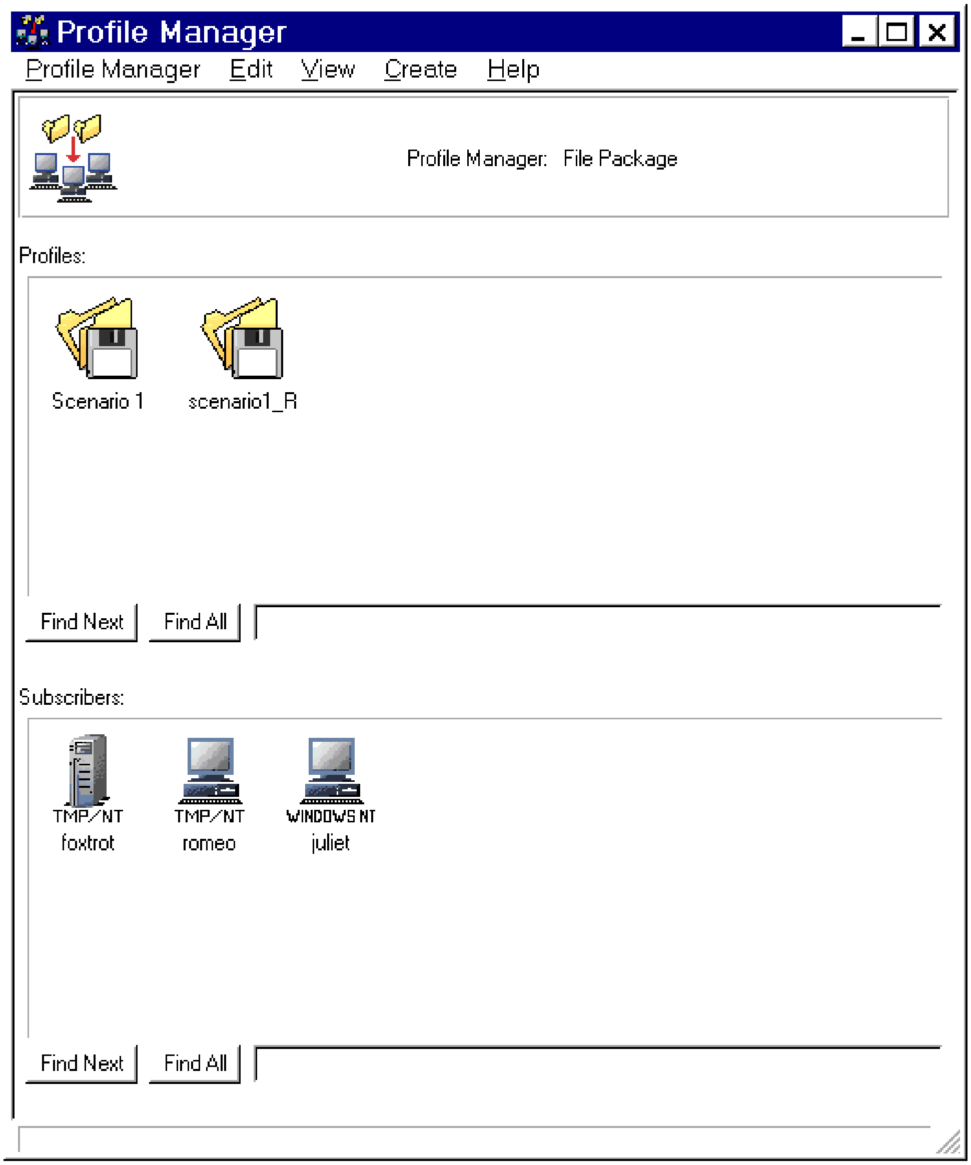


Remote Connection Completed

The remote connection to TME server rs600011 was completed successfully.

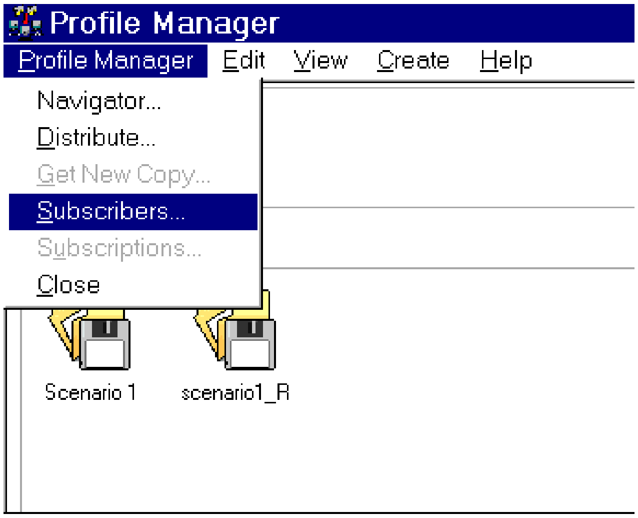
Figure 98

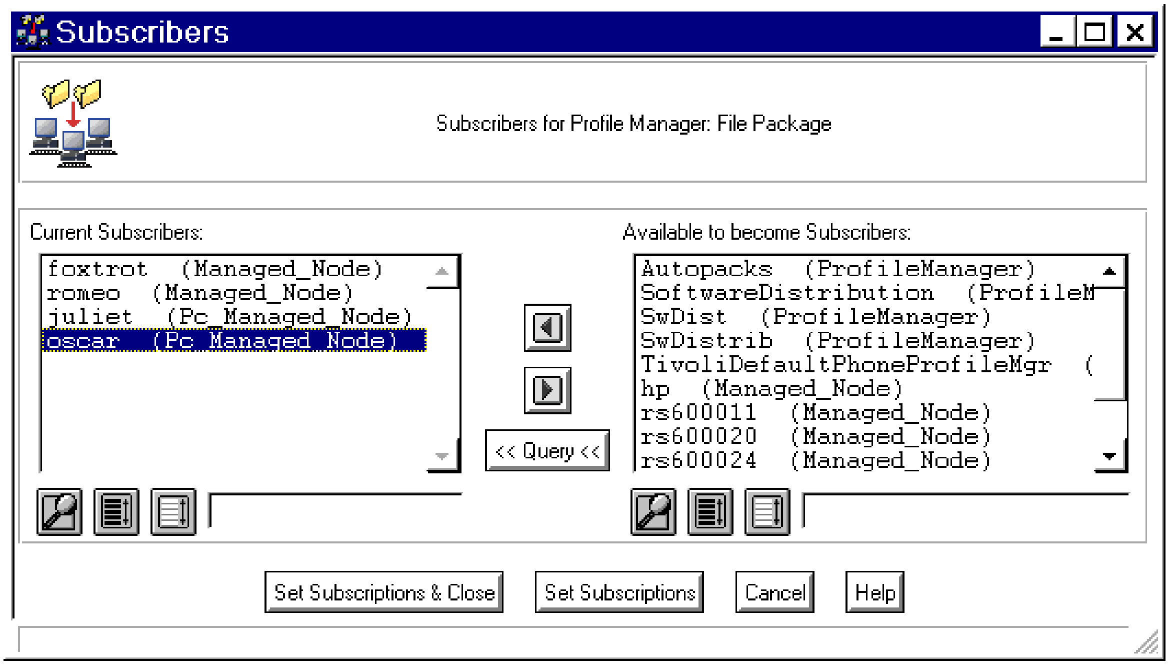

Policy Region: foxtrot-region
Region
Edit
View
Create
Properties
Help
TMP/NT
foxtrot
TMP/NT
romeo
WINDOWS NT
juliet
File Package
RemoteControl
Find Next
Find All



Profile Manager
Profile Manager Edit View Create Help
Profile Manager: File Package
Profiles:
Scenario 1
scenario1_R
Find Next
Find All
Subscribers:
TMP/NT
foxtrot
TMP/NT
romeo
WINDOWS NT
juliet
Find Next
Find All

Figure 100


Profile Manager
Profile Manager
Edit
View
Create
Help
Navigator...
Distribute...
Get New Copy...
Subscribers...
Subscriptions...
Close
Scenario 1
scenario1_R

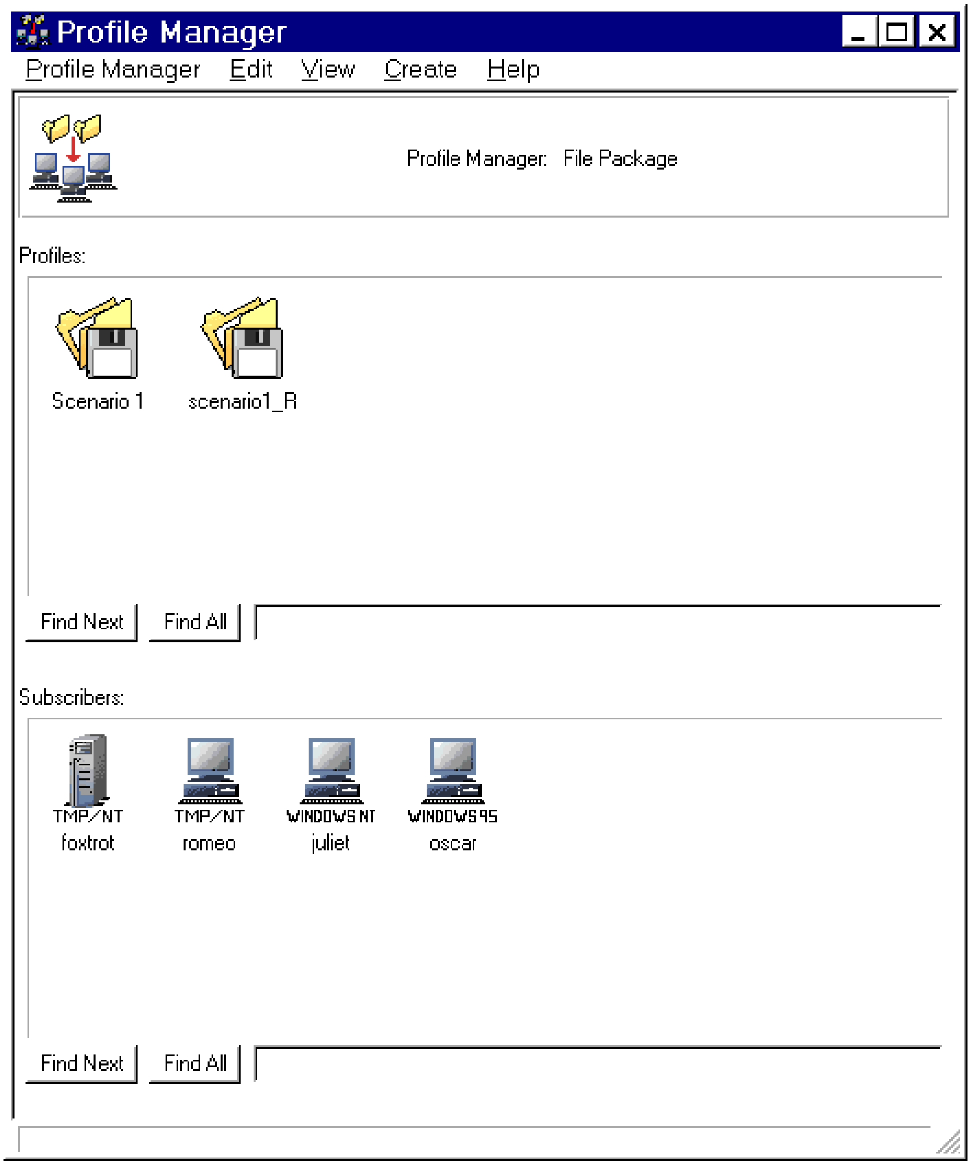


Subscribers
Subscribers for Profile Manager: File Package
Current Subscribers:
Available to become Subscribers:
<< Query <<
Set Subscriptions & Close
Set Subscriptions
Cancel
Help

```
foxtrot   (Managed_Node)
romeo   (Managed_Node)
juliet   (Pc_Managed_Node)
oscar   (Pc_Managed_Node)
```

```
Autopacks   (ProfileManager)
SoftwareDistribution   (ProfileM
SwDist   (ProfileManager)
SwDistrib   (ProfileManager)
TivoliDefaultPhoneProfileMgr   (
hp   (Managed_Node)
rs600011   (Managed_Node)
rs600020   (Managed_Node)
rs600024   (Managed_Node)
```

Figure 102


Profile Manager
Profile Manager Edit View Create Help
Profile Manager: File Package
Profiles:
Scenario 1
scenario1_R
Find Next
Find All
Subscribers:
TMP/NT
foxtrot
TMP/NT
romeo
WINDOWS NT
juliet
WINDOWS95
oscar
Find Next
Find All

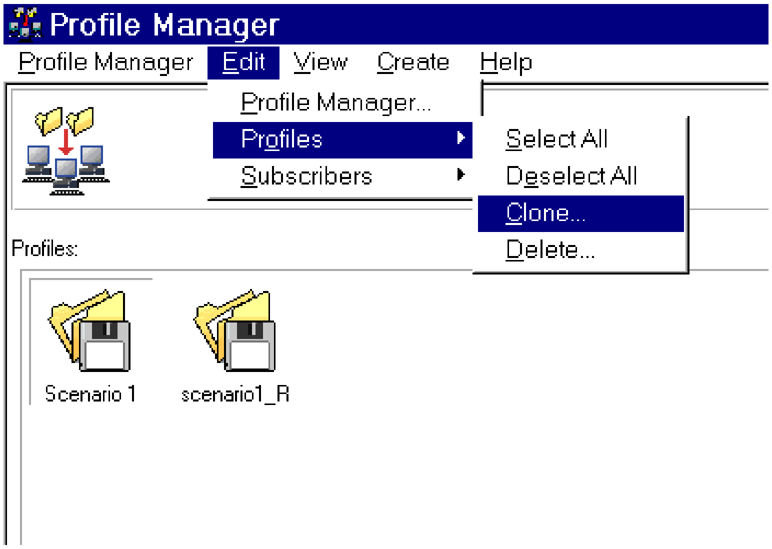
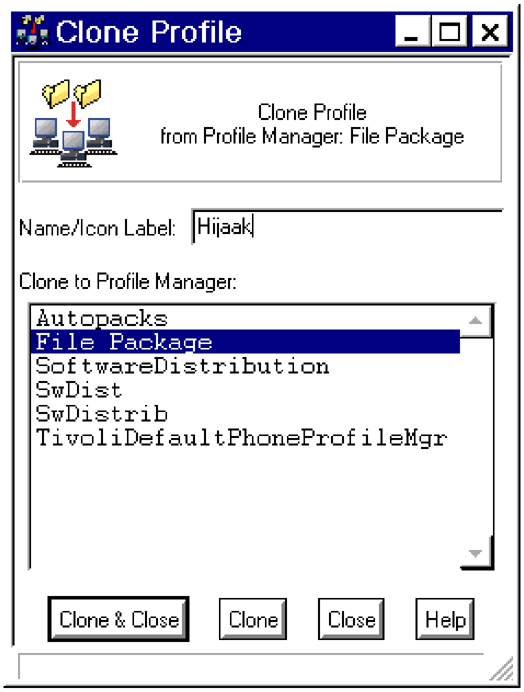

Profile Manager
Profile Manager
Edit
View
Create
Help
Profile Manager...
Profiles
Subscribers
Select All
Deselect All
Clone...
Delete...
Profiles:
Scenario 1
scenario1_R

Figure 104



Clone Profile
from Profile Manager: File Package

Name/Icon Label: Hijaak

Clone to Profile Manager:

```
Autopacks
File Package
SoftwareDistribution
SwDist
SwDistrib
TivoliDefaultPhoneProfileMgr
```

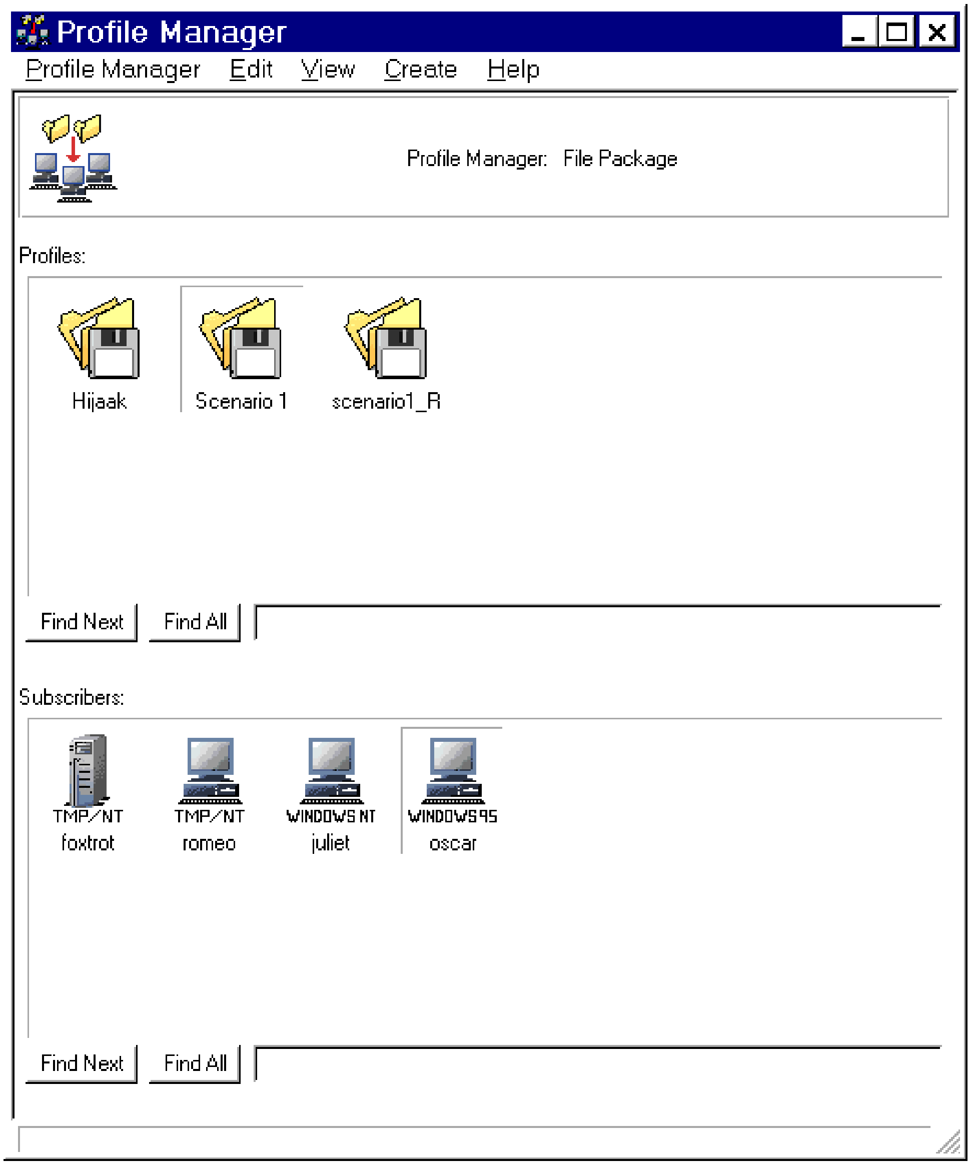
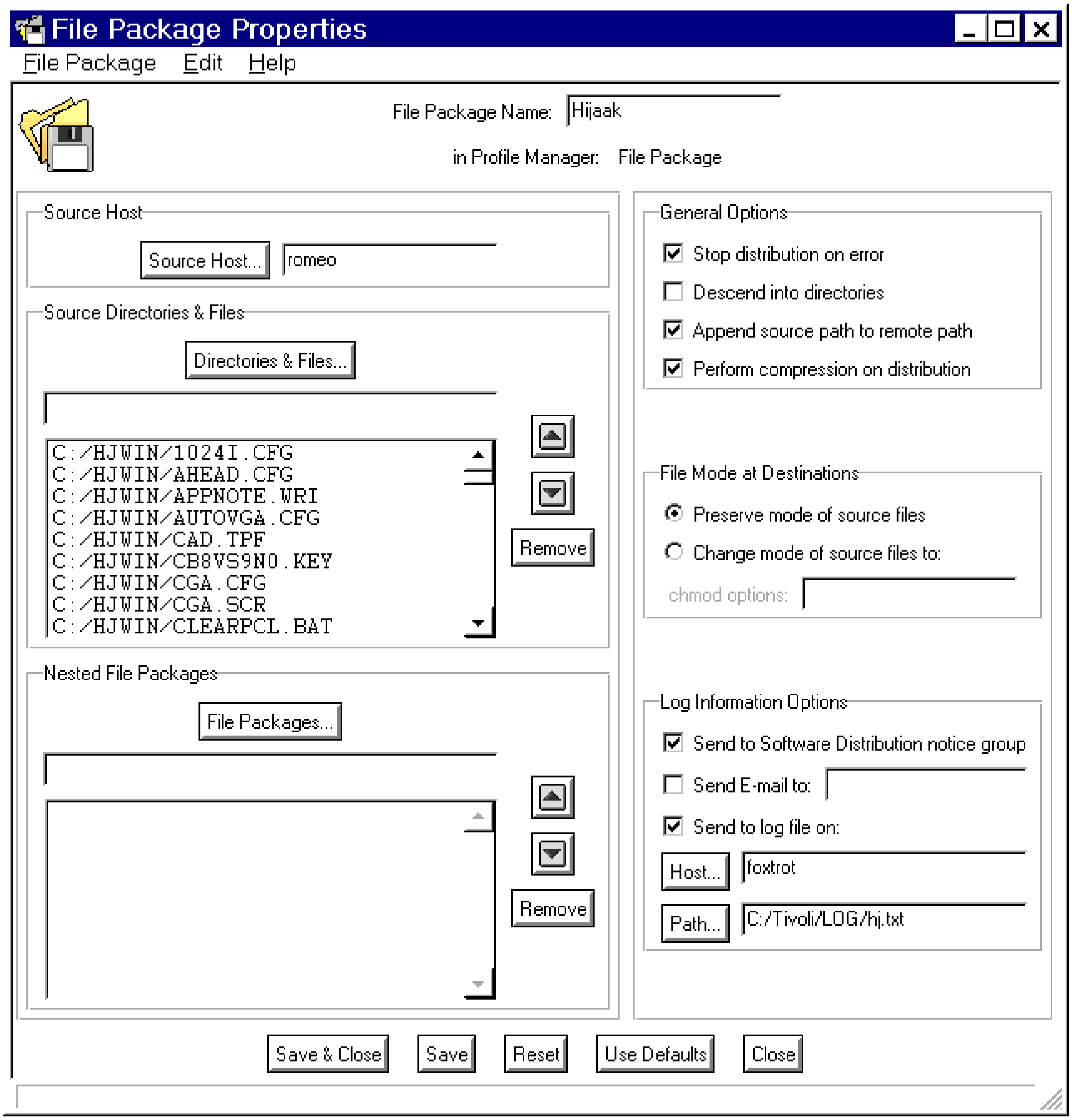

Profile Manager
Profile Manager
Edit
View
Create
Help
Profile Manager: File Package
Profiles:
Hijaak
Scenario 1
scenario1_R
Find Next
Find All
Subscribers:
TMP/NT
foxtrot
TMP/NT
romeo
WINDOWS NT
juliet
WINDOWS95
oscar
Find Next
Find All

Figure 106



File Package Properties

File Package Name: Hijaak

in Profile Manager: File Package

Source Host

romeo

Source Directories & Files

```
C:/HJWIN/1024I.CFG
C:/HJWIN/AHEAD.CFG
C:/HJWIN/APPNOTE.WRI
C:/HJWIN/AUTOVGA.CFG
C:/HJWIN/CAD.TPF
C:/HJWIN/CB8VS9N0.KEY
C:/HJWIN/CGA.CFG
C:/HJWIN/CGA.SCR
C:/HJWIN/CLEARPCL.BAT
```

Nested File Packages

General Options

☑ Stop distribution on error

□ Descend into directories

☑ Append source path to remote path

☑ Perform compression on distribution

File Mode at Destinations

● Preserve mode of source files

○ Change mode of source files to:

chmod options:

Log Information Options

☑ Send to Software Distribution notice group

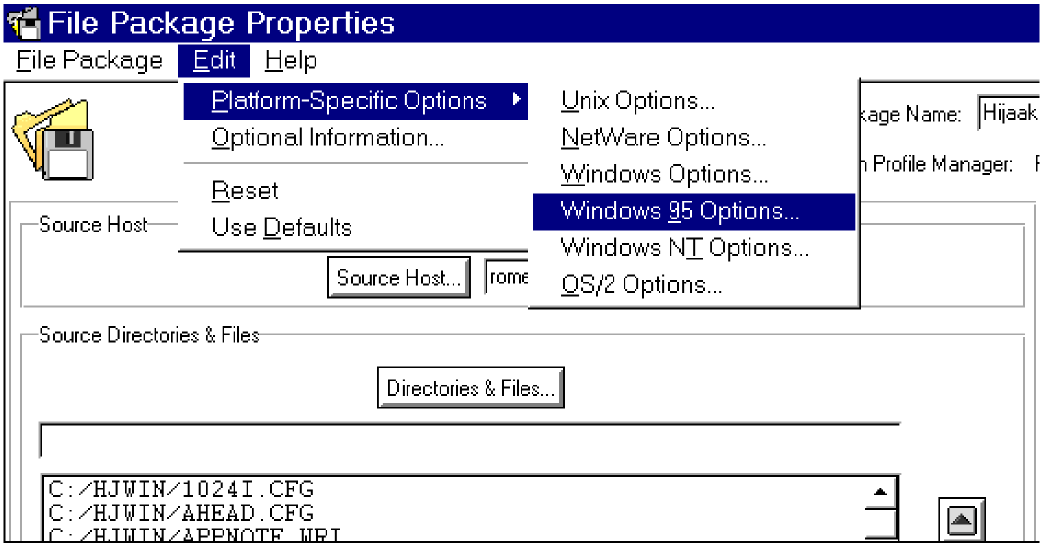
□ Send E-mail to:

☑ Send to log file on:

Host... foxtrot

Path... C:/Tivoli/LOG/hj.txt

Figure 107

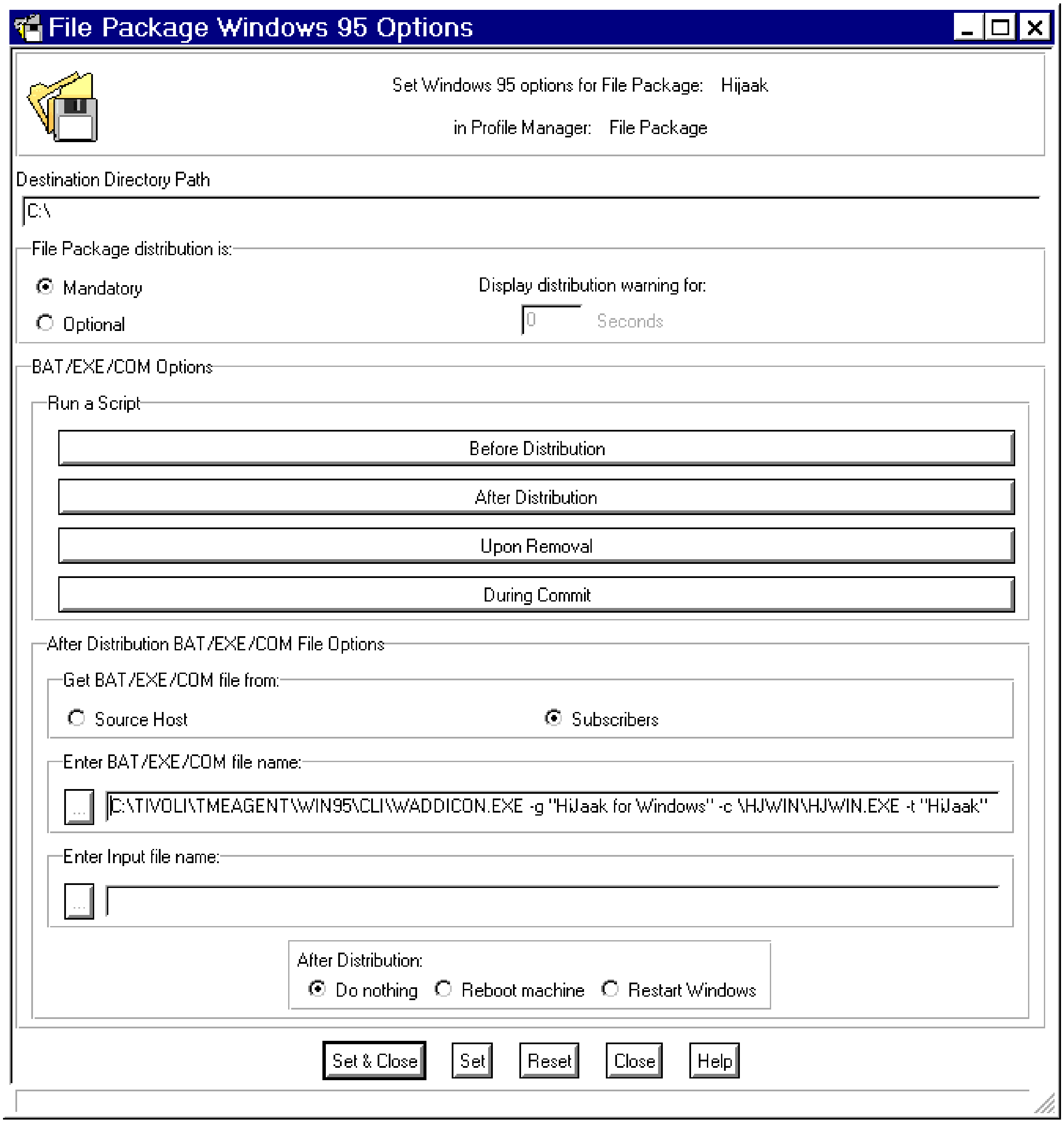


kage Name: Hijaak

Source Host... rome

```
C:/HJWIN/1024I.CFG
C:/HJWIN/AHEAD.CFG
C:/HJWIN/APPNOTE.WRI
```

Figure 108



Set Windows 95 options for File Package: Hijaak

in Profile Manager: File Package

Destination Directory Path: C:\

File Package distribution is:

● Mandatory

○ Optional

Display distribution warning for: 0 Seconds

BAT/EXE/COM Options

Run a Script

After Distribution BAT/EXE/COM File Options

Get BAT/EXE/COM file from:

○ Source Host ● Subscribers

Enter BAT/EXE/COM file name:

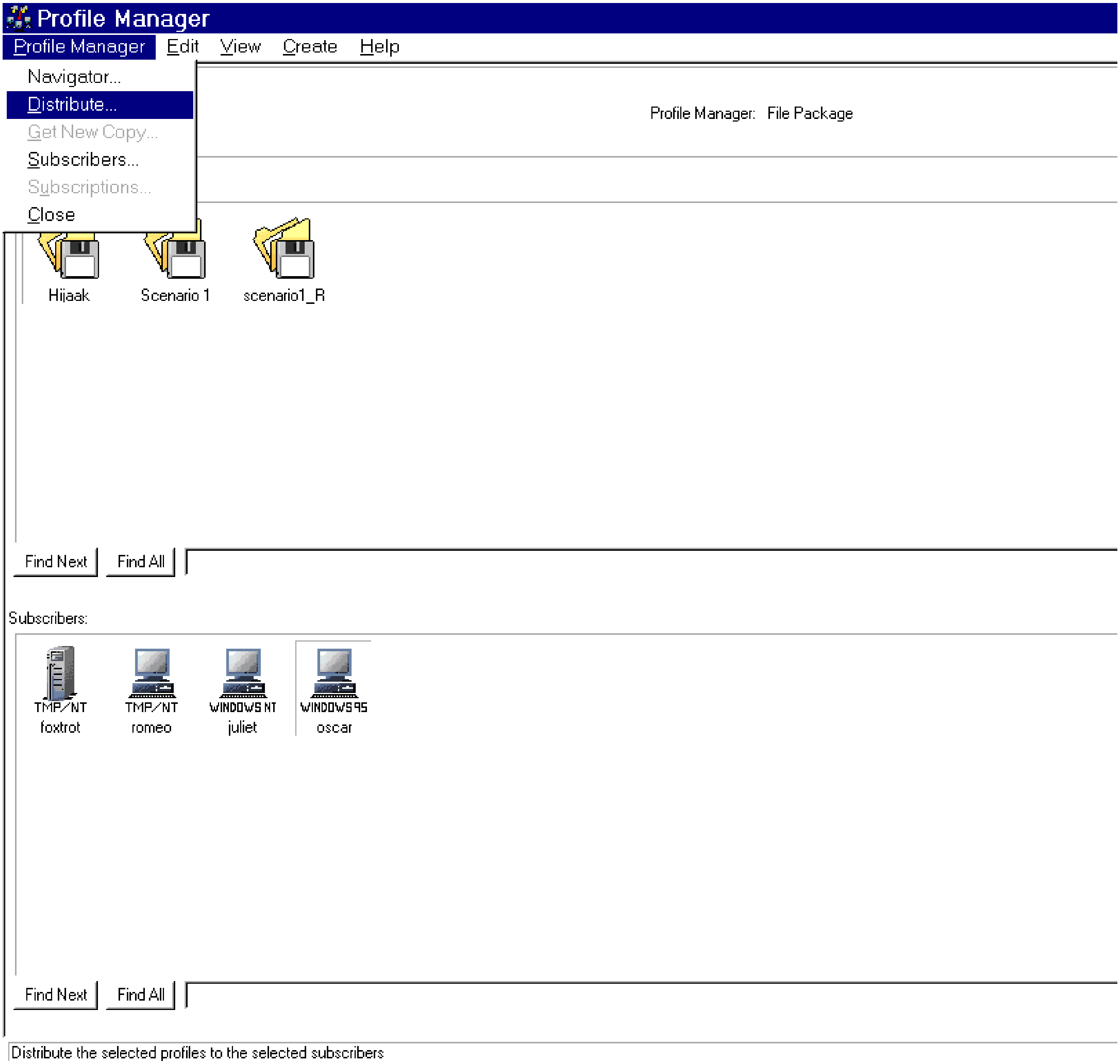
```
C:\TIVOLI\TMEAGENT\WIN95\CLI\WADDICON.EXE -g "HiJaak for Windows" -c \HJWIN\HJWIN.EXE -t "HiJaak"
```

Enter Input file name:

After Distribution:

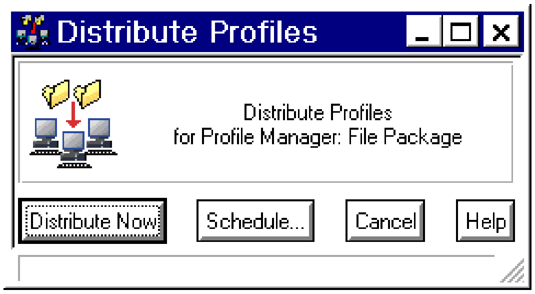
● Do nothing ○ Reboot machine ○ Restart Windows

Figure 109



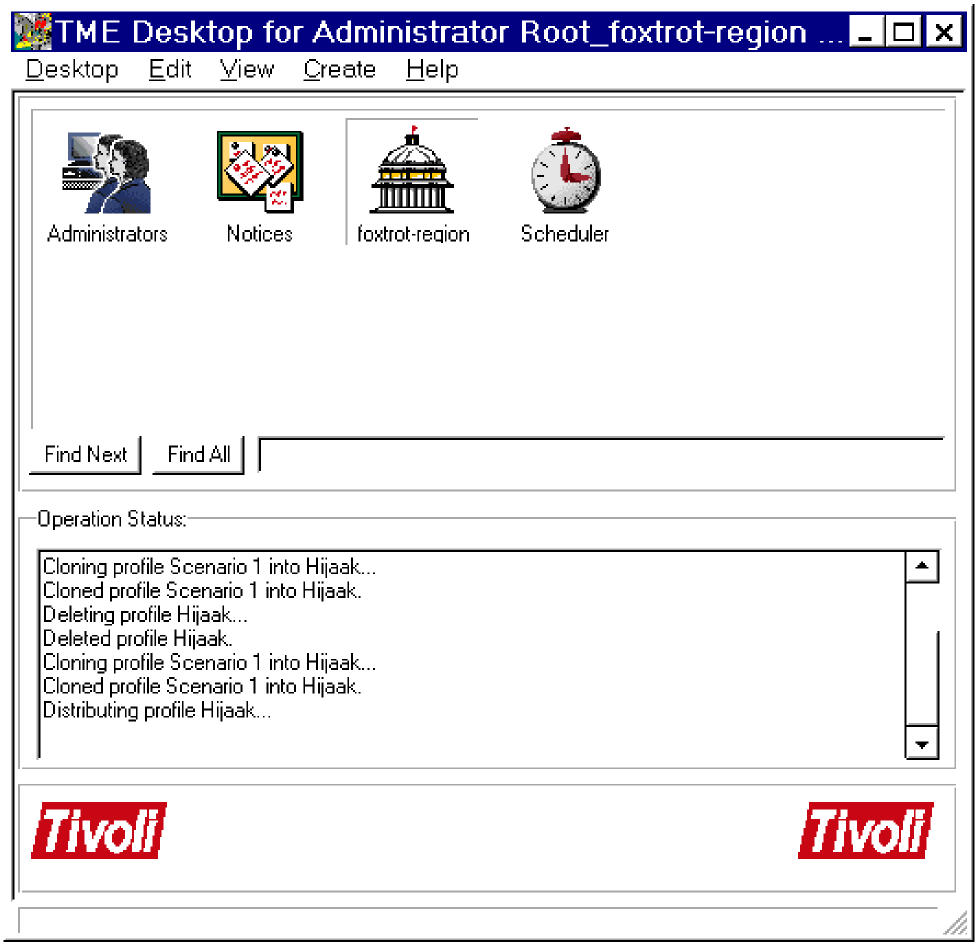
Distribute the selected profiles to the selected subscribers

Figure 110



Distribute Profiles
for Profile Manager: File Package

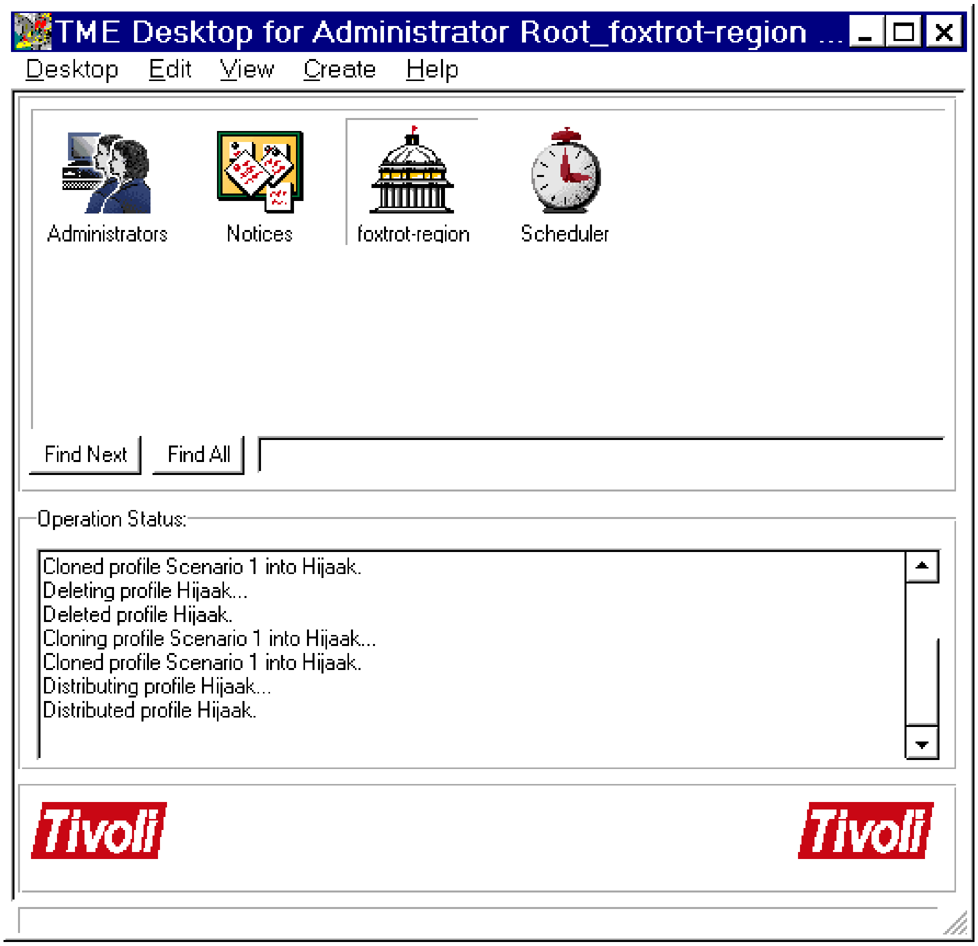
Figure 111



Operation Status:

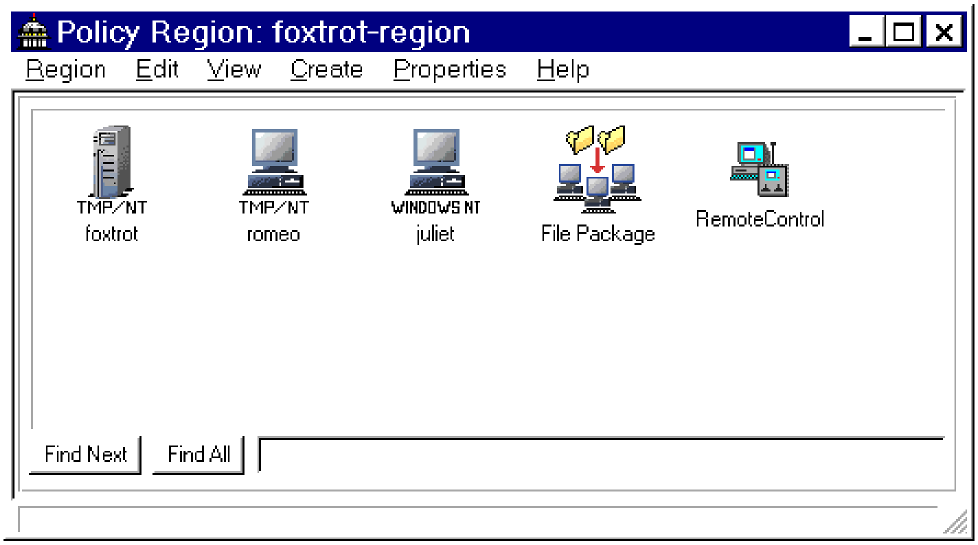
```
Cloning profile Scenario 1 into Hijaak...
Cloned profile Scenario 1 into Hijaak.
Deleting profile Hijaak...
Deleted profile Hijaak.
Cloning profile Scenario 1 into Hijaak...
Cloned profile Scenario 1 into Hijaak.
Distributing profile Hijaak...
```

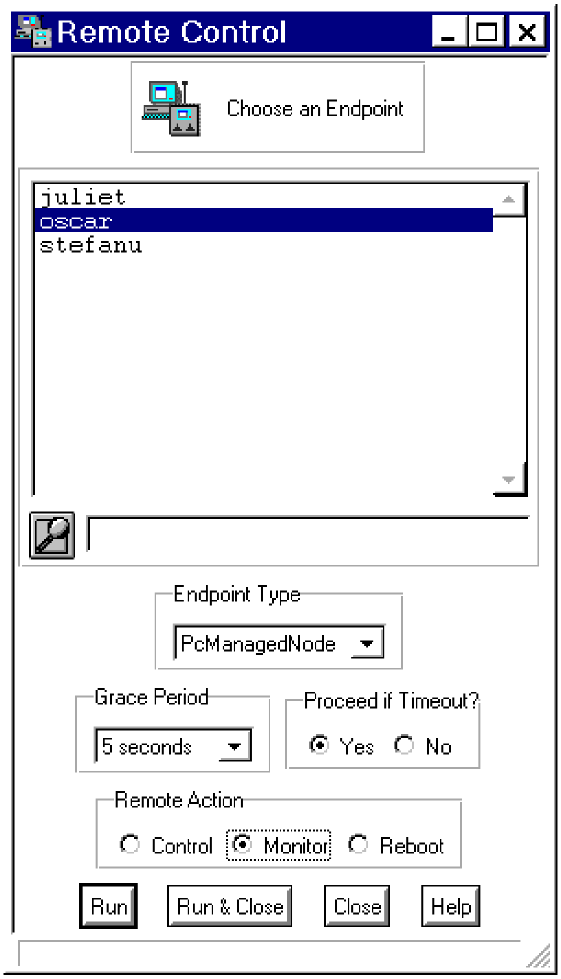
Figure 142



```
Cloned profile Scenario 1 into Hijaak.
Deleting profile Hijaak...
Deleted profile Hijaak.
Cloning profile Scenario 1 into Hijaak...
Cloned profile Scenario 1 into Hijaak.
Distributing profile Hijaak...
Distributed profile Hijaak.
```

Figure 113


Policy Region: foxtrot-region
Region
Edit
View
Create
Properties
Help
TMP/NT
foxtrot
TMP/NT
romeo
WINDOWS NT
juliet
File Package
RemoteControl
Find Next
Find All



Remote Control

Choose an Endpoint

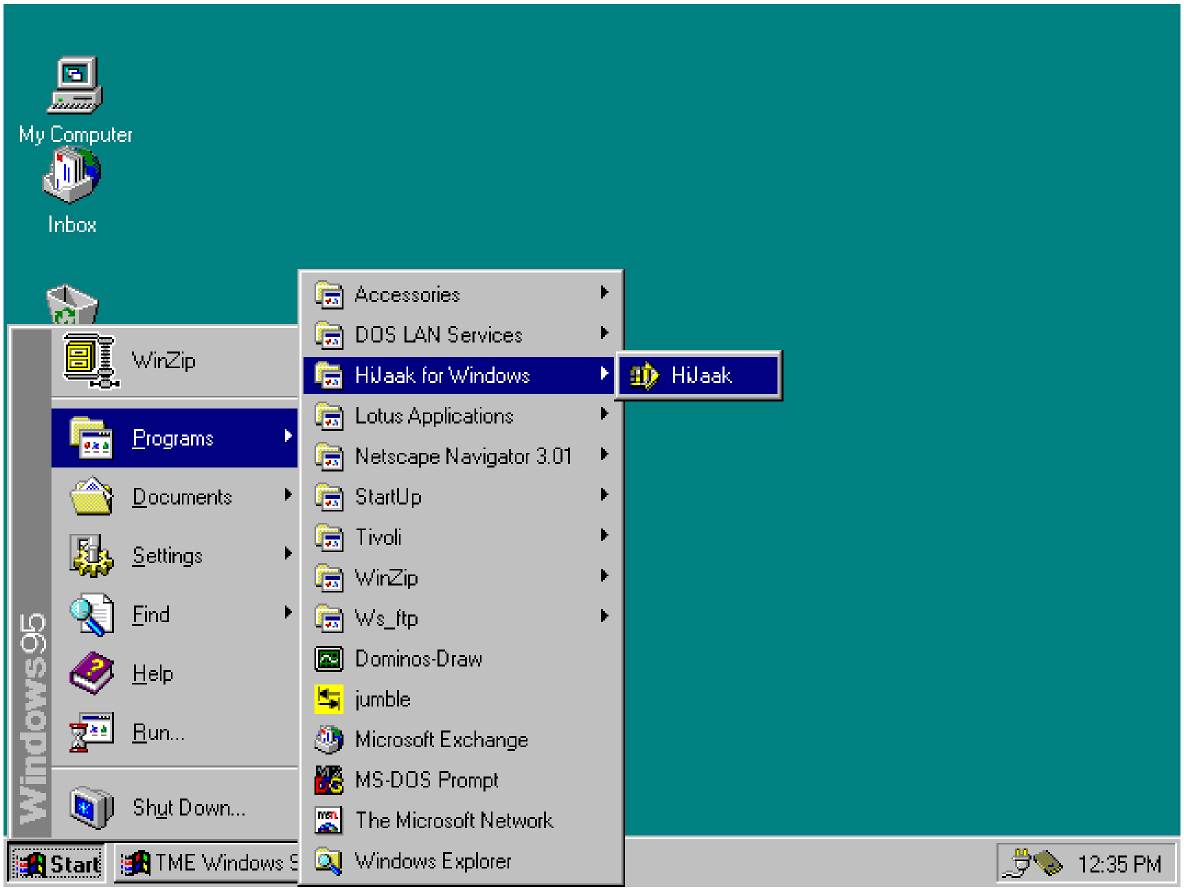
juliet
oscar
stefanu

Endpoint Type: PcManagedNode

Grace Period: 5 seconds

Proceed if Timeout? ● Yes ○ No

Remote Action: ○ Control ● Monitor ○ Reboot


My Computer
Inbox
WinZip
Programs
Documents
Settings
Find
Help
Run...
Shut Down...
Windows95
Accessories
DOS LAN Services
HiJaak for Windows
HiJaak
Lotus Applications
Netscape Navigator 3.01
StartUp
Tivoli
WinZip
Ws_ftp
Dominos-Draw
jumble
Microsoft Exchange
MS-DOS Prompt
The Microsoft Network
Windows Explorer
Start
TME Windows 9
12:35 PM

http://www.redbooks.ibm.com:80/SG244976/apprc.gif

Latest

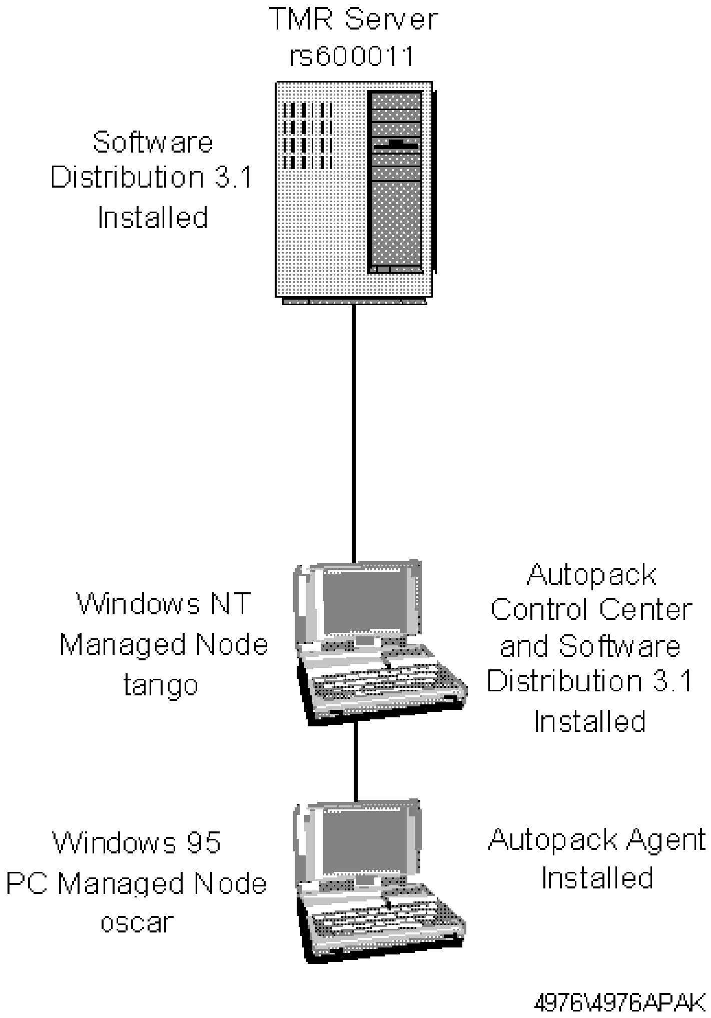
Show All

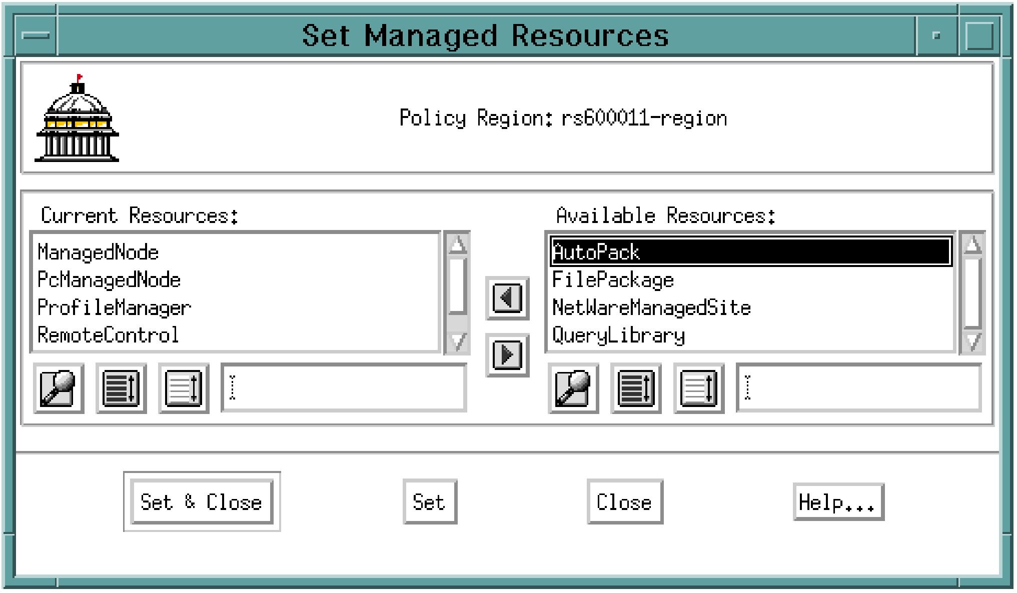
Hrm.

Wayback Machine doesn't have that page archived.
Want to search for all archived pages under
http://www.redbooks.ibm.com:80/SG244976/ ?

This page is available on the web!

Help make the Wayback Machine more complete!
Save this url in the Wayback Machine


TMR Server
rs600011
Software
Distribution 3.1
Installed
Windows NT
Managed Node
tango
Autopack
Control Center
and Software
Distribution 3.1
Installed
Windows 95
PC Managed Node
oscar
Autopack Agent
Installed
4976\4976APAK



Policy Region: rs600011-region

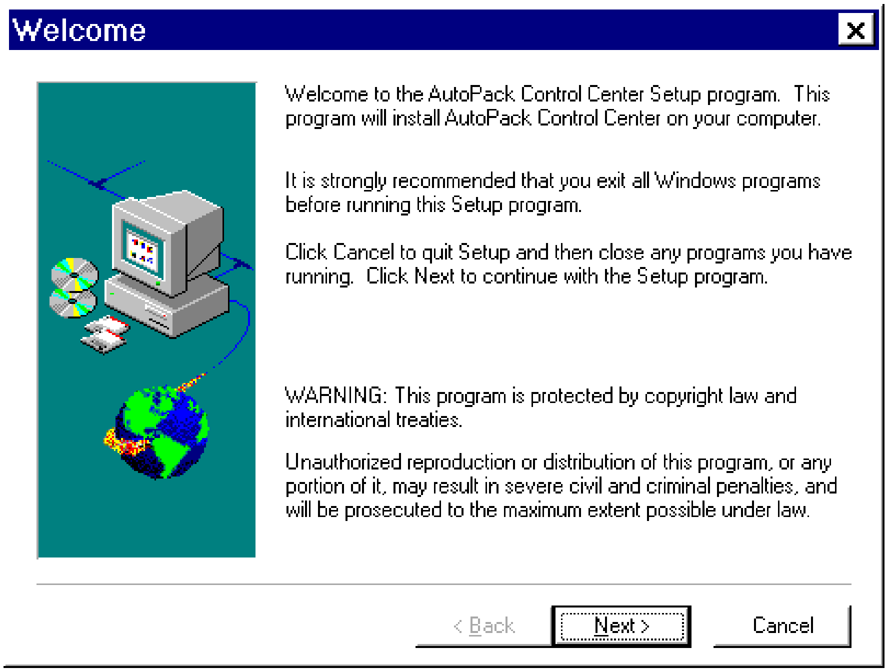
Current Resources:

- ManagedNode
- PcManagedNode
- ProfileManager
- RemoteControl

Available Resources:

- AutoPack
- FilePackage
- NetWareManagedSite
- QueryLibrary

Figure 119



Welcome to the AutoPack Control Center Setup program. This program will install AutoPack Control Center on your computer.

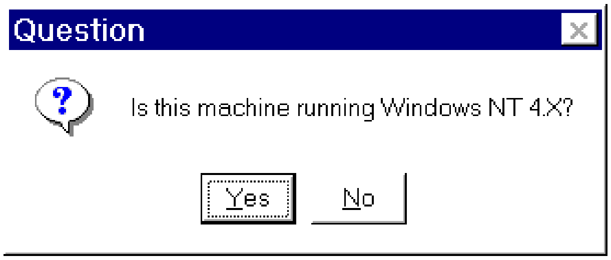
It is strongly recommended that you exit all Windows programs before running this Setup program.

Click Cancel to quit Setup and then close any programs you have running. Click Next to continue with the Setup program.

WARNING: This program is protected by copyright law and international treaties.

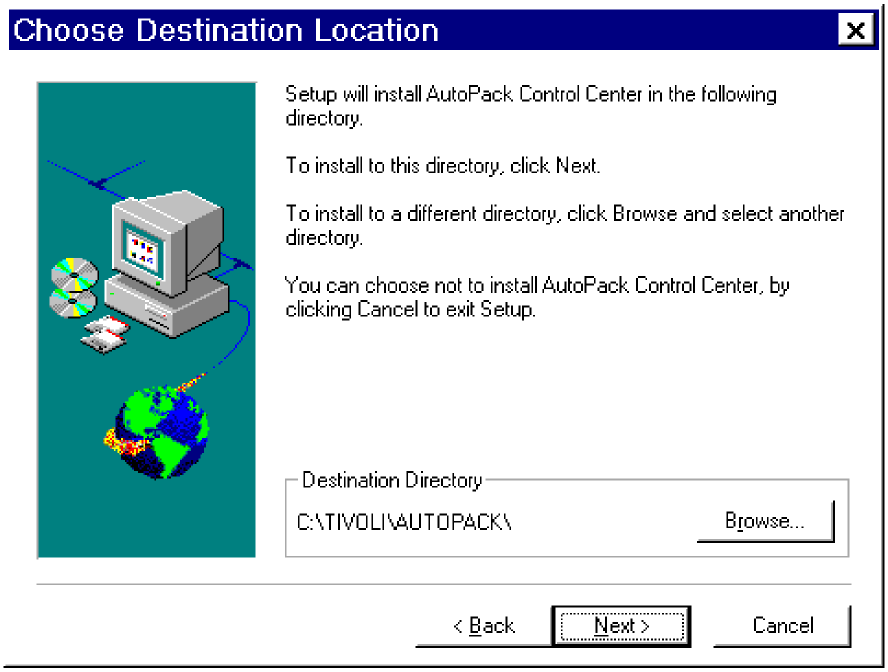
Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law.

Figure 120



Is this machine running Windows NT 4.X?

Figure 121



Setup will install AutoPack Control Center in the following directory.

To install to this directory, click Next.

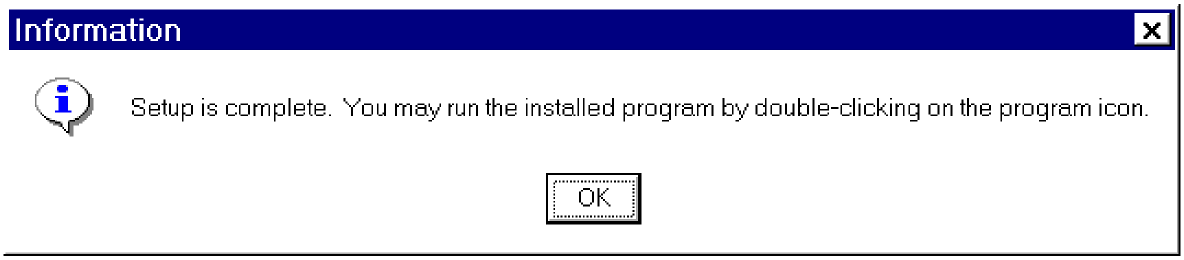
To install to a different directory, click Browse and select another directory.

You can choose not to install AutoPack Control Center, by clicking Cancel to exit Setup.

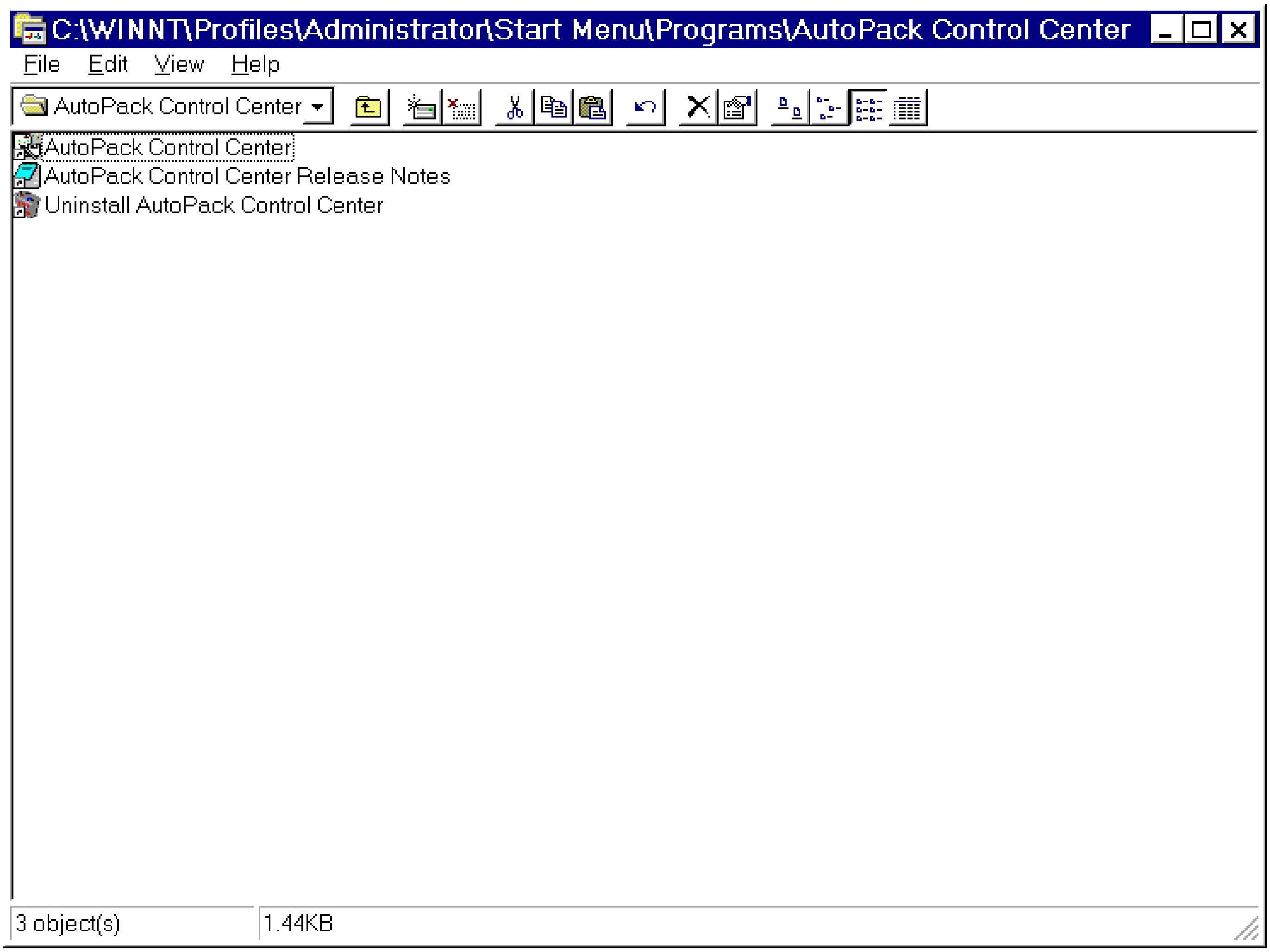
Destination Directory

C:\TIVOLI\AUTOPACK\

Figure 122



Setup is complete. You may run the installed program by double-clicking on the program icon.


C:\WINNT\Profiles\Administrator\Start Menu\Programs\AutoPack Control Center
File
Edit
View
Help
AutoPack Control Center

AutoPack Control Center

AutoPack Control Center Release Notes

Uninstall AutoPack Control Center

3 object(s)

1.44KB

Figure 124

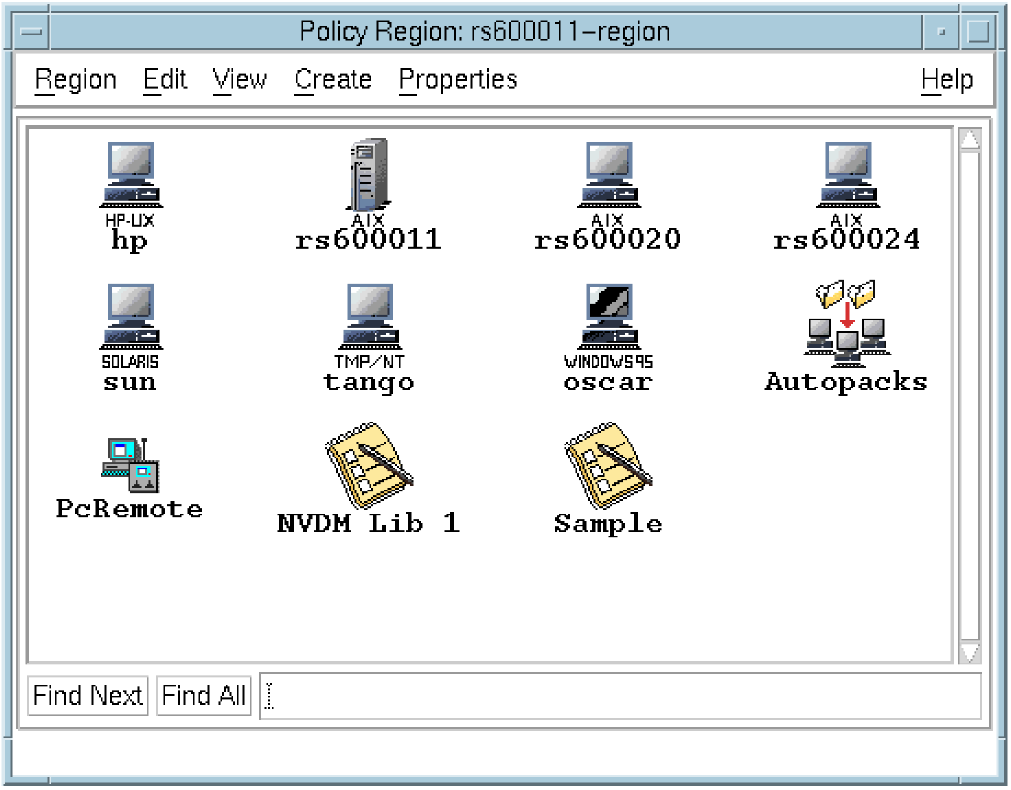
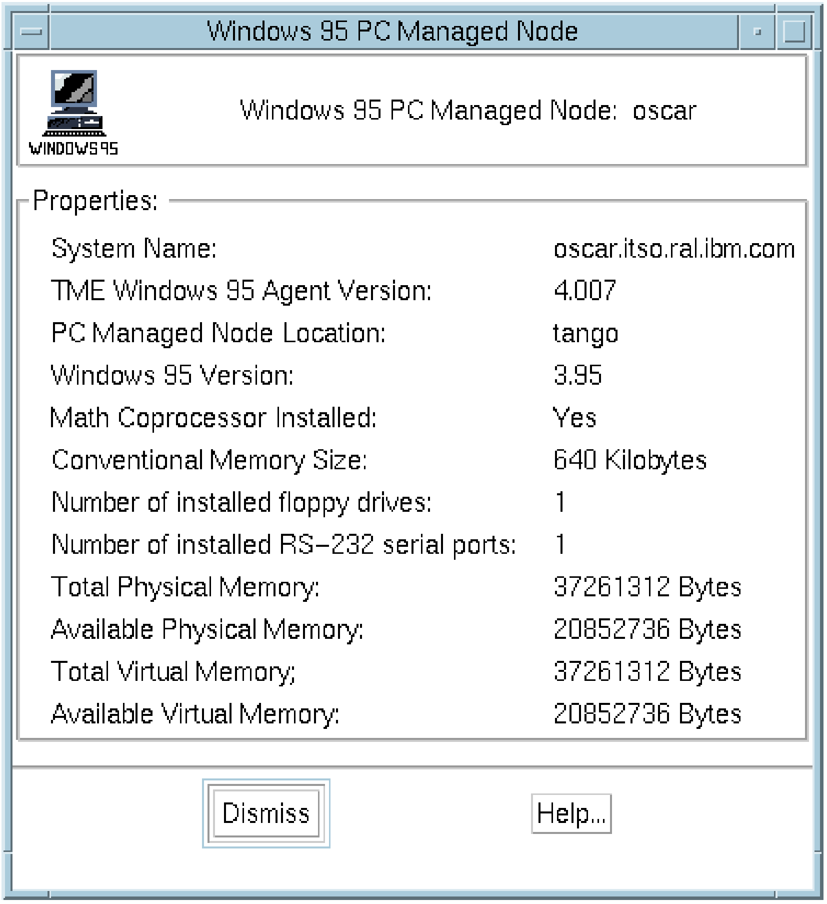

Policy Region: rs600011–region
Region
Edit
View
Create
Properties
Help
HP-UX
hp
AIX
rs600011
AIX
rs600020
AIX
rs600024
SOLARIS
sun
TMP/NT
tango
WINDOWS95
oscar
Autopacks
PcRemote
NVDM Lib 1
Sample
Find Next
Find All

Figure 125



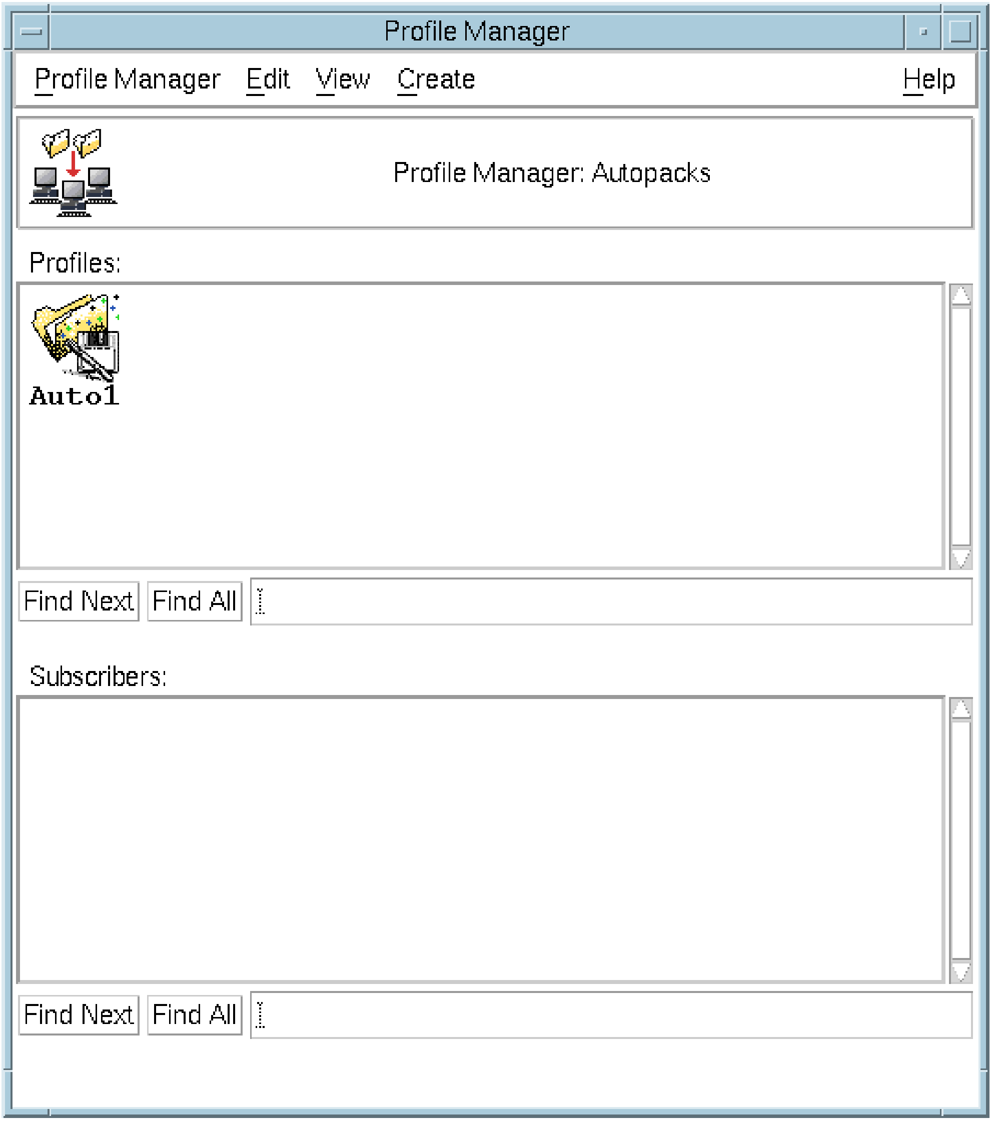
Windows 95 PC Managed Node

Windows 95 PC Managed Node: oscar

Properties:

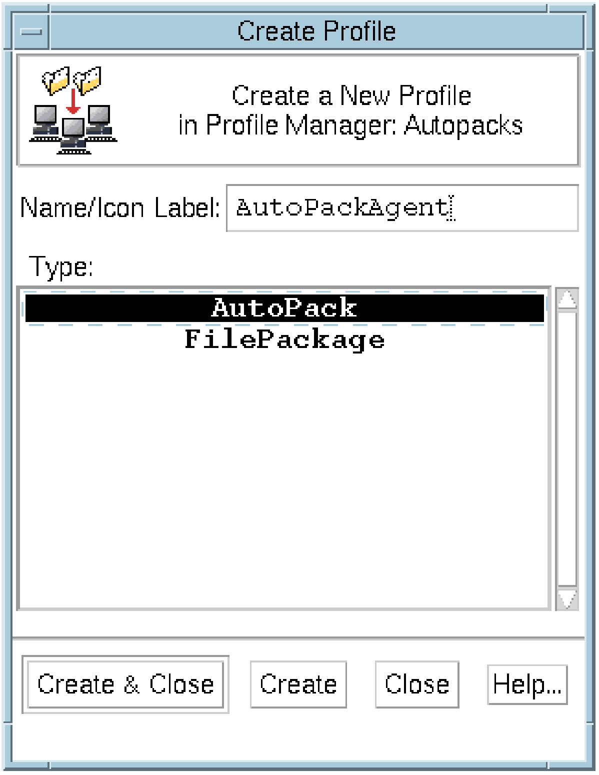
System Name:	oscar.itso.ral.ibm.com
TME Windows 95 Agent Version:	4.007
PC Managed Node Location:	tango
Windows 95 Version:	3.95
Math Coprocessor Installed:	Yes
Conventional Memory Size:	640 Kilobytes
Number of installed floppy drives:	1
Number of installed RS−232 serial ports:	1
Total Physical Memory:	37261312 Bytes
Available Physical Memory:	20852736 Bytes
Total Virtual Memory;	37261312 Bytes
Available Virtual Memory:	20852736 Bytes

Figure 120



Profile Manager
Profile Manager Edit View Create Help
Profile Manager: Autopacks
Profiles:
Auto1
Find Next
Find All
Subscribers:
Find Next
Find All

Figure 127



Name/Icon Label: AutoPackAgent

AutoPack
FilePackage

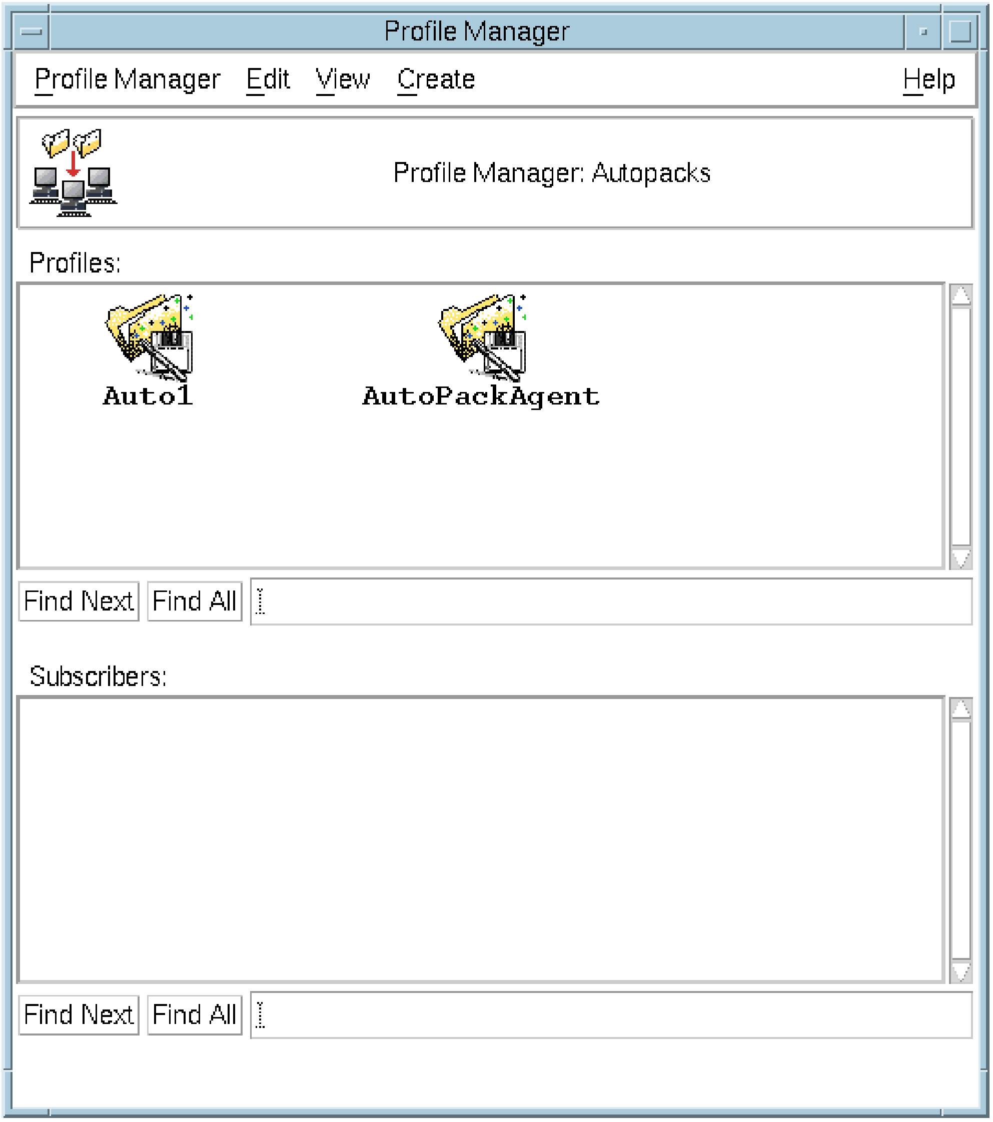
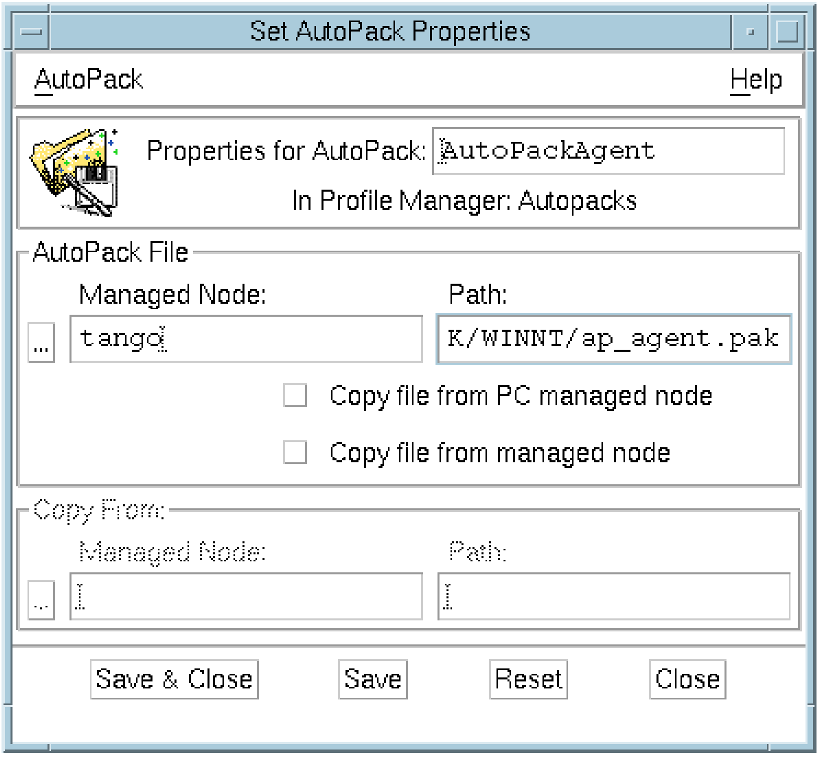

Profile Manager
Profile Manager Edit View Create Help
Profile Manager: Autopacks
Profiles:
Auto1
AutoPackAgent
Find Next
Find All
Subscribers:
Find Next
Find All

Figure 129



Properties for AutoPack: AutoPackAgent

In Profile Manager: Autopacks

AutoPack File

Managed Node: tango

Path: K/WINNT/ap_agent.pak

□ Copy file from PC managed node

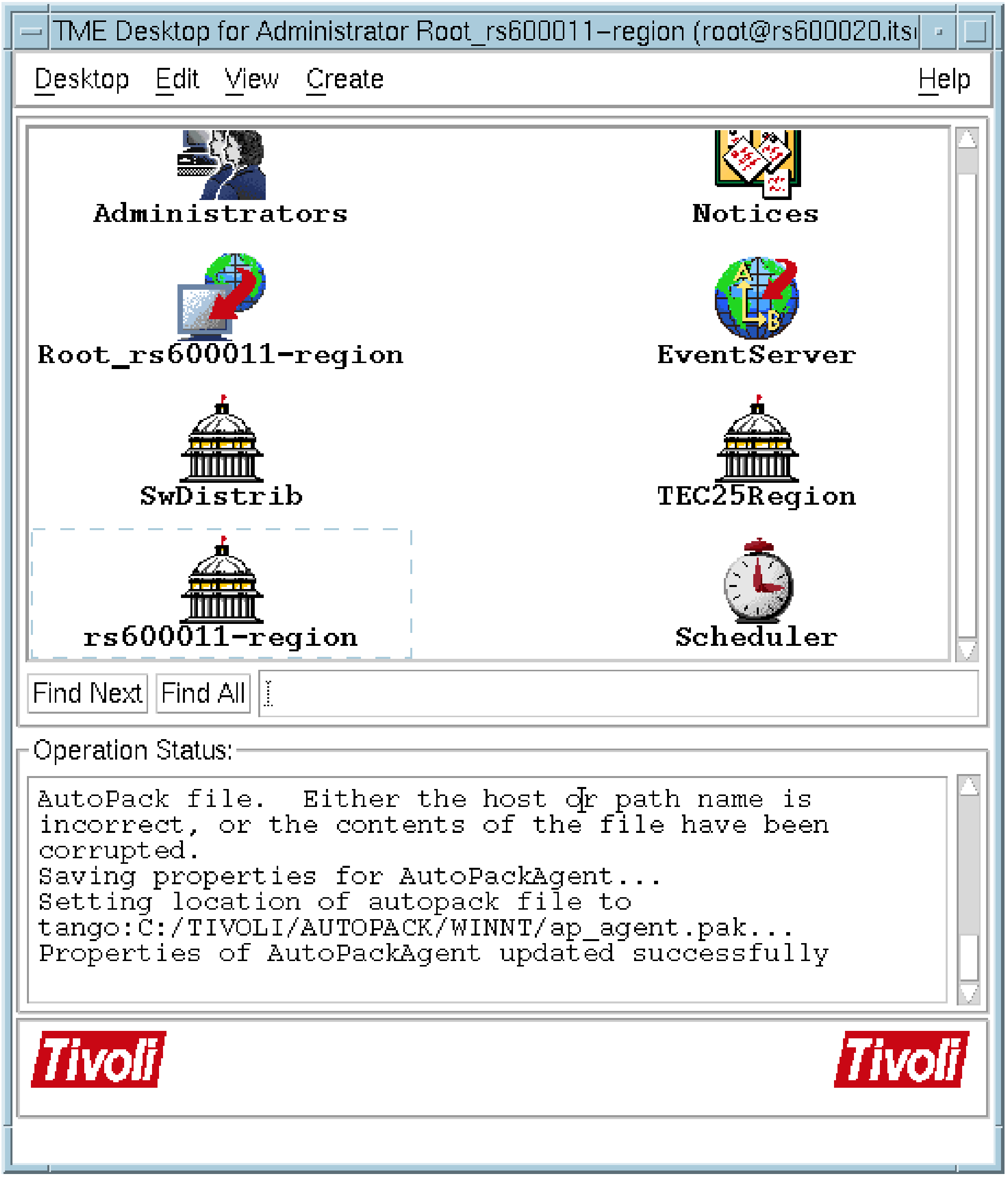
□ Copy file from managed node

Copy From:

Managed Node:

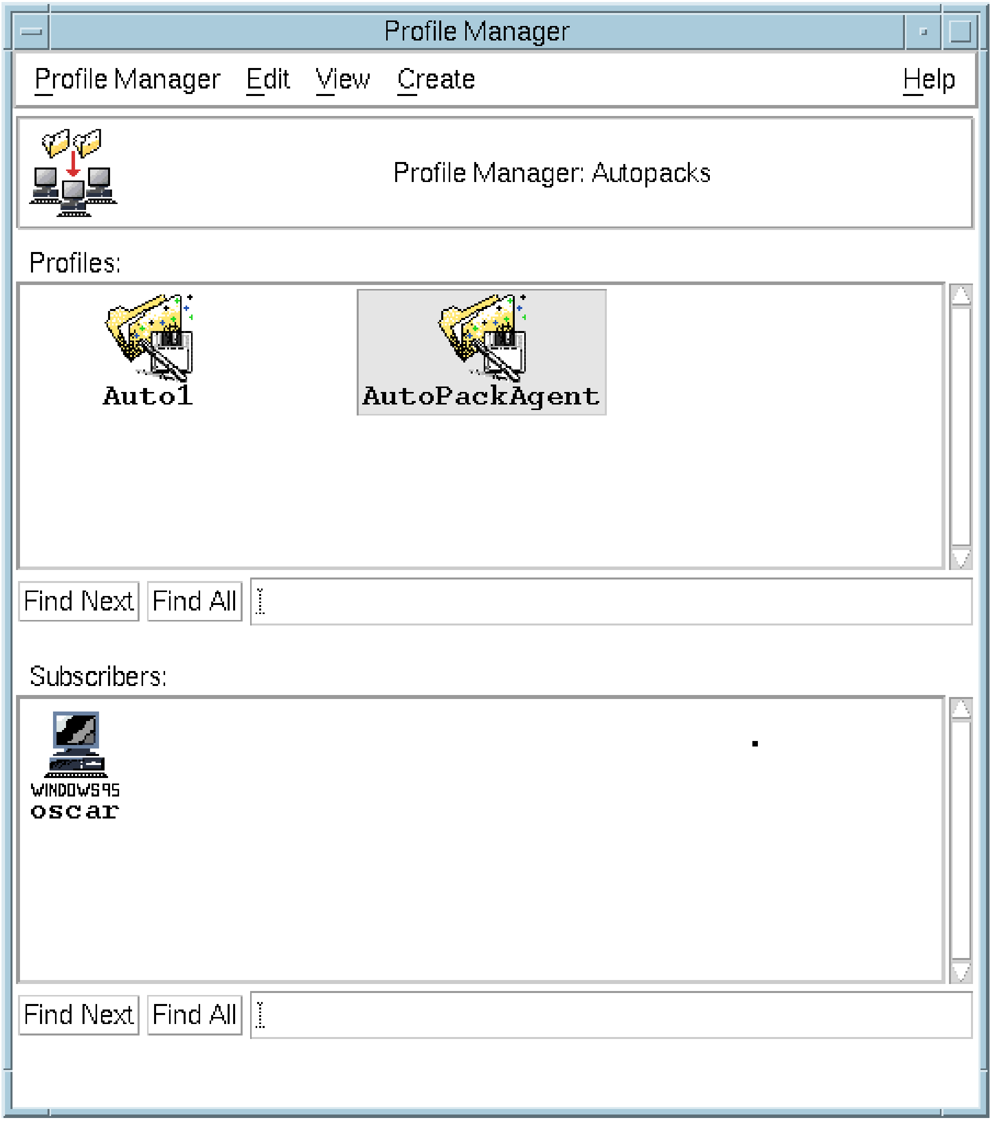
Path:

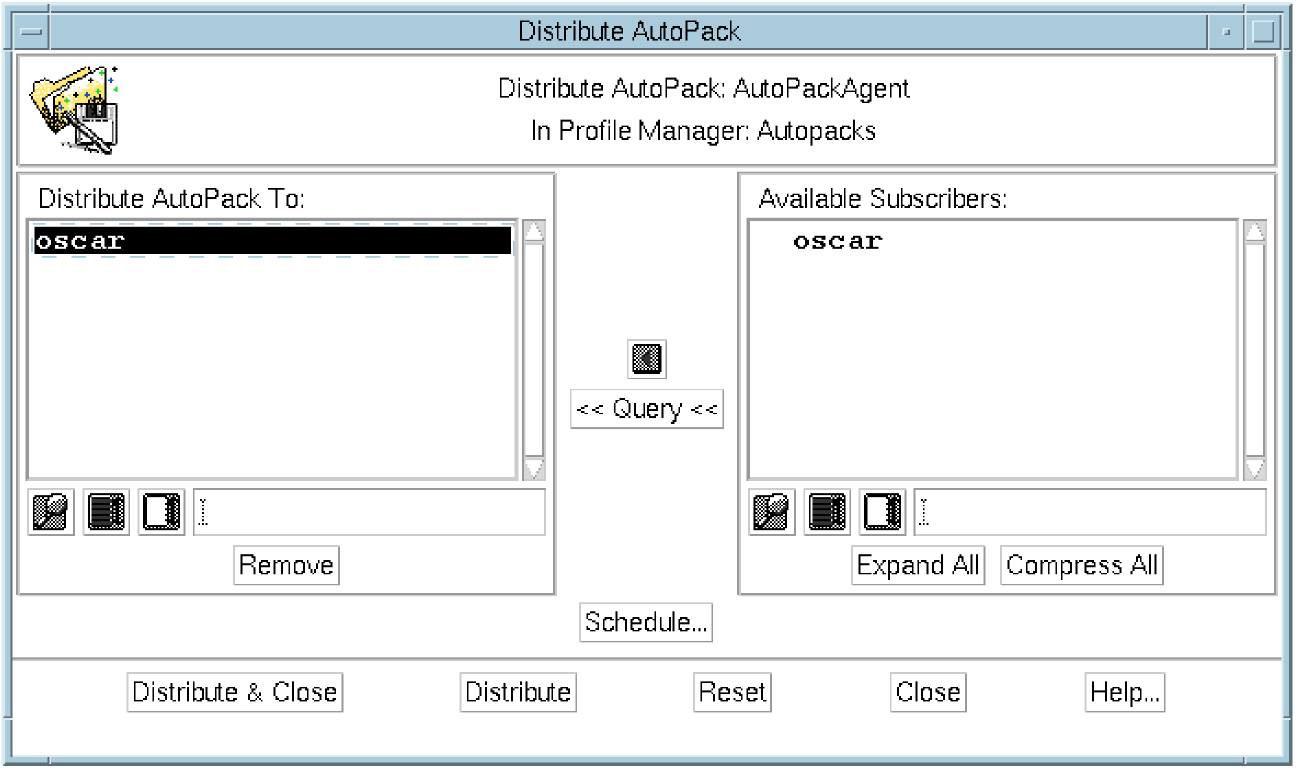
Figure 130



```
AutoPack file.  Either the host or path name is
incorrect, or the contents of the file have been
corrupted.
Saving properties for AutoPackAgent...
Setting location of autopack file to
tango:C:/TIVOLI/AUTOPACK/WINNT/ap_agent.pak...
Properties of AutoPackAgent updated successfully
```

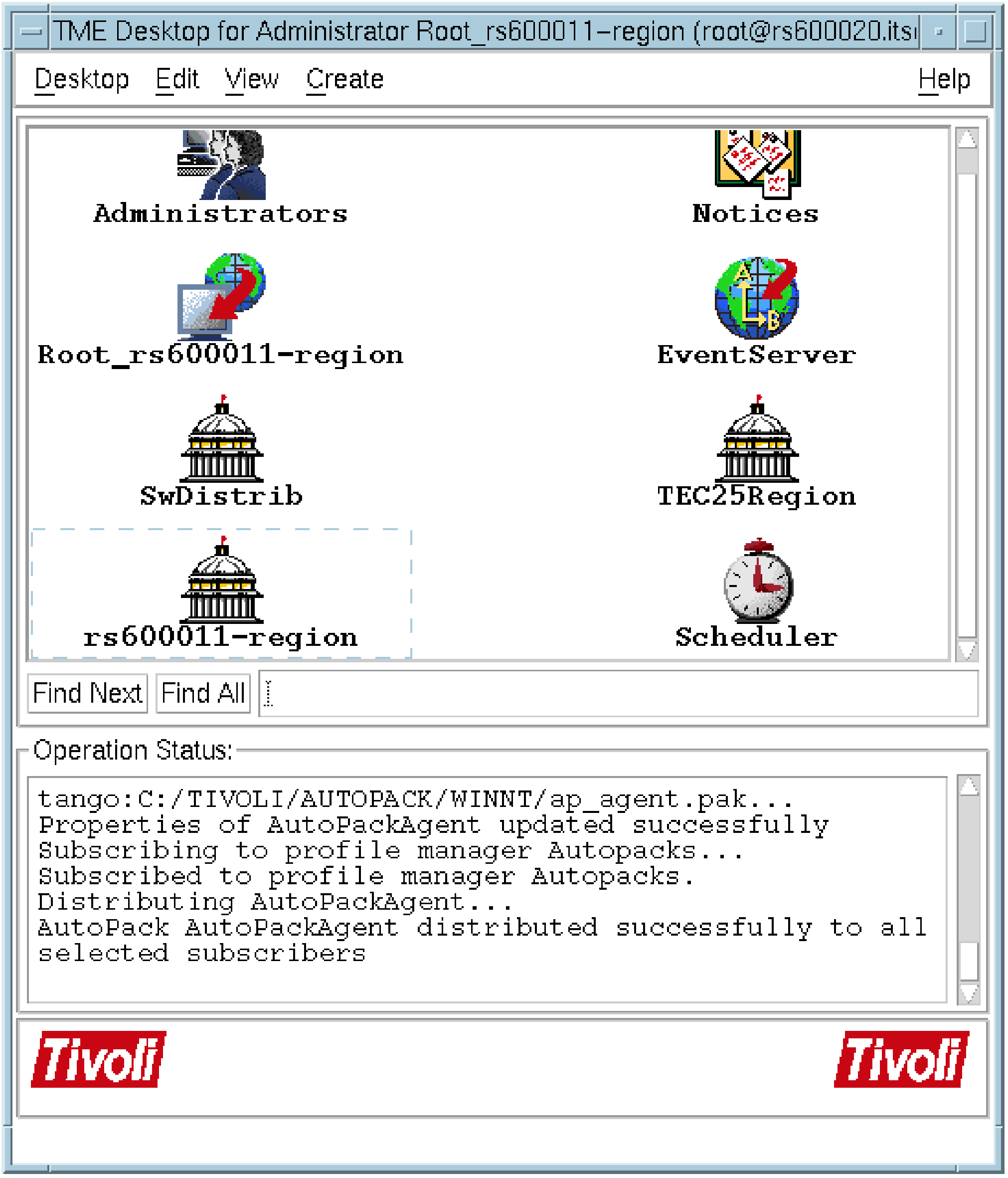
Figure 131


Profile Manager
Profile Manager
Edit
View
Create
Help
Profile Manager: Autopacks
Profiles:
Auto1
AutoPackAgent
Find Next
Find All
Subscribers:
WINDOWS95
oscar
Find Next
Find All



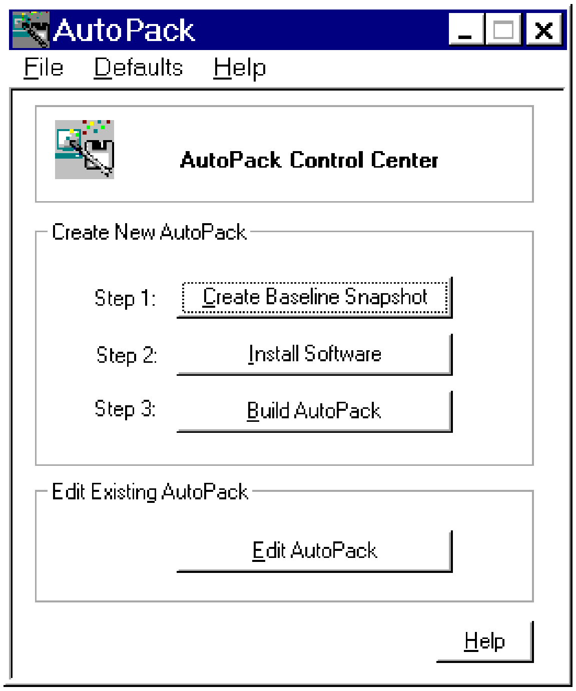
Distribute AutoPack
Distribute AutoPack: AutoPackAgent
In Profile Manager: Autopacks
Distribute AutoPack To:
oscar
Remove
<< Query <<
Available Subscribers:
oscar
Expand All
Compress All
Schedule...
Distribute & Close
Distribute
Reset
Close
Help...

Figure 133



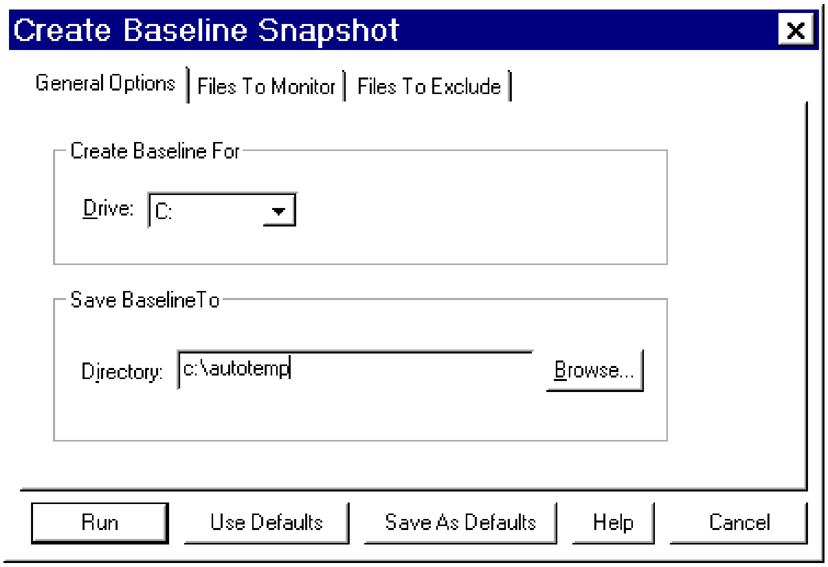
```
tango:C:/TIVOLI/AUTOPACK/WINNT/ap_agent.pak...
Properties of AutoPackAgent updated successfully
Subscribing to profile manager Autopacks...
Subscribed to profile manager Autopacks.
Distributing AutoPackAgent...
AutoPack AutoPackAgent distributed successfully to all
selected subscribers
```

Figure 134



AutoPack
File
Defaults
Help
AutoPack Control Center
Create New AutoPack
Step 1:
Create Baseline Snapshot
Step 2:
Install Software
Step 3:
Build AutoPack
Edit Existing AutoPack
Edit AutoPack
Help

Figure 135



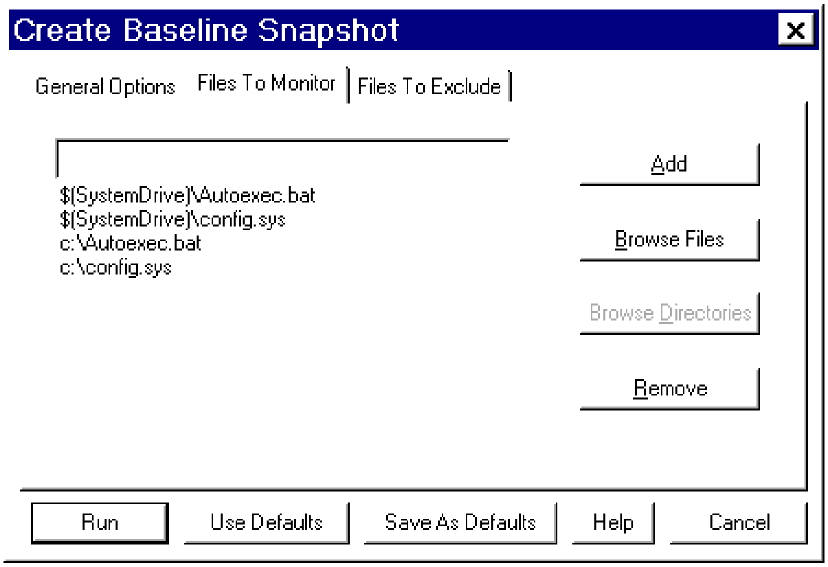
Create Baseline For

Drive: C:

Save BaselineTo

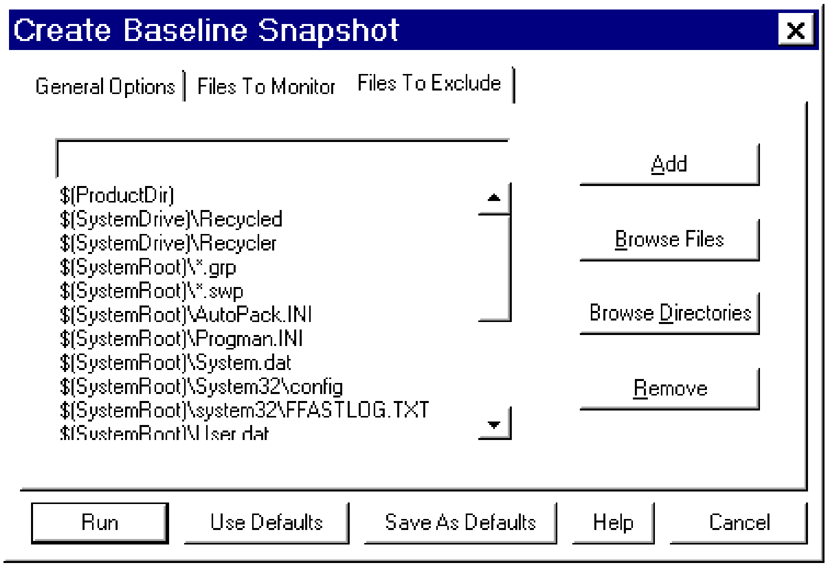
Directory: c:\autotemp

Figure 136



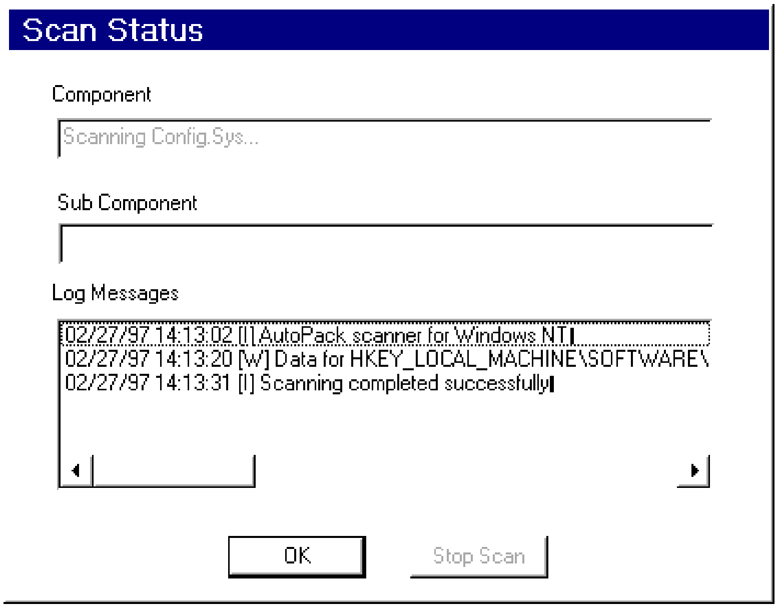
$(SystemDrive)\Autoexec.bat
$(SystemDrive)\config.sys
c:\Autoexec.bat
c:\config.sys

Figure 137



$(ProductDir)
$(SystemDrive)\Recycled
$(SystemDrive)\Recycler
$(SystemRoot)*.grp
$(SystemRoot)*.swp
$(SystemRoot)\AutoPack.INI
$(SystemRoot)\Progman.INI
$(SystemRoot)\System.dat
$(SystemRoot)\System32\config
$(SystemRoot)\system32\FFASTLOG.TXT
$(SystemRoot)\User.dat

Figure 138



Scan Status

Component

Scanning Config.Sys...

Sub Component

Log Messages

```
02/27/97 14:13:02 [I] AutoPack scanner for Windows NT
02/27/97 14:13:20 [W] Data for HKEY_LOCAL_MACHINE\SOFTWARE\
02/27/97 14:13:31 [I] Scanning completed successfully
```

https://web.archive.org/web/19970803065324/http://www.redbooks.ibm.com:80/SG244976/gtl3022.gif

Figure 139

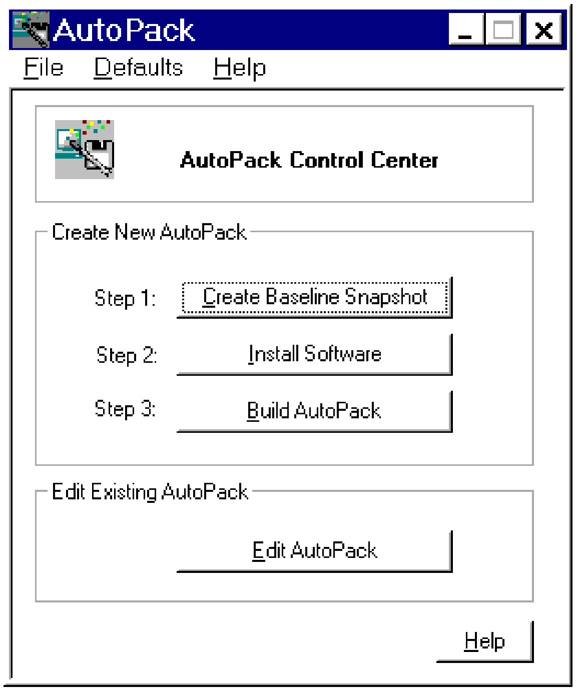
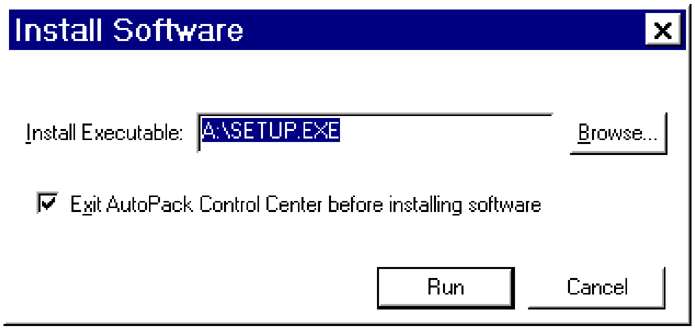

AutoPack
File
Defaults
Help
AutoPack Control Center
Create New AutoPack
Step 1:
Create Baseline Snapshot
Step 2:
Install Software
Step 3:
Build AutoPack
Edit Existing AutoPack
Edit AutoPack
Help

Figure 140



Install Software

Install Executable: A:\SETUP.EXE

☑ Exit AutoPack Control Center before installing software

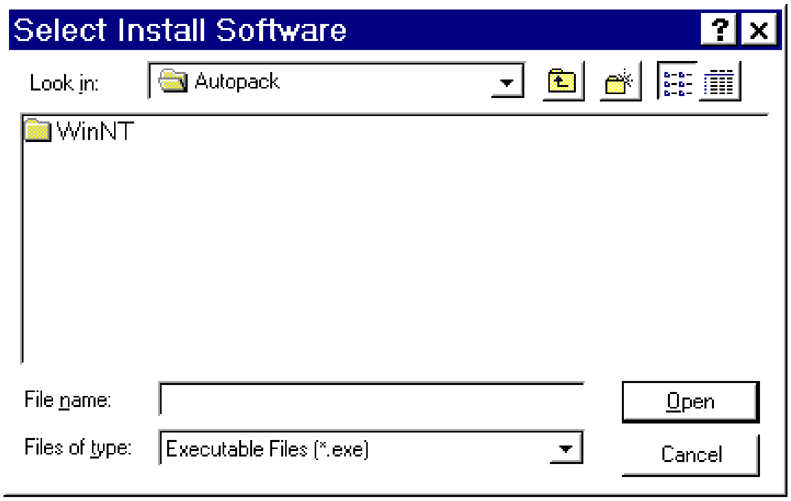
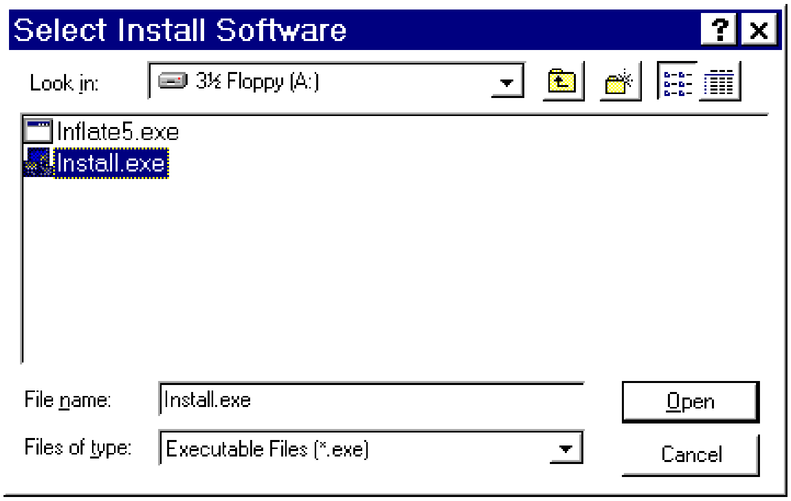

Select Install Software
?
Look in:
Autopack
WinNT
File name:
Files of type:
Executable Files (*.exe)
Open
Cancel

Figure 142



Select Install Software

Look in: 3½ Floppy (A:)

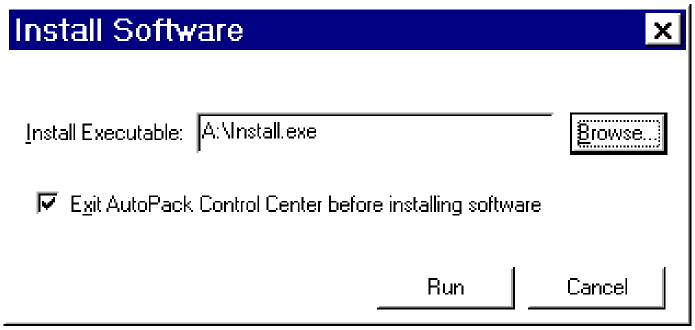
Inflate5.exe

Install.exe

File name: Install.exe

Files of type: Executable Files (*.exe)

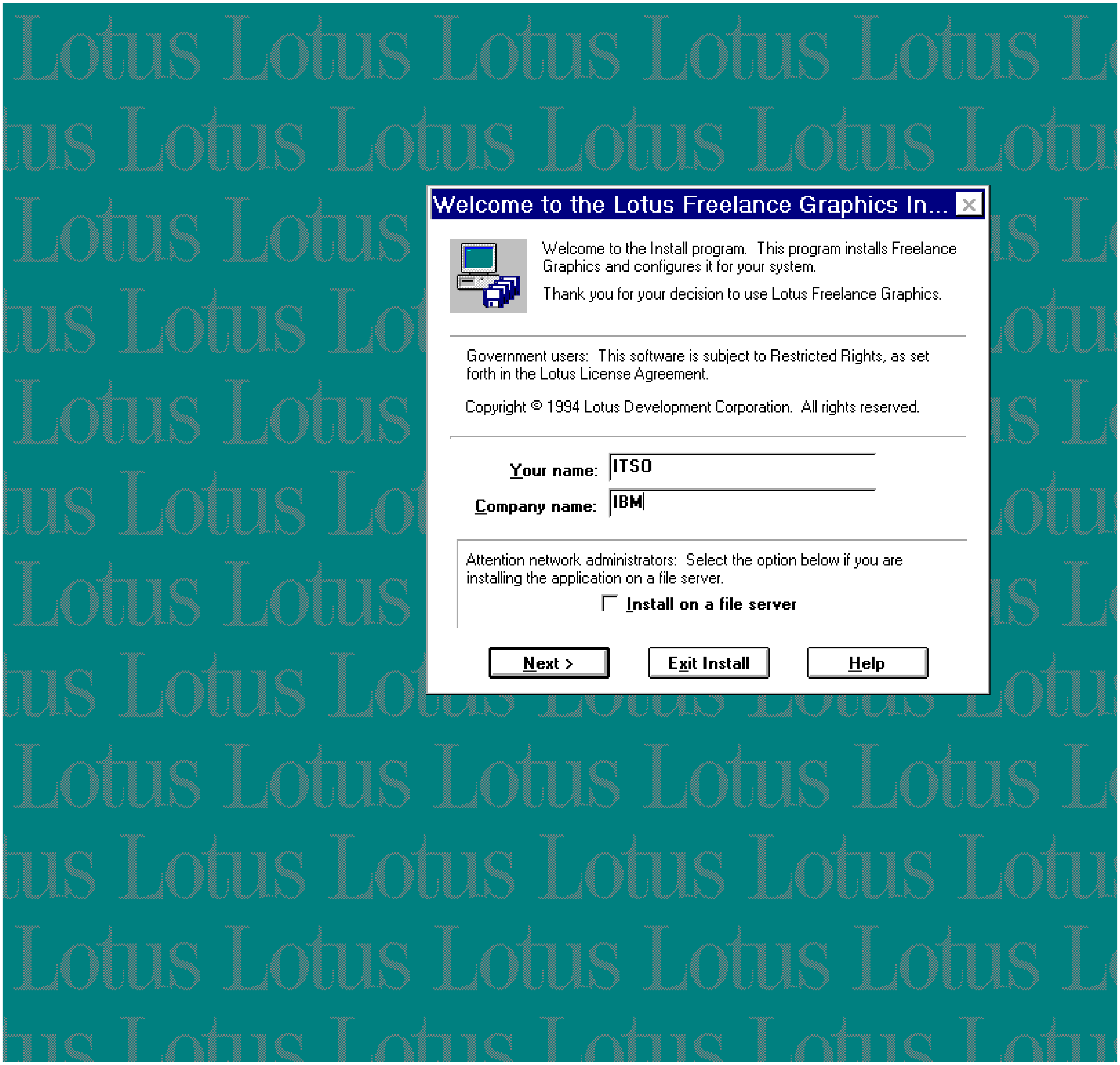
Figure 143



Install Executable: A:\Install.exe

☑ Exit AutoPack Control Center before installing software

Figure 144



Welcome to the Lotus Freelance Graphics In...

Welcome to the Install program. This program installs Freelance Graphics and configures it for your system.

Thank you for your decision to use Lotus Freelance Graphics.

Government users: This software is subject to Restricted Rights, as set forth in the Lotus License Agreement.

Copyright © 1994 Lotus Development Corporation. All rights reserved.

Your name: ITSO

Company name: IBM

Attention network administrators: Select the option below if you are installing the application on a file server.

□ Install on a file server

Figure 145

http://www.redbooks.ibm.com:80/SG244976/gtl3029.gif

Latest

Show All

Hrm.

Wayback Machine doesn't have that page archived.
Want to search for all archived pages under
http://www.redbooks.ibm.com:80/SG244976/ ?

This page is available on the web!

Help make the Wayback Machine more complete!
Save this url in the Wayback Machine

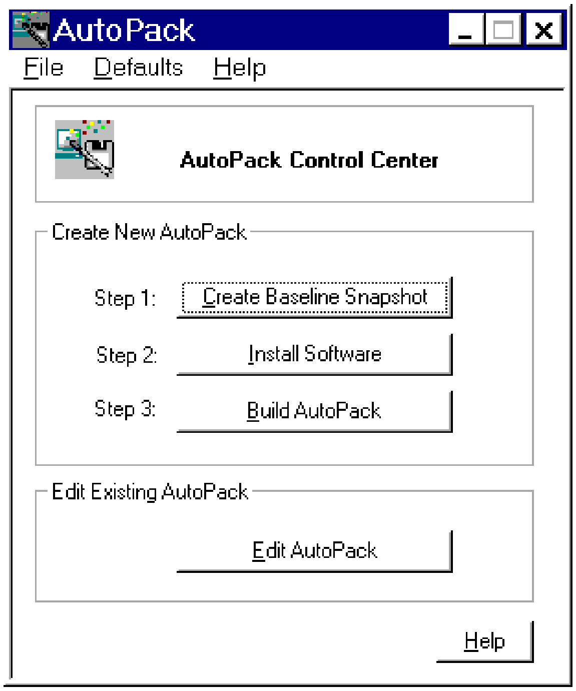
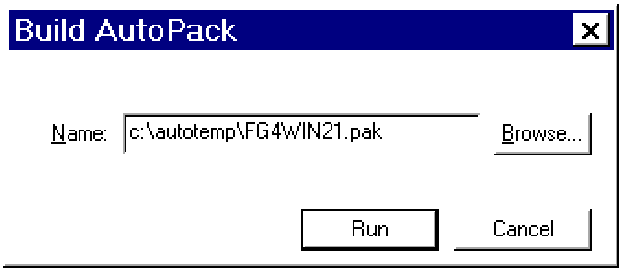

AutoPack
File
Defaults
Help
AutoPack Control Center
Create New AutoPack
Step 1:
Create Baseline Snapshot
Step 2:
Install Software
Step 3:
Build AutoPack
Edit Existing AutoPack
Edit AutoPack
Help

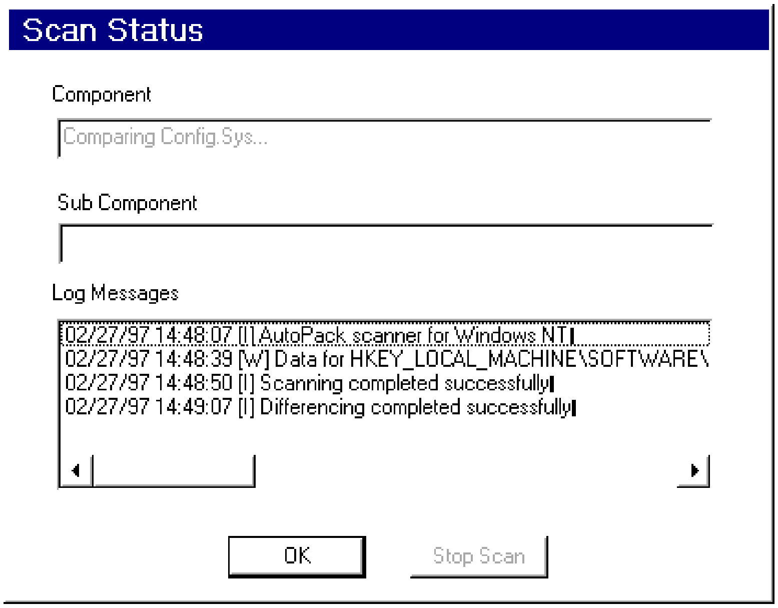
Figure 147



Build AutoPack

Name: c:\autotemp\FG4WIN21.pak

Figure 148



Scan Status

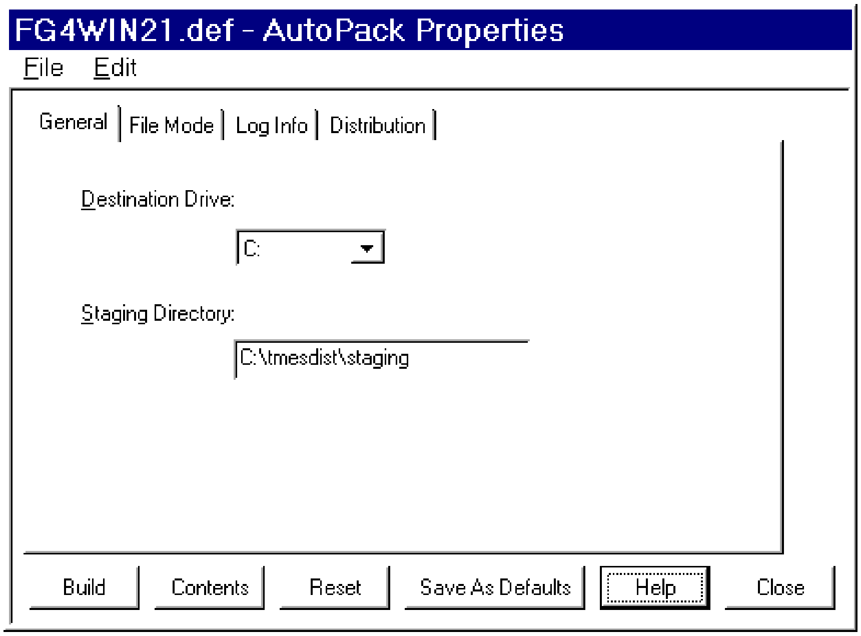
Component

Comparing Config.Sys...

Sub Component

Log Messages

```
02/27/97 14:48:07 [I] AutoPack scanner for Windows NT|
02/27/97 14:48:39 [W] Data for HKEY_LOCAL_MACHINE\SOFTWARE\
02/27/97 14:48:50 [I] Scanning completed successfully|
02/27/97 14:49:07 [I] Differencing completed successfully|
```

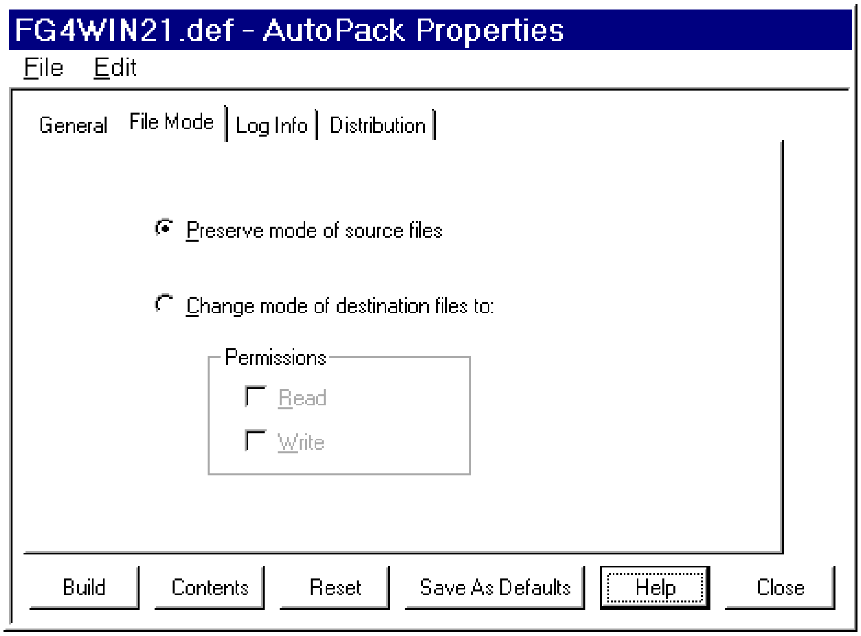


FG4WIN21.def - AutoPack Properties

Destination Drive: C:

Staging Directory: C:\tmesdist\staging

Figure 150



FG4WIN21.def - AutoPack Properties

● Preserve mode of source files

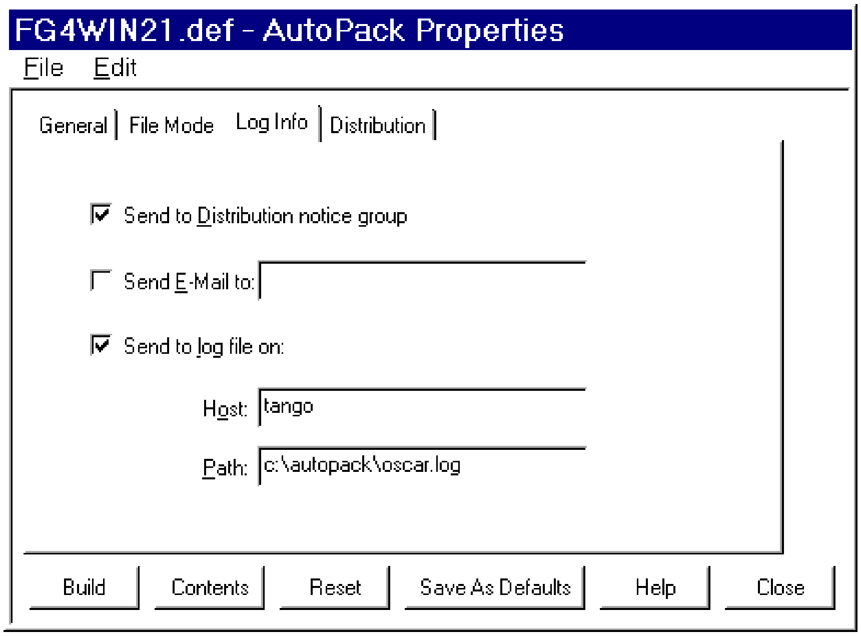
○ Change mode of destination files to:

Permissions

□ Read

□ Write

Figure 151



☑ Send to Distribution notice group

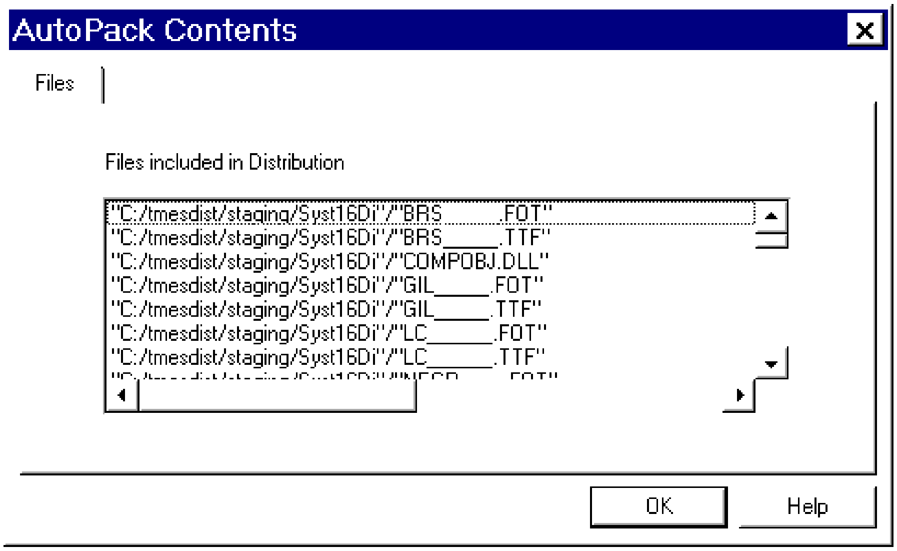
□ Send E-Mail to:

☑ Send to log file on:

Host: tango

Path: c:\autopack\oscar.log

Figure 152

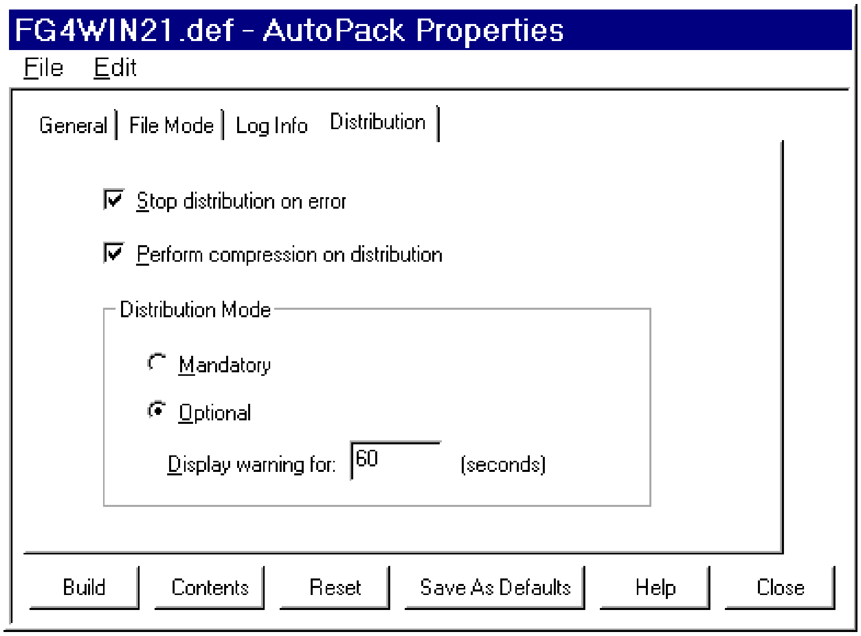


AutoPack Contents

Files

Files included in Distribution

```
"C:/tmesdist/staging/Syst16Di"/"BRS_____.FOT"
"C:/tmesdist/staging/Syst16Di"/"BRS_____.TTF"
"C:/tmesdist/staging/Syst16Di"/"COMPOBJ.DLL"
"C:/tmesdist/staging/Syst16Di"/"GIL_____.FOT"
"C:/tmesdist/staging/Syst16Di"/"GIL_____.TTF"
"C:/tmesdist/staging/Syst16Di"/"LC______.FOT"
"C:/tmesdist/staging/Syst16Di"/"LC______.TTF"
"C:/tmesdist/staging/Syst16Di"/"NECR_____.FOT"
```


FG4WIN21.def - AutoPack Properties

☑ Stop distribution on error

☑ Perform compression on distribution

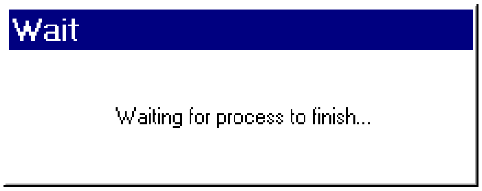
Distribution Mode

○ Mandatory

● Optional

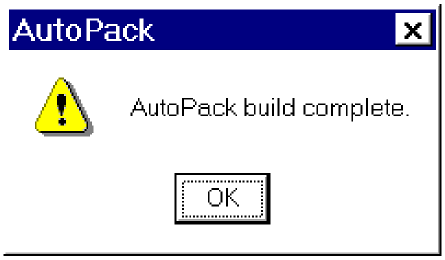
Display warning for: 60 (seconds)

Figure 154



Wait

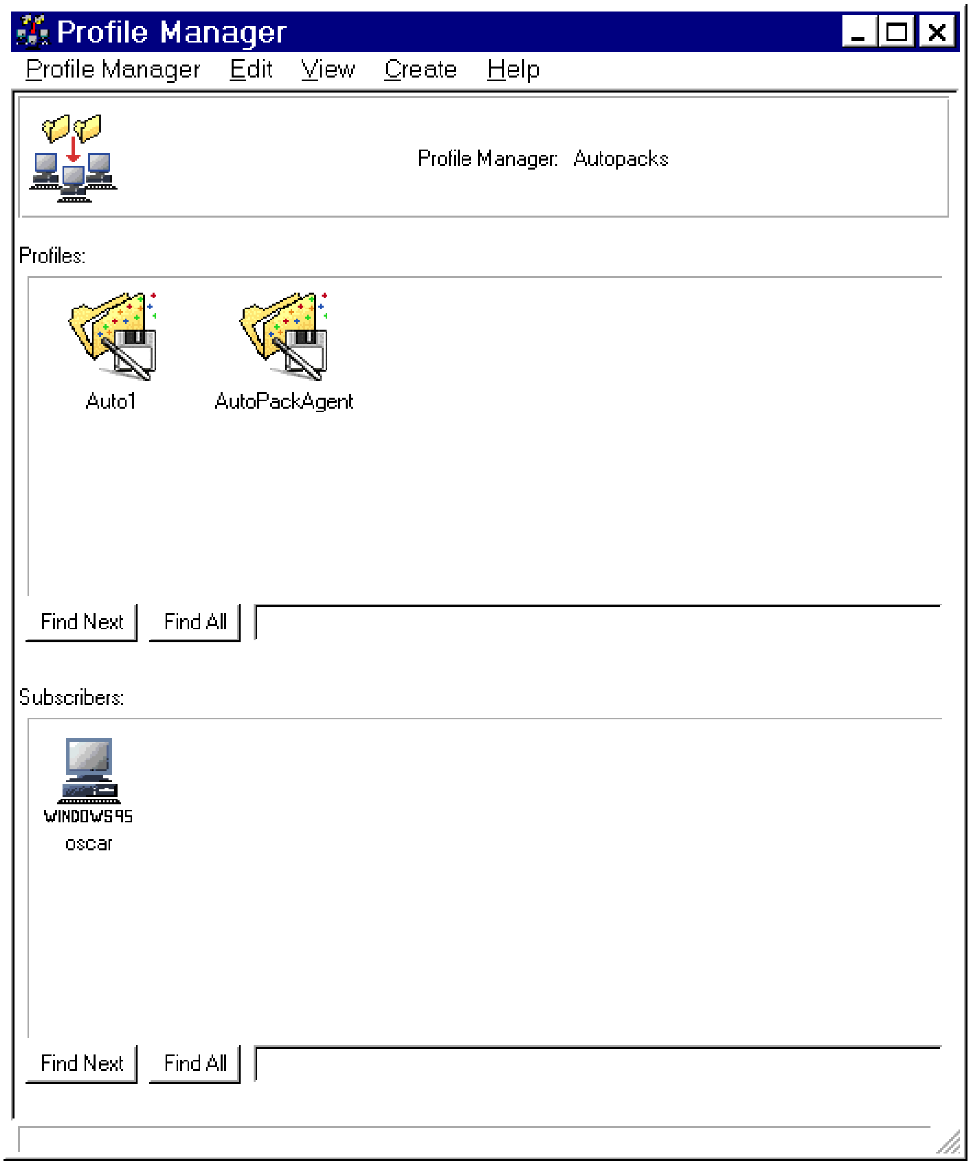
Waiting for process to finish...



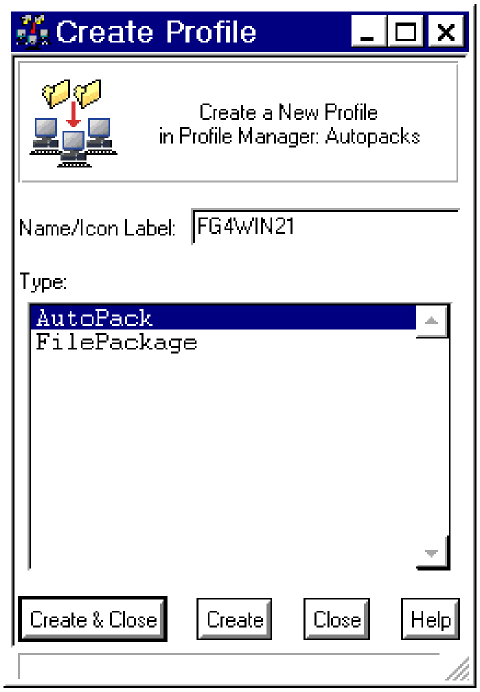
AutoPack

AutoPack build complete.

Figure 156



Profile Manager: Autopacks



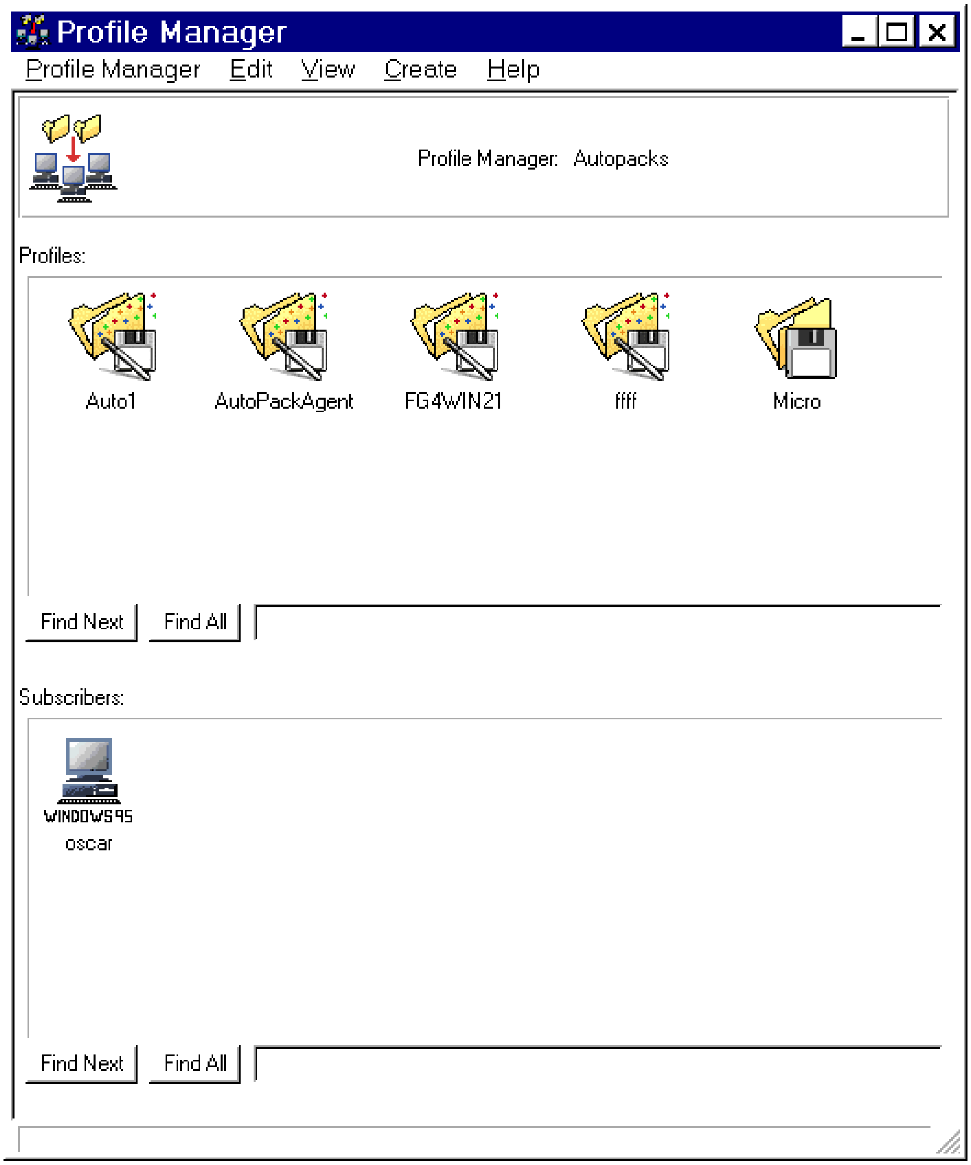
Create a New Profile
in Profile Manager: Autopacks

Name/Icon Label: FG4WIN21

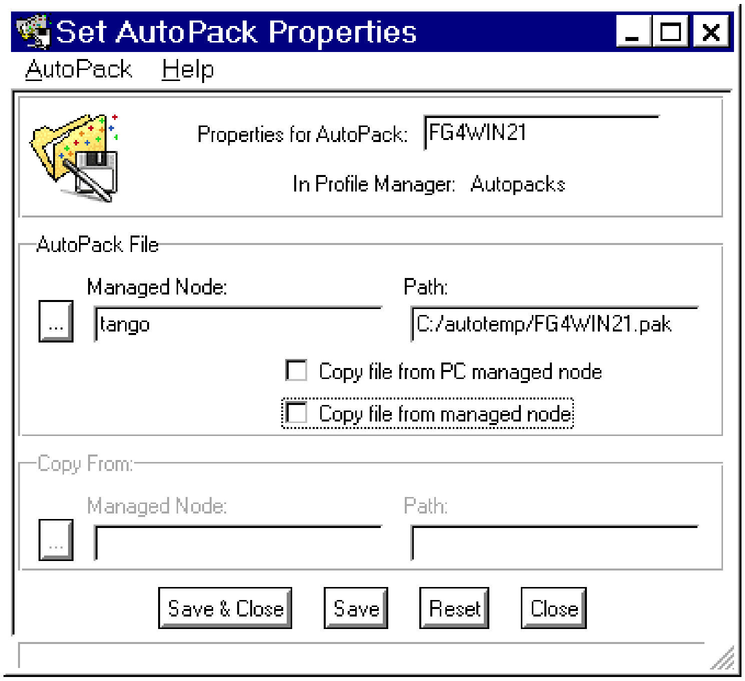
Type:

- AutoPack
- FilePackage

Figure 158



Profile Manager
Profile Manager
Edit
View
Create
Help
Profile Manager: Autopacks
Profiles:
Auto1
AutoPackAgent
FG4WIN21
ffff
Micro
Find Next
Find All
Subscribers:
WINDOWS95
oscar
Find Next
Find All



Properties for AutoPack: FG4WIN21

In Profile Manager: Autopacks

AutoPack File

Managed Node: tango

Path: C:/autotemp/FG4WIN21.pak

□ Copy file from PC managed node

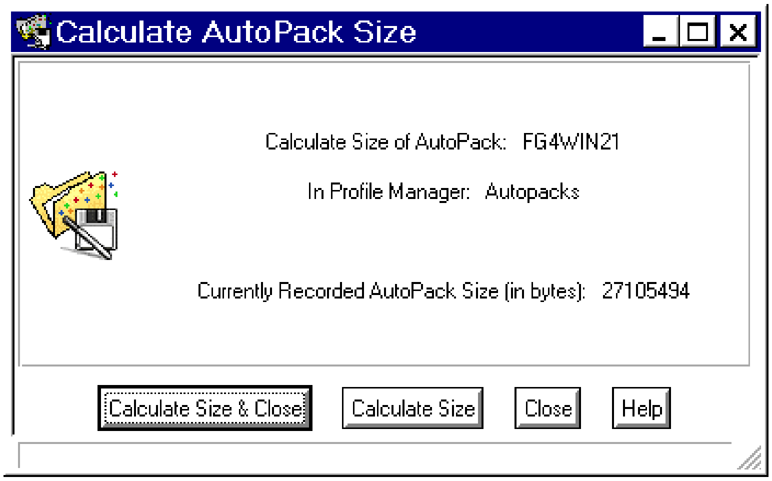
□ Copy file from managed node

Copy From:

Managed Node:

Path:

Figure 160

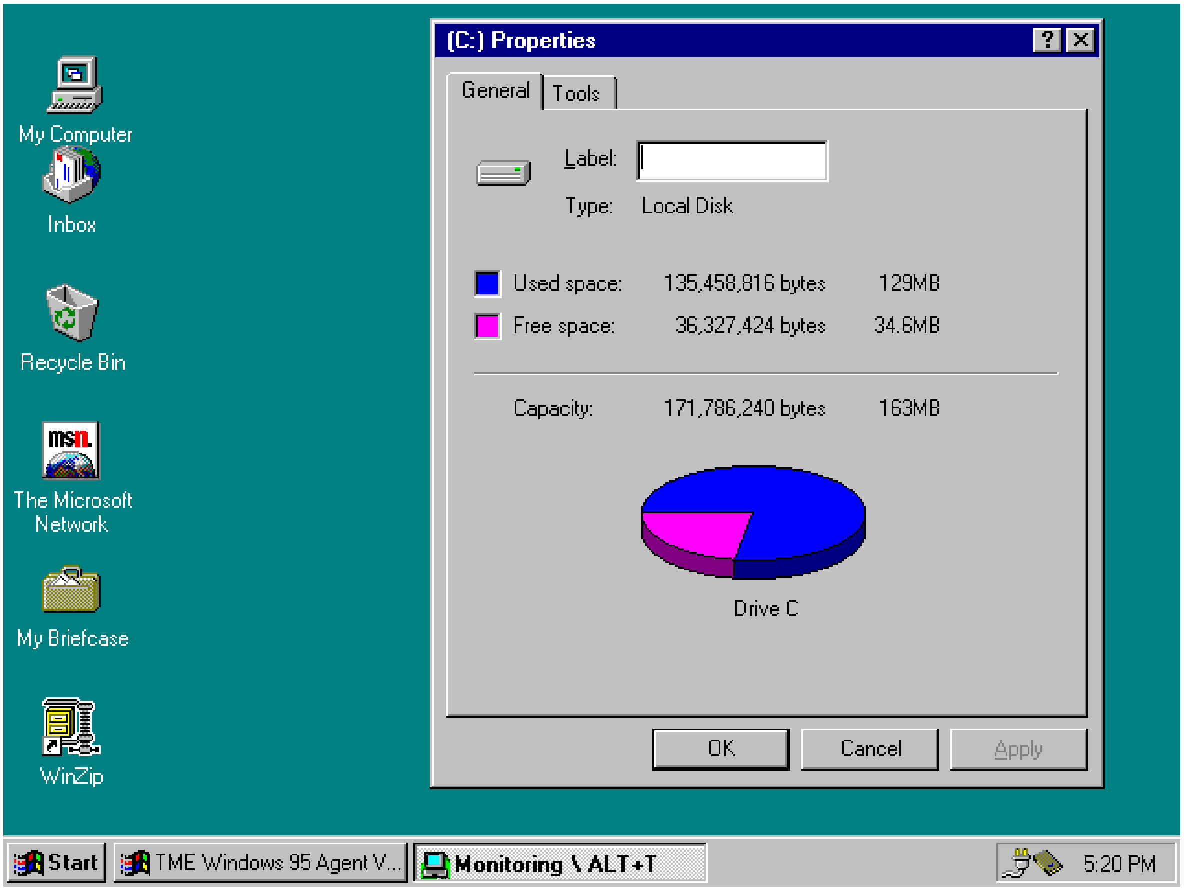


Calculate Size of AutoPack: FG4WIN21

In Profile Manager: Autopacks

Currently Recorded AutoPack Size (in bytes): 27105494

Figure 161



Label:

Type: Local Disk

🟦	Used space:	135,458,816 bytes	129MB
🟪	Free space:	36,327,424 bytes	34.6MB
	Capacity:	171,786,240 bytes	163MB

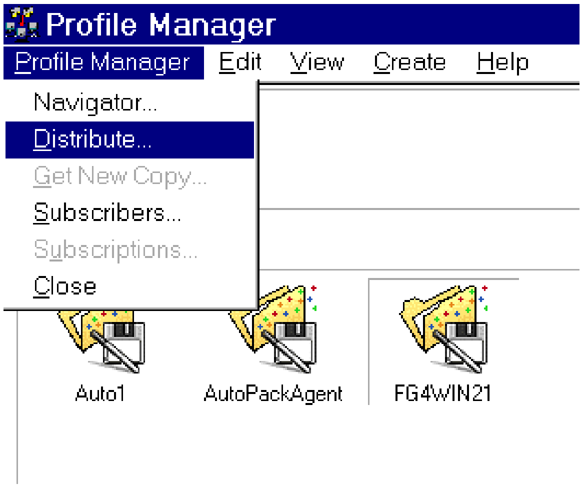
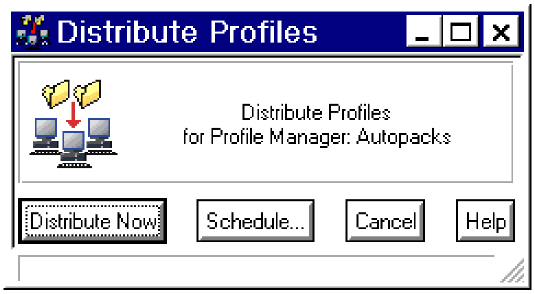
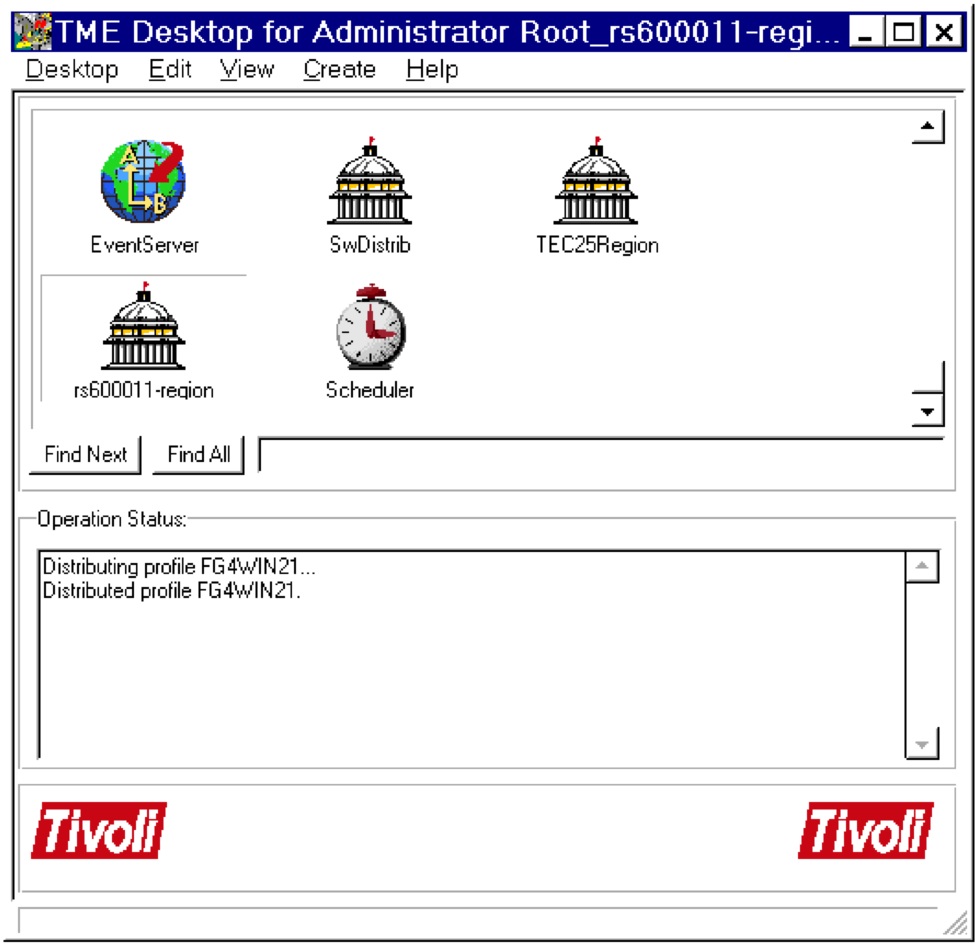

Profile Manager
Profile Manager
Edit
View
Create
Help
Navigator...
Distribute...
Get New Copy...
Subscribers...
Subscriptions...
Close
Auto1
AutoPackAgent
FG4WIN21

Figure 163



Distribute Profiles
for Profile Manager: Autopacks

Figure 164



```
Distributing profile FG4WIN21...
Distributed profile FG4WIN21.
```

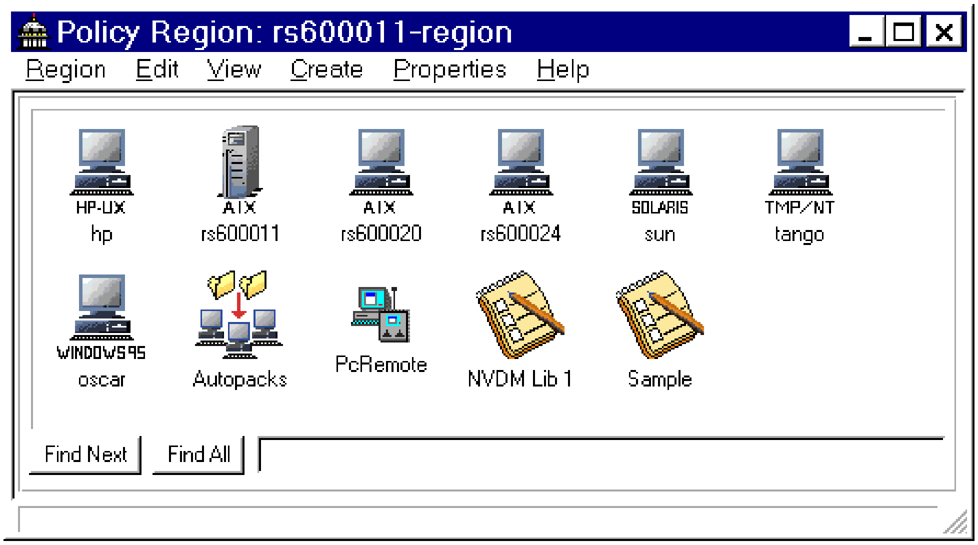

Policy Region: rs600011-region
Region
Edit
View
Create
Properties
Help
HP-UX
hp
AIX
rs600011
AIX
rs600020
AIX
rs600024
SOLARIS
sun
TMP/NT
tango
WINDOWS95
oscar
Autopacks
PcRemote
NVDM Lib 1
Sample
Find Next
Find All

Figure 166

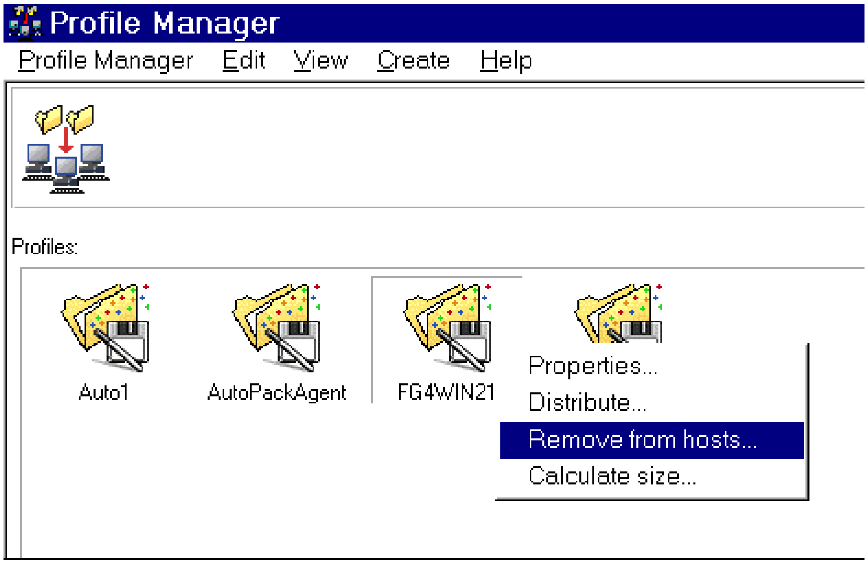
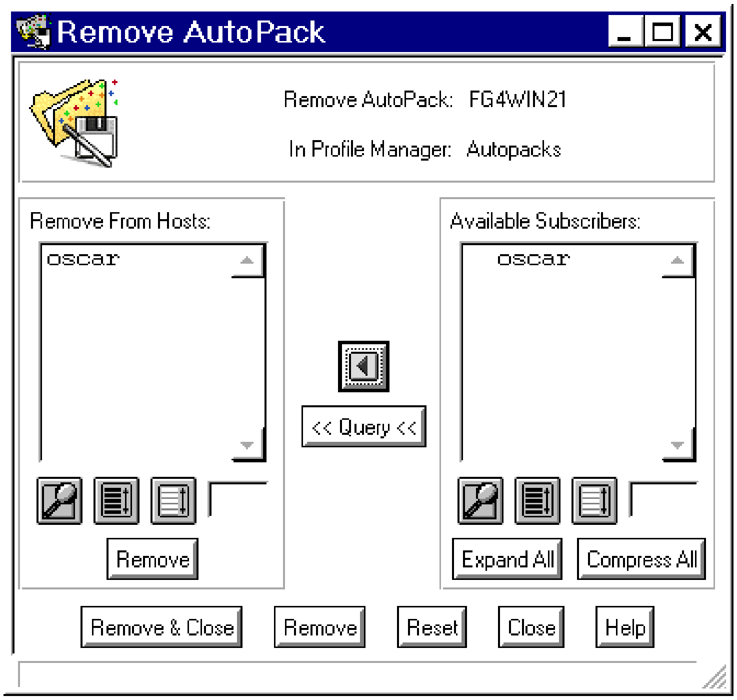

Profile Manager
Profile Manager
Edit
View
Create
Help
Profiles:
Auto1
AutoPackAgent
FG4WIN21
Properties...
Distribute...
Remove from hosts...
Calculate size...

Figure 167



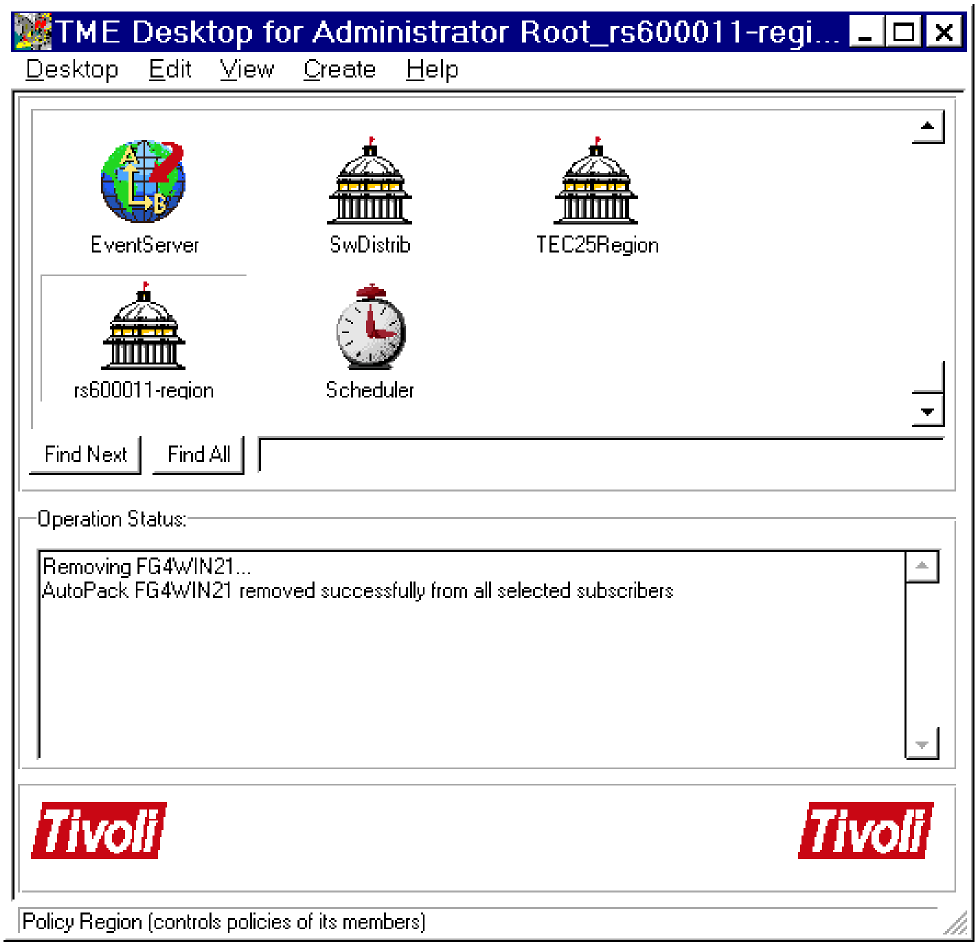
Remove AutoPack: FG4WIN21

In Profile Manager: Autopacks

Remove From Hosts: oscar

Available Subscribers: oscar

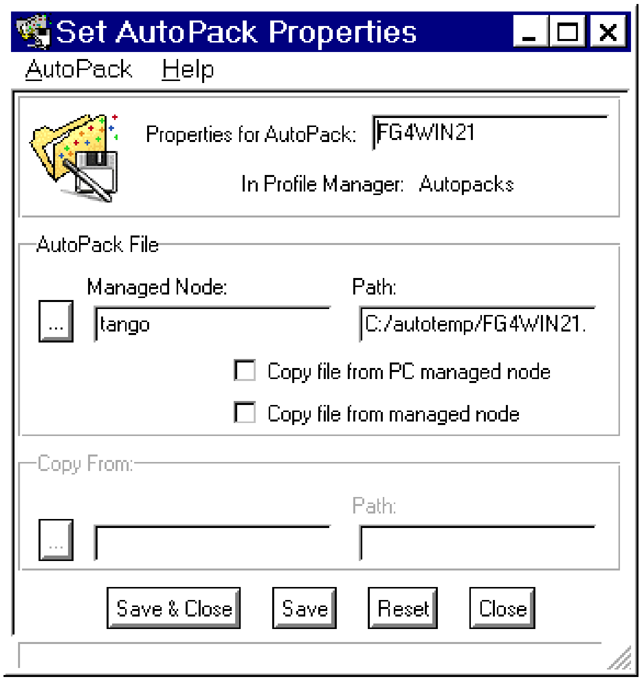
Figure 168



TME Desktop for Administrator Root_rs600011-regi...
Desktop Edit View Create Help
EventServer
SwDistrib
TEC25Region
rs600011-region
Scheduler
Find Next
Find All
Operation Status:

Removing FG4WIN21...
AutoPack FG4WIN21 removed successfully from all selected subscribers

Tivoli
Tivoli
Policy Region (controls policies of its members)



Properties for AutoPack: FG4WIN21

In Profile Manager: Autopacks

AutoPack File

Managed Node: tango

Path: C:/autotemp/FG4WIN21.

☐ Copy file from PC managed node

☐ Copy file from managed node

Copy From:

Path:

Figure 170

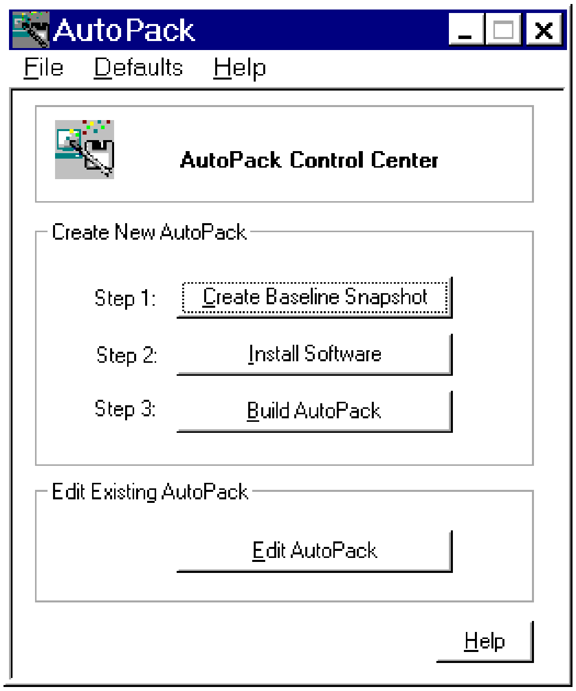
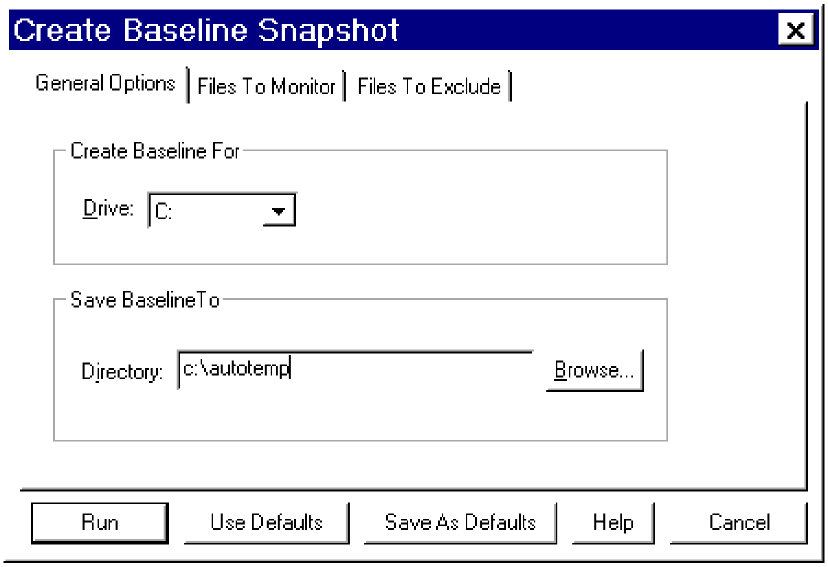

AutoPack
File
Defaults
Help
AutoPack Control Center
Create New AutoPack
Step 1:
Create Baseline Snapshot
Step 2:
Install Software
Step 3:
Build AutoPack
Edit Existing AutoPack
Edit AutoPack
Help

Figure 172



Create Baseline Snapshot

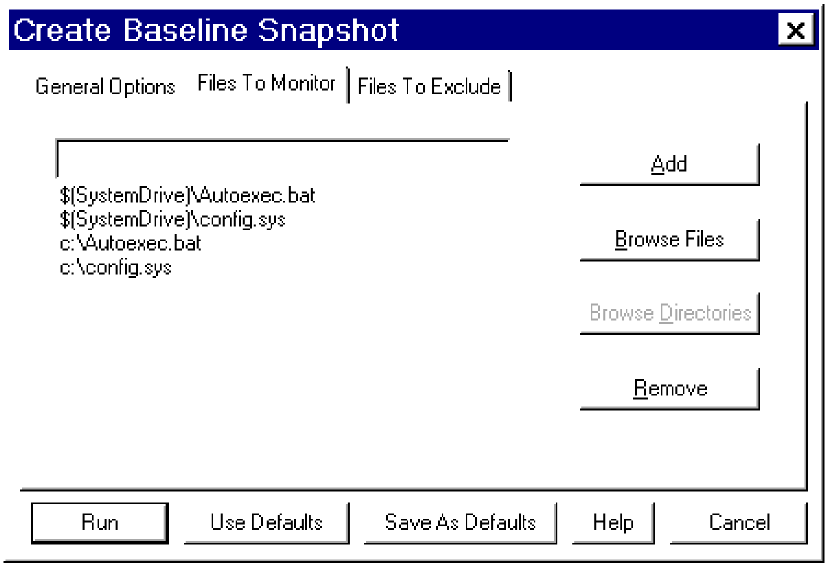
Create Baseline For

Drive: C:

Save BaselineTo

Directory: c:\autotemp

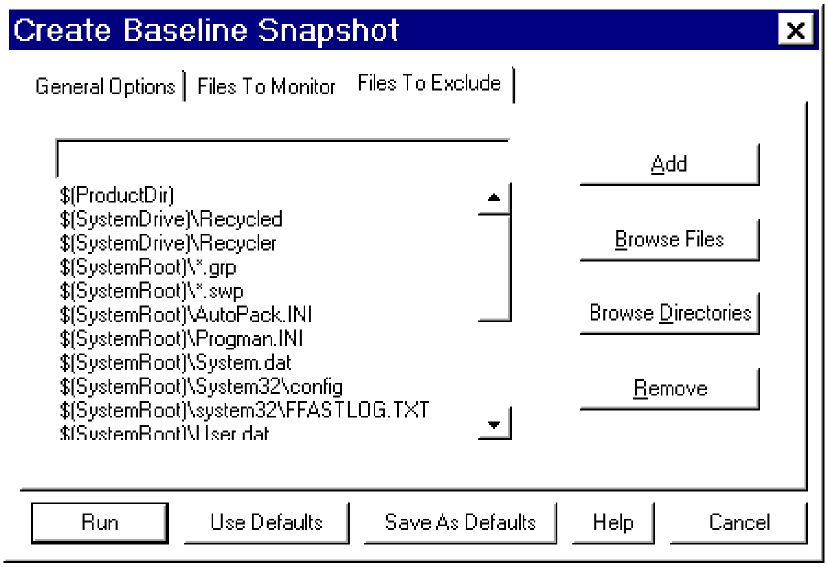
Figure 173



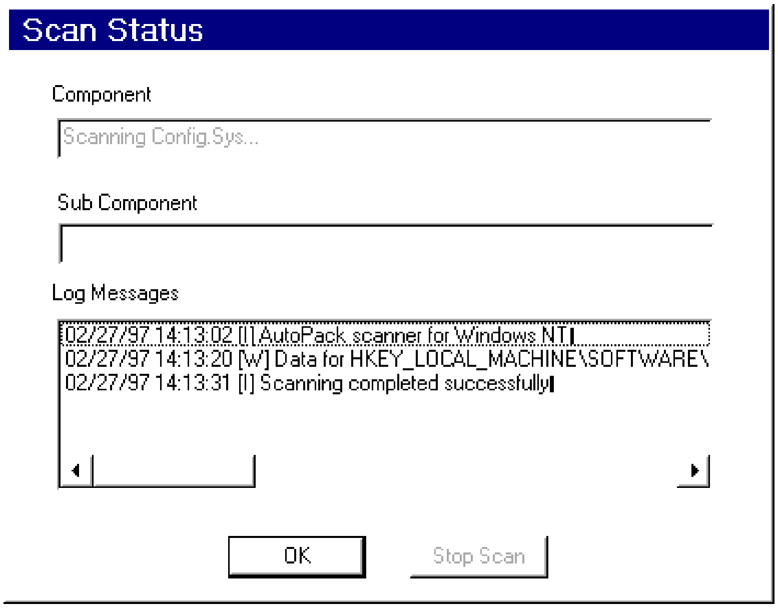
Create Baseline Snapshot

$(SystemDrive)\Autoexec.bat
$(SystemDrive)\config.sys
c:\Autoexec.bat
c:\config.sys

Figure 174



```
$(ProductDir)
$(SystemDrive)\Recycled
$(SystemDrive)\Recycler
$(SystemRoot)\*.grp
$(SystemRoot)\*.swp
$(SystemRoot)\AutoPack.INI
$(SystemRoot)\Progman.INI
$(SystemRoot)\System.dat
$(SystemRoot)\System32\config
$(SystemRoot)\system32\FFASTLOG.TXT
$(SystemRoot)\User.dat
```



Scan Status

Component: Scanning Config.Sys...

Sub Component:

Log Messages

```
02/27/97 14:13:02 [I] AutoPack scanner for Windows NT
02/27/97 14:13:20 [W] Data for HKEY_LOCAL_MACHINE\SOFTWARE\
02/27/97 14:13:31 [I] Scanning completed successfully
```

Figure 176

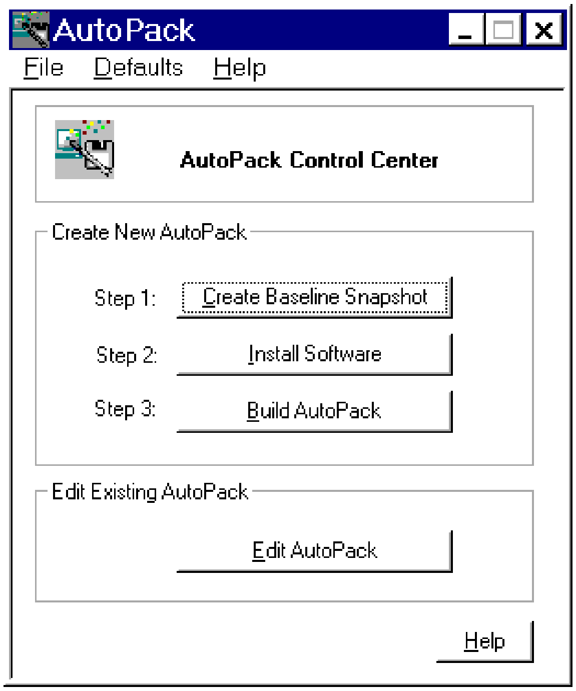
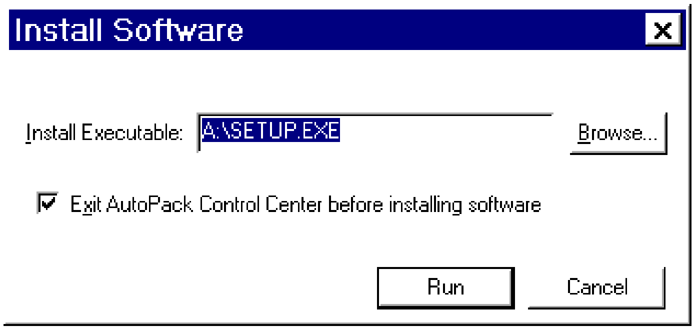

AutoPack
File Defaults Help
AutoPack Control Center
Create New AutoPack
Step 1: Create Baseline Snapshot
Step 2: Install Software
Step 3: Build AutoPack
Edit Existing AutoPack
Edit AutoPack
Help

Figure 177

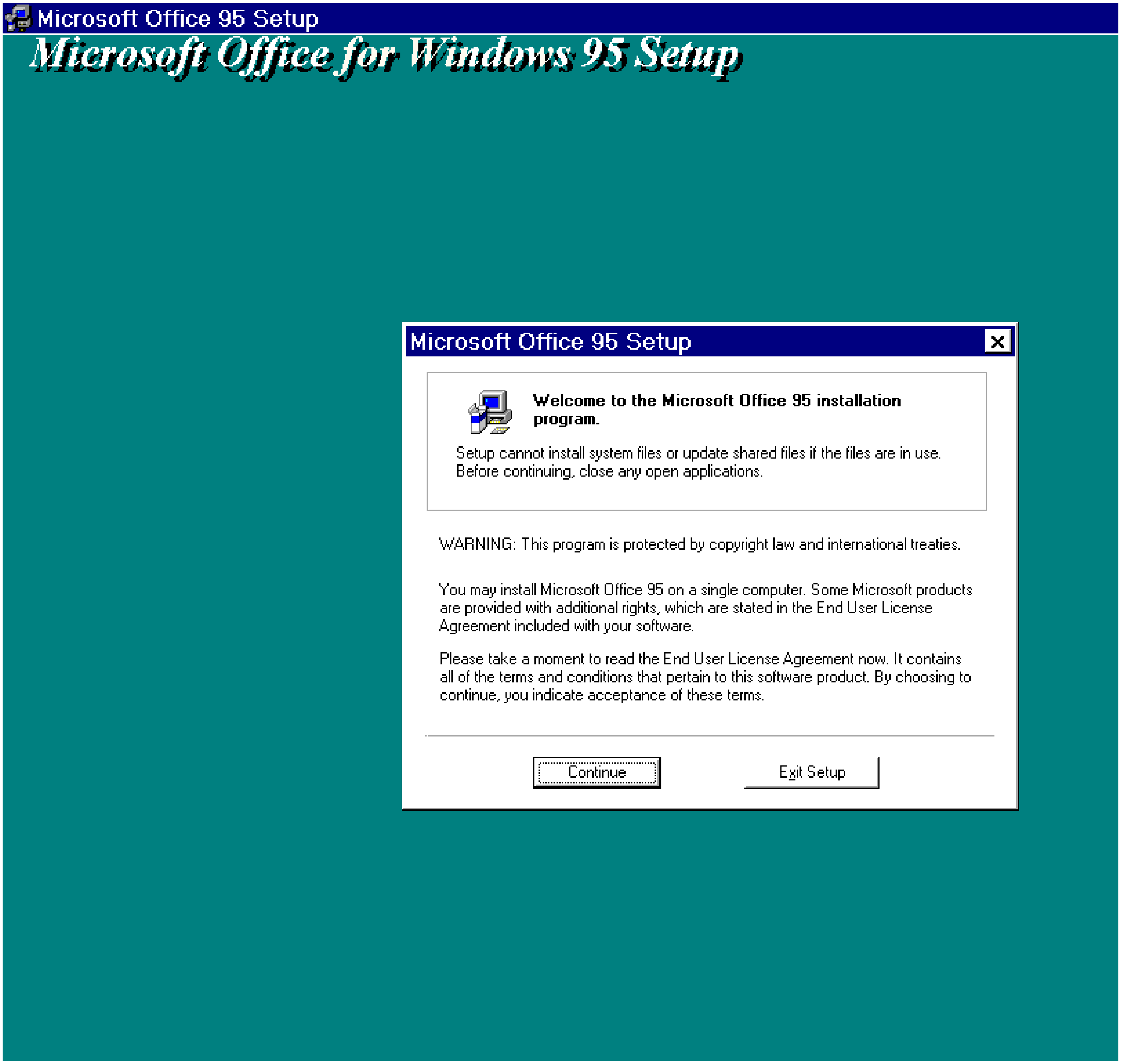


Install Software

Install Executable: A:\SETUP.EXE

☑ Exit AutoPack Control Center before installing software

Figure 178



Microsoft Office 95 Setup
Microsoft Office for Windows 95 Setup
Microsoft Office 95 Setup
Continue
Exit Setup

Welcome to the Microsoft Office 95 installation program.

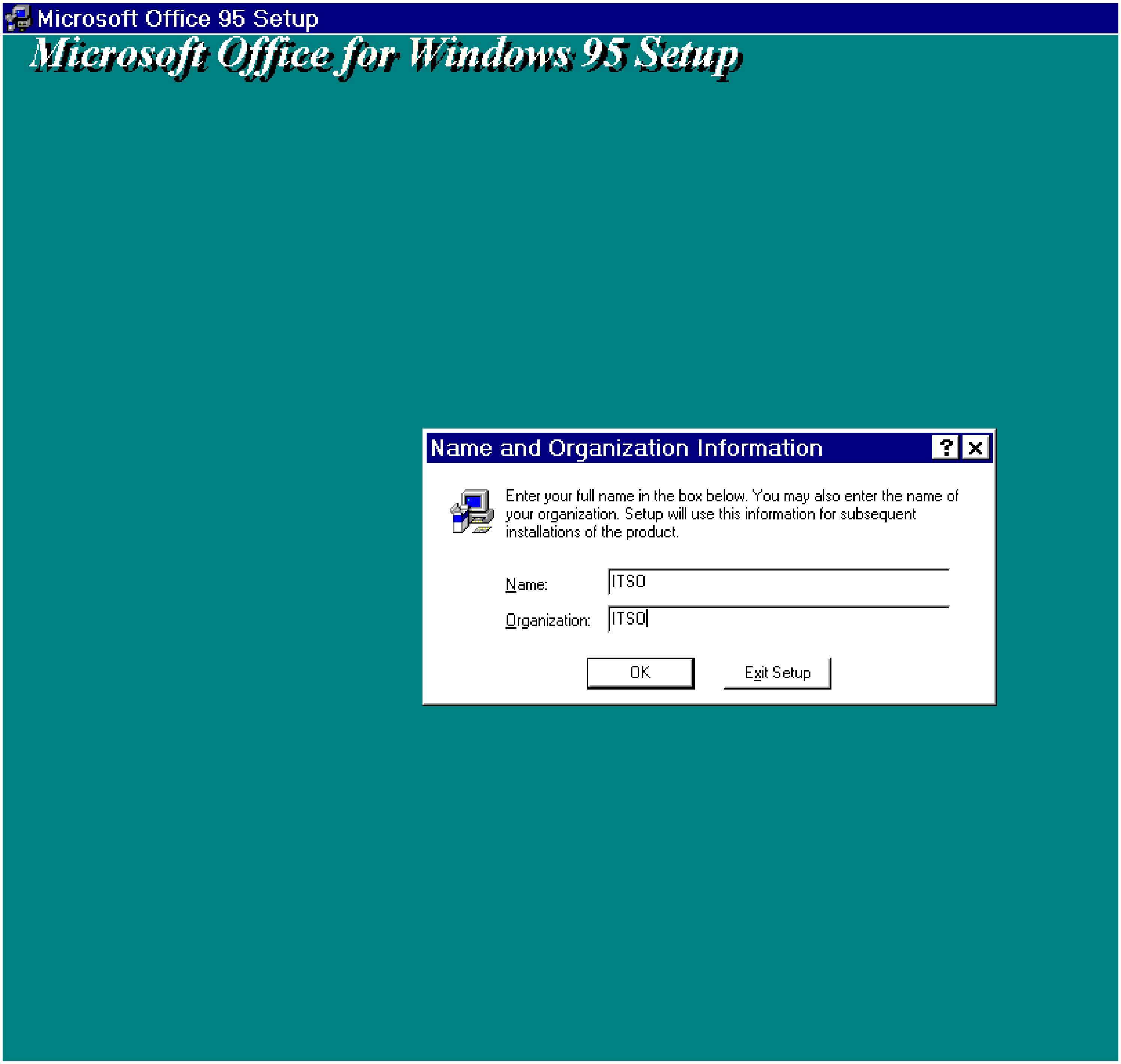
Setup cannot install system files or update shared files if the files are in use. Before continuing, close any open applications.

WARNING: This program is protected by copyright law and international treaties.

You may install Microsoft Office 95 on a single computer. Some Microsoft products are provided with additional rights, which are stated in the End User License Agreement included with your software.

Please take a moment to read the End User License Agreement now. It contains all of the terms and conditions that pertain to this software product. By choosing to continue, you indicate acceptance of these terms.

Figure 179

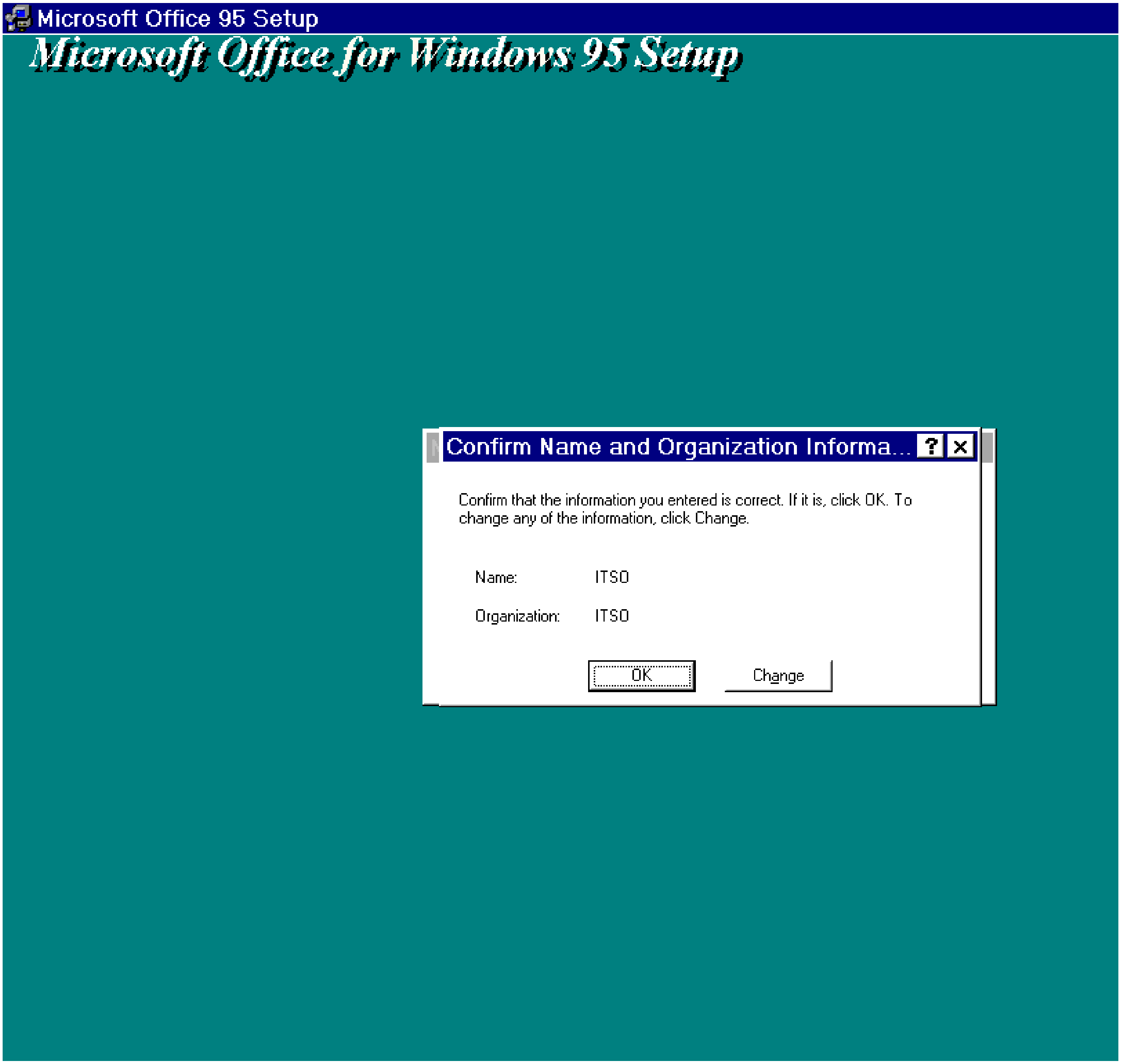


Microsoft Office 95 Setup
Microsoft Office for Windows 95 Setup
Name and Organization Information
?
X

Enter your full name in the box below. You may also enter the name of your organization. Setup will use this information for subsequent installations of the product.

Name: ITSO

Organization: ITSO

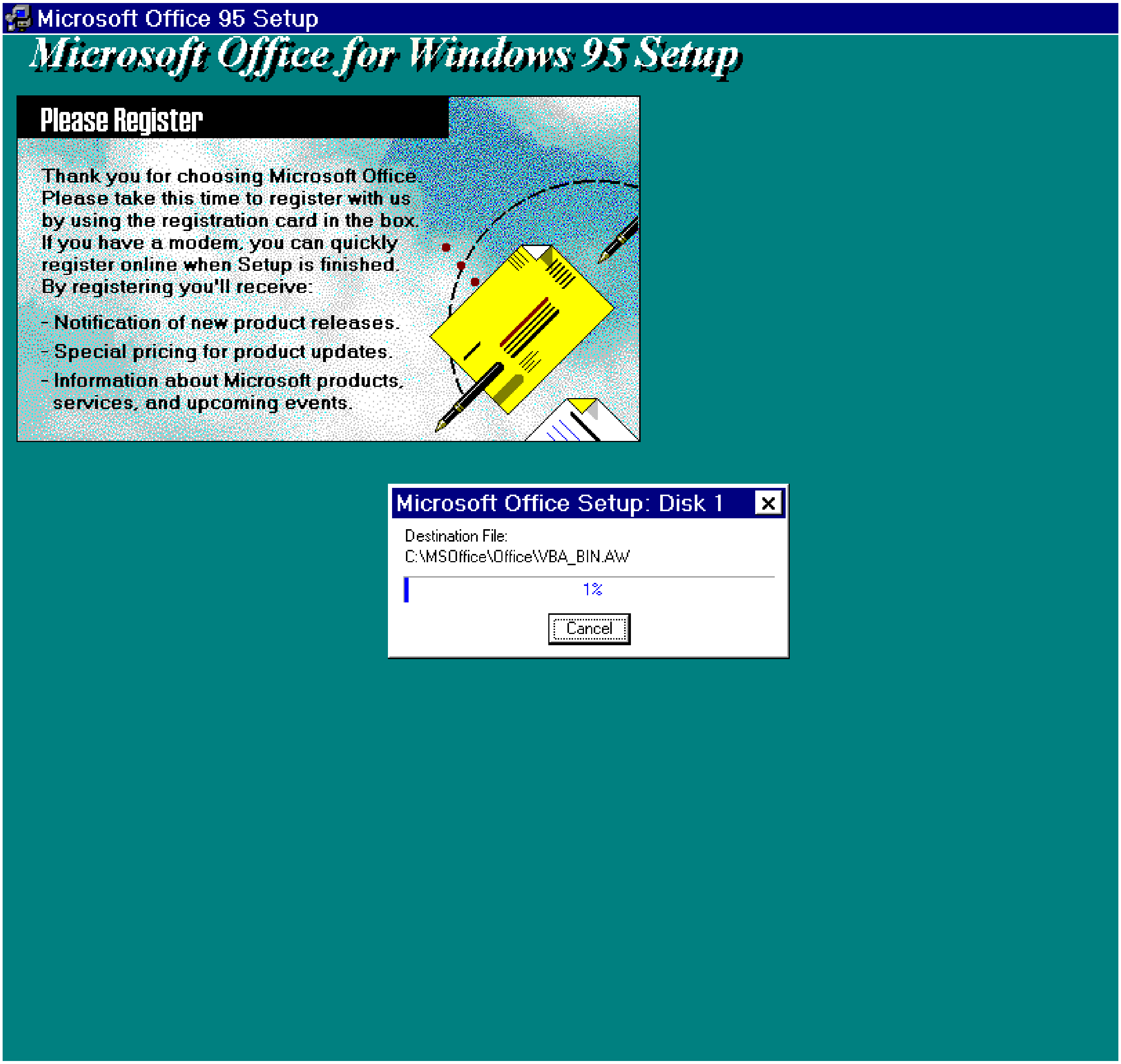


Microsoft Office 95 Setup
Microsoft Office for Windows 95 Setup
Confirm Name and Organization Informa...
?
✕
OK
Change

Confirm that the information you entered is correct. If it is, click OK. To change any of the information, click Change.

Name: ITSO

Organization: ITSO



Microsoft Office 95 Setup

Microsoft Office for Windows 95 Setup

Please Register

Thank you for choosing Microsoft Office. Please take this time to register with us by using the registration card in the box. If you have a modem, you can quickly register online when Setup is finished. By registering you'll receive:

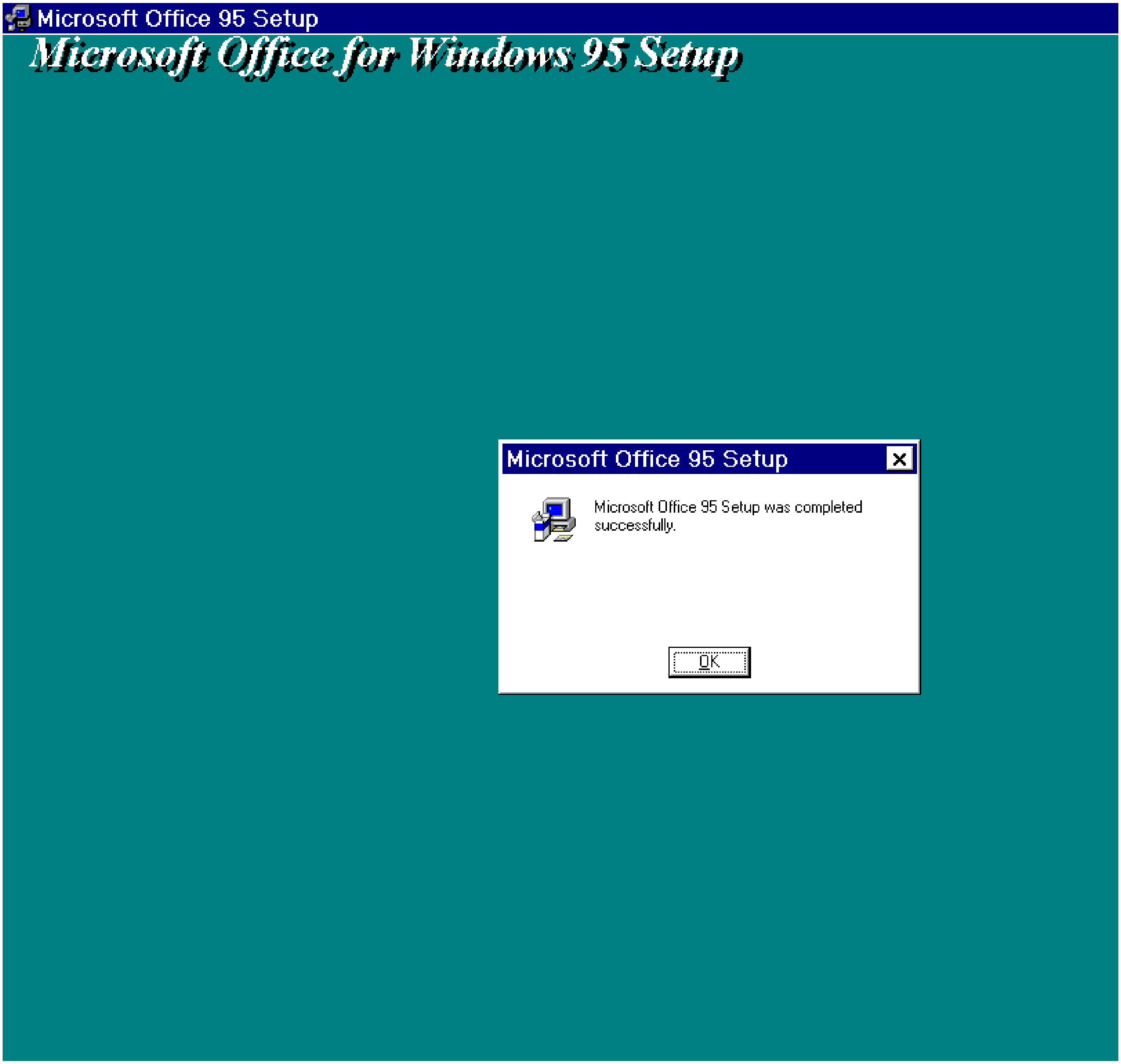
- Notification of new product releases.
- Special pricing for product updates.
- Information about Microsoft products, services, and upcoming events.

Microsoft Office Setup: Disk 1

Destination File:
C:\MSOffice\Office\VBA_BIN.AW

1%

Figure 182



Microsoft Office 95 Setup
Microsoft Office for Windows 95 Setup
Microsoft Office 95 Setup
OK

Microsoft Office 95 Setup was completed successfully.

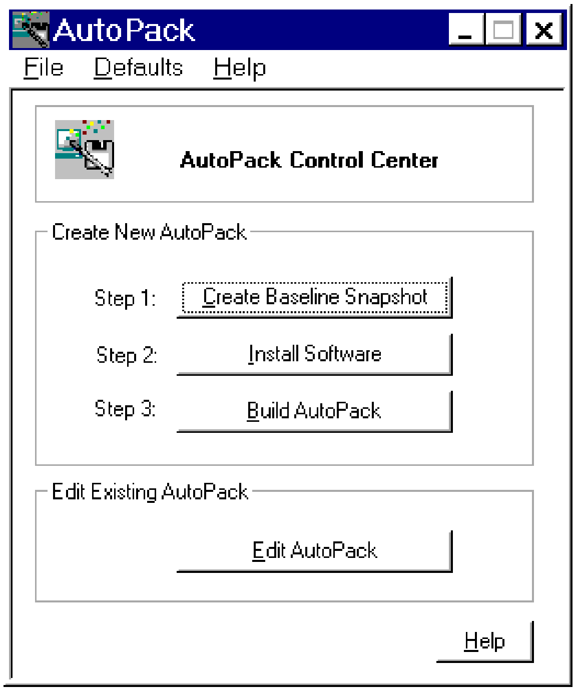
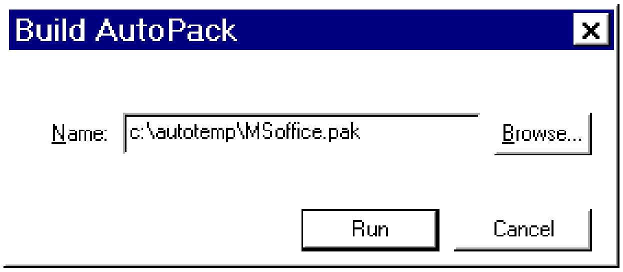
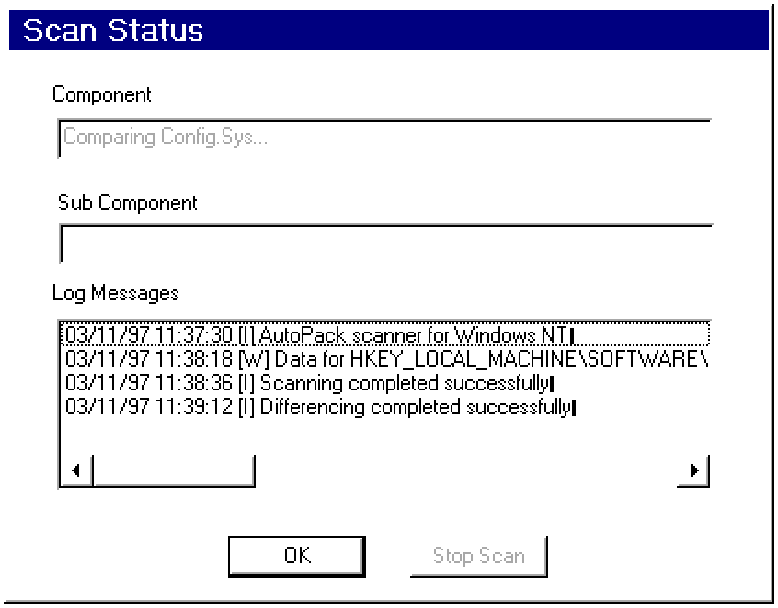

AutoPack
File Defaults Help
AutoPack Control Center
Create New AutoPack
Step 1: Create Baseline Snapshot
Step 2: Install Software
Step 3: Build AutoPack
Edit Existing AutoPack
Edit AutoPack
Help

Figure 184

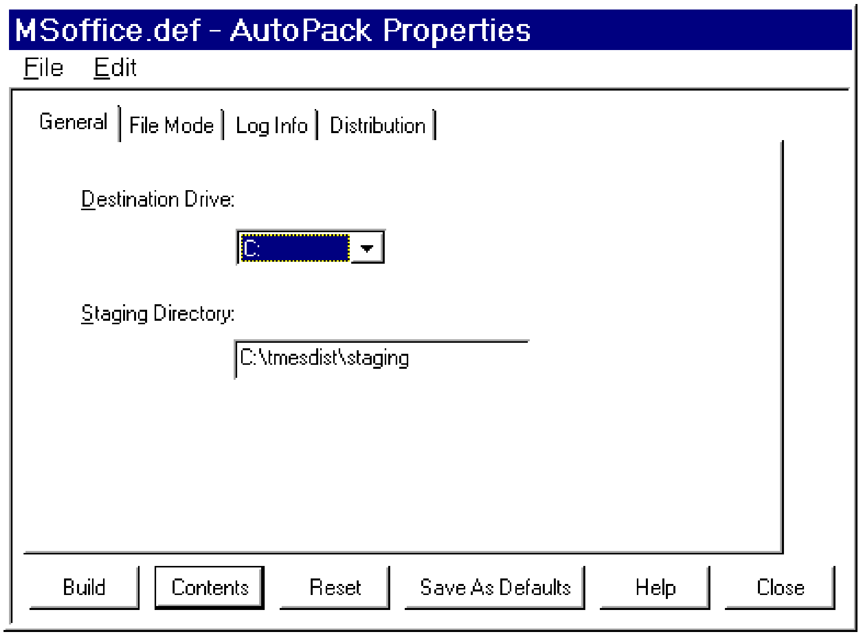


Name: c:\autotemp\MSoffice.pak



Comparing Config.Sys...

```
03/11/97 11:37:30 [I] AutoPack scanner for Windows NT
03/11/97 11:38:18 [W] Data for HKEY_LOCAL_MACHINE\SOFTWARE\
03/11/97 11:38:36 [I] Scanning completed successfully
03/11/97 11:39:12 [I] Differencing completed successfully
```

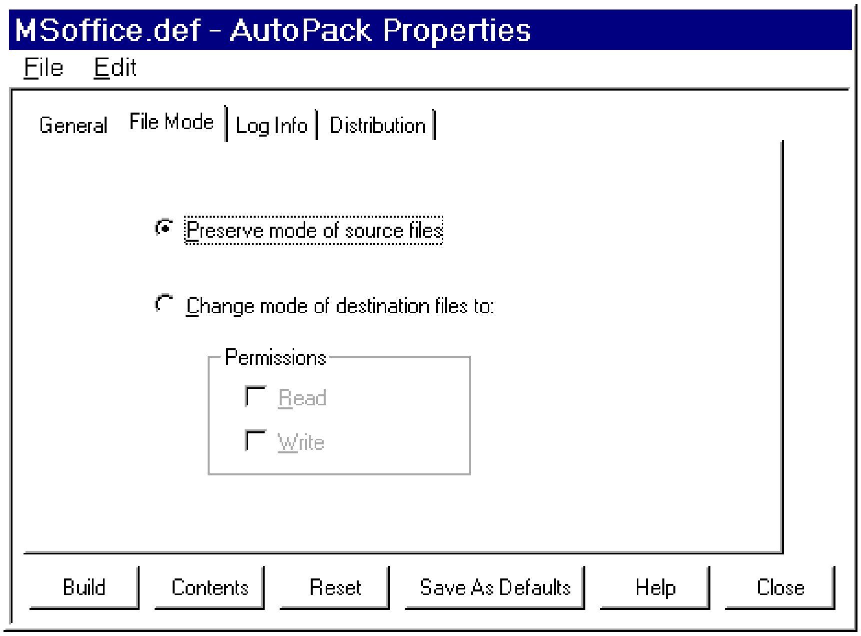


MSoffice.def - AutoPack Properties

Destination Drive: C:

Staging Directory: C:\tmesdist\staging

Figure 187



● Preserve mode of source files

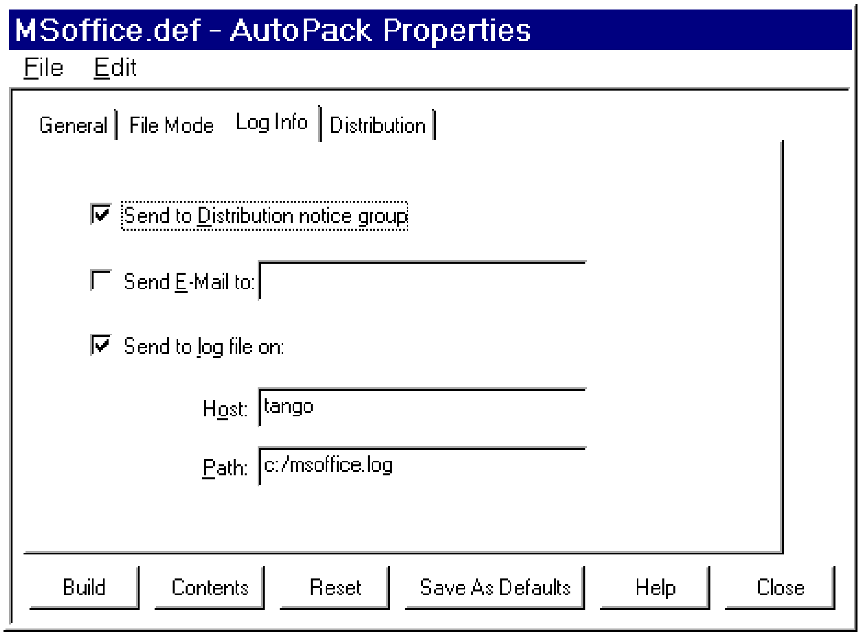
○ Change mode of destination files to:

Permissions

□ Read

□ Write

Figure 188



MSoffice.def - AutoPack Properties

☑ Send to Distribution notice group

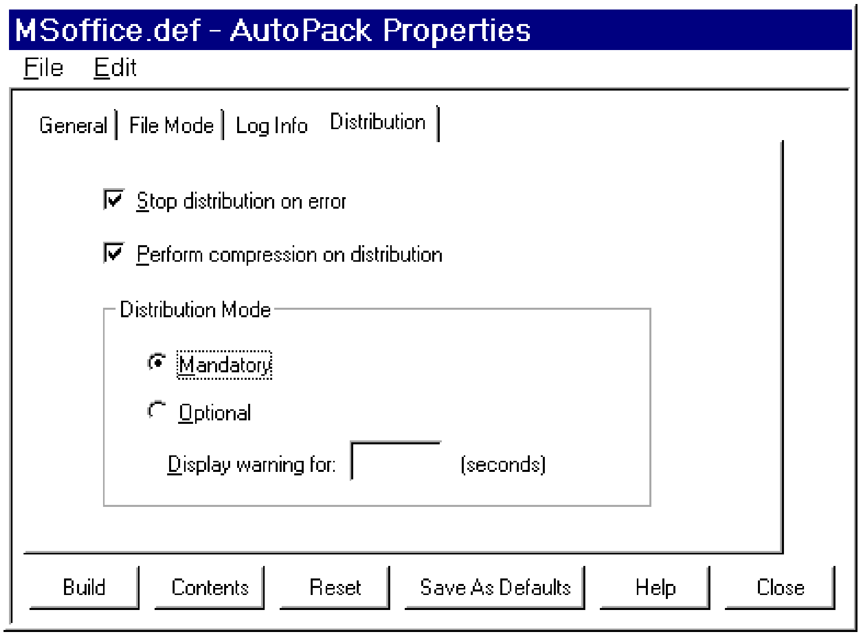
□ Send E-Mail to:

☑ Send to log file on:

Host: tango

Path: c:/msoffice.log

Figure 189



MSoffice.def - AutoPack Properties

☑ Stop distribution on error

☑ Perform compression on distribution

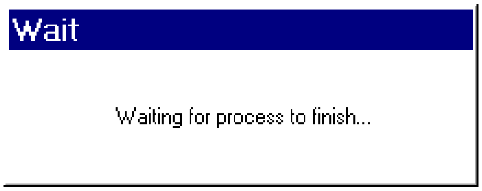
Distribution Mode

● Mandatory

○ Optional

Display warning for: (seconds)

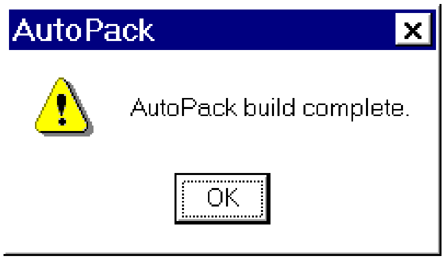
Figure 190



Wait

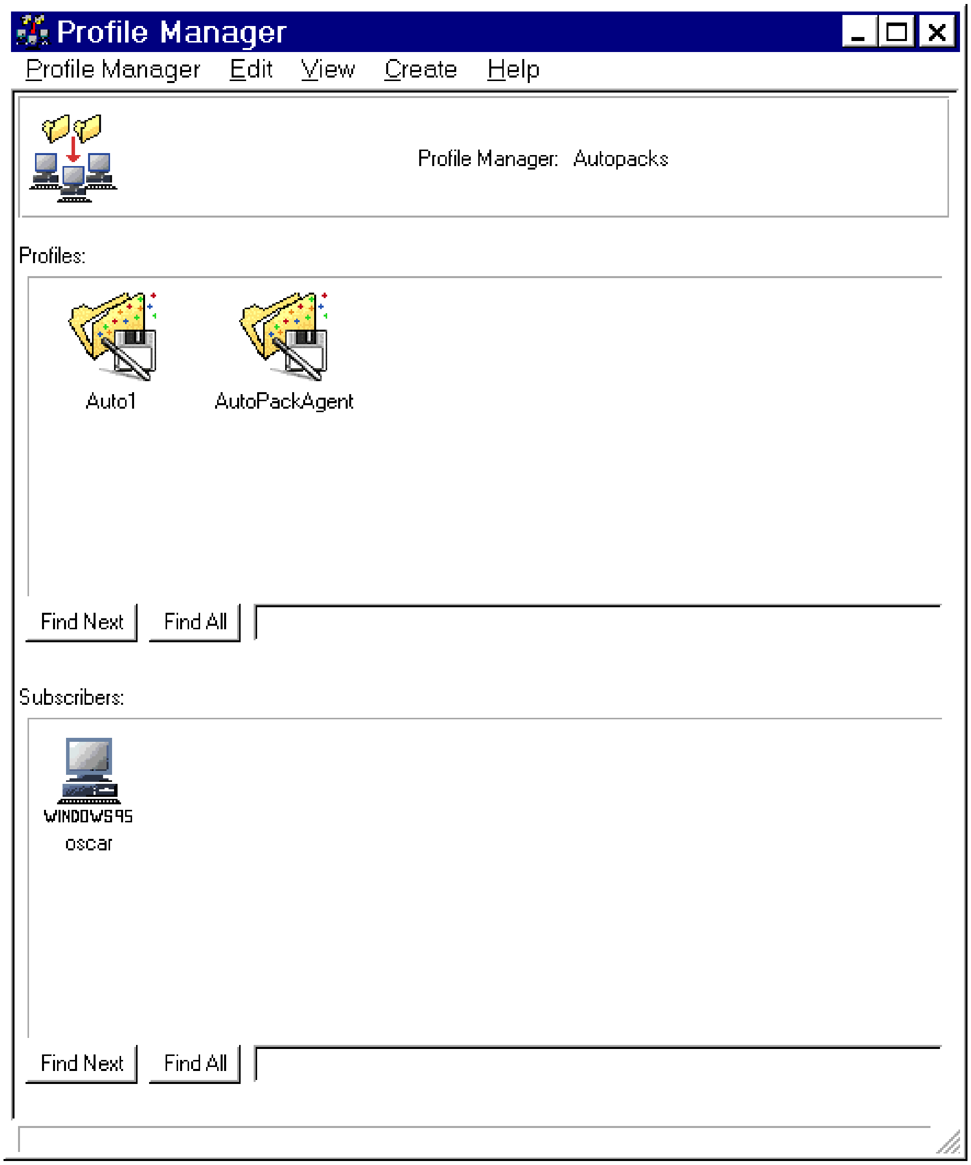
Waiting for process to finish...

Figure 191



AutoPack build complete.

Figure 192

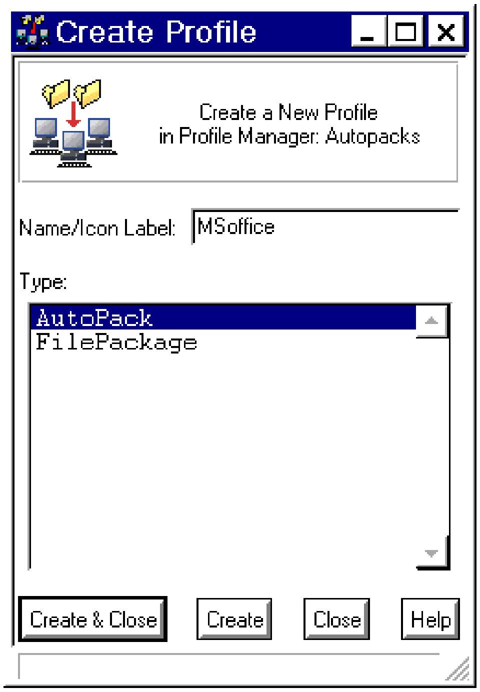


Profile Manager: Autopacks

Profiles:

Subscribers:

Figure 193



Create a New Profile
in Profile Manager: Autopacks

Name/Icon Label: MSoffice

Type:

AutoPack
FilePackage

Figure 194

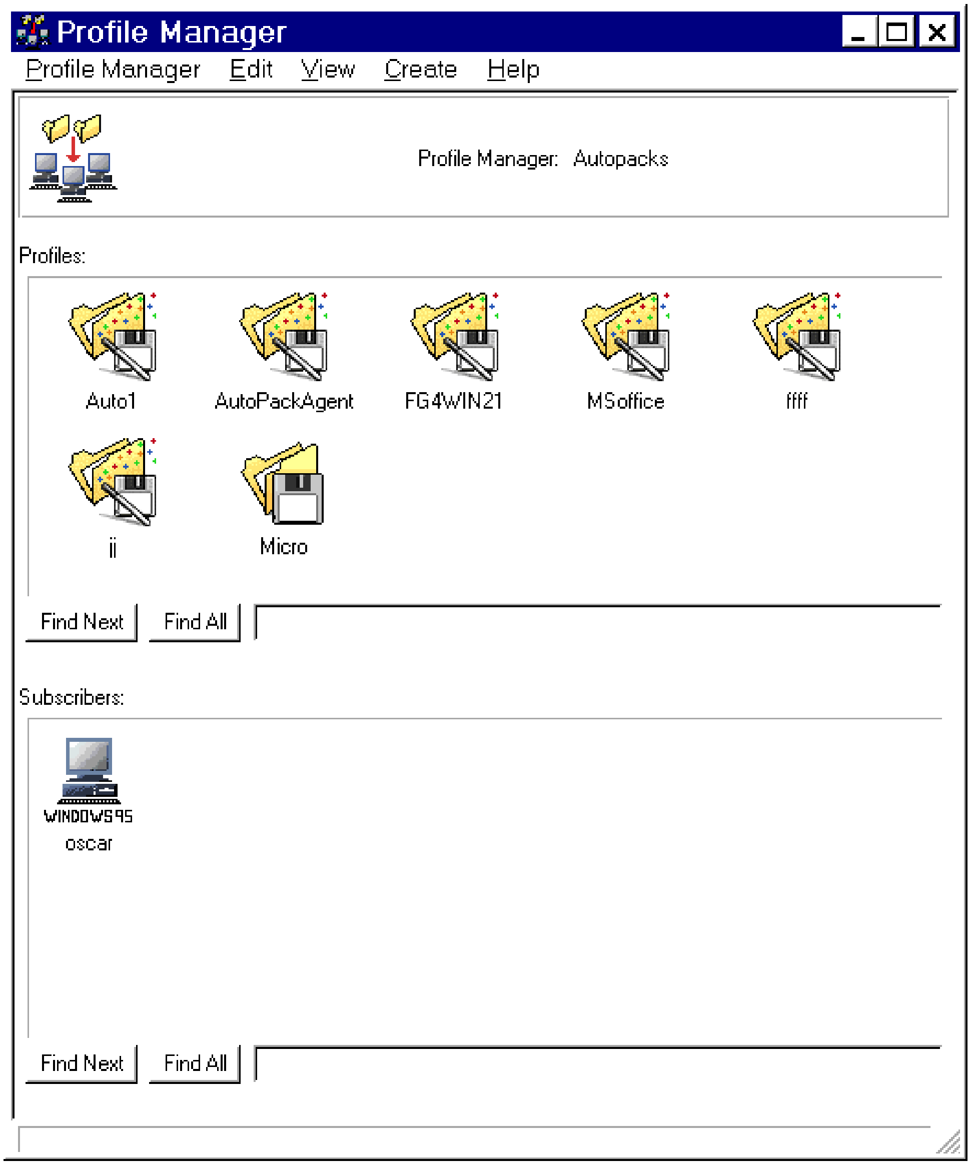
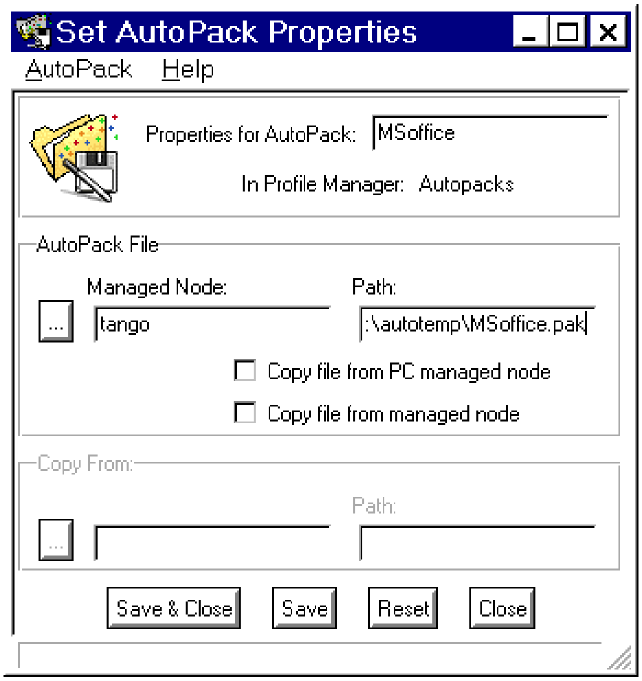

Profile Manager
Profile Manager Edit View Create Help
Profile Manager: Autopacks
Profiles:
Auto1
AutoPackAgent
FG4WIN21
MSoffice
ffff
jj
Micro
Find Next
Find All
Subscribers:
WINDOWS95
oscar
Find Next
Find All

Figure 105



Properties for AutoPack: MSoffice

In Profile Manager: Autopacks

AutoPack File

Managed Node: tango

Path: :\autotemp\MSoffice.pak

□ Copy file from PC managed node

□ Copy file from managed node

Copy From:

Path:

Figure 106

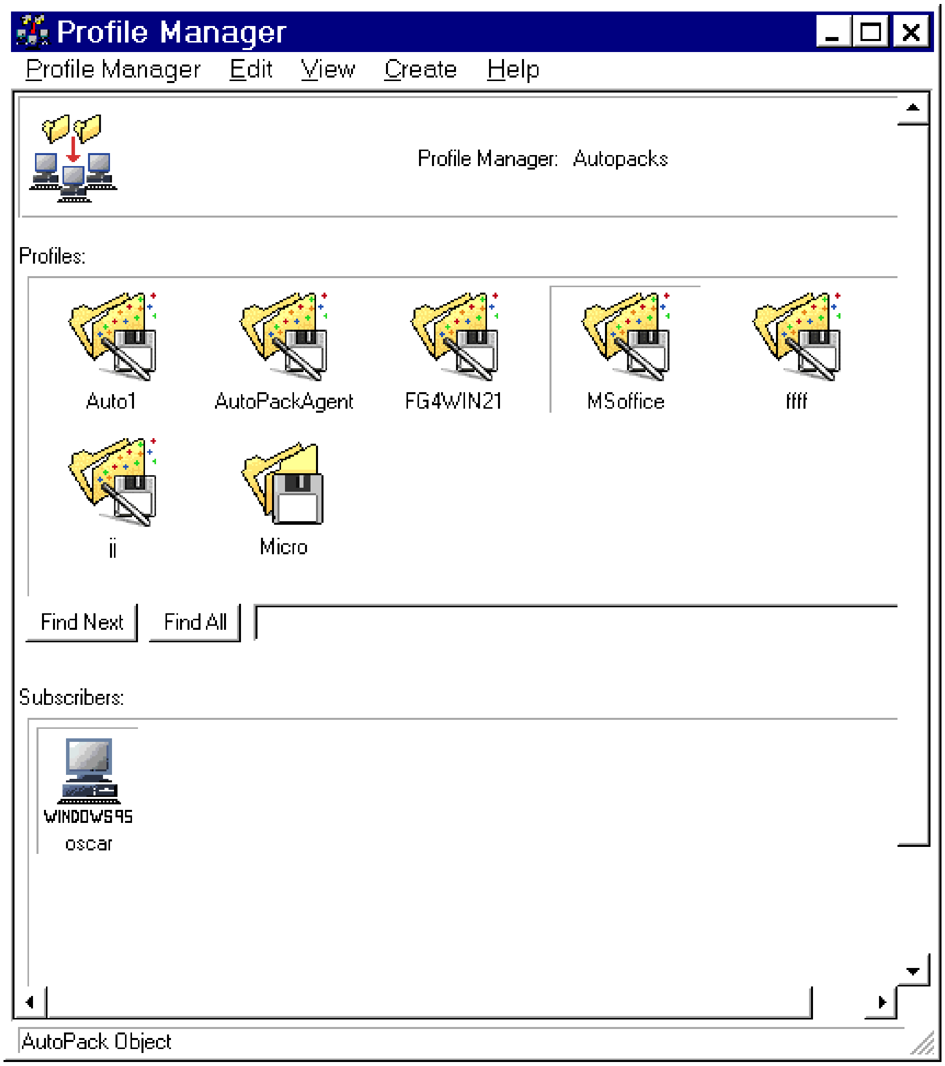
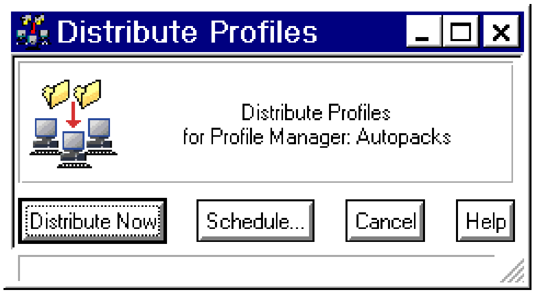
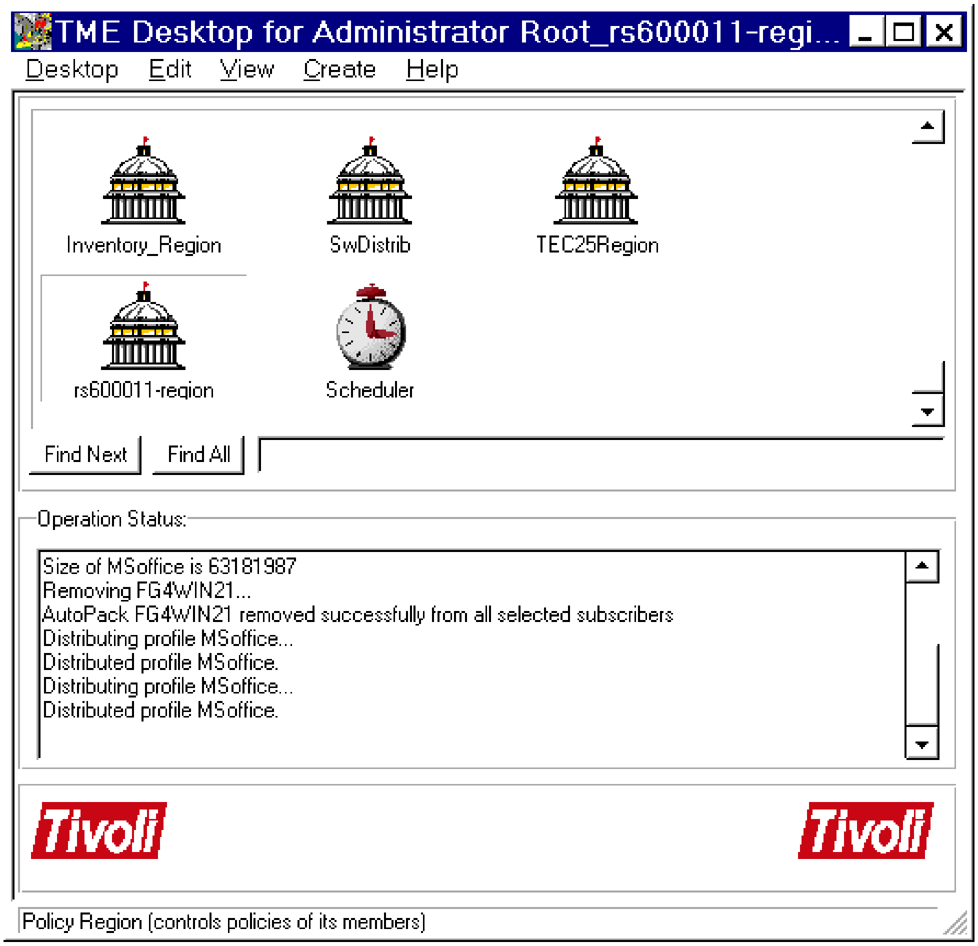

Profile Manager
Profile Manager
Edit
View
Create
Help
Profile Manager: Autopacks
Profiles:
Auto1
AutoPackAgent
FG4WIN21
MSoffice
ffff
jj
Micro
Find Next
Find All
Subscribers:
WINDOWS95
oscar
AutoPack Object

Figure 107



Distribute Profiles
for Profile Manager: Autopacks



TME Desktop for Administrator Root_rs600011-regi...
Desktop Edit View Create Help
Inventory_Region
SwDistrib
TEC25Region
rs600011-region
Scheduler
Find Next
Find All
Operation Status:
Tivoli
Tivoli

```
Size of MSoffice is 63181987
Removing FG4WIN21...
AutoPack FG4WIN21 removed successfully from all selected subscribers
Distributing profile MSoffice...
Distributed profile MSoffice.
Distributing profile MSoffice...
Distributed profile MSoffice.
```

Policy Region (controls policies of its members)

Figure 199

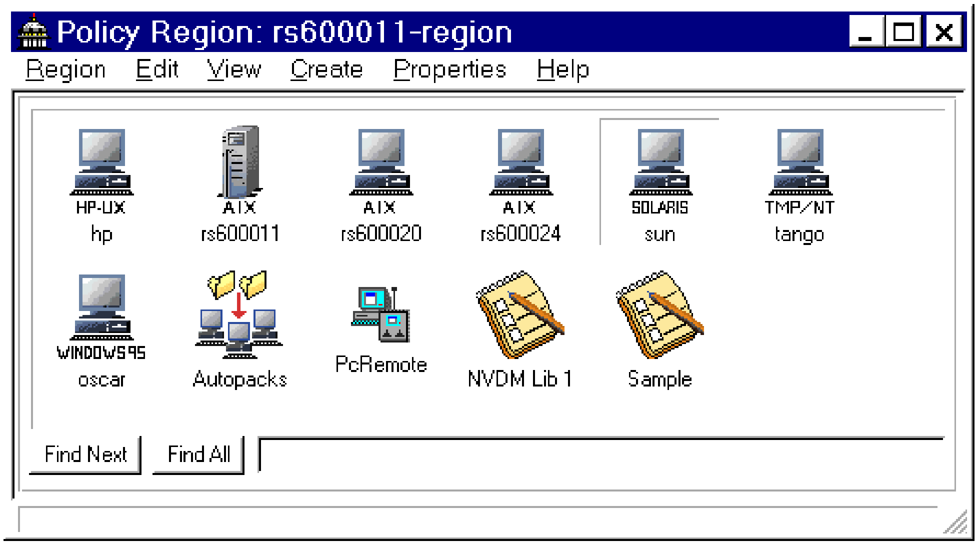
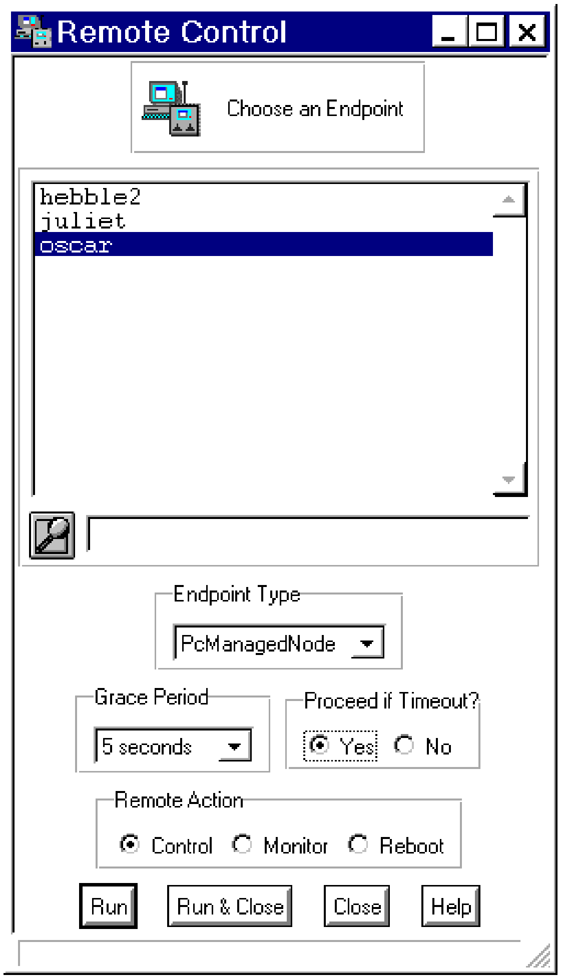
Policy Region: rs600011-region
Region
Edit
View
Create
Properties
Help
HP-UX
hp
AIX
rs600011
AIX
rs600020
AIX
rs600024
SOLARIS
sun
TMP/NT
tango
WINDOWS95
oscar
Autopacks
PcRemote
NVDM Lib 1
Sample
Find Next
Find All

Figure 200



hebble2
juliet
oscar

Endpoint Type: PcManagedNode

Grace Period: 5 seconds

Proceed if Timeout? ● Yes ○ No

Remote Action: ● Control ○ Monitor ○ Reboot

Figure 201

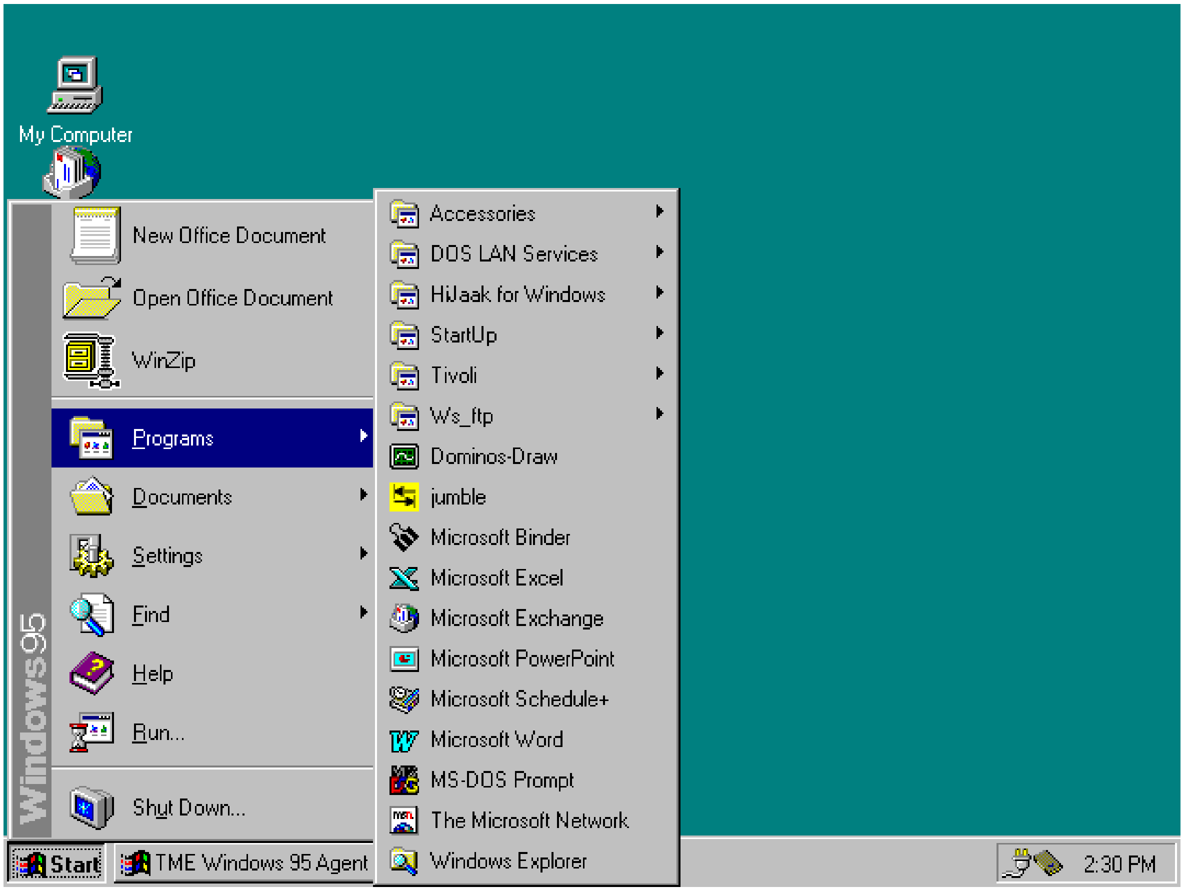
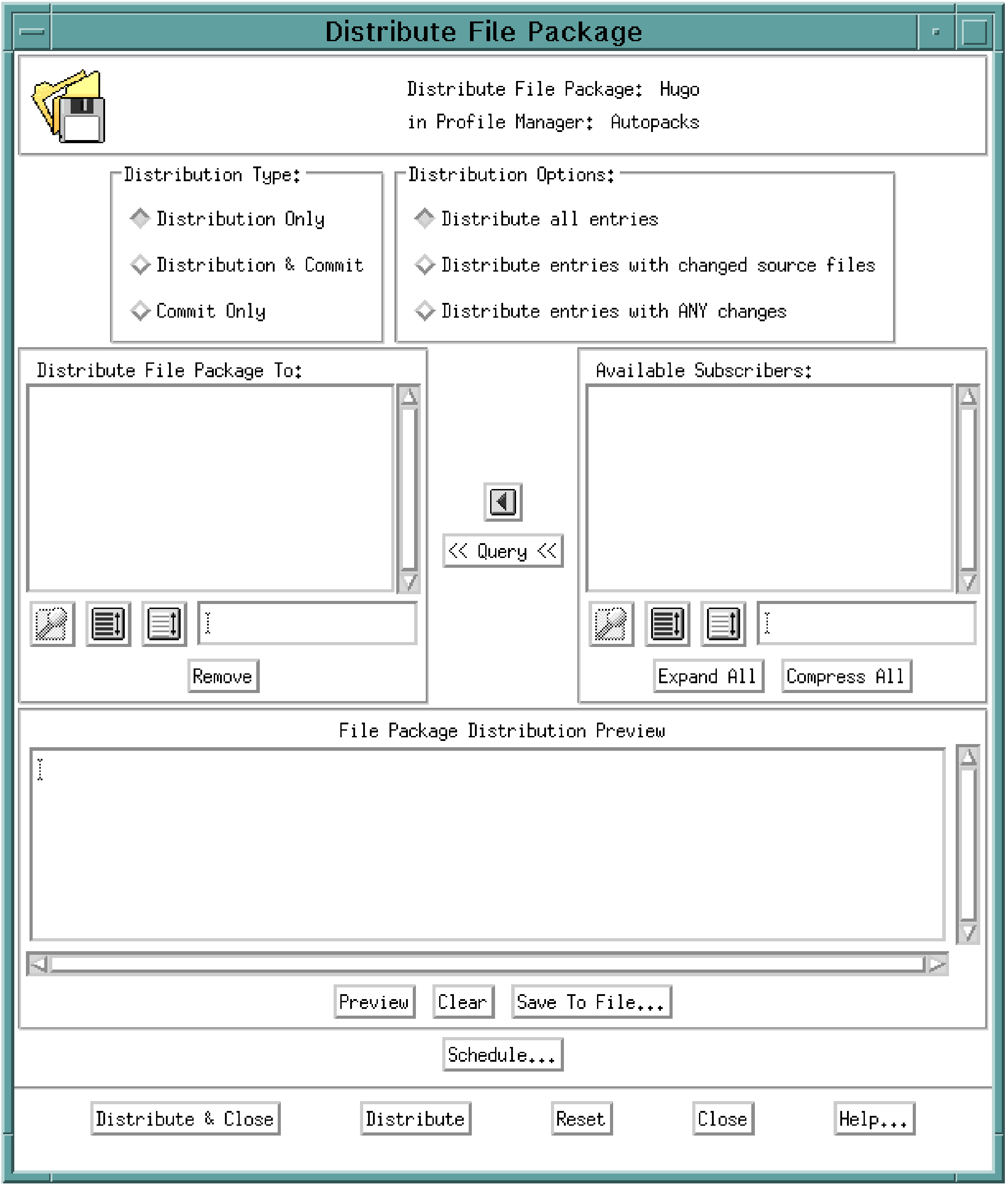

My Computer
New Office Document
Open Office Document
WinZip
Programs
Documents
Settings
Find
Help
Run...
Shut Down...
Windows95
Accessories
DOS LAN Services
HiJaak for Windows
StartUp
Tivoli
Ws_ftp
Dominos-Draw
jumble
Microsoft Binder
Microsoft Excel
Microsoft Exchange
Microsoft PowerPoint
Microsoft Schedule+
Microsoft Word
MS-DOS Prompt
The Microsoft Network
Windows Explorer
Start
TME Windows 95 Agent
2:30 PM

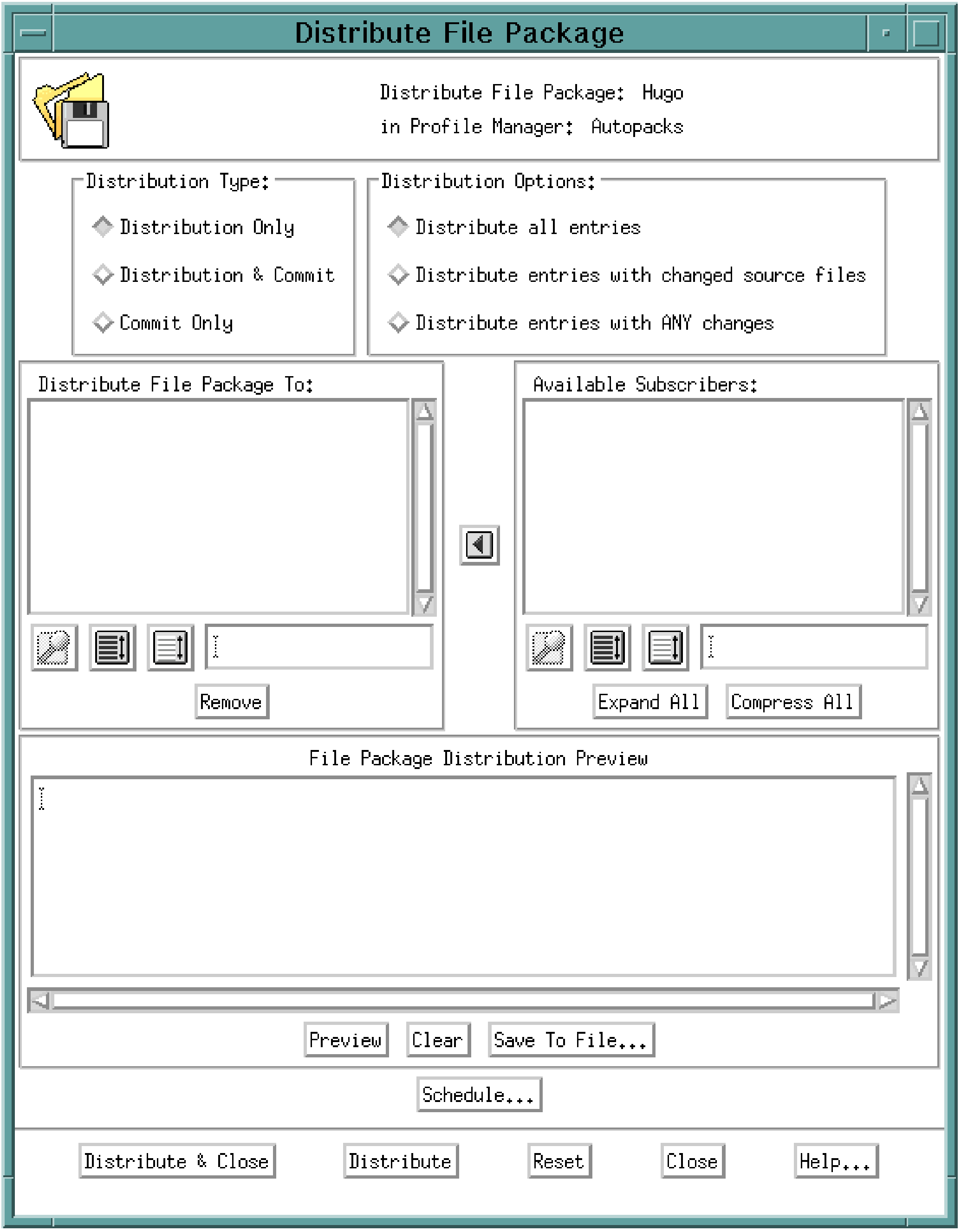
Figure 202



Distribute File Package: Hugo
in Profile Manager: Autopacks

Distribution Type:
- ◆ Distribution Only
- ◇ Distribution & Commit
- ◇ Commit Only

Distribution Options:
- ◆ Distribute all entries
- ◇ Distribute entries with changed source files
- ◇ Distribute entries with ANY changes



Distribute File Package

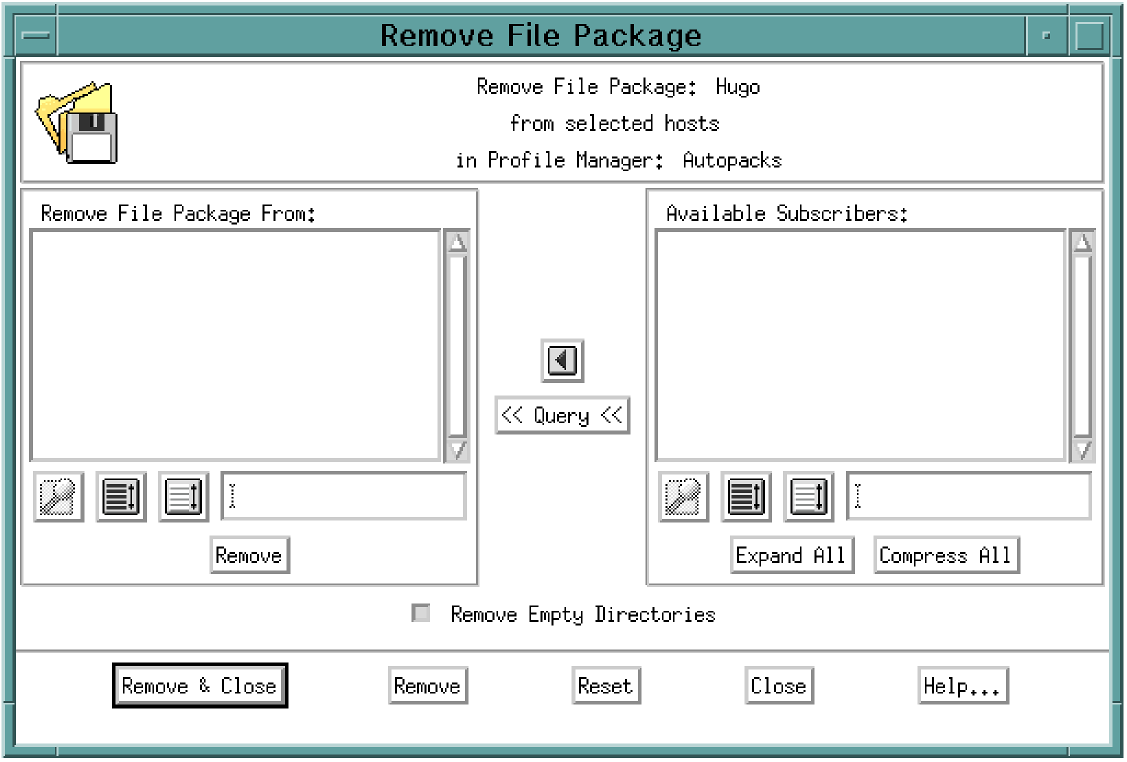
Distribute File Package: Hugo
in Profile Manager: Autopacks

Distribution Type:

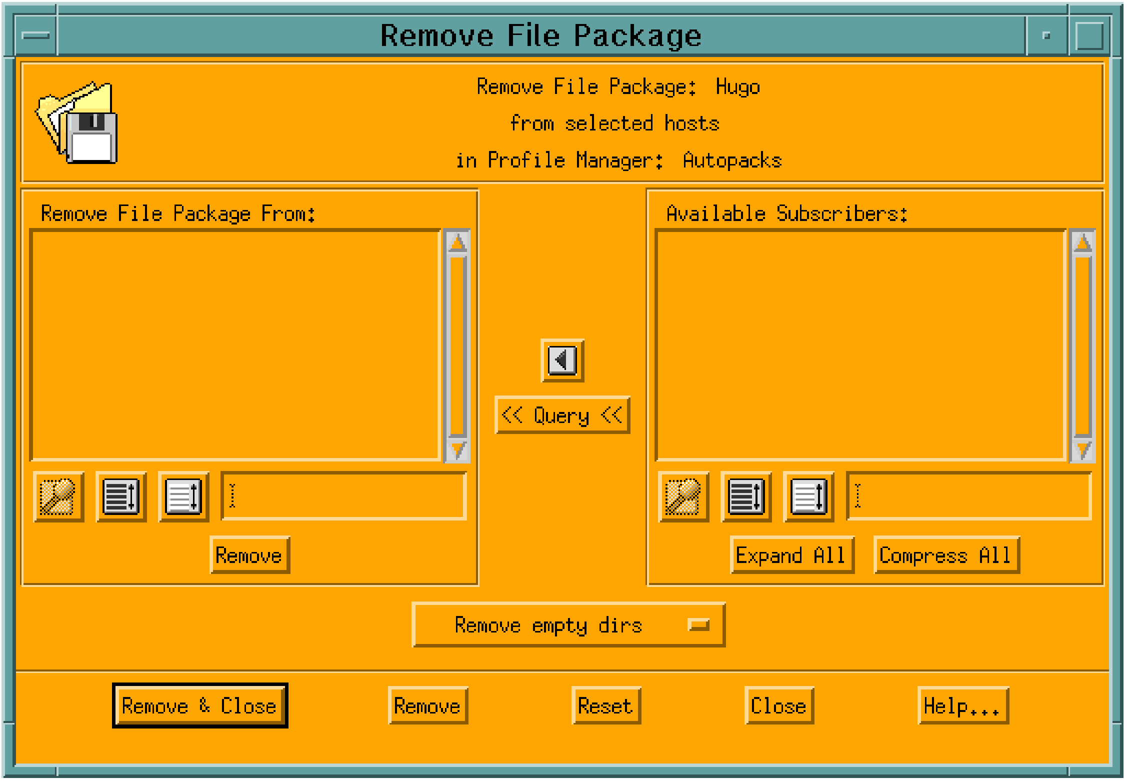
◆ Distribution Only
◇ Distribution & Commit
◇ Commit Only

Distribution Options:

◆ Distribute all entries
◇ Distribute entries with changed source files
◇ Distribute entries with ANY changes



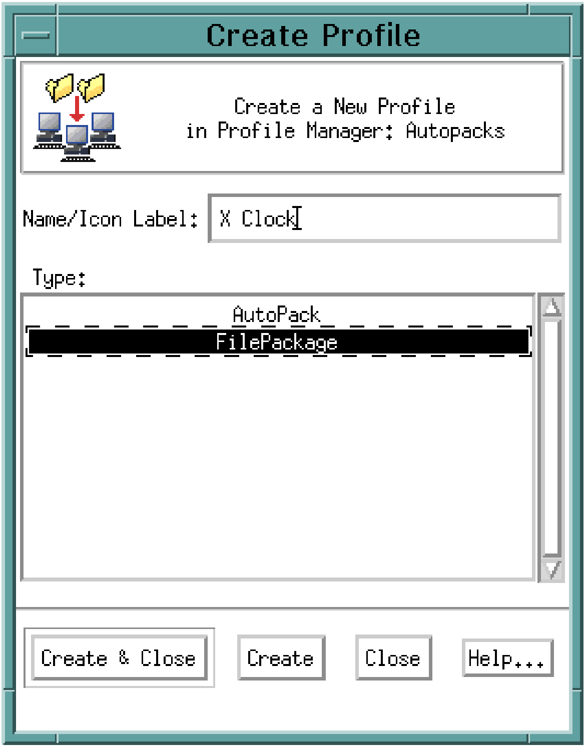
Remove File Package: Hugo
from selected hosts
in Profile Manager: Autopacks



Remove File Package

Remove File Package: Hugo
from selected hosts
in Profile Manager: Autopacks

Figure 211



Create Profile

Create a New Profile
in Profile Manager: Autopacks

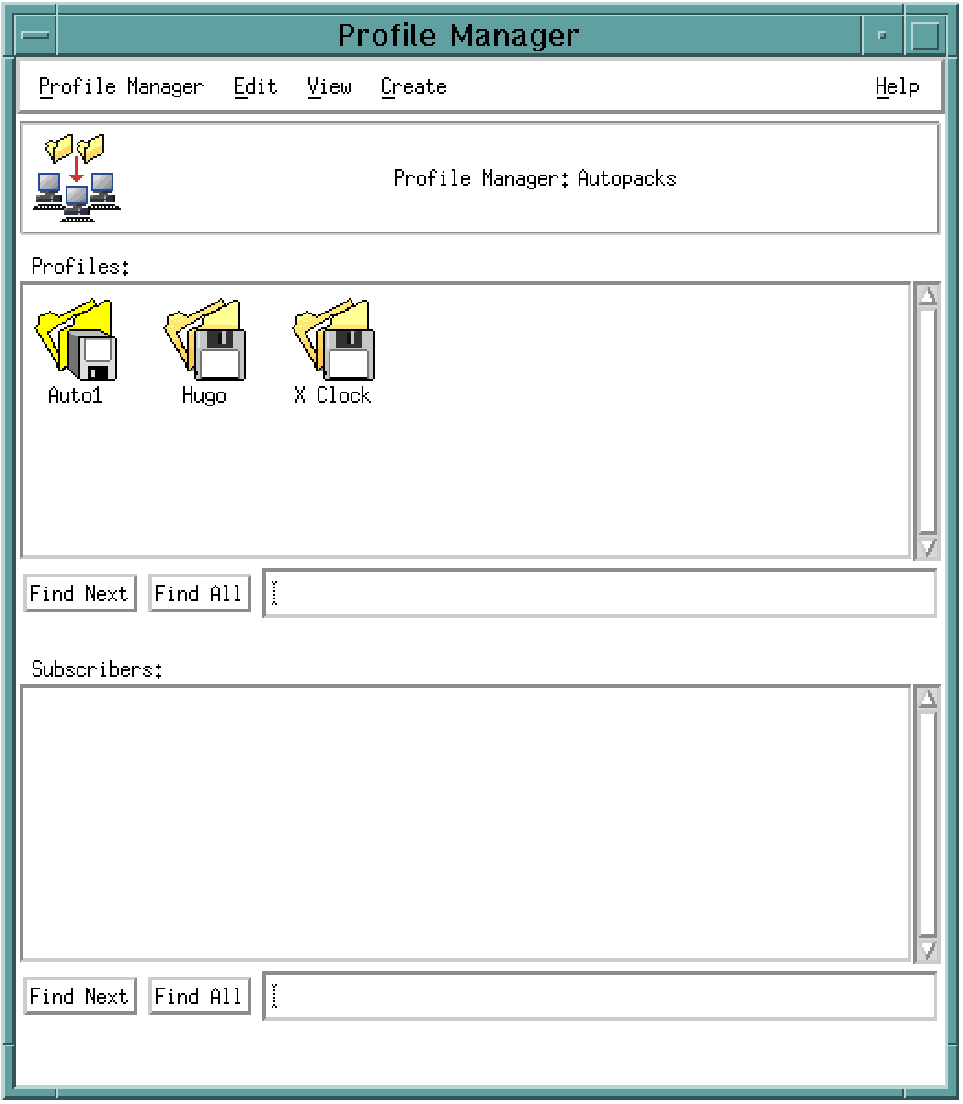
Name/Icon Label: X Clock

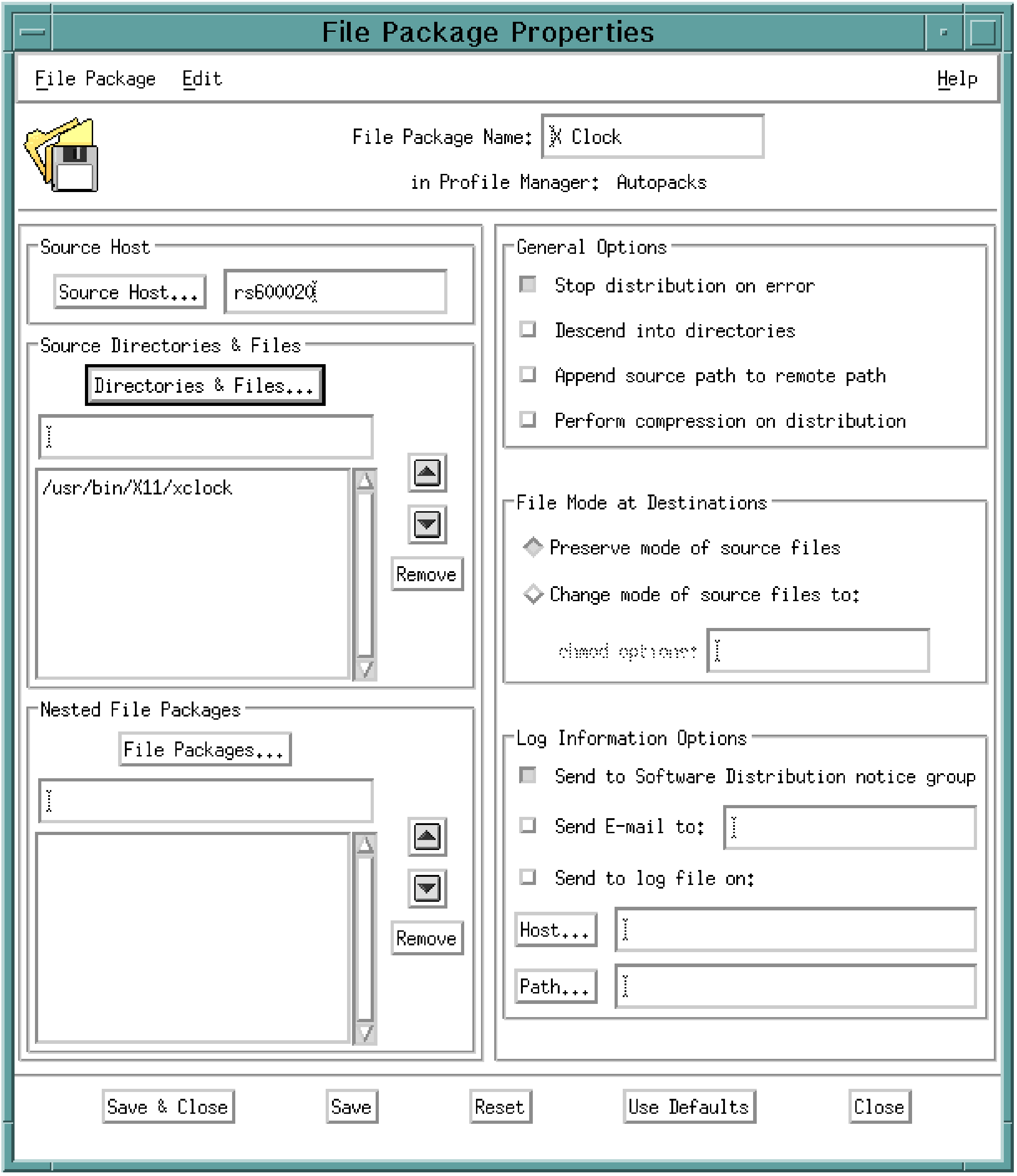
Type:

AutoPack

FilePackage

Figure 25


Profile Manager
Profile Manager
Edit
View
Create
Help
Profile Manager: Autopacks
Profiles:
Auto1
Hugo
X Clock
Find Next
Find All
Subscribers:
Find Next
Find All



File Package Name: X Clock

in Profile Manager: Autopacks

Source Host

rs600020

Source Directories & Files

/usr/bin/X11/xclock

Nested File Packages

General Options

☒ Stop distribution on error

□ Descend into directories

□ Append source path to remote path

□ Perform compression on distribution

File Mode at Destinations

● Preserve mode of source files

○ Change mode of source files to:

chmod options:

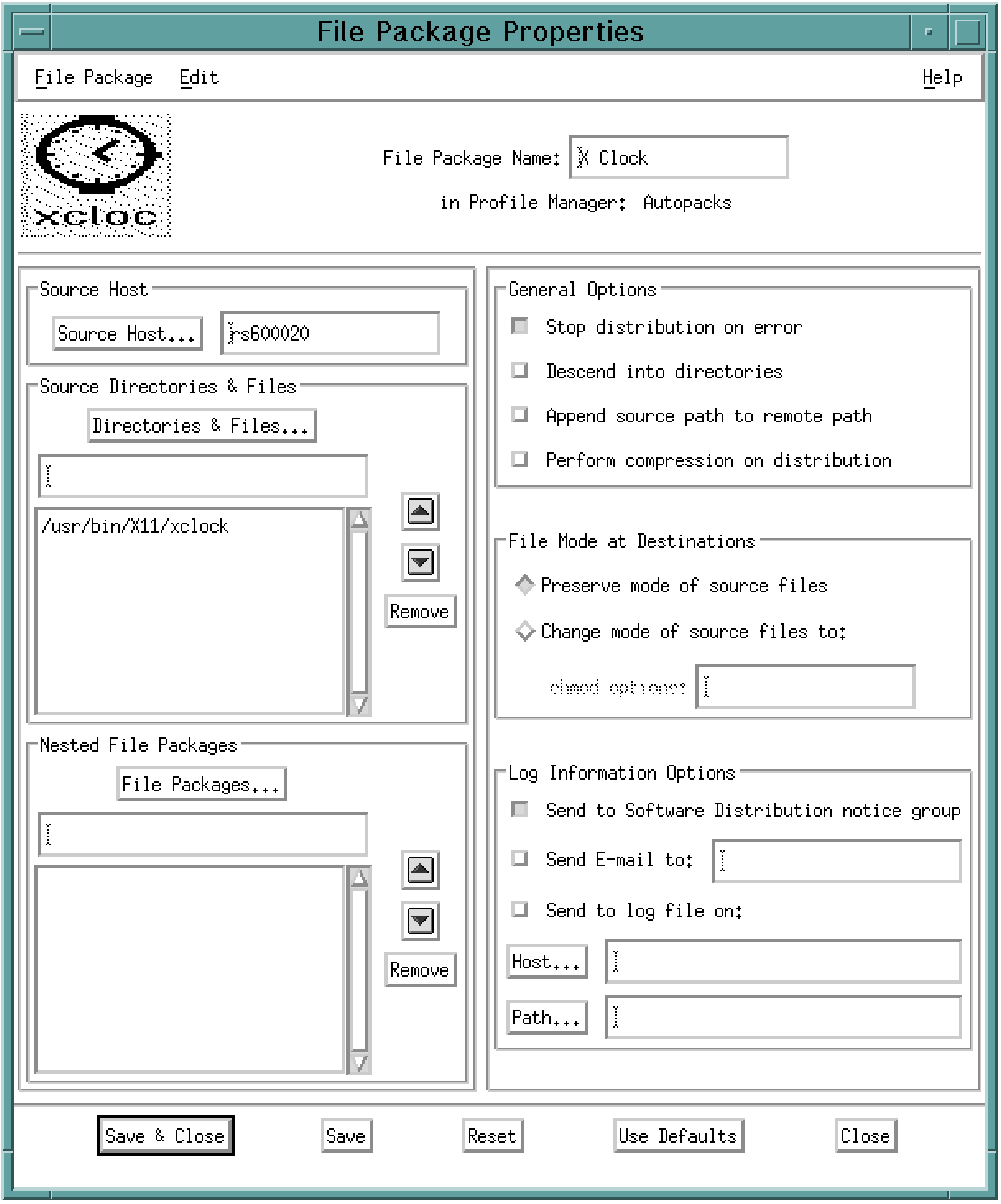
Log Information Options

☒ Send to Software Distribution notice group

□ Send E-mail to:

□ Send to log file on:

Figure 214



File Package Name: X Clock

in Profile Manager: Autopacks

Source Host

rs600020

Source Directories & Files

/usr/bin/X11/xclock

Nested File Packages

General Options

☑ Stop distribution on error

□ Descend into directories

□ Append source path to remote path

□ Perform compression on distribution

File Mode at Destinations

● Preserve mode of source files

○ Change mode of source files to:

chmod options:

Log Information Options

☑ Send to Software Distribution notice group

□ Send E-mail to:

□ Send to log file on:

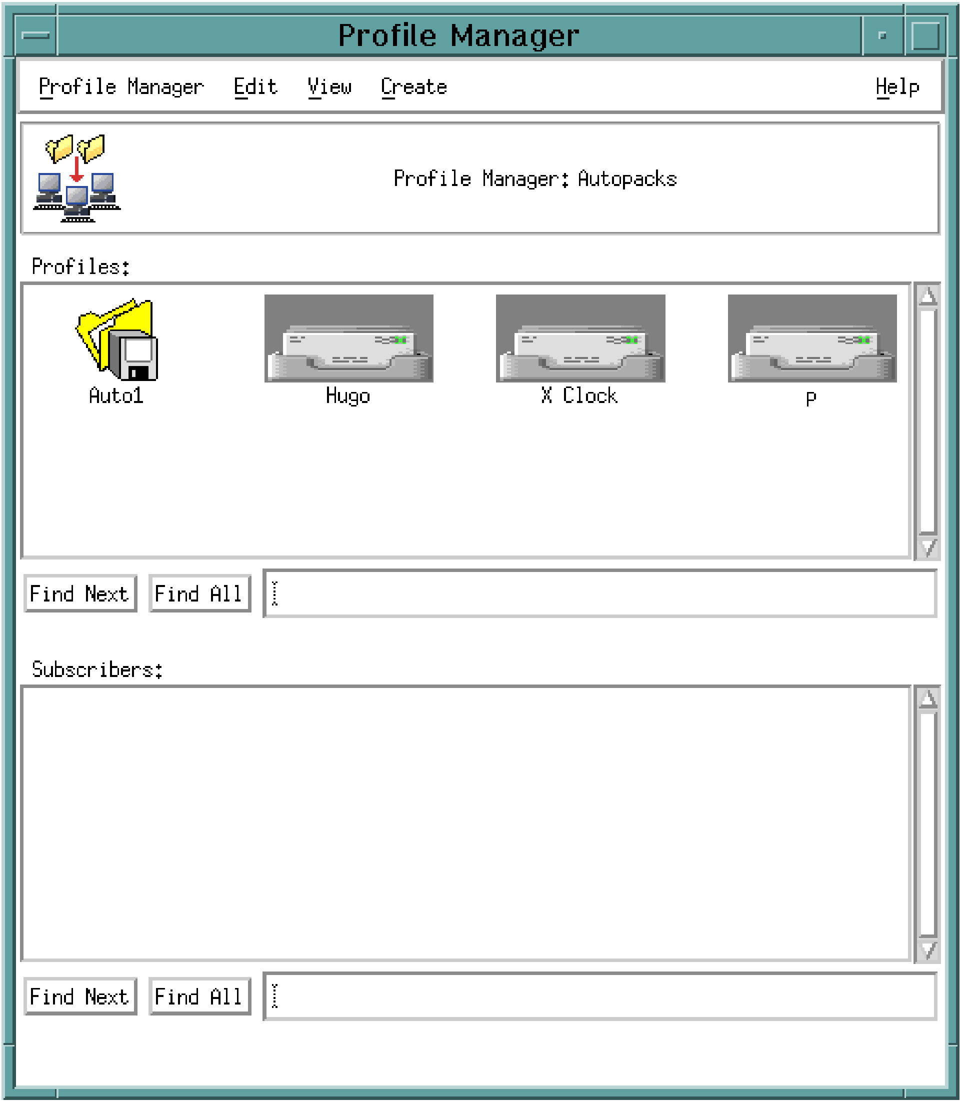

Profile Manager
Profile Manager
Edit
View
Create
Help
Profile Manager: Autopacks
Profiles:
Auto1
Hugo
X Clock
p
Find Next
Find All
Subscribers:
Find Next
Find All

Figure 217

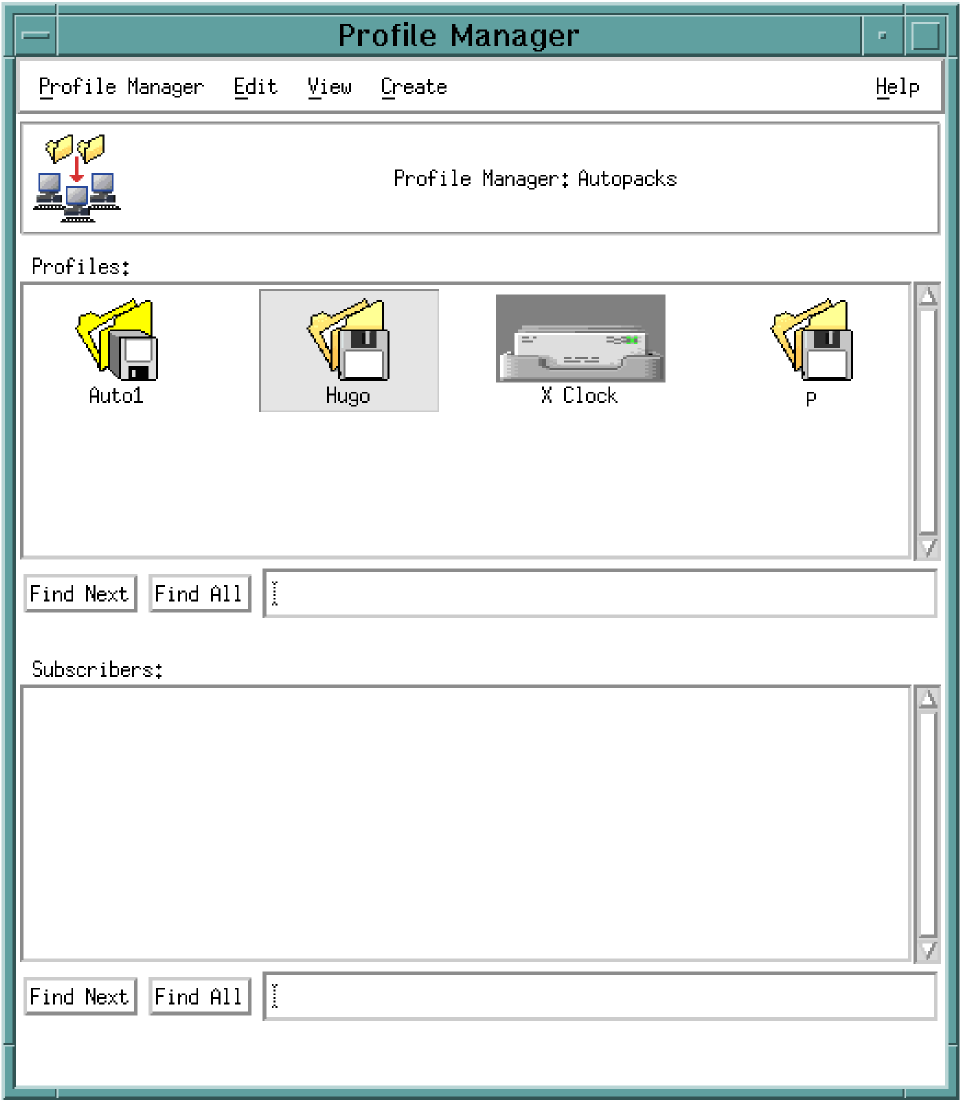

Profile Manager
Profile Manager
Edit
View
Create
Help
Profile Manager: Autopacks
Profiles:
Auto1
Hugo
X Clock
P
Find Next
Find All
Subscribers:
Find Next
Find All

Figure 218

http://www.redbooks.ibm.com:80/SG244976/variable.gif

Latest

Show All

Hrm.

Wayback Machine doesn't have that page archived.
Want to search for all archived pages under
http://www.redbooks.ibm.com:80/SG244976/ ?

This page is available on the web!

Help make the Wayback Machine more complete!
Save this url in the Wayback Machine

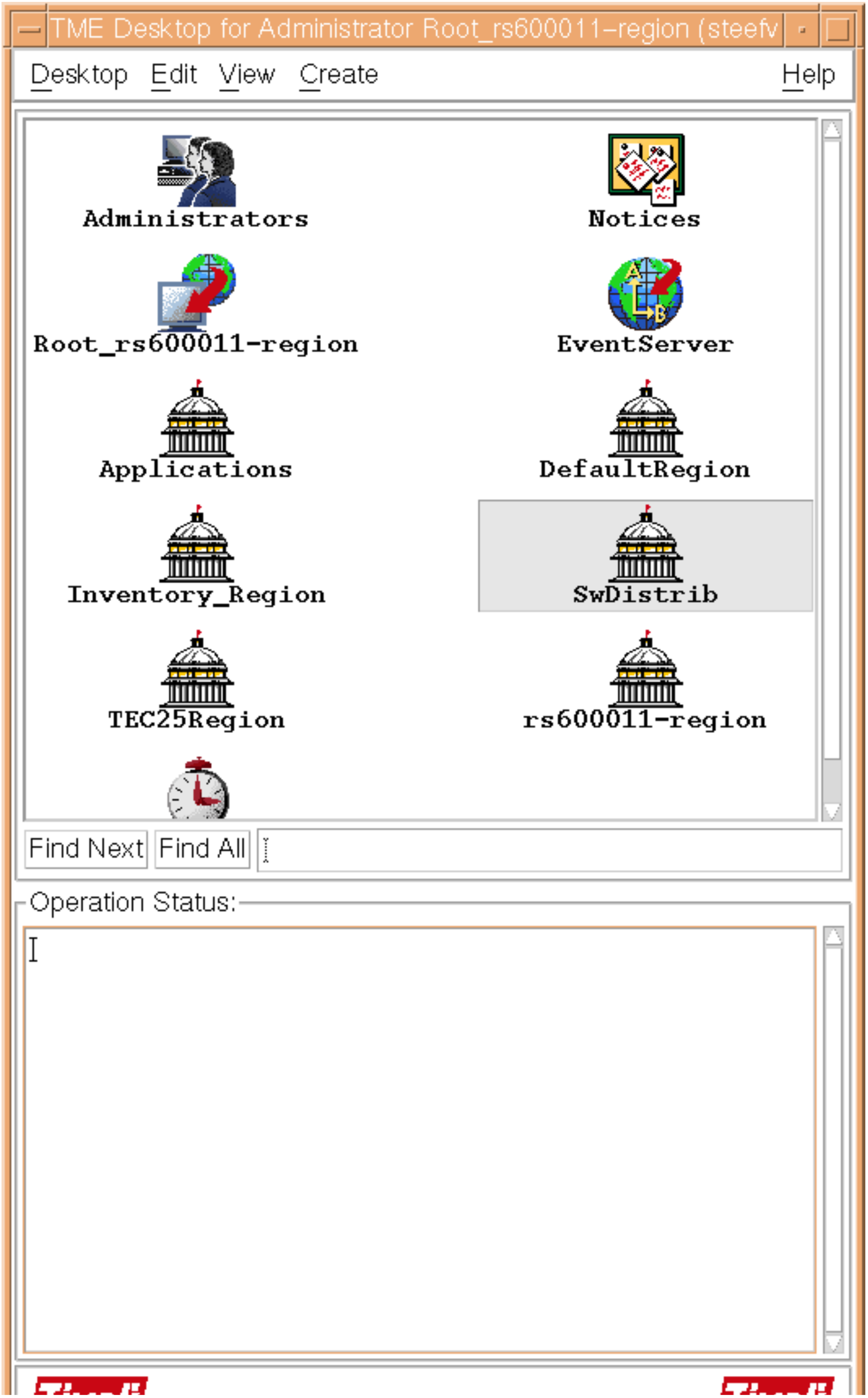
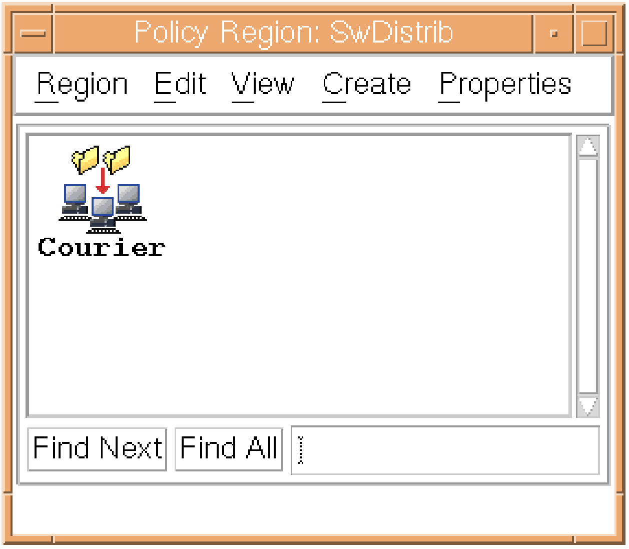
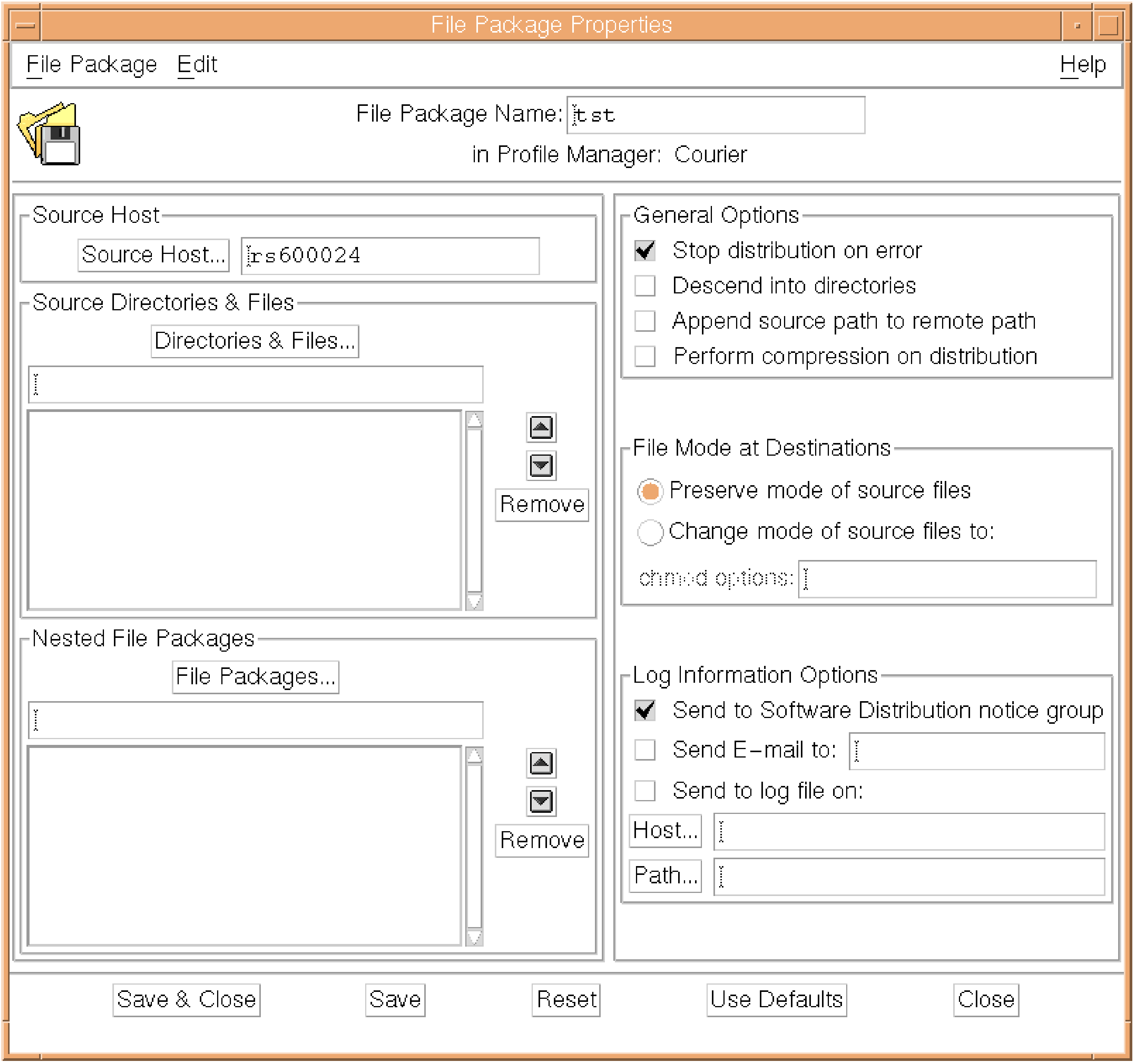

TME Desktop for Administrator Root_rs600011-region (steefv
Desktop
Edit
View
Create
Help
Administrators
Notices
Root_rs600011-region
EventServer
Applications
DefaultRegion
Inventory_Region
SwDistrib
TEC25Region
rs600011-region
Find Next
Find All
Operation Status:

Figure 227

Figure 227


Policy Region: SwDistrib
Region
Edit
View
Create
Properties
Courier
Find Next
Find All



File Package Name: tst

in Profile Manager: Courier

Source Host

rs600024

Source Directories & Files

Nested File Packages

General Options

☑ Stop distribution on error

□ Descend into directories

□ Append source path to remote path

□ Perform compression on distribution

File Mode at Destinations

● Preserve mode of source files

○ Change mode of source files to:

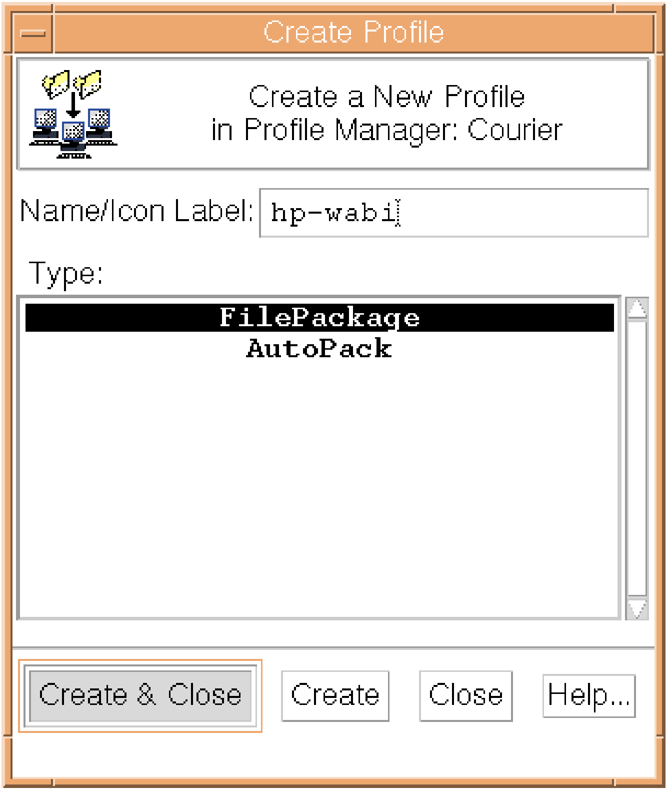
chmod options:

Log Information Options

☑ Send to Software Distribution notice group

□ Send E-mail to:

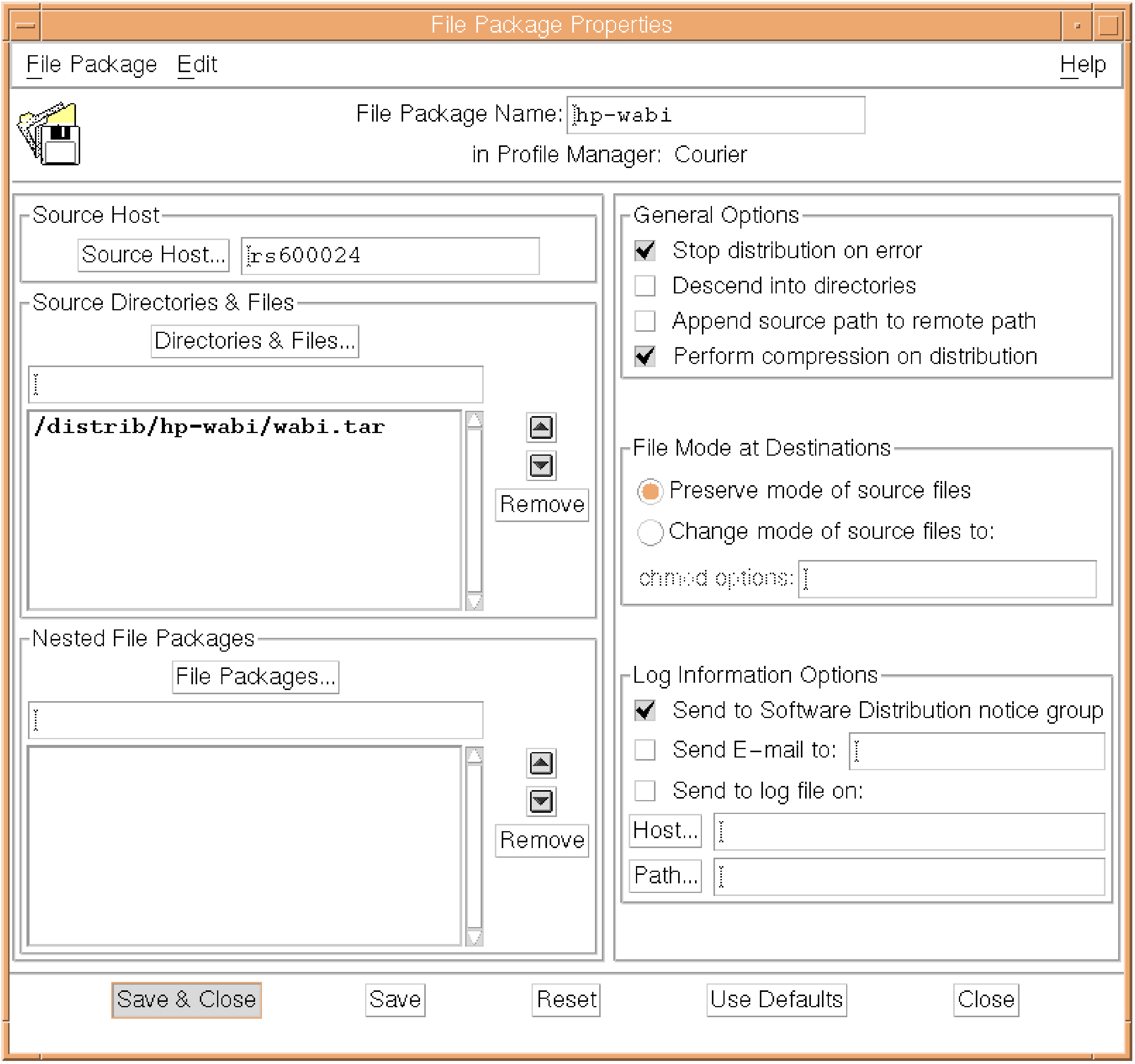
□ Send to log file on:



Name/Icon Label: hp-wabi

Type:

FilePackage
AutoPack



File Package Name: hp-wabi

in Profile Manager: Courier

Source Host

rs600024

Source Directories & Files

/distrib/hp-wabi/wabi.tar

Nested File Packages

General Options

- ☑ Stop distribution on error
- □ Descend into directories
- □ Append source path to remote path
- ☑ Perform compression on distribution

File Mode at Destinations

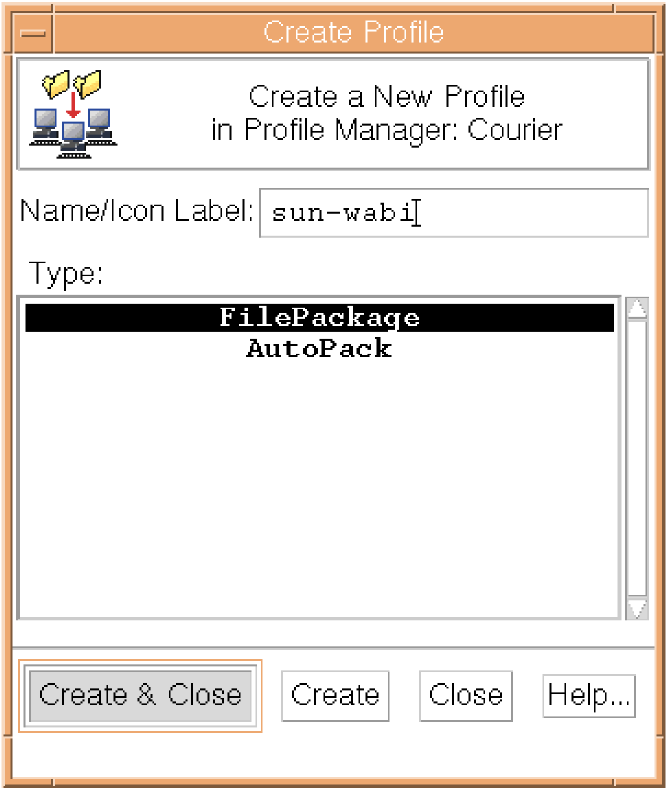
- ● Preserve mode of source files
- ○ Change mode of source files to:

chmod options:

Log Information Options

- ☑ Send to Software Distribution notice group
- □ Send E-mail to:
- □ Send to log file on:

Figure 237

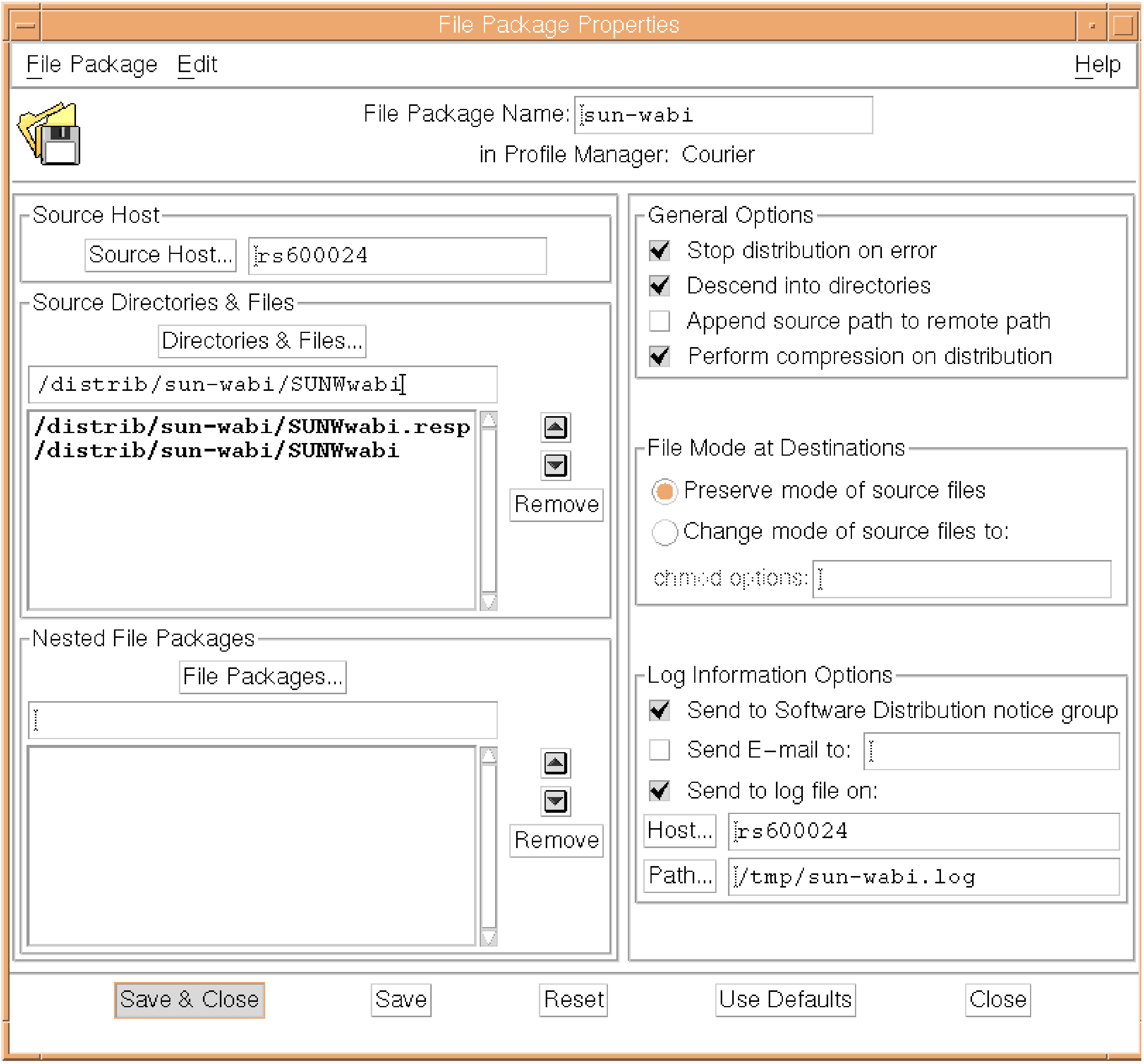


Create a New Profile
in Profile Manager: Courier

Name/Icon Label: sun-wabi

Type:

- FilePackage
- AutoPack



File Package Name: sun-wabi

in Profile Manager: Courier

Source Host

rs600024

Source Directories & Files

/distrib/sun-wabi/SUNWwabi

/distrib/sun-wabi/SUNWwabi.resp
/distrib/sun-wabi/SUNWwabi

Nested File Packages

General Options

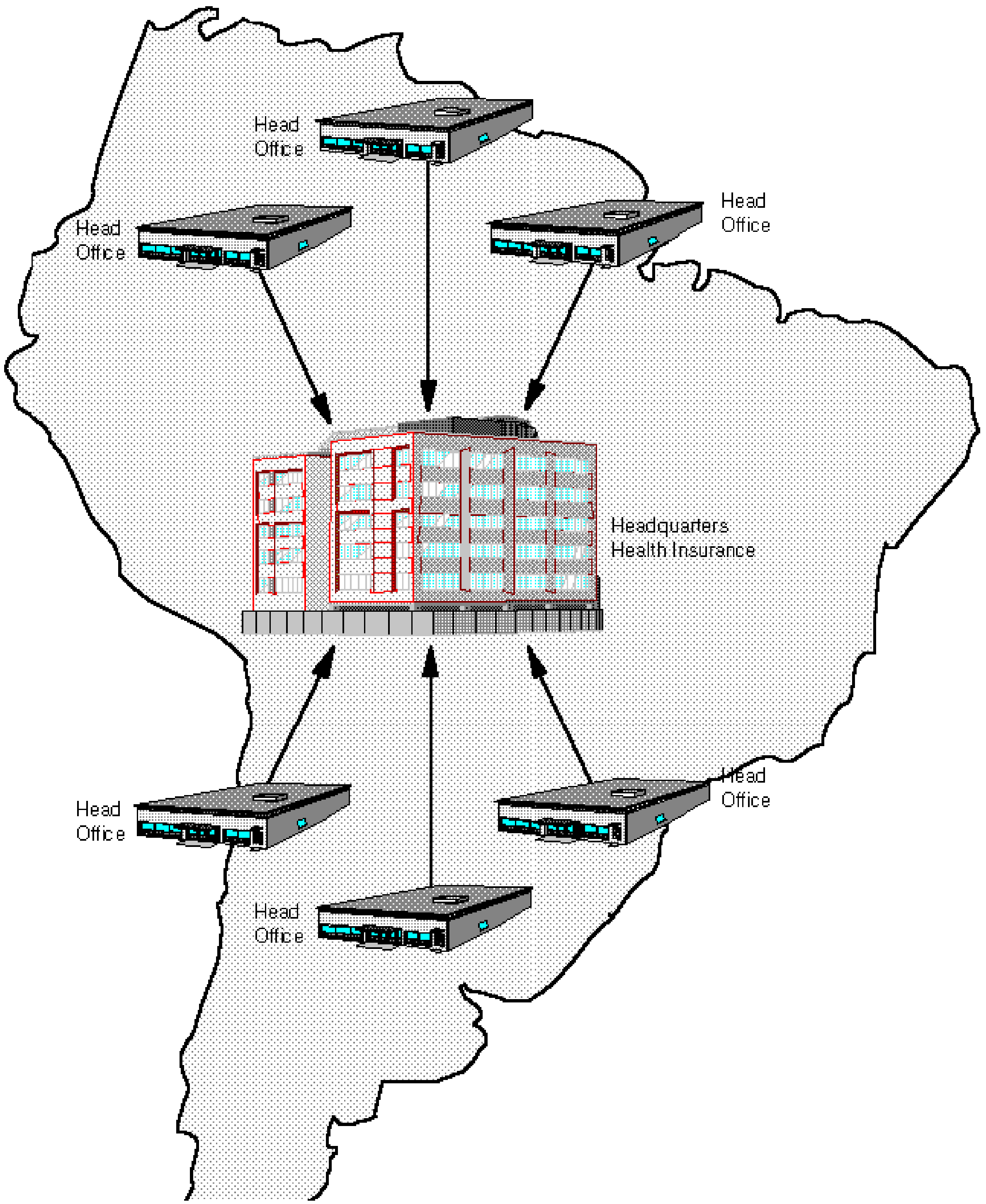
☑ Stop distribution on error
☑ Descend into directories
☐ Append source path to remote path
☑ Perform compression on distribution

File Mode at Destinations

● Preserve mode of source files
○ Change mode of source files to:
chmod options:

Log Information Options

☑ Send to Software Distribution notice group
☐ Send E-mail to:
☑ Send to log file on:
Host: rs600024
Path: /tmp/sun-wabi.log


Head
Office
Head
Office
Head
Office
Headquarters
Health Insurance
Head
Office
Head
Office
Head
Office

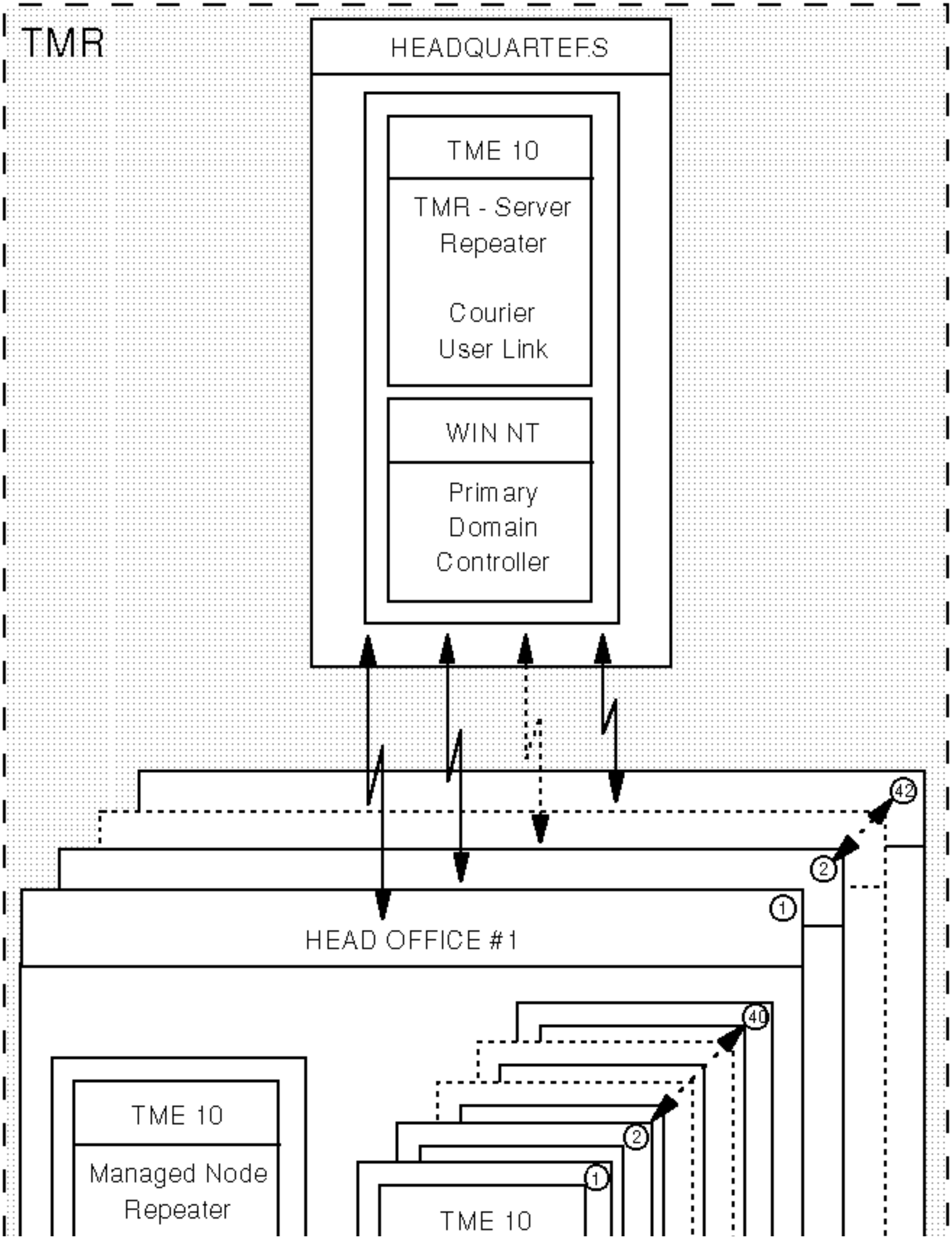

TMR
HEADQUARTEF.S
TME 10
TMR - Server
Repeater
Courier
User Link
WIN NT
Primary
Domain
Controller
42
2
1
HEAD OFFICE #1
40
2
1
TME 10
Managed Node
Repeater
TME 10

Figure 241

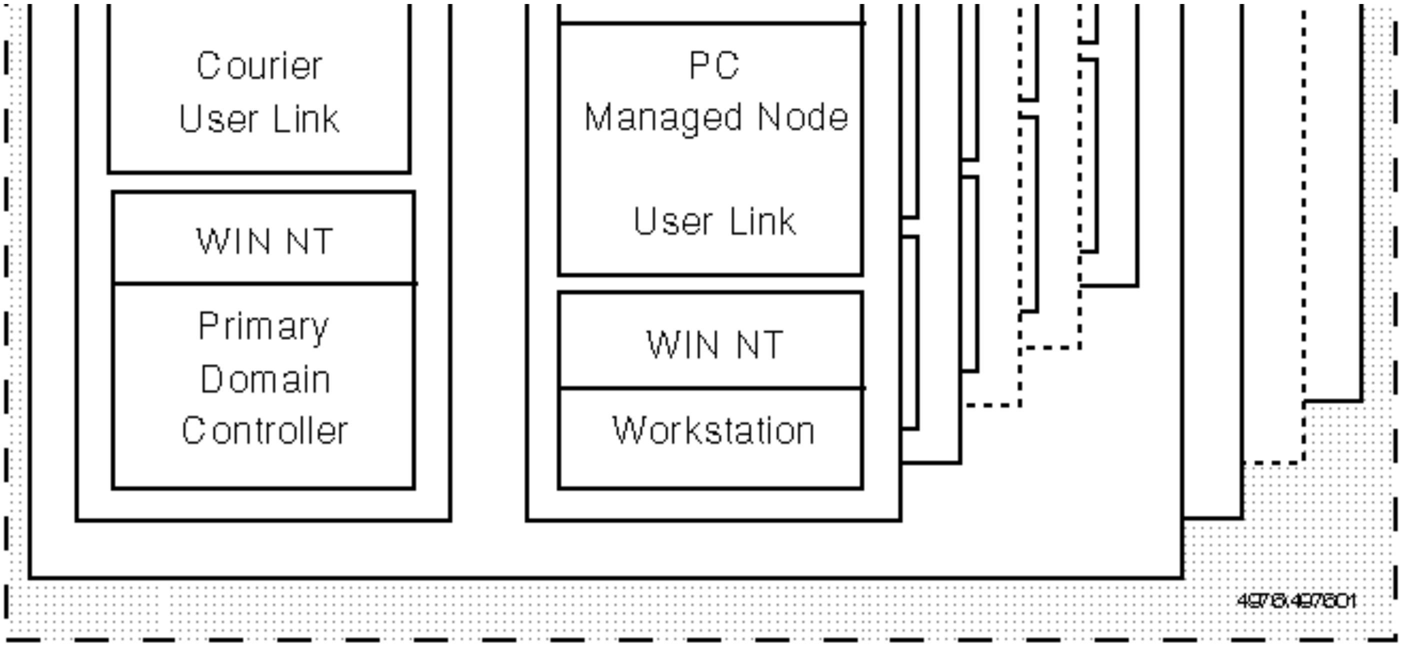
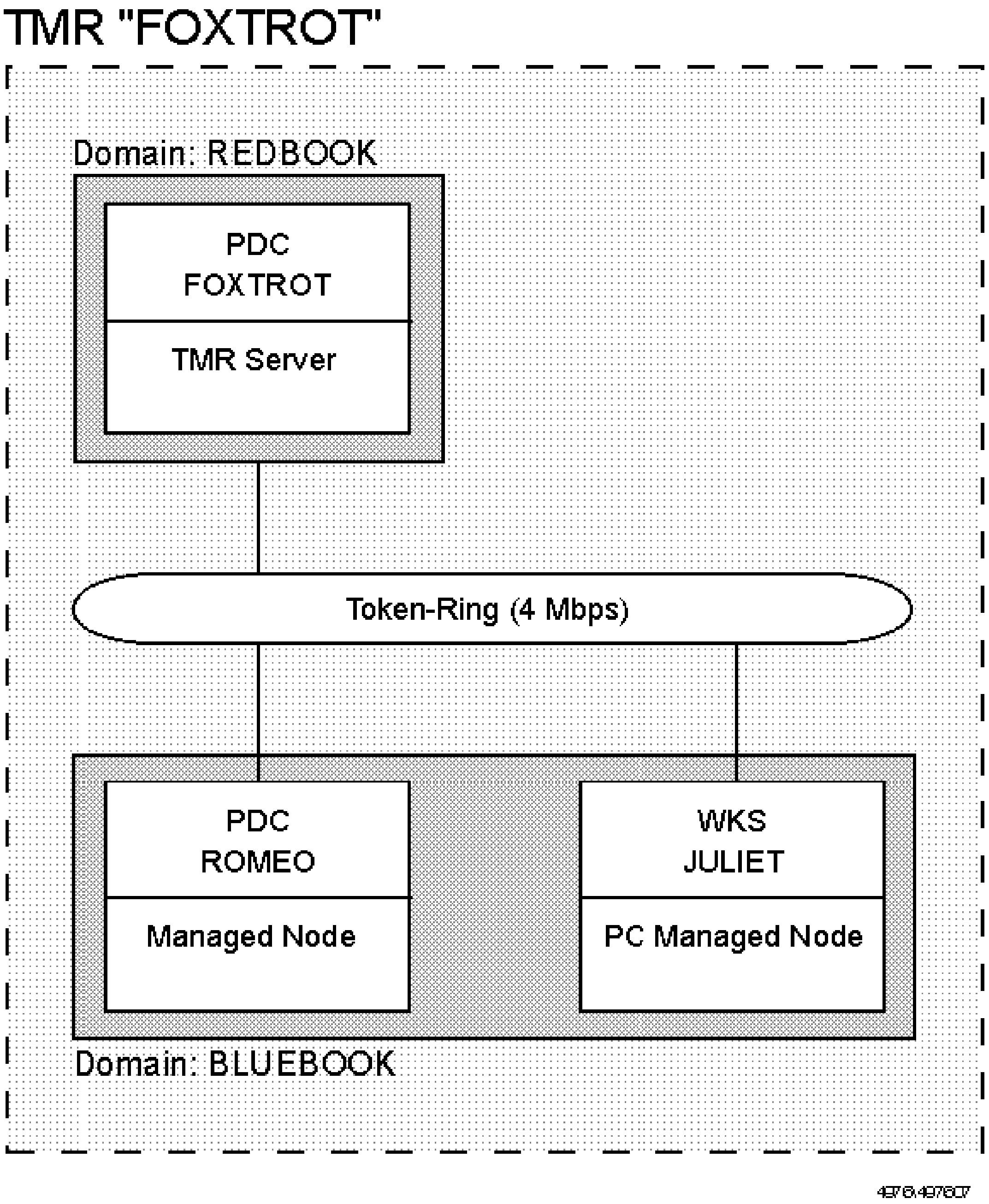

Courier
User Link
WIN NT
Primary
Domain
Controller
PC
Managed Node
User Link
WIN NT
Workstation
4976\497601

Figure 241


TMR "FOXTROT"
Domain: REDBOOK
PDC
FOXTROT
TMR Server
Token-Ring (4 Mbps)
PDC
ROMEO
Managed Node
WKS
JULIET
PC Managed Node
Domain: BLUEBOOK
4976\497607

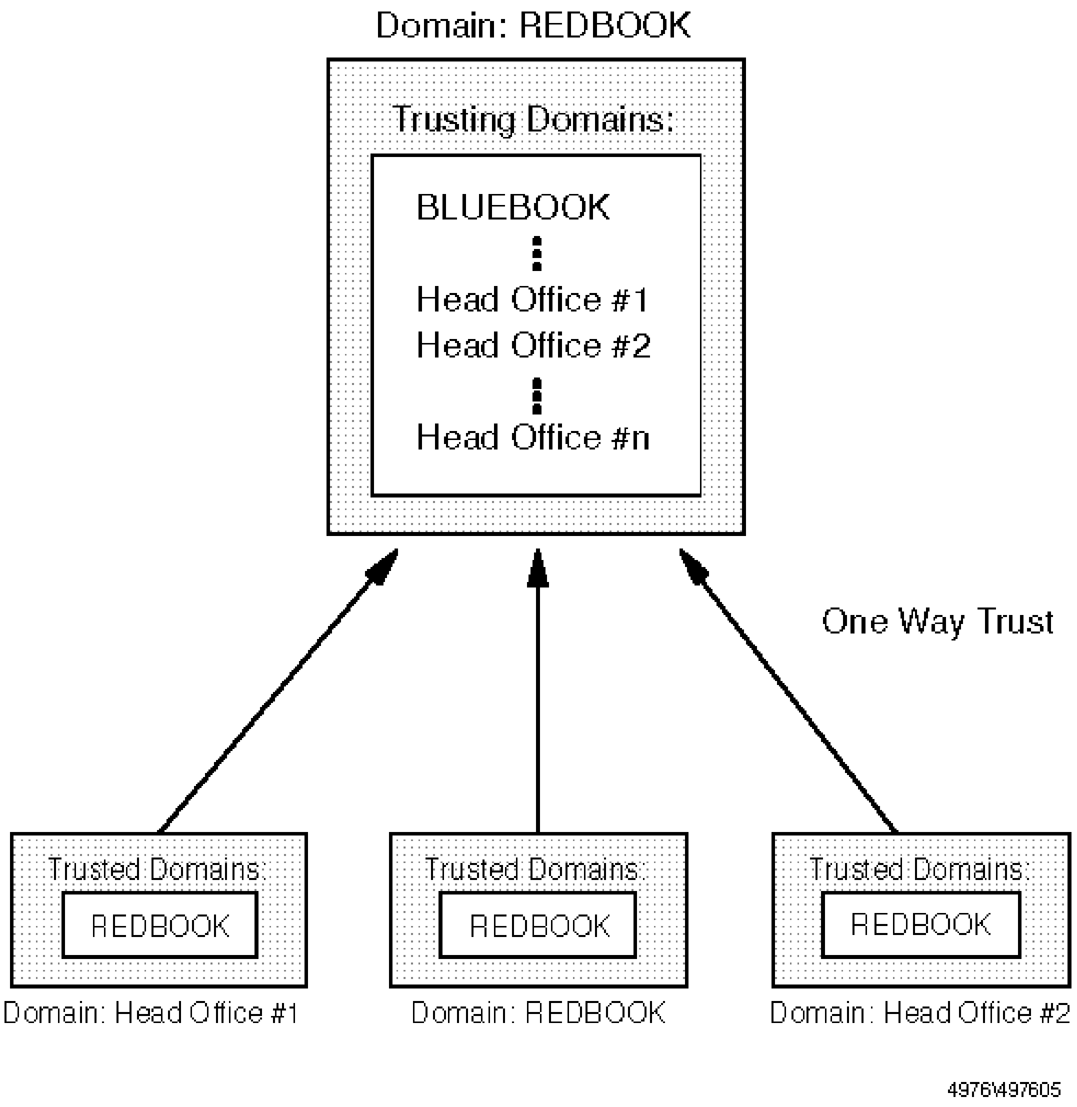

Domain: REDBOOK
Trusting Domains:
BLUEBOOK
Head Office #1
Head Office #2
Head Office #n
One Way Trust
Trusted Domains:
REDBOOK
Domain: Head Office #1
Trusted Domains:
REDBOOK
Domain: REDBOOK
Trusted Domains:
REDBOOK
Domain: Head Office #2
4976\497605

Figure 242

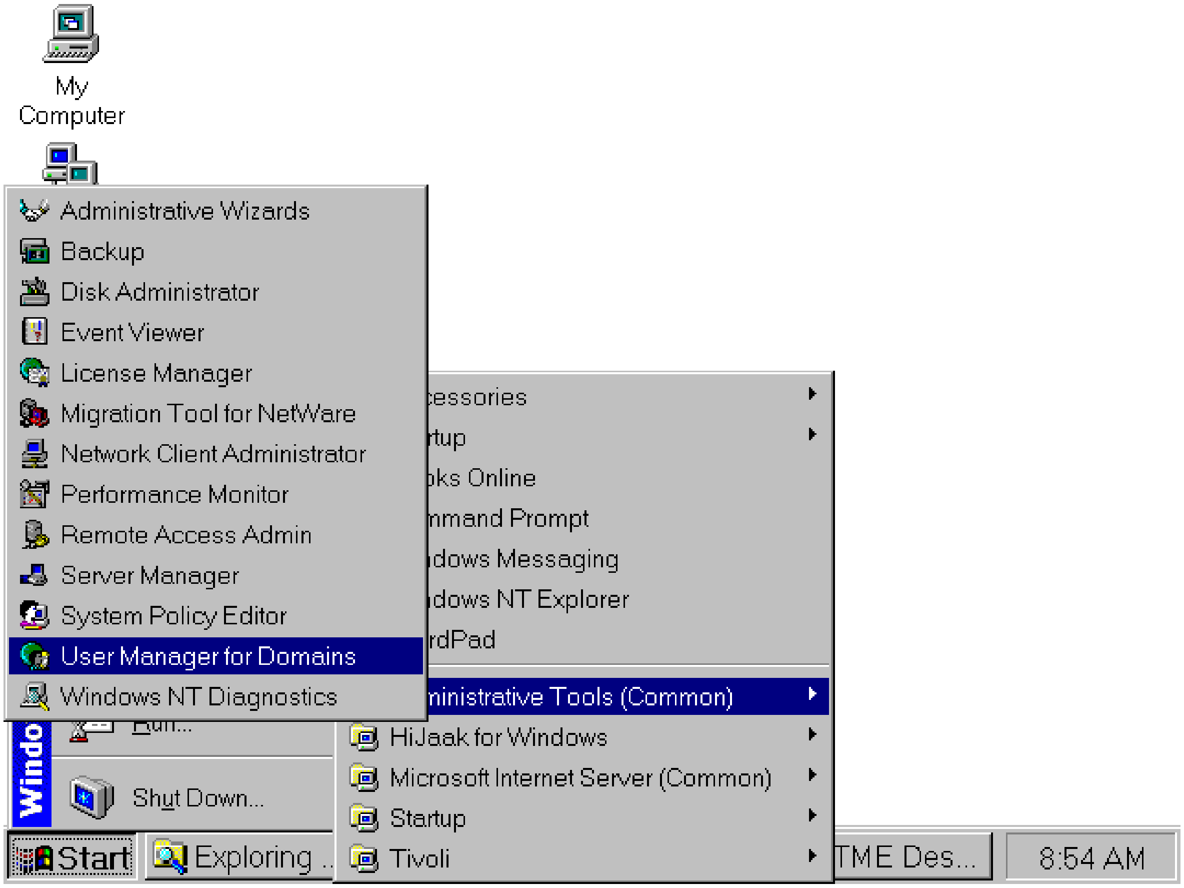
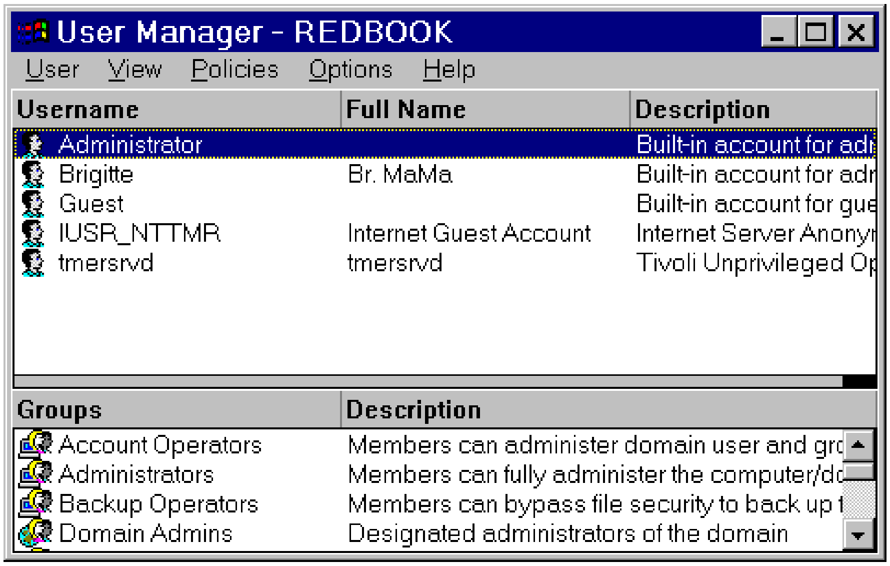

My Computer
Administrative Wizards
Backup
Disk Administrator
Event Viewer
License Manager
Migration Tool for NetWare
Network Client Administrator
Performance Monitor
Remote Access Admin
Server Manager
System Policy Editor
User Manager for Domains
Windows NT Diagnostics
cessories
rtup
oks Online
nmand Prompt
idows Messaging
idows NT Explorer
rdPad
ministrative Tools (Common)
HiJaak for Windows
Microsoft Internet Server (Common)
Startup
Tivoli
Run...
Shut Down...
Windo
Start
Exploring ...
TME Des...
8:54 AM

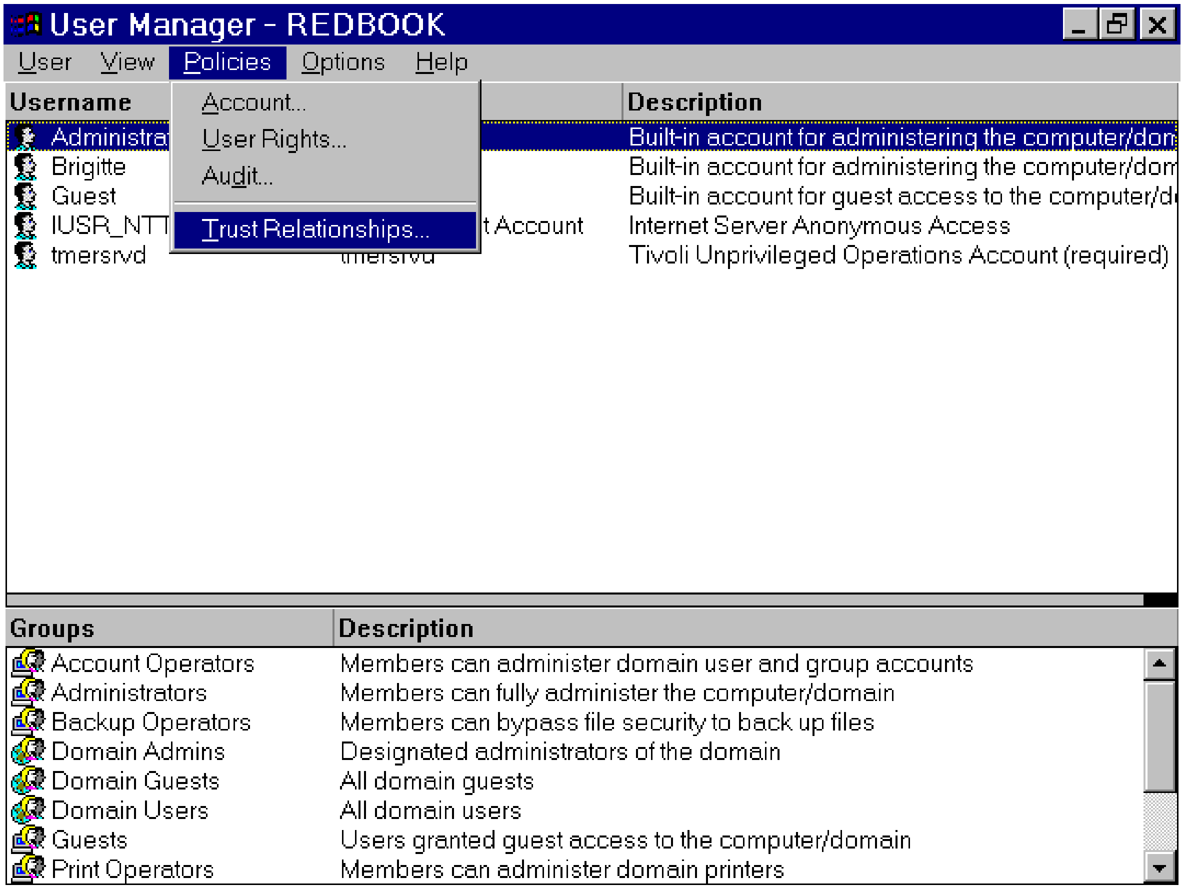
Figure 244



Username	Full Name	Description
Administrator		Built-in account for adı
Brigitte	Br. MaMa	Built-in account for adr
Guest		Built-in account for gue
IUSR_NTTMR	Internet Guest Account	Internet Server Anonyı
tmersrvd	tmersrvd	Tivoli Unprivileged Op

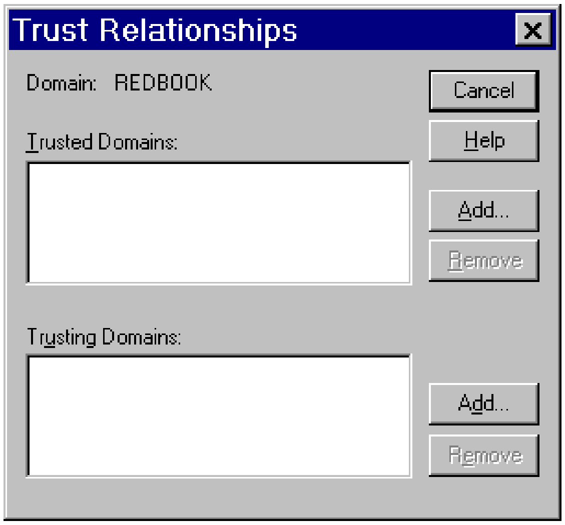
Groups	Description
Account Operators	Members can administer domain user and grc
Administrators	Members can fully administer the computer/dc
Backup Operators	Members can bypass file security to back up t
Domain Admins	Designated administrators of the domain

Figure 245



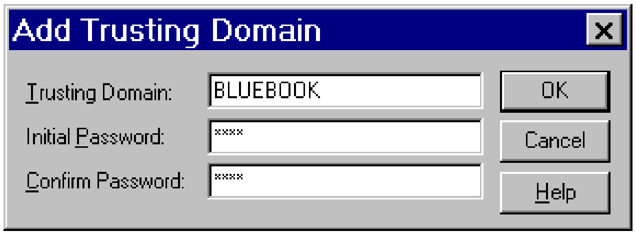
Username		Description
Administra		Built-in account for administering the computer/dom
Brigitte		Built-in account for administering the computer/dom
Guest		Built-in account for guest access to the computer/d
IUSR_NTT	t Account	Internet Server Anonymous Access
tmersrvd	tmersrvd	Tivoli Unprivileged Operations Account (required)

Groups	Description
Account Operators	Members can administer domain user and group accounts
Administrators	Members can fully administer the computer/domain
Backup Operators	Members can bypass file security to back up files
Domain Admins	Designated administrators of the domain
Domain Guests	All domain guests
Domain Users	All domain users
Guests	Users granted guest access to the computer/domain
Print Operators	Members can administer domain printers



Domain: REDBOOK

Figure 247



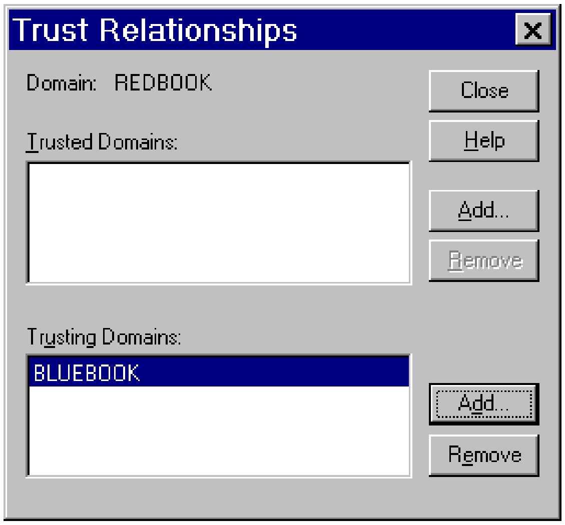
Add Trusting Domain

Trusting Domain: BLUEBOOK

Initial Password: ****

Confirm Password: ****

Figure 248

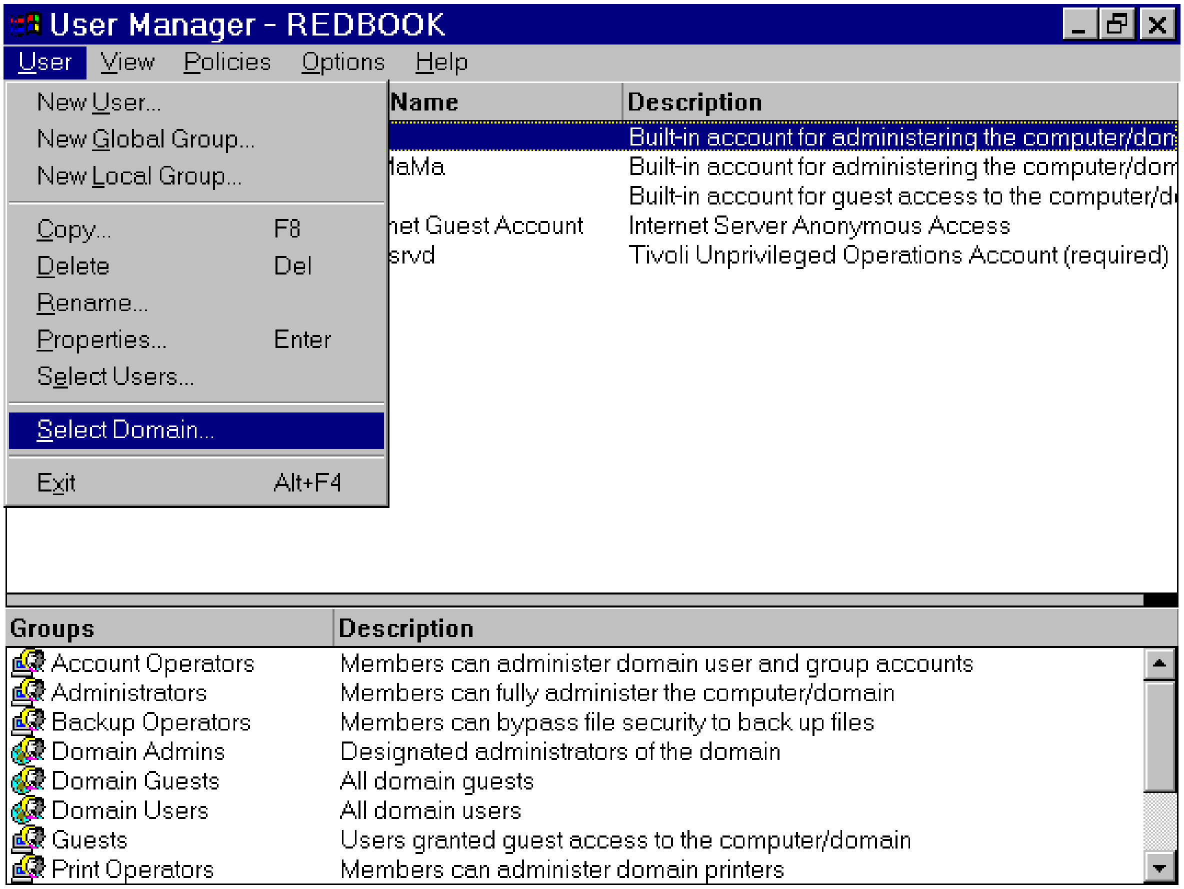


Domain: REDBOOK

Trusted Domains:

Trusting Domains: BLUEBOOK

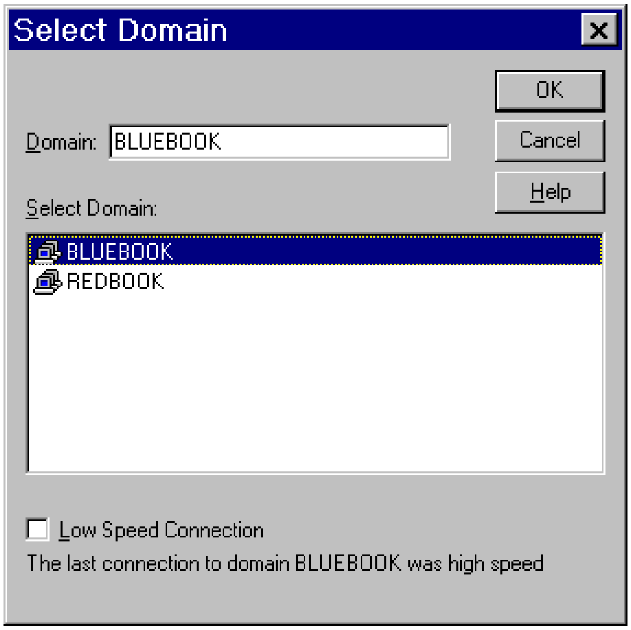
Figure 249



Name	Description
	Built-in account for administering the computer/dom
laMa	Built-in account for administering the computer/dom
	Built-in account for guest access to the computer/d
net Guest Account	Internet Server Anonymous Access
srvd	Tivoli Unprivileged Operations Account (required)

Groups	Description
Account Operators	Members can administer domain user and group accounts
Administrators	Members can fully administer the computer/domain
Backup Operators	Members can bypass file security to back up files
Domain Admins	Designated administrators of the domain
Domain Guests	All domain guests
Domain Users	All domain users
Guests	Users granted guest access to the computer/domain
Print Operators	Members can administer domain printers

Figure 250



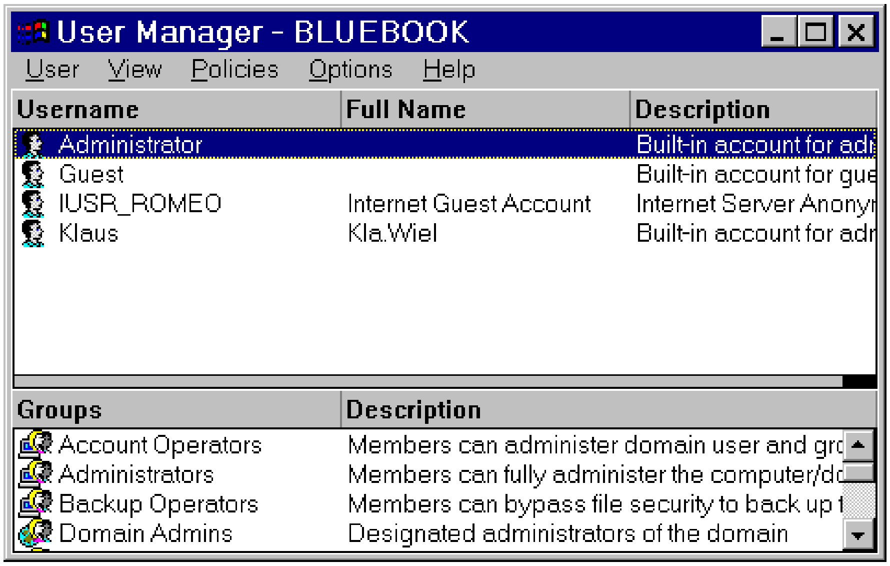
Domain: BLUEBOOK

Select Domain:

- BLUEBOOK
- REDBOOK

□ Low Speed Connection

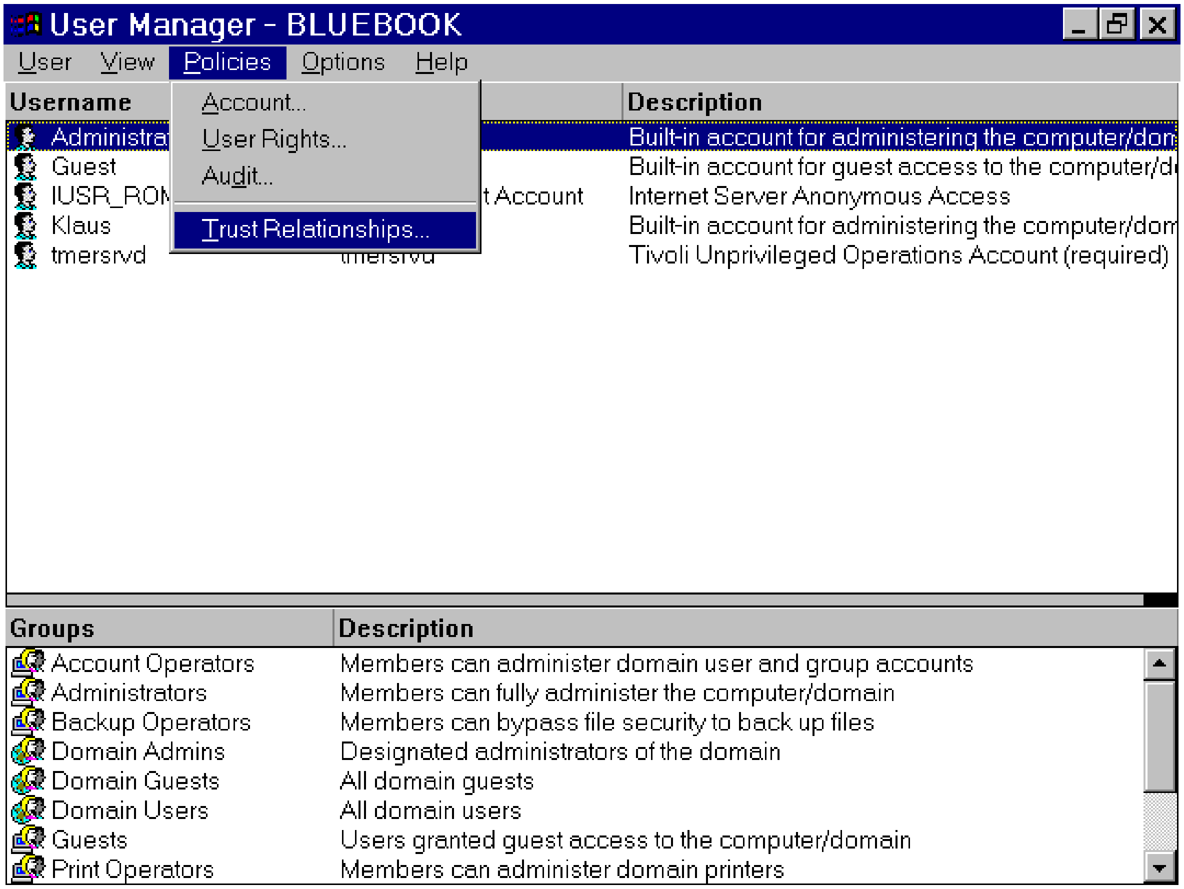
The last connection to domain BLUEBOOK was high speed



Username	Full Name	Description
Administrator		Built-in account for adi
Guest		Built-in account for gue
IUSR_ROMEO	Internet Guest Account	Internet Server Anonyı
Klaus	Kla.Wiel	Built-in account for adı

Groups	Description
Account Operators	Members can administer domain user and grc
Administrators	Members can fully administer the computer/dc
Backup Operators	Members can bypass file security to back up t
Domain Admins	Designated administrators of the domain

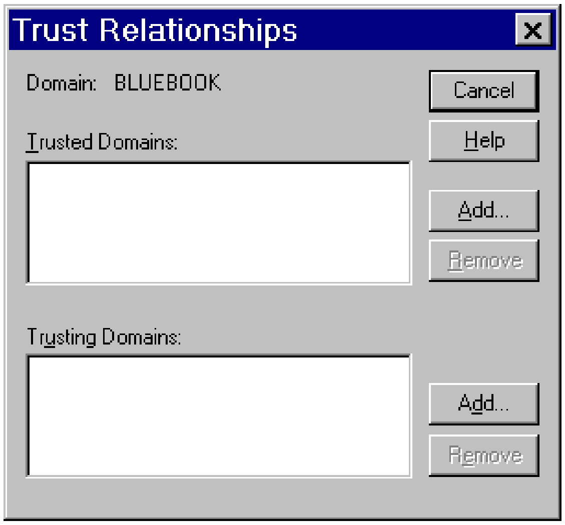
Figure 252



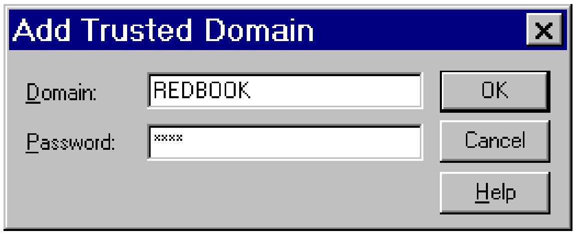
Username		Description
Administra		Built-in account for administering the computer/dom
Guest		Built-in account for guest access to the computer/d
IUSR_ROM	t Account	Internet Server Anonymous Access
Klaus		Built-in account for administering the computer/dom
tmersrvd	tmersrvd	Tivoli Unprivileged Operations Account (required)

Groups	Description
Account Operators	Members can administer domain user and group accounts
Administrators	Members can fully administer the computer/domain
Backup Operators	Members can bypass file security to back up files
Domain Admins	Designated administrators of the domain
Domain Guests	All domain guests
Domain Users	All domain users
Guests	Users granted guest access to the computer/domain
Print Operators	Members can administer domain printers

Figure 253



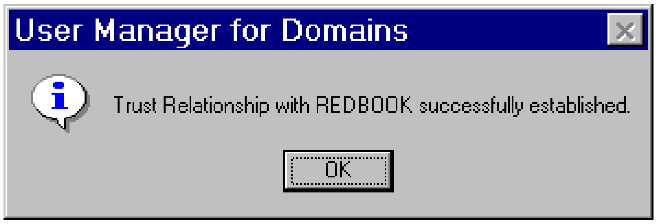
Domain: BLUEBOOK



Add Trusted Domain

Domain: REDBOOK

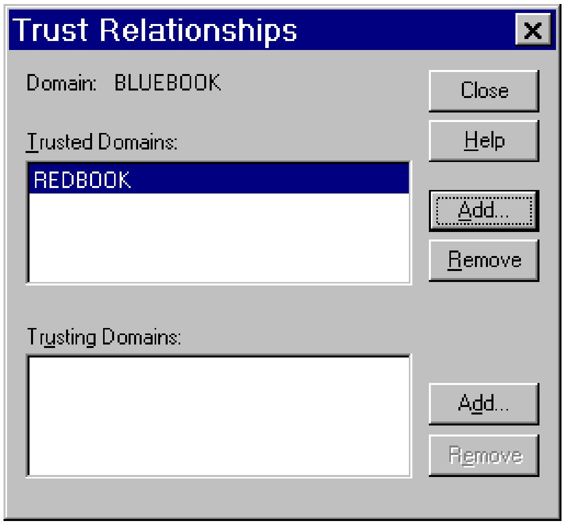
Password: ****



User Manager for Domains

Trust Relationship with REDBOOK successfully established.

Figure 256



Trust Relationships

Domain: BLUEBOOK

Trusted Domains: REDBOOK

Trusting Domains:

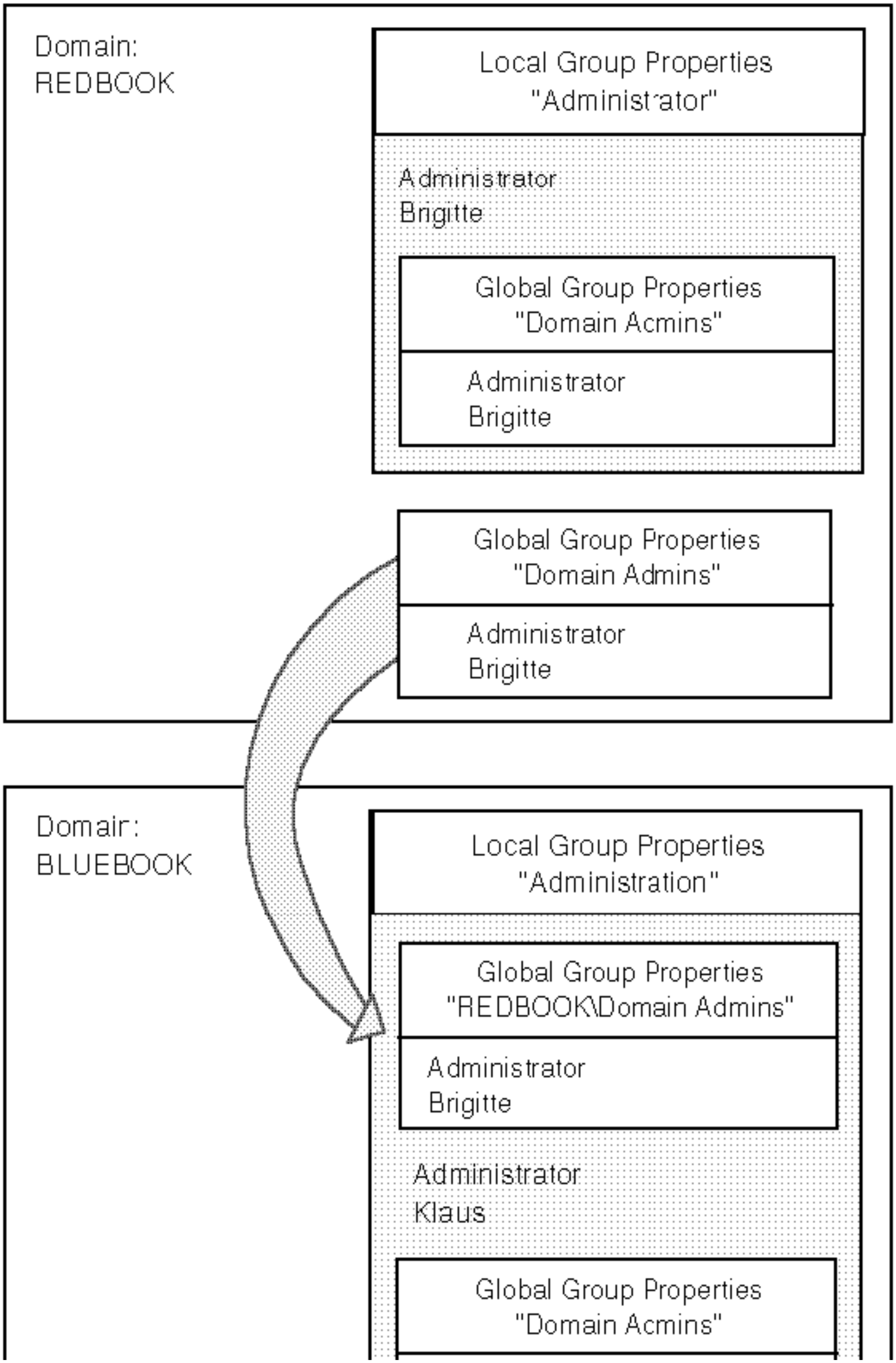
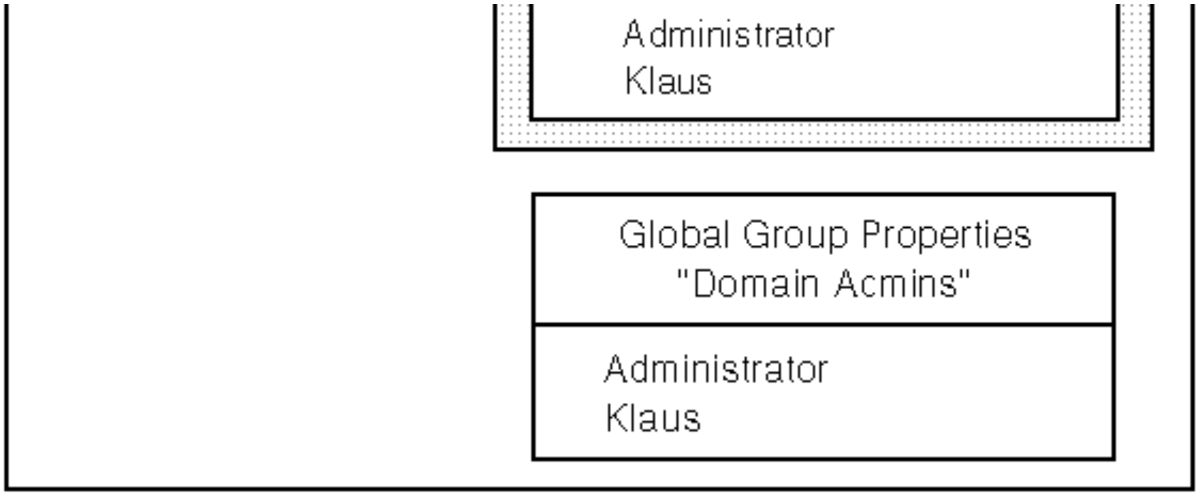
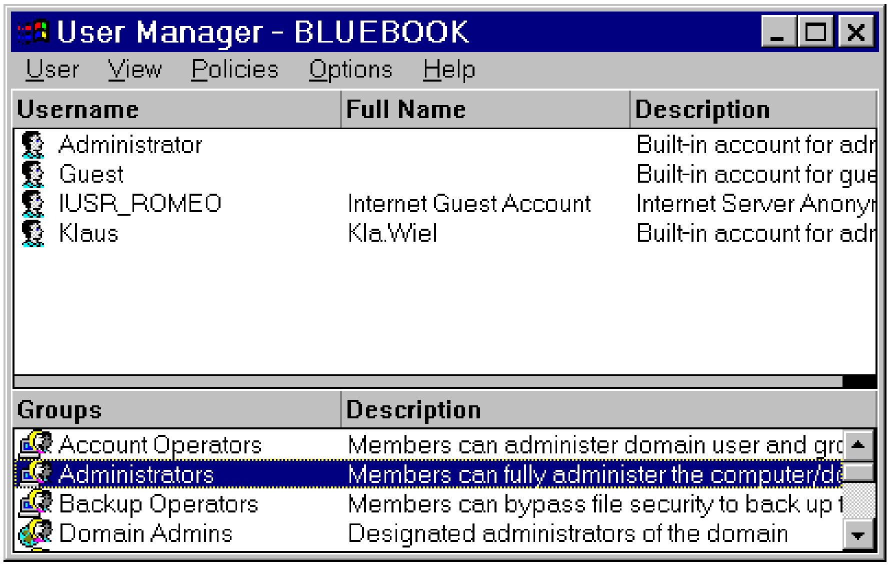

Domain:
REDBOOK
Local Group Properties
"Administ-ator"
Administrator
Brigitte
Global Group Properties
"Domain Acmins"
Administrator
Brigitte
Global Group Properties
"Domain Admins"
Administrator
Brigitte
Domair:
BLUEBOOK
Local Group Properties
"Administration"
Global Group Properties
"REDBOOK\Domain Admins"
Administrator
Brigitte
Administrator
Klaus
Global Group Properties
"Domain Acmins"

Figure 258

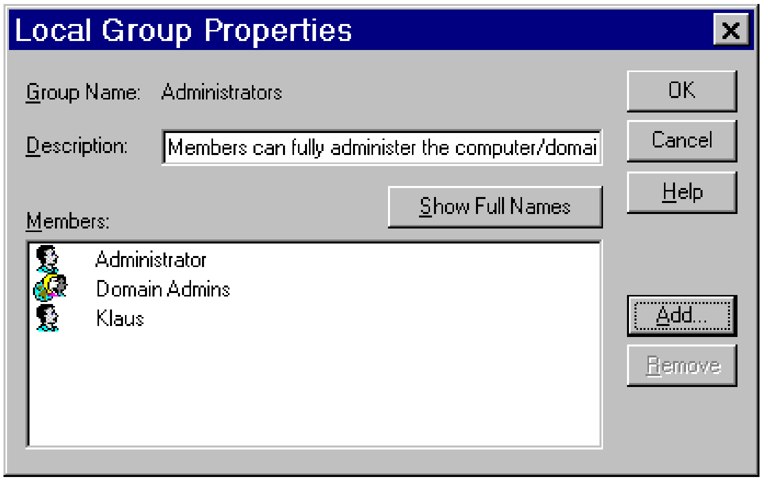

Administrator
Klaus
Global Group Properties
"Domain Acmins"
Administrator
Klaus

4976\497603



Username	Full Name	Description
Administrator		Built-in account for adr
Guest		Built-in account for gue
IUSR_ROMEO	Internet Guest Account	Internet Server Anonyı
Klaus	Kla.Wiel	Built-in account for adr

Groups	Description
Account Operators	Members can administer domain user and grc
Administrators	Members can fully administer the computer/dc
Backup Operators	Members can bypass file security to back up f
Domain Admins	Designated administrators of the domain



Local Group Properties

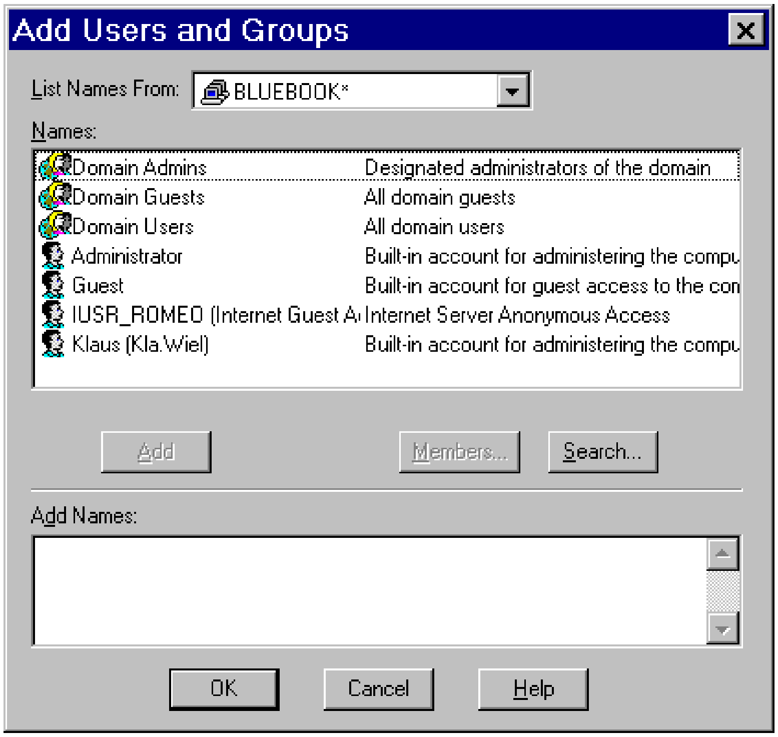
Group Name: Administrators

Description: Members can fully administer the computer/domai

Members:

- Administrator
- Domain Admins
- Klaus

Figure 260



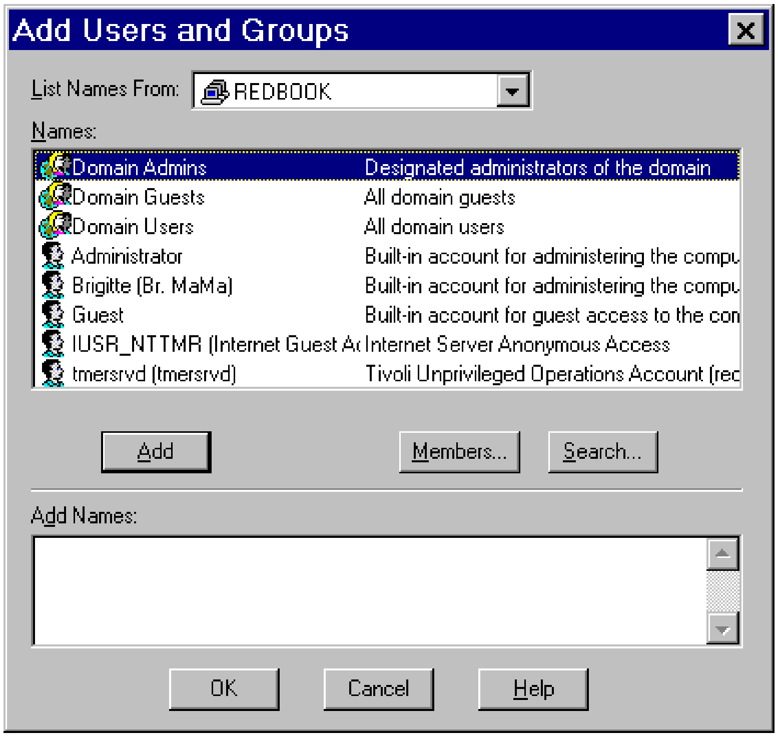
Add Users and Groups

List Names From: BLUEBOOK*

Names:

Domain Admins	Designated administrators of the domain
Domain Guests	All domain guests
Domain Users	All domain users
Administrator	Built-in account for administering the compu
Guest	Built-in account for guest access to the con
IUSR_ROMEO (Internet Guest A	Internet Server Anonymous Access
Klaus (Kla.Wiel)	Built-in account for administering the compu

Add Names:

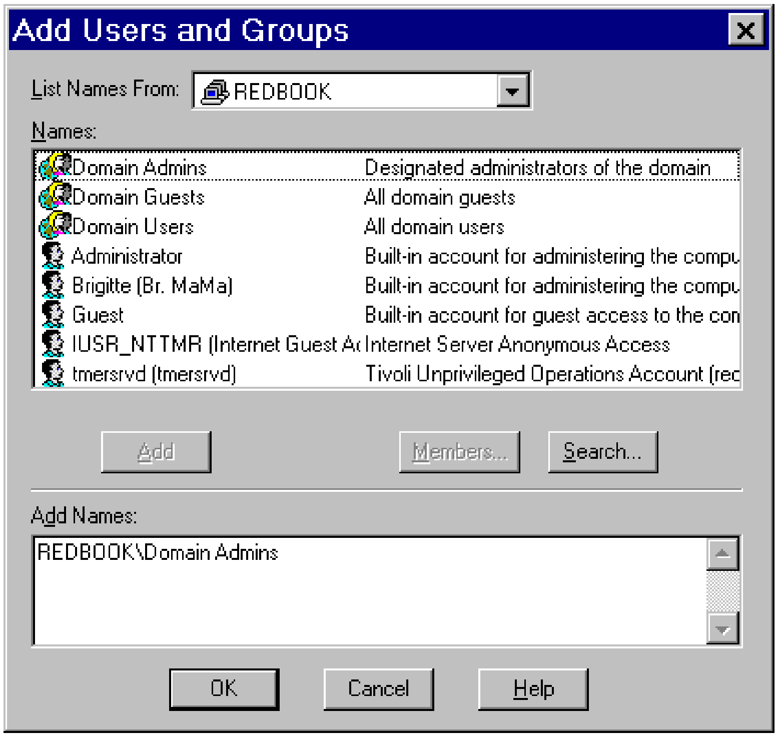


Add Users and Groups

List Names From: REDBOOK

Names:

Domain Admins	Designated administrators of the domain
Domain Guests	All domain guests
Domain Users	All domain users
Administrator	Built-in account for administering the compu
Brigitte (Br. MaMa)	Built-in account for administering the compu
Guest	Built-in account for guest access to the con
IUSR_NTTMR (Internet Guest A	Internet Server Anonymous Access
tmersrvd (tmersrvd)	Tivoli Unprivileged Operations Account (rec



List Names From: REDBOOK

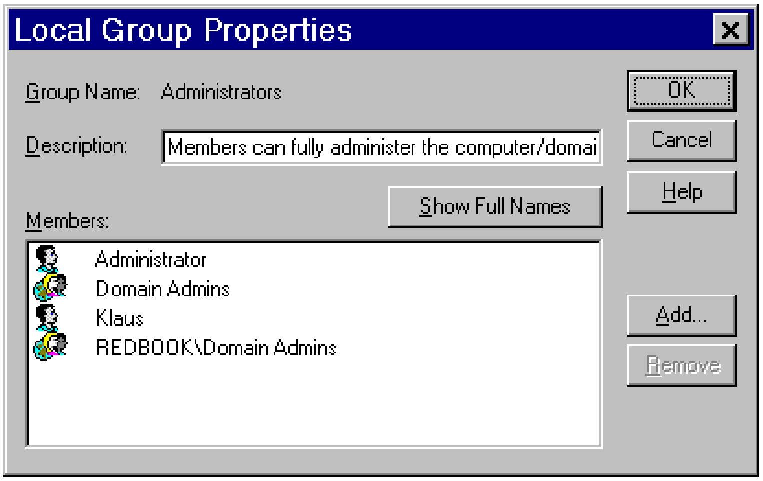
Names:

Domain Admins	Designated administrators of the domain
Domain Guests	All domain guests
Domain Users	All domain users
Administrator	Built-in account for administering the compu
Brigitte (Br. MaMa)	Built-in account for administering the compu
Guest	Built-in account for guest access to the con
IUSR_NTTMR (Internet Guest A	Internet Server Anonymous Access
tmersrvd (tmersrvd)	Tivoli Unprivileged Operations Account (rec

Add Names:

REDBOOK\Domain Admins

Figure 263



Local Group Properties

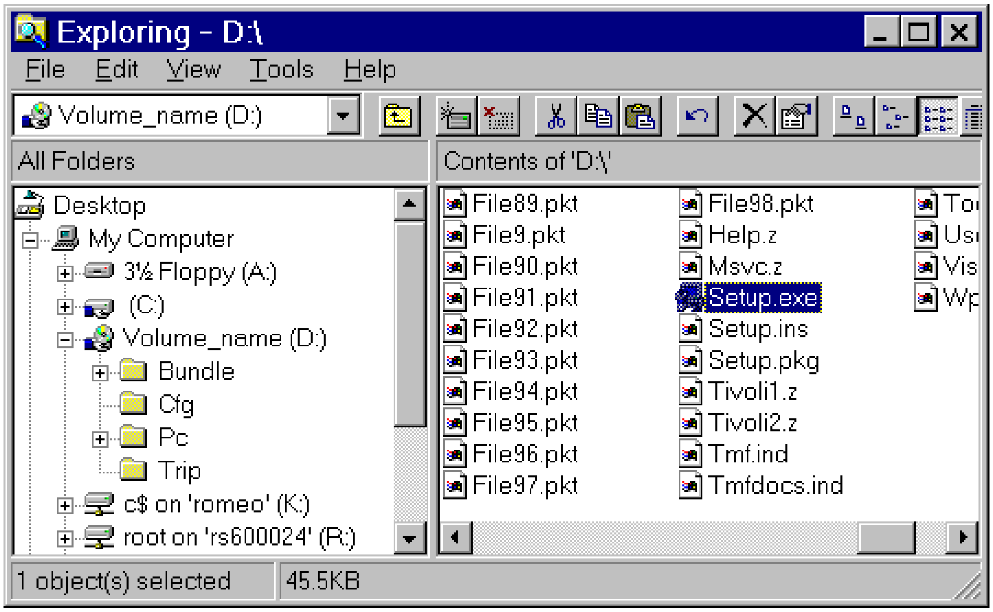
Group Name: Administrators

Description: Members can fully administer the computer/domai

Members:

Administrator
Domain Admins
Klaus
REDBOOK\Domain Admins

Figure 164

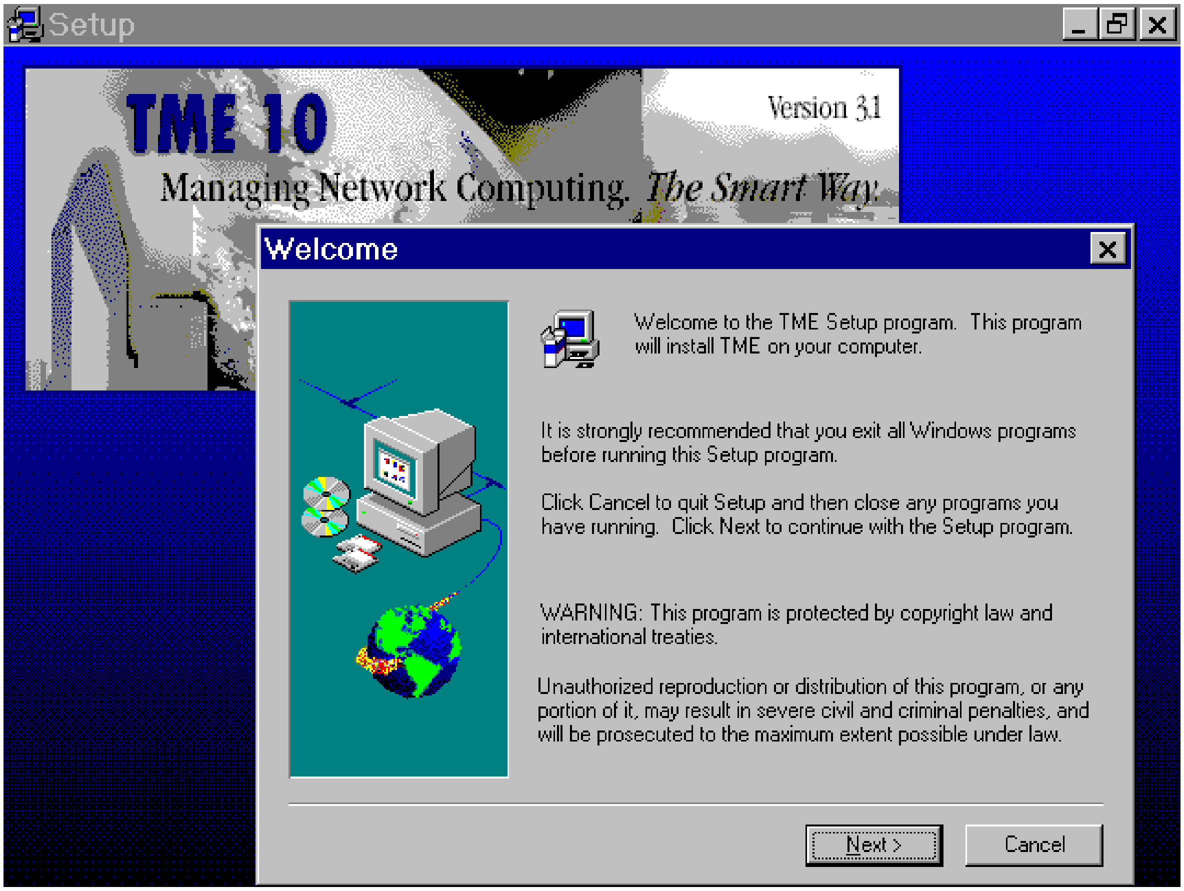


Contents of 'D:\'

File89.pkt
File9.pkt
File90.pkt
File91.pkt
File92.pkt
File93.pkt
File94.pkt
File95.pkt
File96.pkt
File97.pkt
File98.pkt
Help.z
Msvc.z
Setup.exe
Setup.ins
Setup.pkg
Tivoli1.z
Tivoli2.z
Tmf.ind
Tmfdocs.ind
To
Us
Vis
Wp

1 object(s) selected
45.5KB

Figure 265



Welcome to the TME Setup program. This program will install TME on your computer.

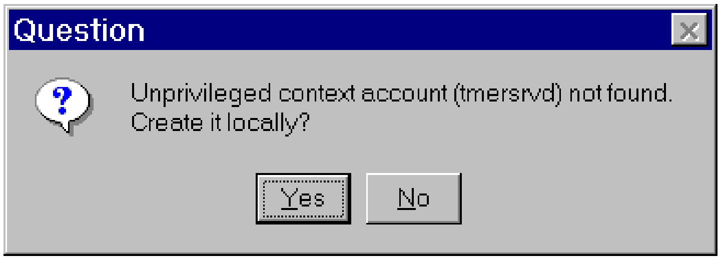
It is strongly recommended that you exit all Windows programs before running this Setup program.

Click Cancel to quit Setup and then close any programs you have running. Click Next to continue with the Setup program.

WARNING: This program is protected by copyright law and international treaties.

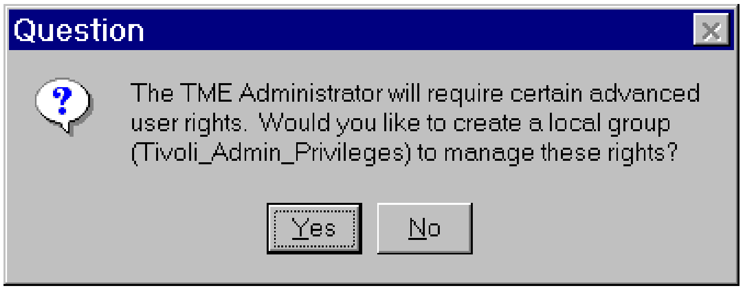
Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law.

Figure 266

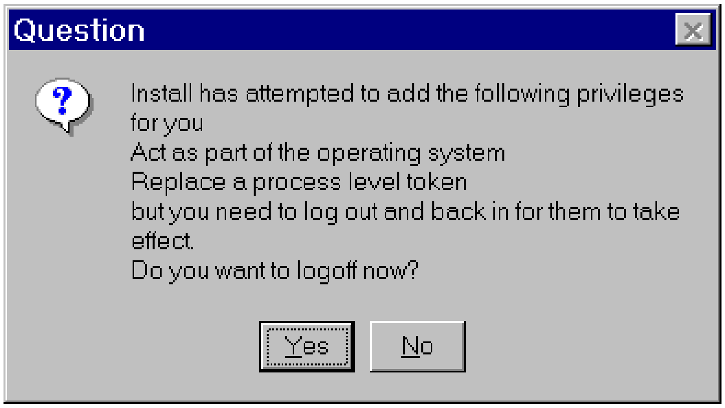


Unprivileged context account (tmersrvd) not found.
Create it locally?

Figure 267

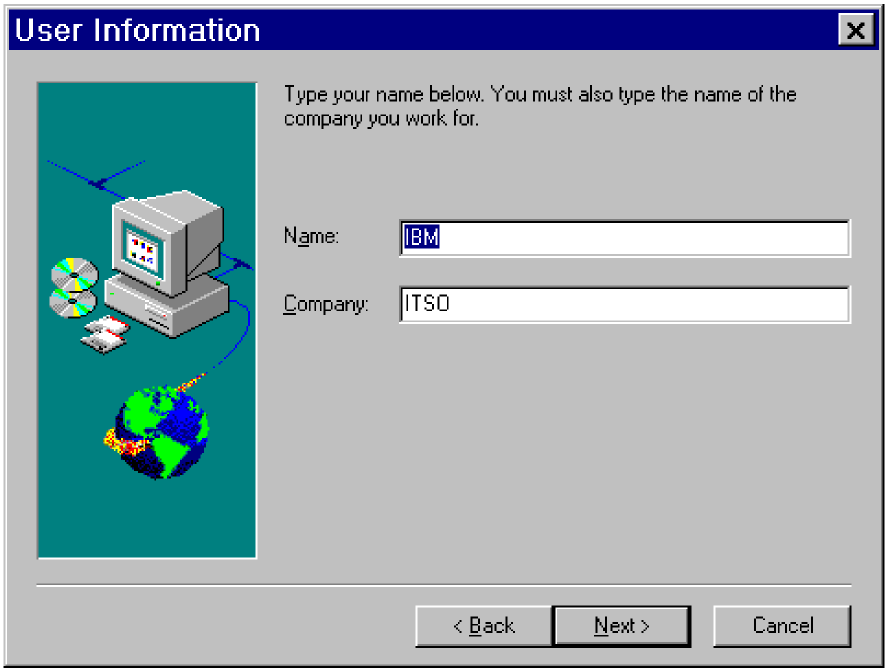


The TME Administrator will require certain advanced user rights. Would you like to create a local group (Tivoli_Admin_Privileges) to manage these rights?



Question

Install has attempted to add the following privileges for you
Act as part of the operating system
Replace a process level token
but you need to log out and back in for them to take effect.
Do you want to logoff now?

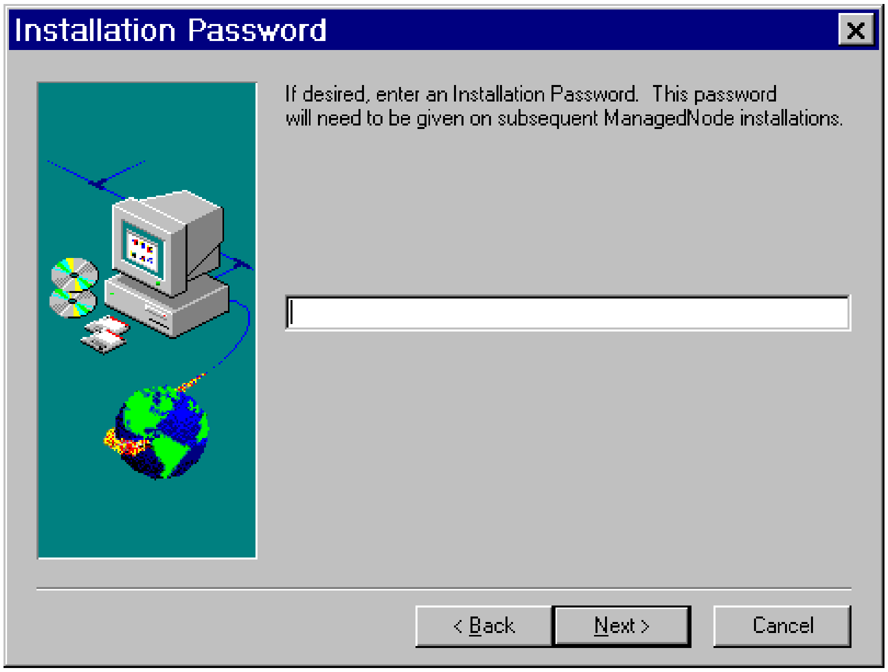


User Information

Type your name below. You must also type the name of the company you work for.

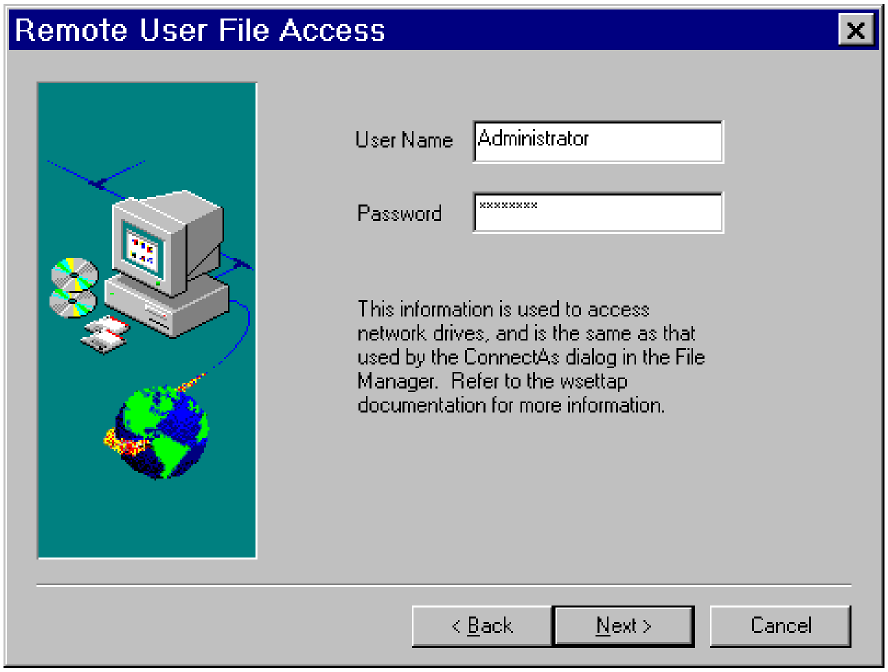
Name: IBM

Company: ITSO



If desired, enter an Installation Password. This password will need to be given on subsequent ManagedNode installations.

Figure 271



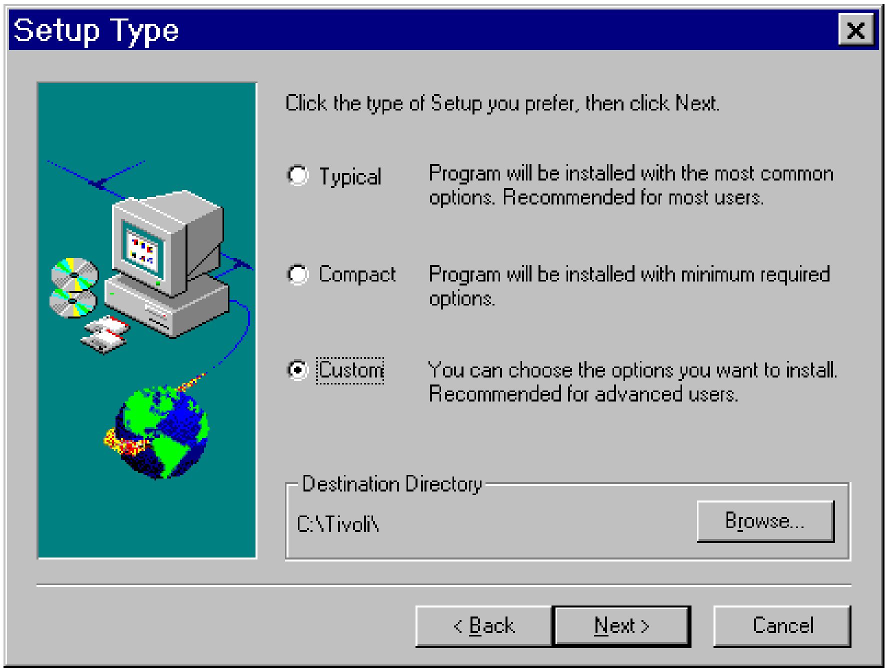
Remote User File Access

User Name Administrator

Password ********

This information is used to access network drives, and is the same as that used by the ConnectAs dialog in the File Manager. Refer to the wsettap documentation for more information.

Figure 272



Setup Type

Click the type of Setup you prefer, then click Next.

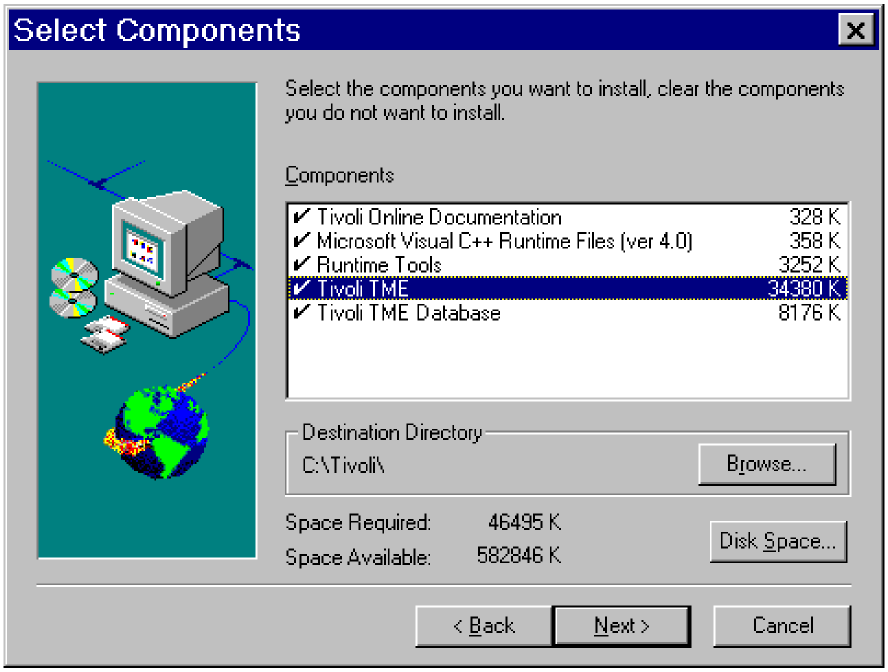
○ Typical — Program will be installed with the most common options. Recommended for most users.

○ Compact — Program will be installed with minimum required options.

● Custom — You can choose the options you want to install. Recommended for advanced users.

Destination Directory

C:\Tivoli\



Select Components

Select the components you want to install, clear the components you do not want to install.

Components

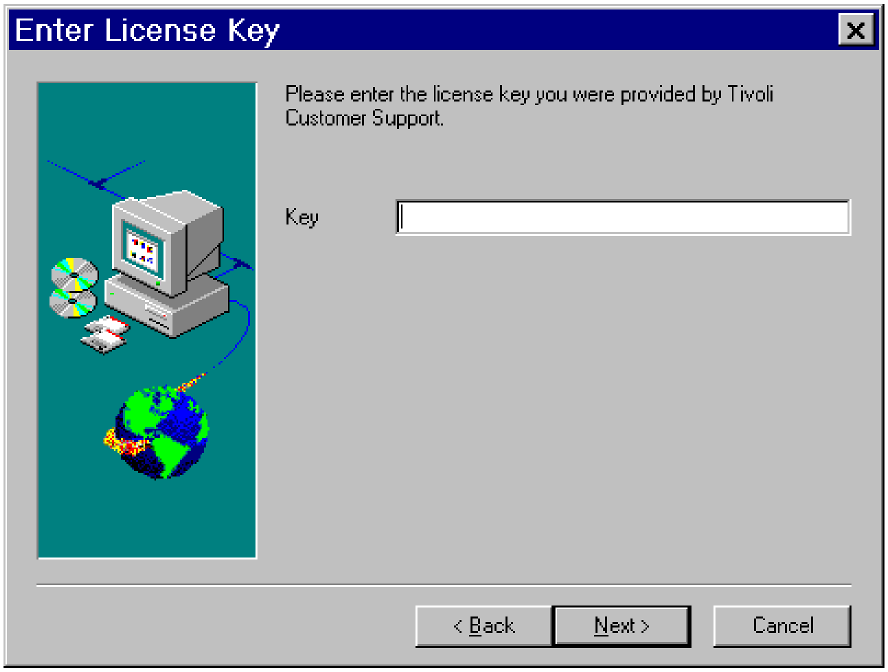
✓ Tivoli Online Documentation	328 K
✓ Microsoft Visual C++ Runtime Files (ver 4.0)	358 K
✓ Runtime Tools	3252 K
✓ Tivoli TME	34380 K
✓ Tivoli TME Database	8176 K

Destination Directory

C:\Tivoli\

Space Required: 46495 K

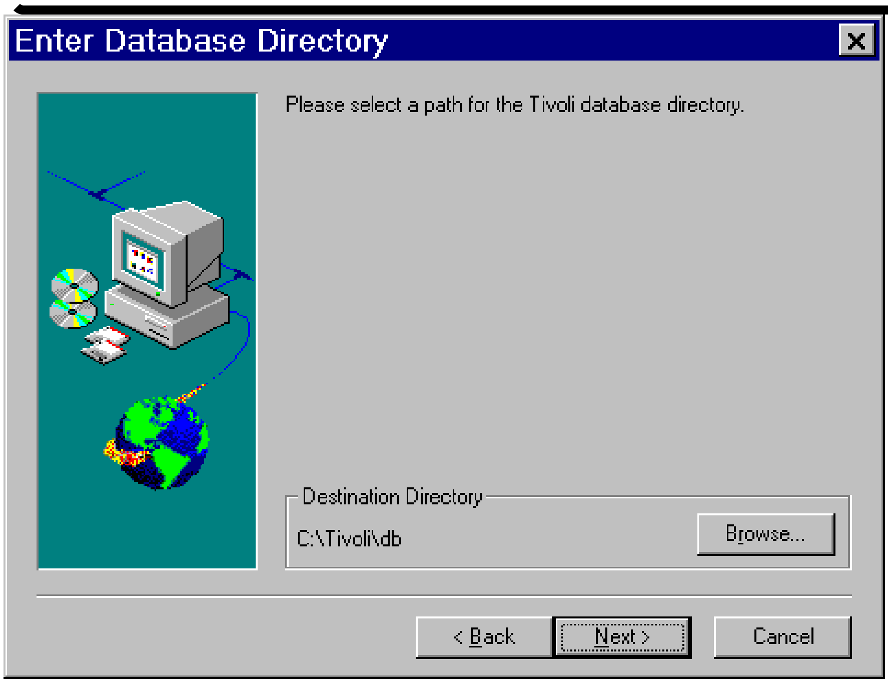
Space Available: 582846 K



Enter License Key

Please enter the license key you were provided by Tivoli Customer Support.

Key

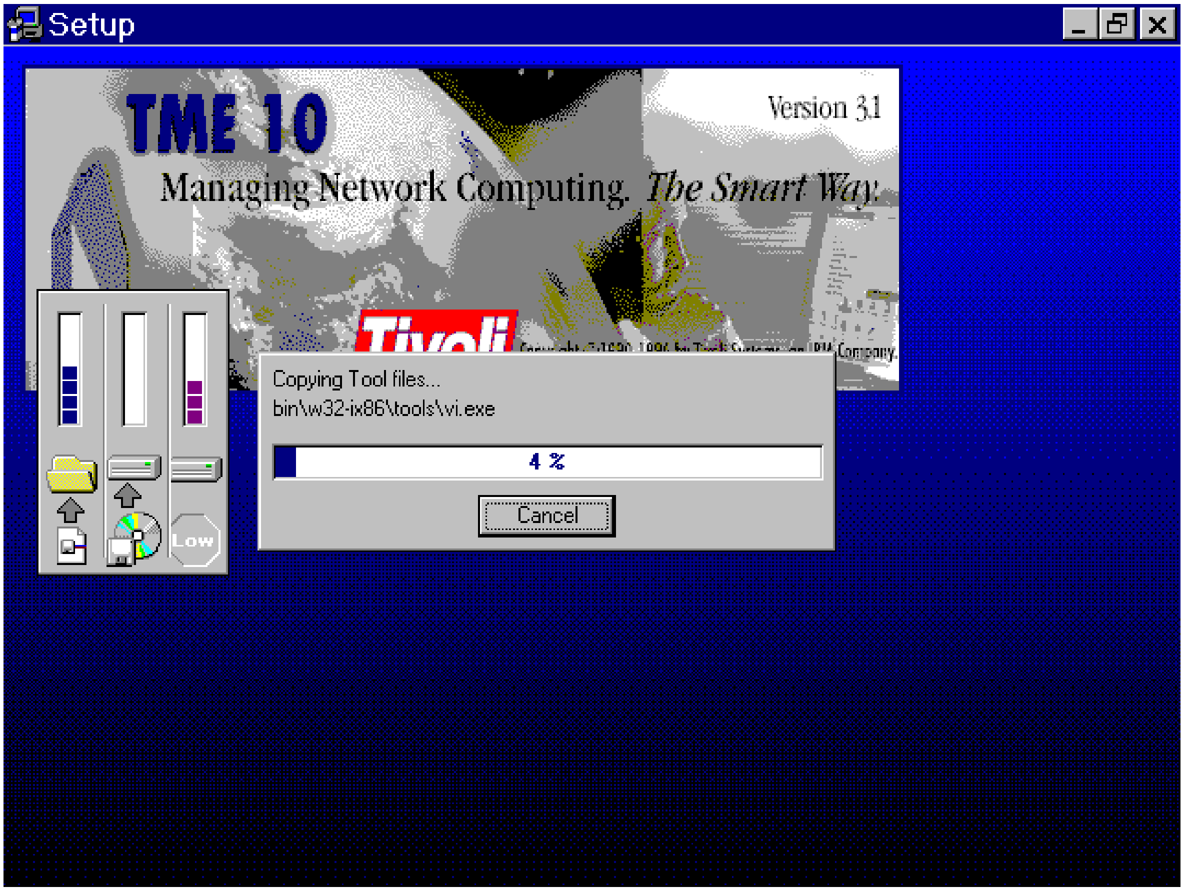


Please select a path for the Tivoli database directory.

Destination Directory

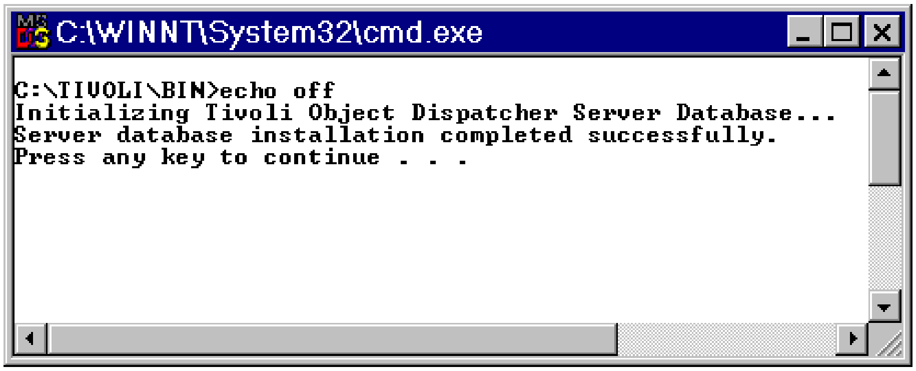
C:\Tivoli\db

Figure 276

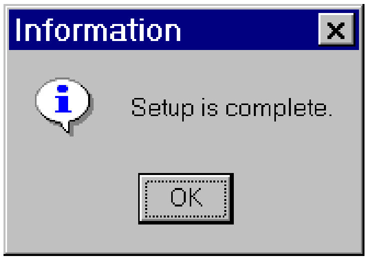

Setup
TME 10
Version 3.1
Managing Network Computing. The Smart Way.
Tivoli
Copyright ©1990-1996 by Tivoli Systems, an IBM Company.
Low
Cancel

Copying Tool files...
bin\w32-ix86\tools\vi.exe

4 %

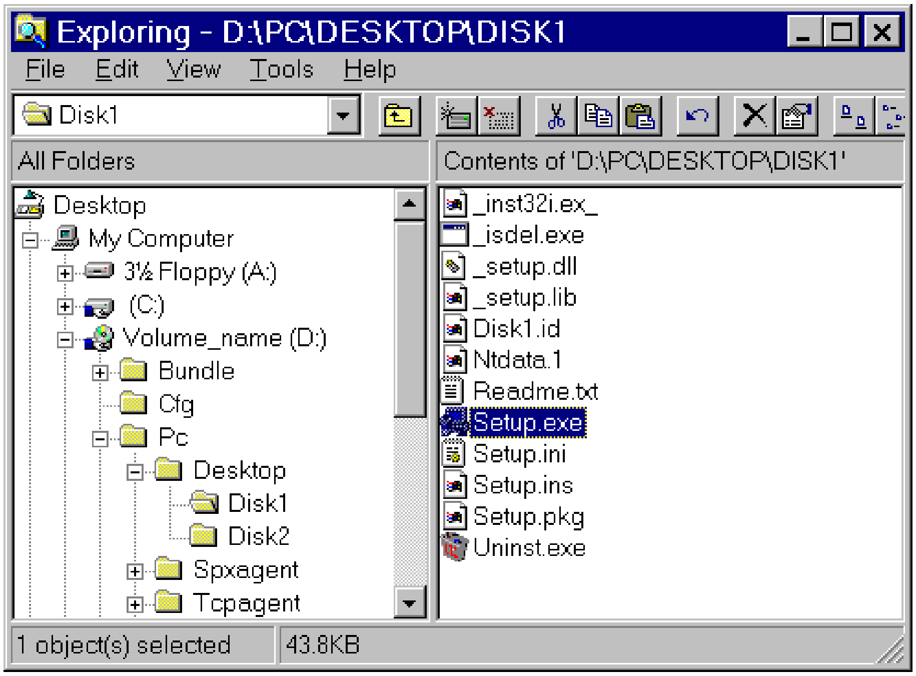


```
C:\TIVOLI\BIN>echo off
Initializing Tivoli Object Dispatcher Server Database...
Server database installation completed successfully.
Press any key to continue . . .
```



Information

Setup is complete.



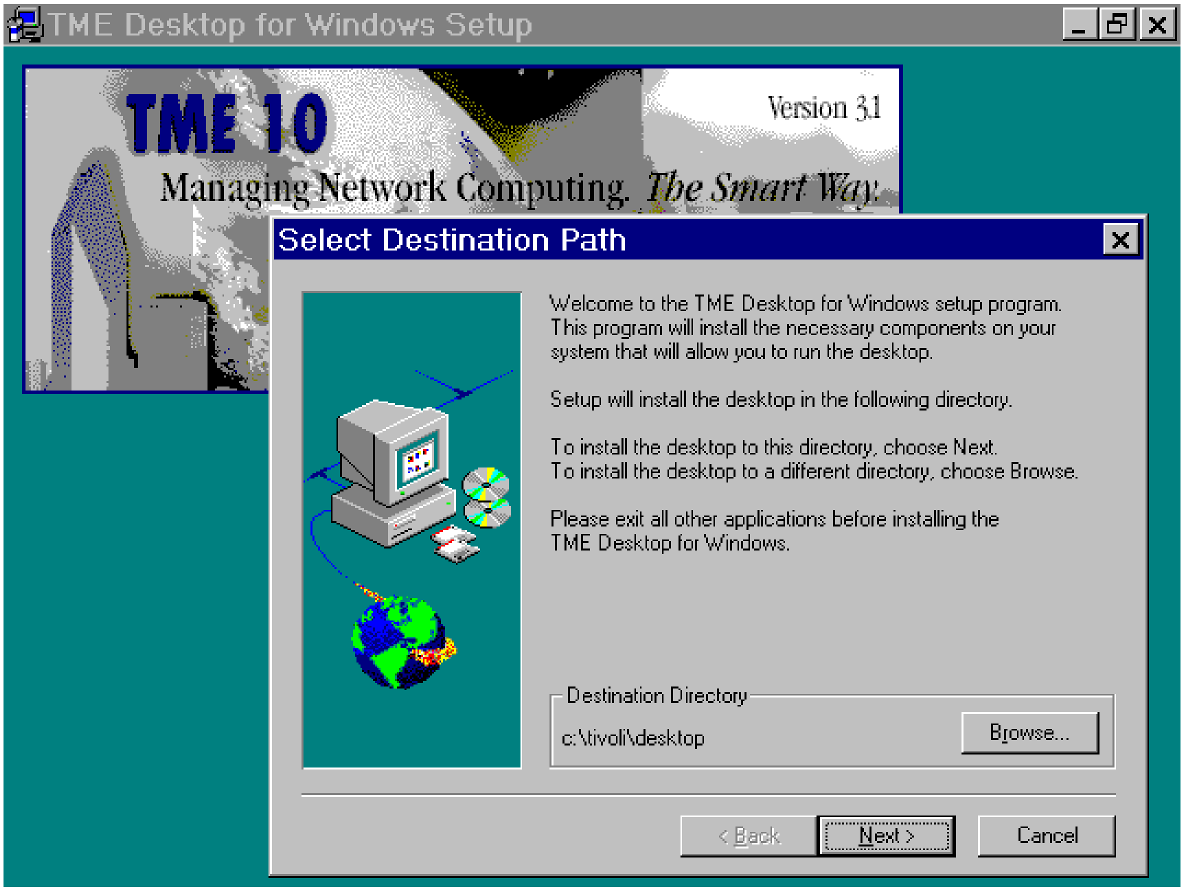
Contents of 'D:\PC\DESKTOP\DISK1'

```
Desktop
  My Computer
    3½ Floppy (A:)
    (C:)
    Volume_name (D:)
      Bundle
      Cfg
      Pc
        Desktop
          Disk1
          Disk2
        Spxagent
        Tcpagent
```

```
_inst32i.ex_
_isdel.exe
_setup.dll
_setup.lib
Disk1.id
Ntdata.1
Readme.txt
Setup.exe
Setup.ini
Setup.ins
Setup.pkg
Uninst.exe
```

1 object(s) selected | 43.8KB

Figure 280



TME Desktop for Windows Setup
TME 10
Version 3.1
Managing Network Computing. The Smart Way.

Select Destination Path

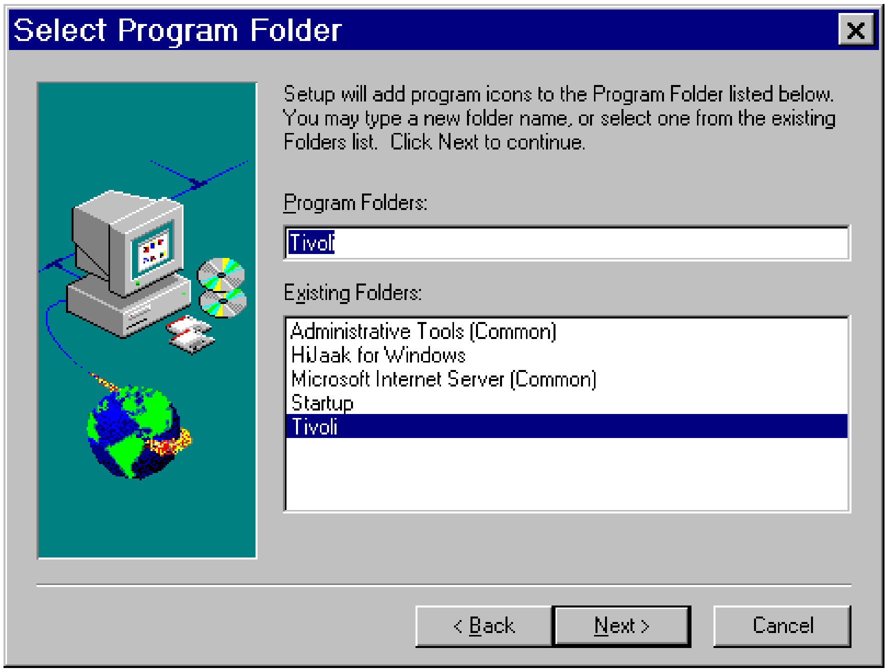
Welcome to the TME Desktop for Windows setup program. This program will install the necessary components on your system that will allow you to run the desktop.

Setup will install the desktop in the following directory.

To install the desktop to this directory, choose Next.
To install the desktop to a different directory, choose Browse.

Please exit all other applications before installing the TME Desktop for Windows.

Destination Directory
c:\tivoli\desktop



Setup will add program icons to the Program Folder listed below. You may type a new folder name, or select one from the existing Folders list. Click Next to continue.

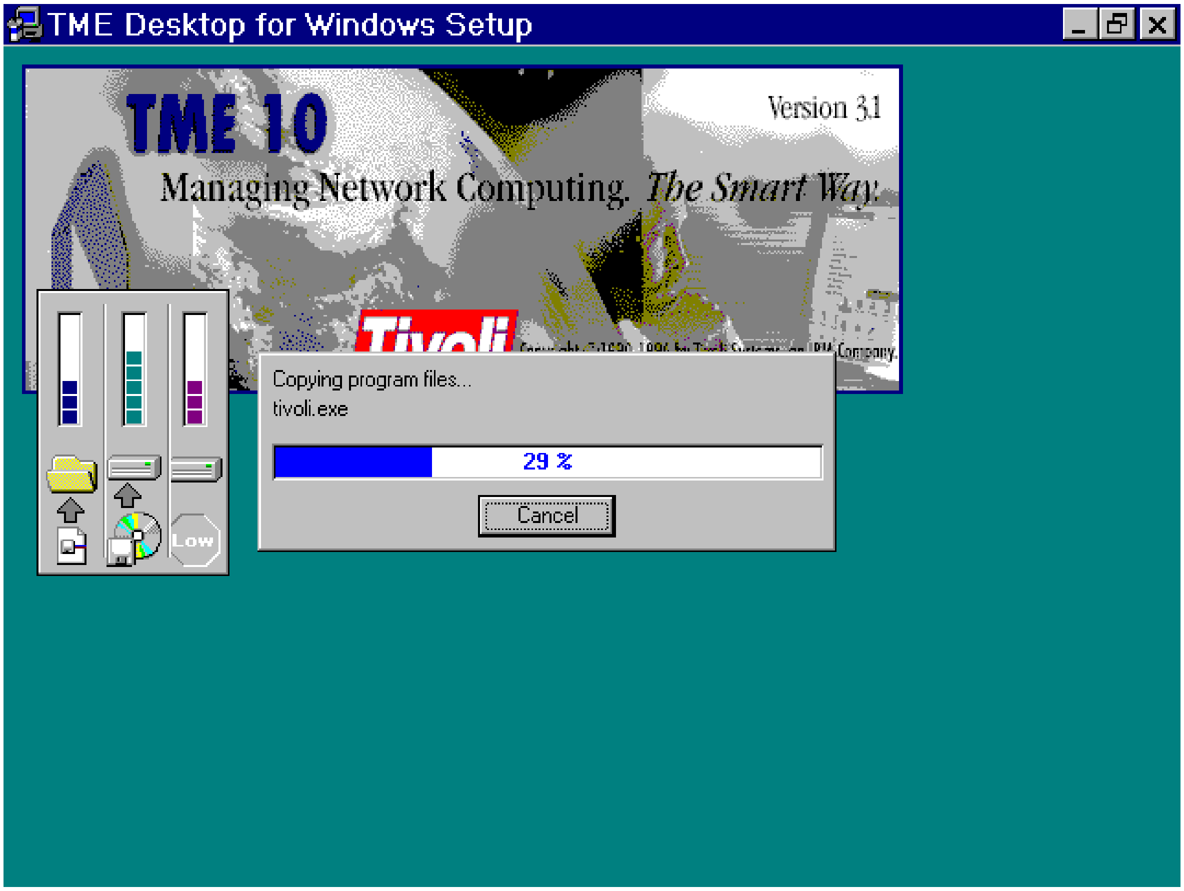
Program Folders:

Tivoli

Existing Folders:

Administrative Tools (Common)
HiJaak for Windows
Microsoft Internet Server (Common)
Startup
Tivoli

Figure 282

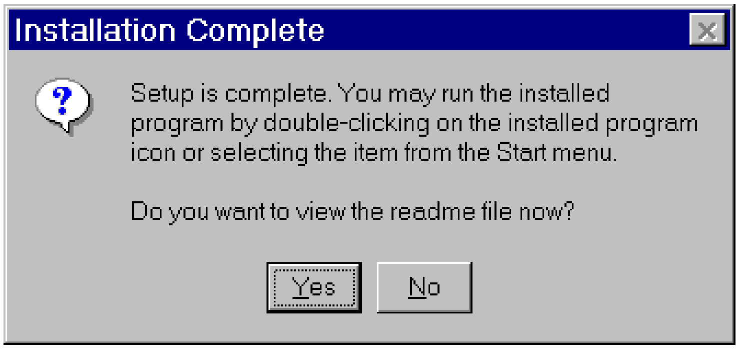


TME Desktop for Windows Setup

TME 10
Version 3.1
Managing Network Computing. The Smart Way.
Tivoli
Copyright ©1990, 1996 by Tivoli Systems, an IBM Company.
Low

Copying program files...
tivoli.exe

29 %

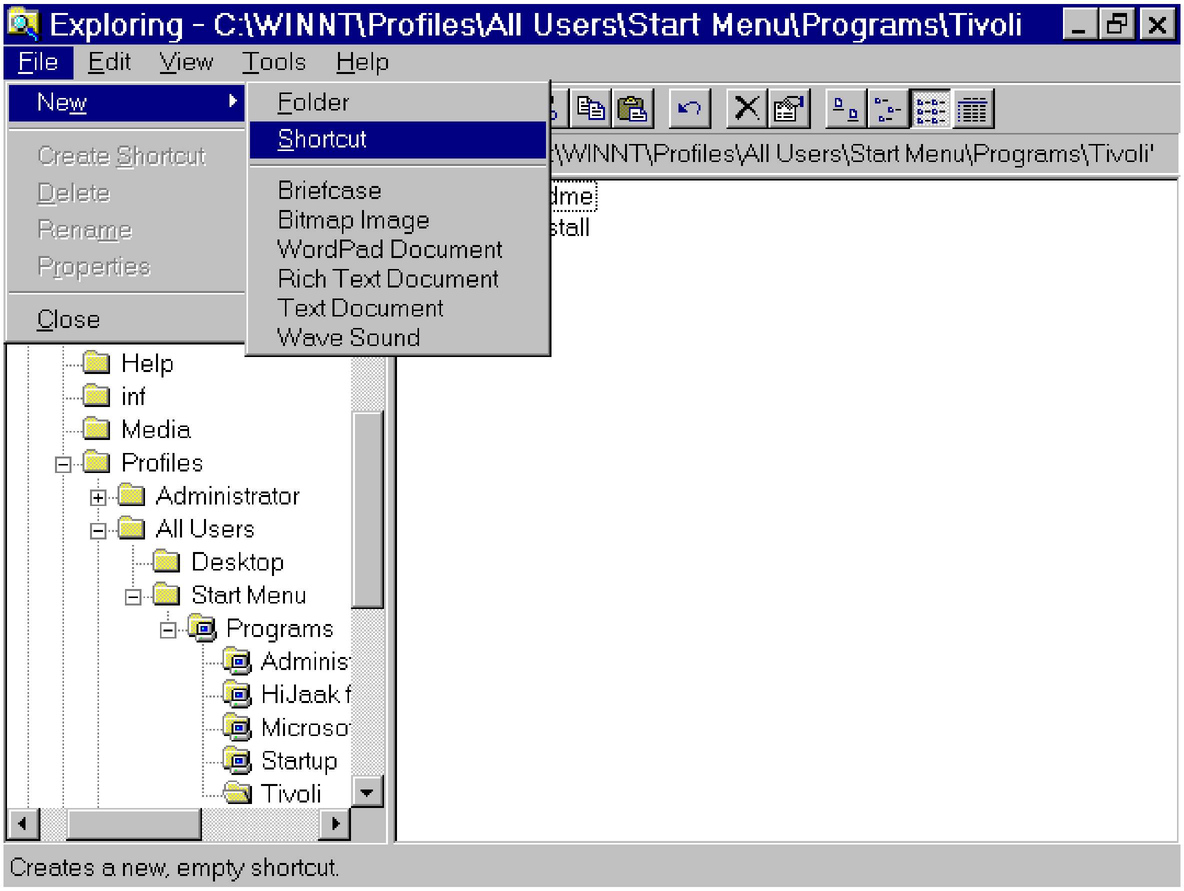


Installation Complete

Setup is complete. You may run the installed program by double-clicking on the installed program icon or selecting the item from the Start menu.

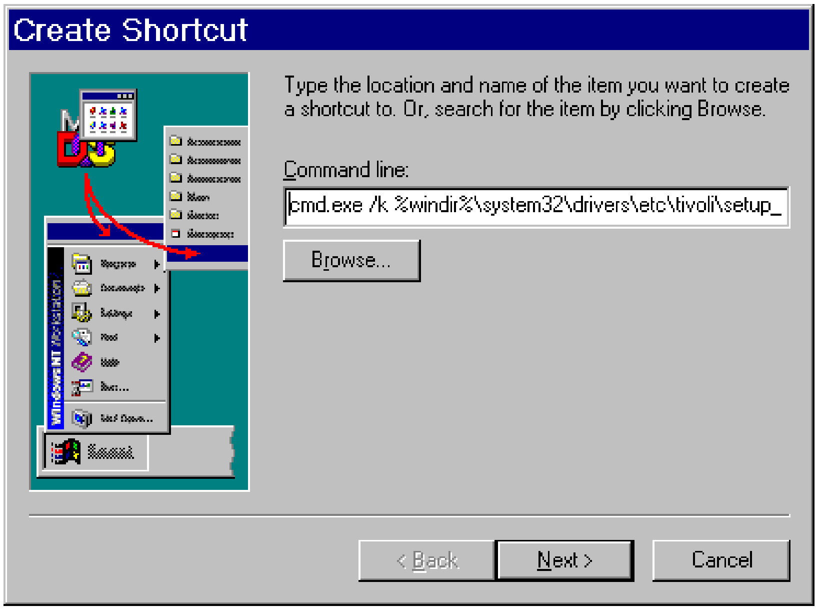
Do you want to view the readme file now?

Figure 284



Creates a new, empty shortcut.

Figure 285



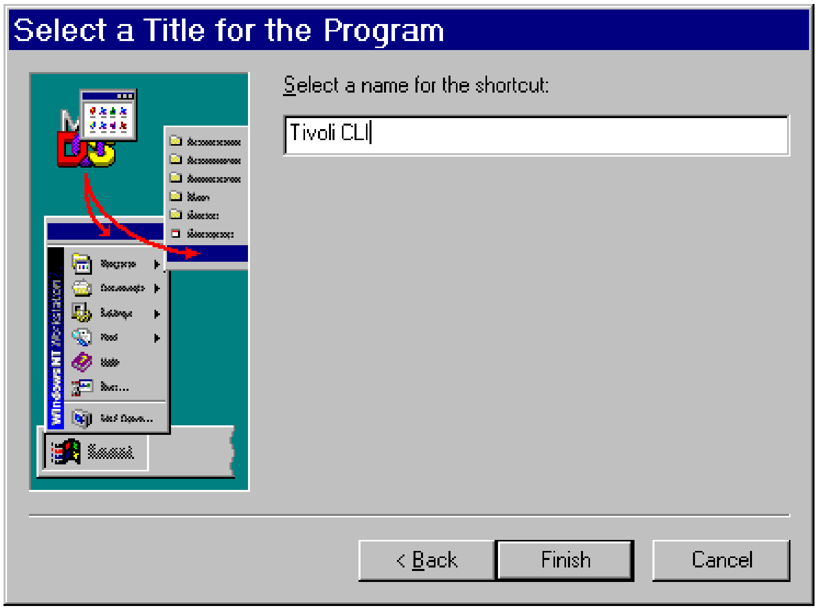
Create Shortcut

Type the location and name of the item you want to create a shortcut to. Or, search for the item by clicking Browse.

Command line:

```
cmd.exe /k %windir%\system32\drivers\etc\tivoli\setup_
```

Figure 286

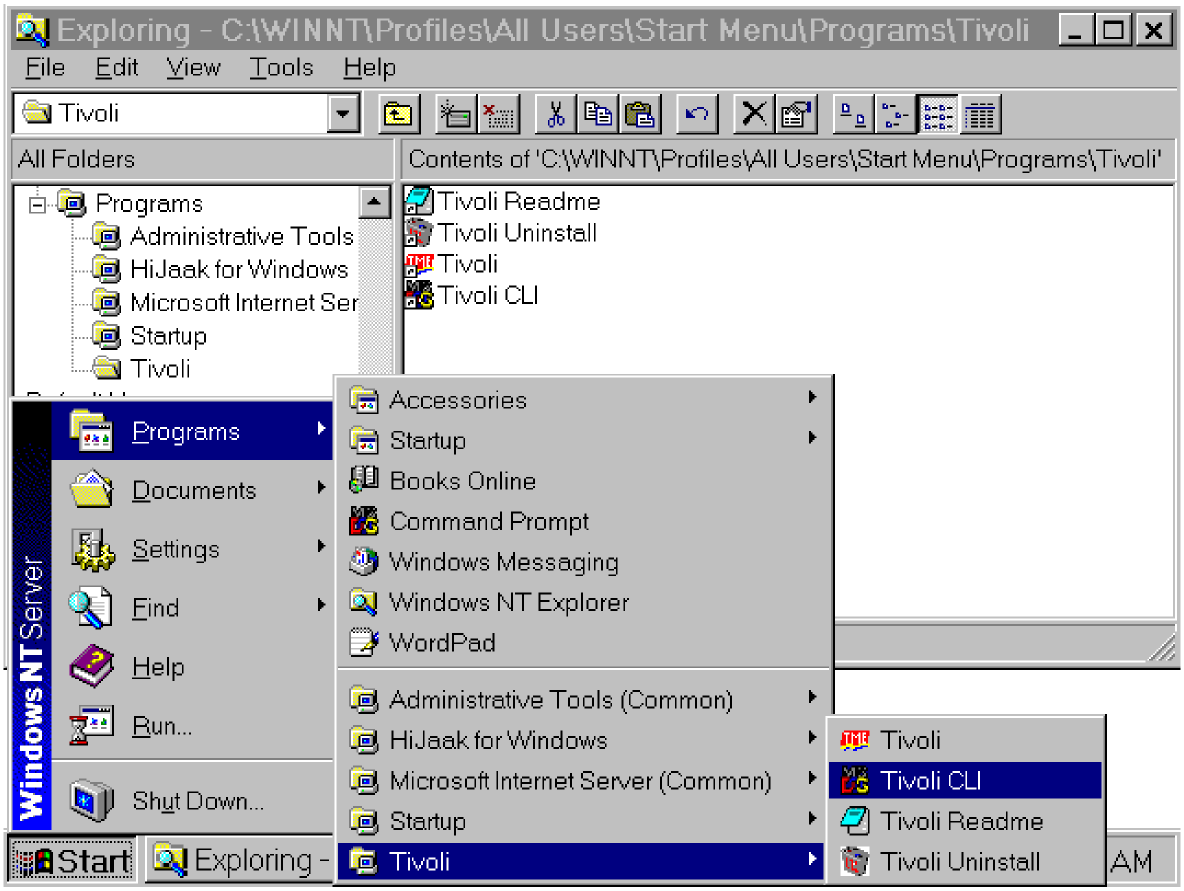


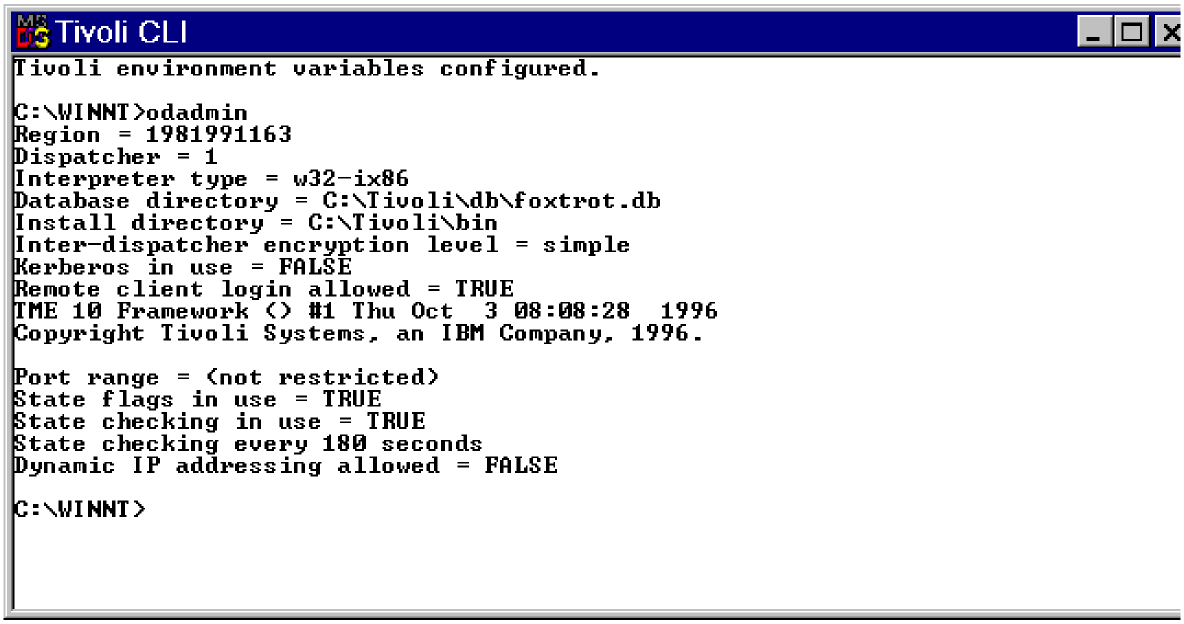
Select a Title for the Program

Select a name for the shortcut:

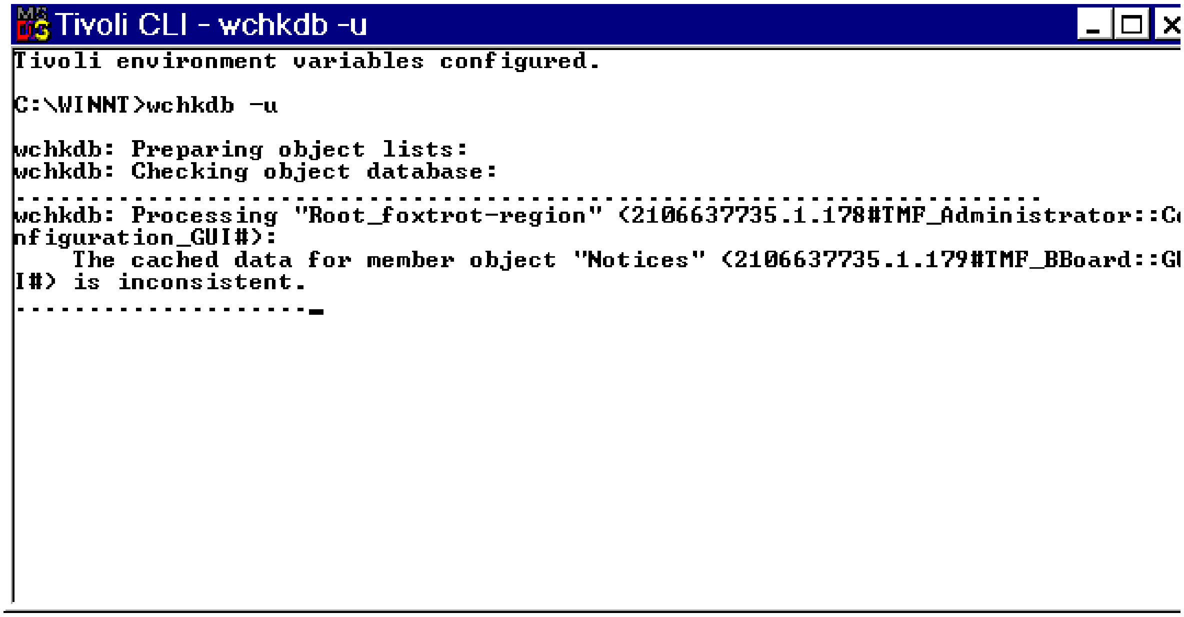
Tivoli CLI

Figure 287


Exploring - C:\WINNT\Profiles\All Users\Start Menu\Programs\Tivoli
File
Edit
View
Tools
Help
Tivoli
All Folders
Contents of 'C:\WINNT\Profiles\All Users\Start Menu\Programs\Tivoli'
Programs
Administrative Tools
HiJaak for Windows
Microsoft Internet Ser
Startup
Tivoli
Tivoli Readme
Tivoli Uninstall
Tivoli
Tivoli CLI
Windows NT Server
Programs
Documents
Settings
Find
Help
Run...
Shut Down...
Accessories
Startup
Books Online
Command Prompt
Windows Messaging
Windows NT Explorer
WordPad
Administrative Tools (Common)
HiJaak for Windows
Microsoft Internet Server (Common)
Startup
Tivoli
Tivoli
Tivoli CLI
Tivoli Readme
Tivoli Uninstall
Start
Exploring -
AM



```
Tivoli environment variables configured.

C:\WINNT>odadmin
Region = 1981991163
Dispatcher = 1
Interpreter type = w32-ix86
Database directory = C:\Tivoli\db\foxtrot.db
Install directory = C:\Tivoli\bin
Inter-dispatcher encryption level = simple
Kerberos in use = FALSE
Remote client login allowed = TRUE
TME 10 Framework () #1 Thu Oct  3 08:08:28  1996
Copyright Tivoli Systems, an IBM Company, 1996.

Port range = (not restricted)
State flags in use = TRUE
State checking in use = TRUE
State checking every 180 seconds
Dynamic IP addressing allowed = FALSE

C:\WINNT>
```



```
Tivoli environment variables configured.

C:\WINNT>wchkdb -u

wchkdb: Preparing object lists:
wchkdb: Checking object database:
......................................................................
wchkdb: Processing "Root_foxtrot-region" (2106637735.1.178#TMF_Administrator::C
nfiguration_GUI#):
    The cached data for member object "Notices" (2106637735.1.179#TMF_BBoard::G
I#) is inconsistent.
....................
```

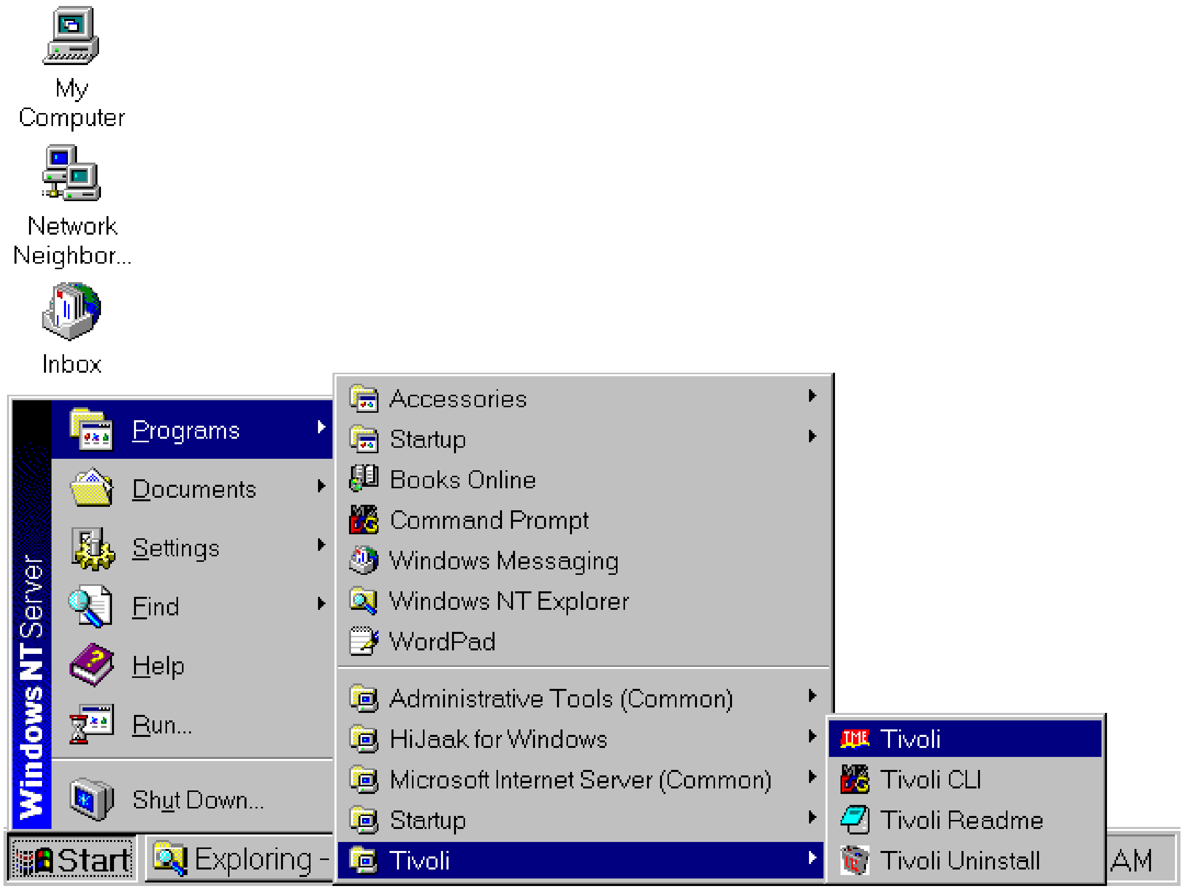
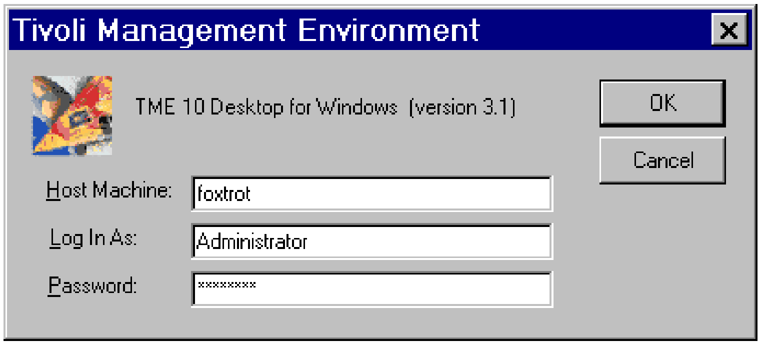

My Computer
Network Neighbor...
Inbox
Windows NT Server
Programs
Documents
Settings
Find
Help
Run...
Shut Down...
Start
Exploring -
Accessories
Startup
Books Online
Command Prompt
Windows Messaging
Windows NT Explorer
WordPad
Administrative Tools (Common)
HiJaak for Windows
Microsoft Internet Server (Common)
Startup
Tivoli
Tivoli
Tivoli CLI
Tivoli Readme
Tivoli Uninstall
AM

Figure 2



Tivoli Management Environment

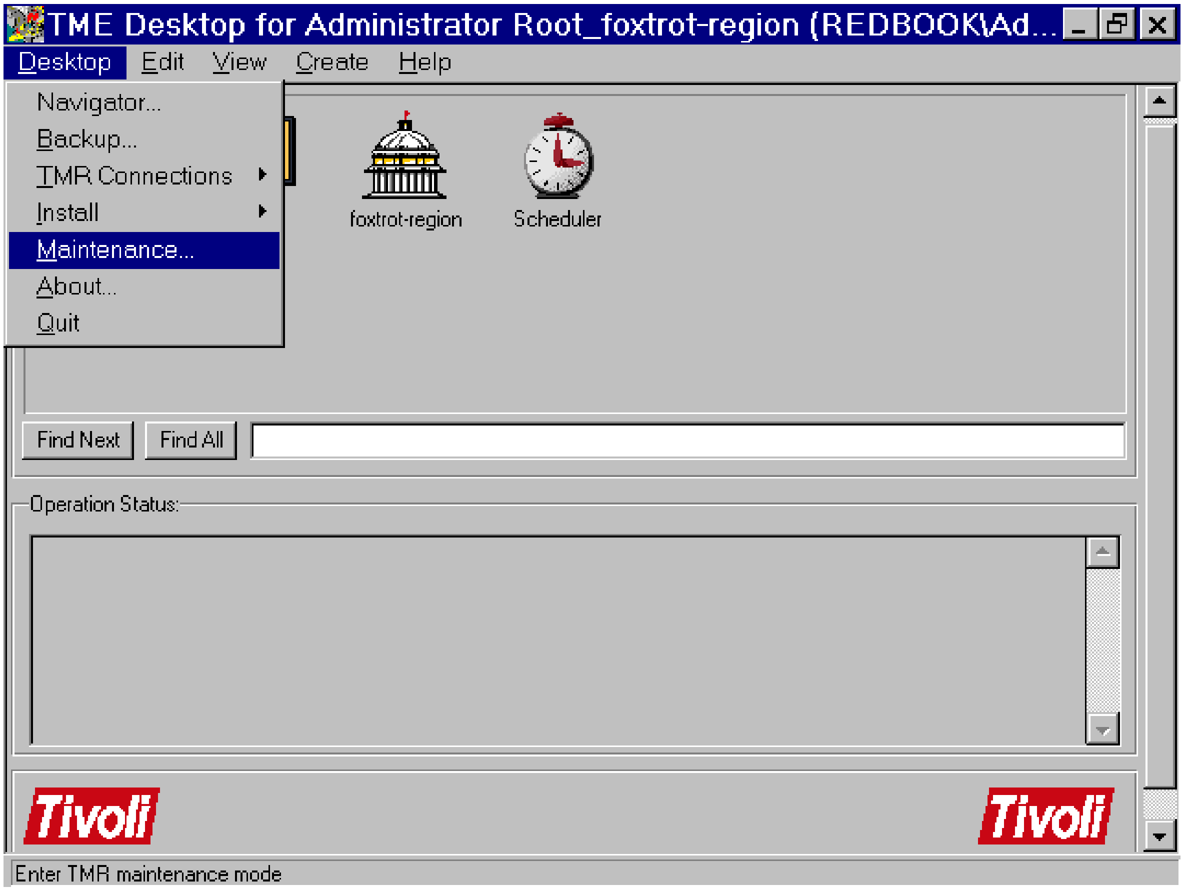
TME 10 Desktop for Windows (version 3.1)

Host Machine: foxtrot

Log In As: Administrator

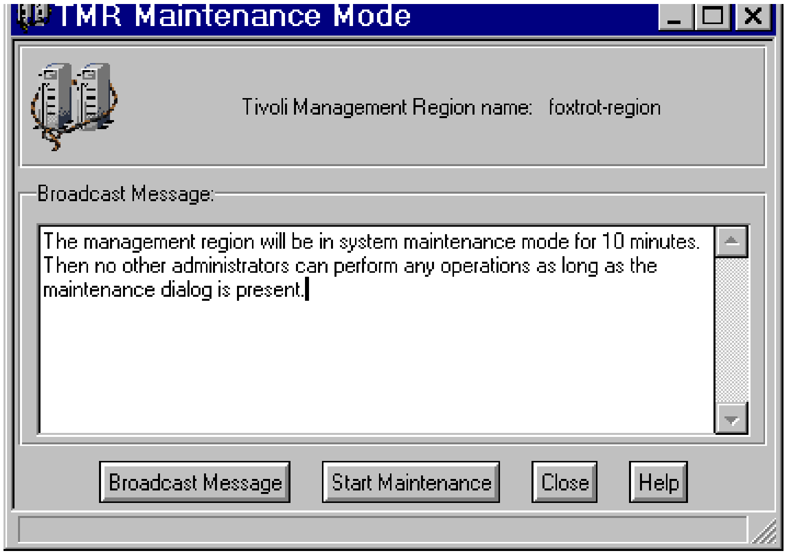
Password: ********

Tivoli Startup
TME 10
Version 3.1
Managing Network Computing. *The Smart Way.*
Tivoli



Enter TMR maintenance mode

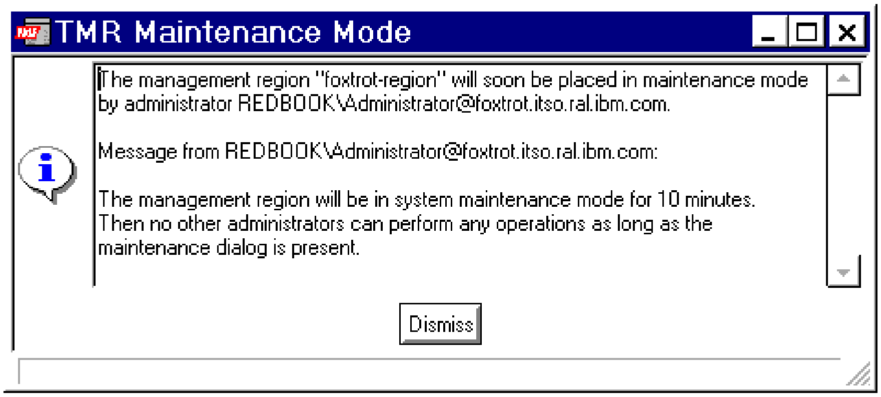
Figure 295



Tivoli Management Region name: foxtrot-region

Broadcast Message:

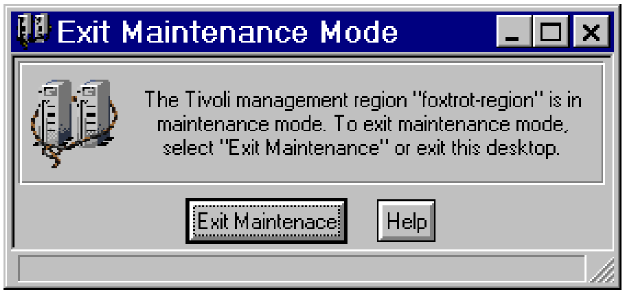
The management region will be in system maintenance mode for 10 minutes. Then no other administrators can perform any operations as long as the maintenance dialog is present.



The management region "foxtrot-region" will soon be placed in maintenance mode by administrator REDBOOK\Administrator@foxtrot.itso.ral.ibm.com.

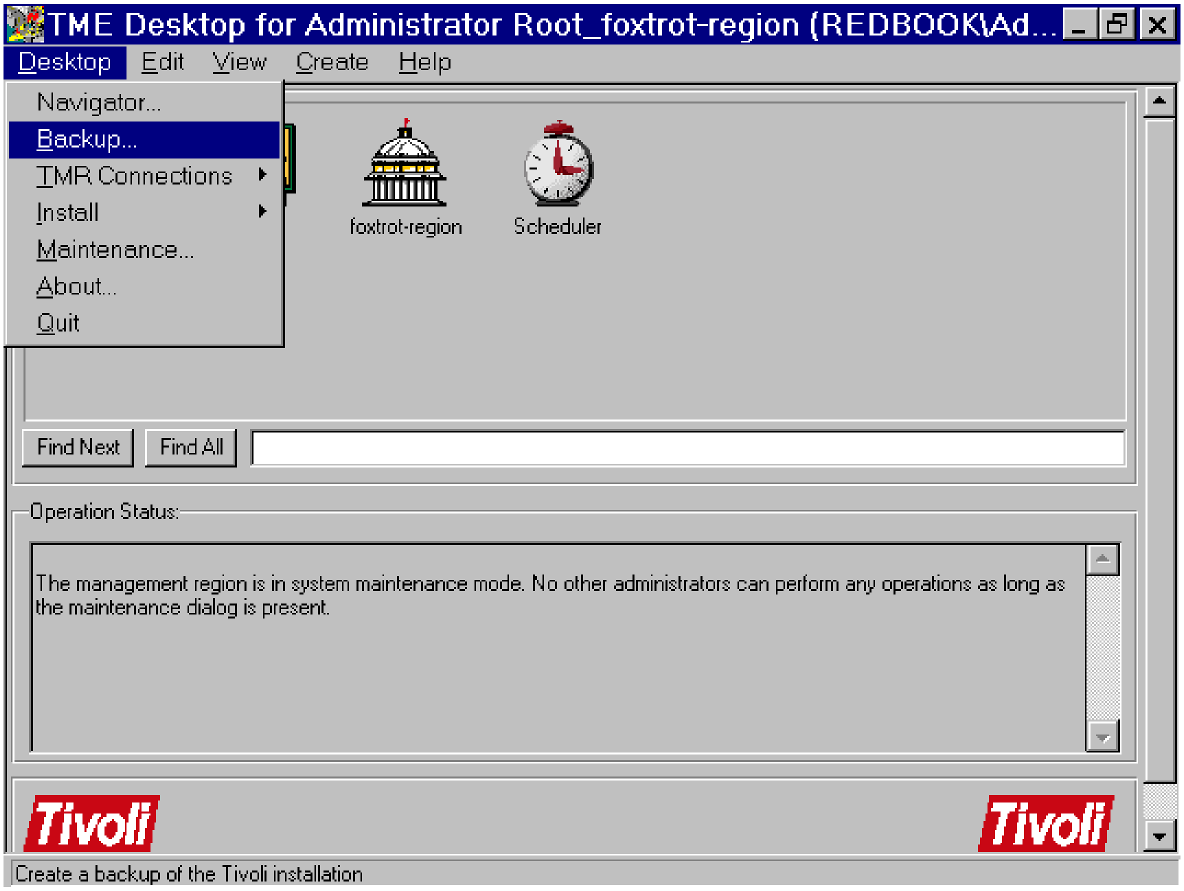
Message from REDBOOK\Administrator@foxtrot.itso.ral.ibm.com:

The management region will be in system maintenance mode for 10 minutes. Then no other administrators can perform any operations as long as the maintenance dialog is present.



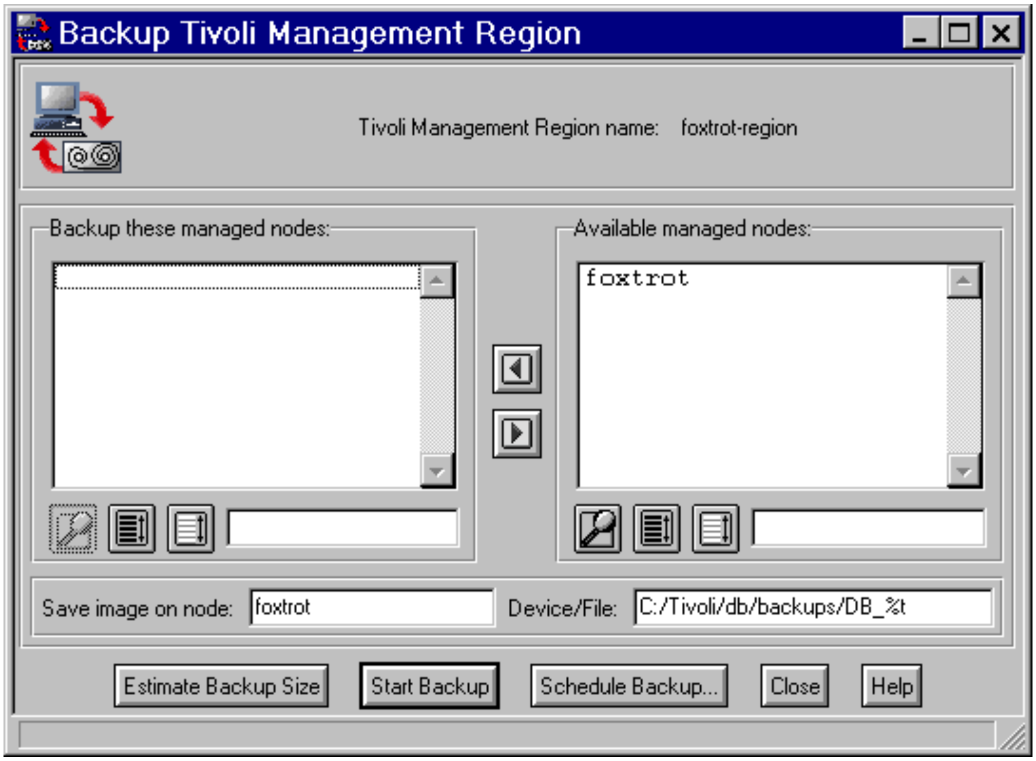
The Tivoli management region "foxtrot-region" is in maintenance mode. To exit maintenance mode, select "Exit Maintenance" or exit this desktop.

Figure 298



The management region is in system maintenance mode. No other administrators can perform any operations as long as the maintenance dialog is present.

Create a backup of the Tivoli installation



Backup Tivoli Management Region

Tivoli Management Region name: foxtrot-region

Backup these managed nodes:

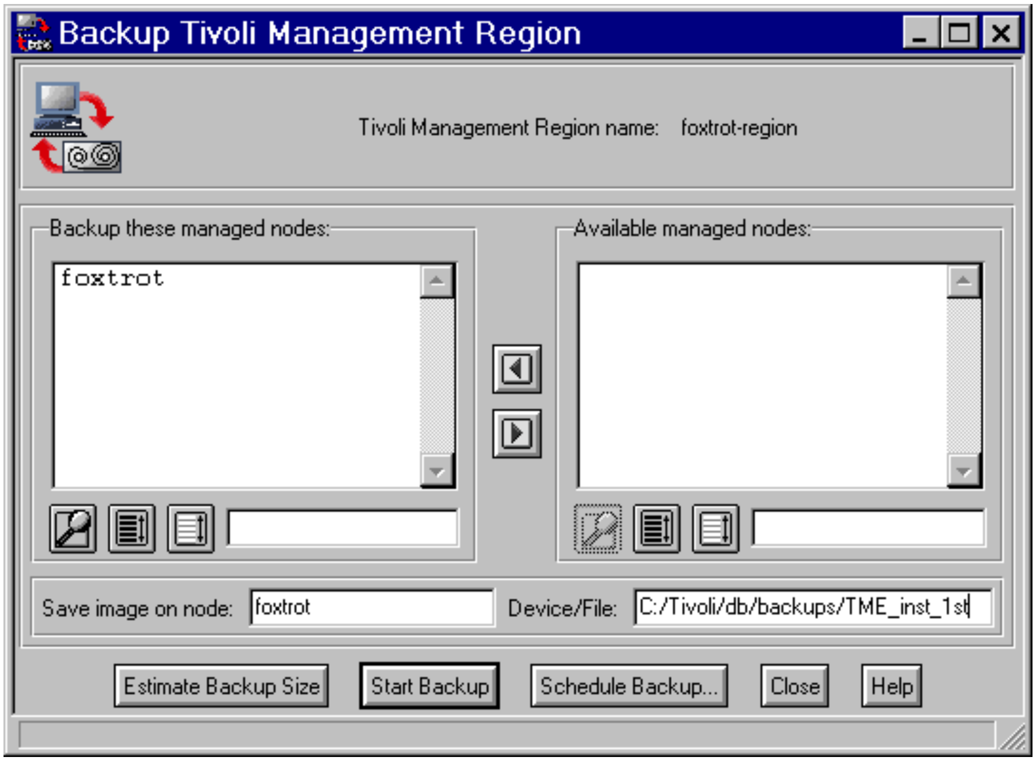
Available managed nodes:

foxtrot

Save image on node: foxtrot

Device/File: C:/Tivoli/db/backups/DB_%t

Figure 300



Tivoli Management Region name: foxtrot-region

Backup these managed nodes:

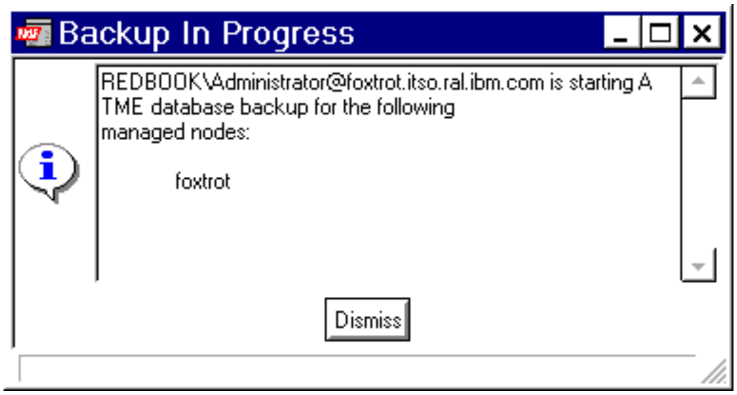
foxtrot

Save image on node: foxtrot

Device/File: C:/Tivoli/db/backups/TME_inst_1st

Figure 301

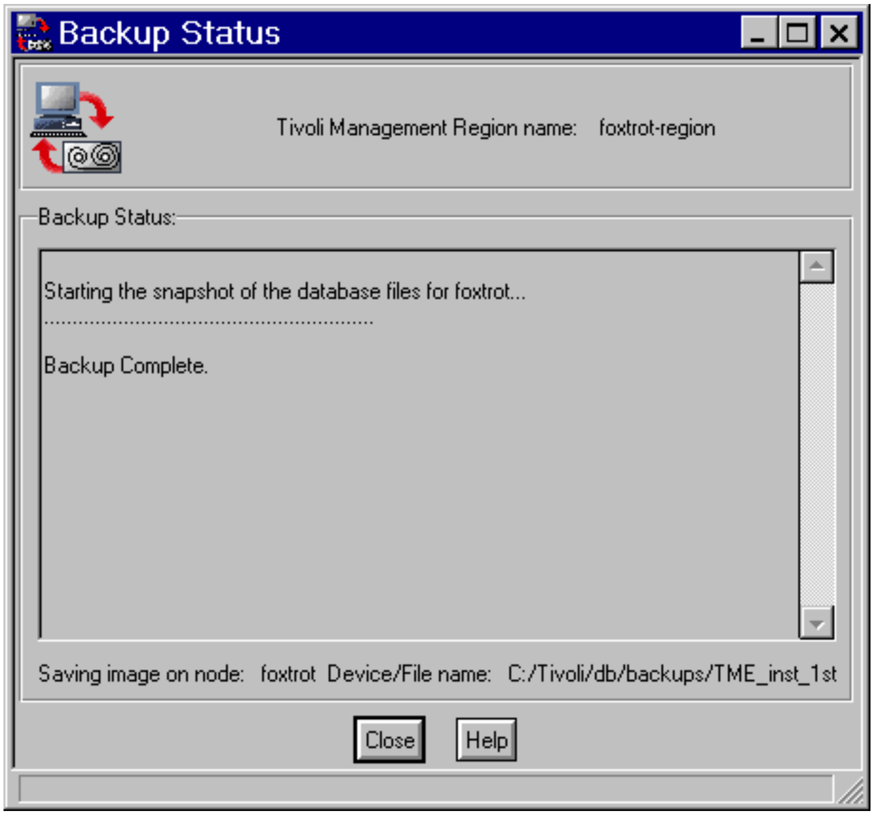
Figure 301



REDBOOK\Administrator@foxtrot.itso.ral.ibm.com is starting A TME database backup for the following managed nodes:

foxtrot

Figure 302

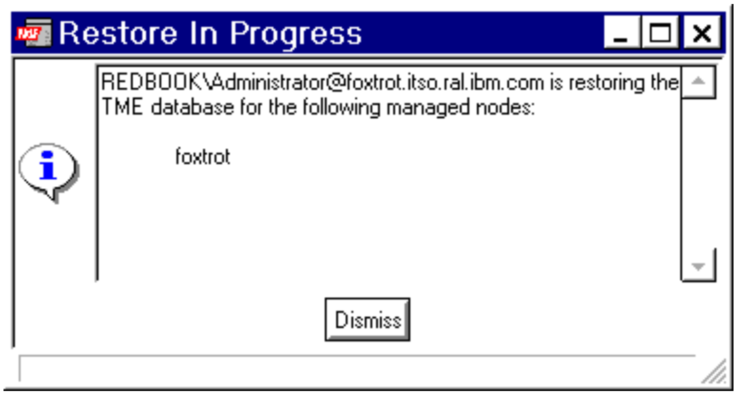


Tivoli Management Region name: foxtrot-region

Backup Status:

```
Starting the snapshot of the database files for foxtrot...
........................................................

Backup Complete.
```

Saving image on node: foxtrot Device/File name: C:/Tivoli/db/backups/TME_inst_1st



Restore In Progress

REDBOOK\Administrator@foxtrot.itso.ral.ibm.com is restoring the TME database for the following managed nodes:

foxtrot

Figure 304

Figure 304

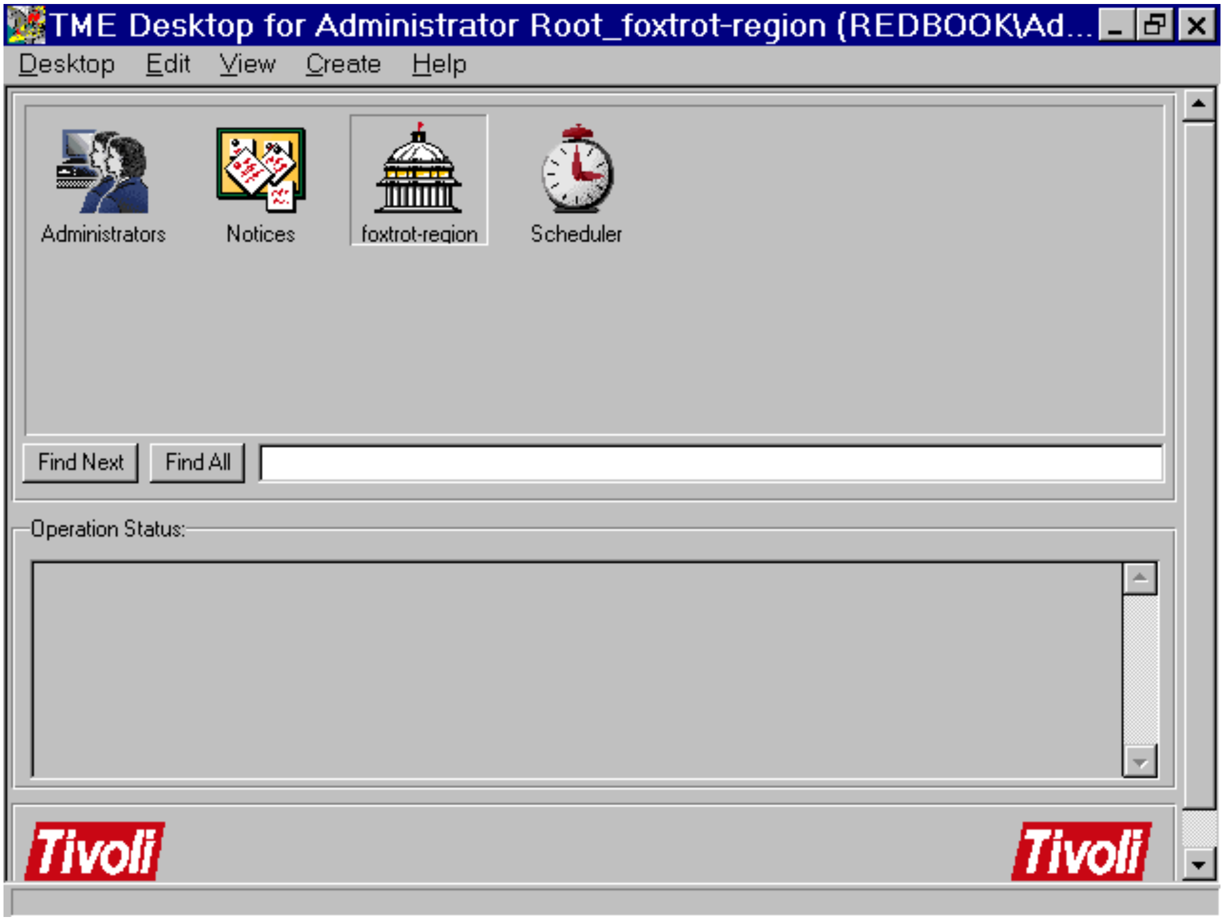

TME Desktop for Administrator Root_foxtrot-region (REDBOOK\Ad...
Desktop
Edit
View
Create
Help
Administrators
Notices
foxtrot-region
Scheduler
Find Next
Find All
Operation Status:
Tivoli
Tivoli

Figure 305

Figure 305

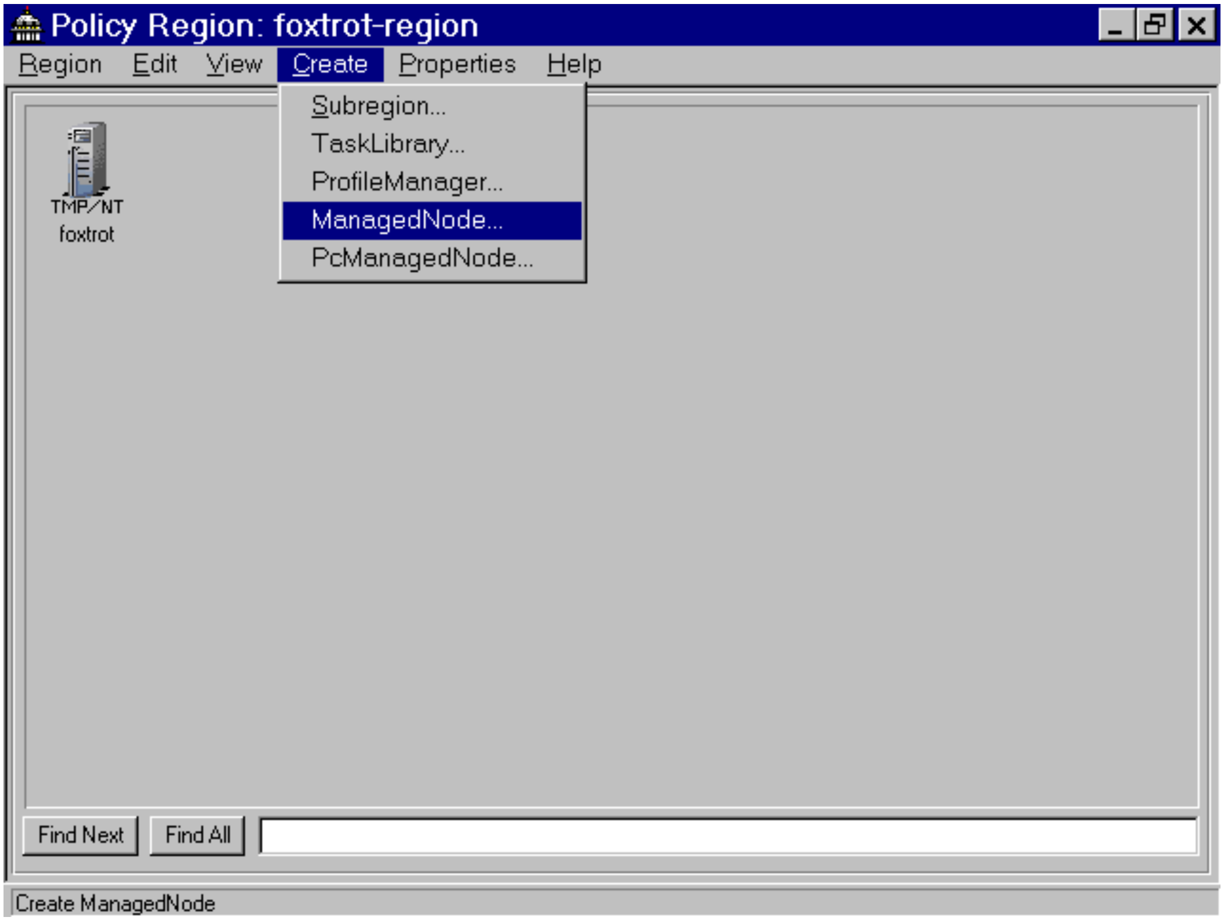
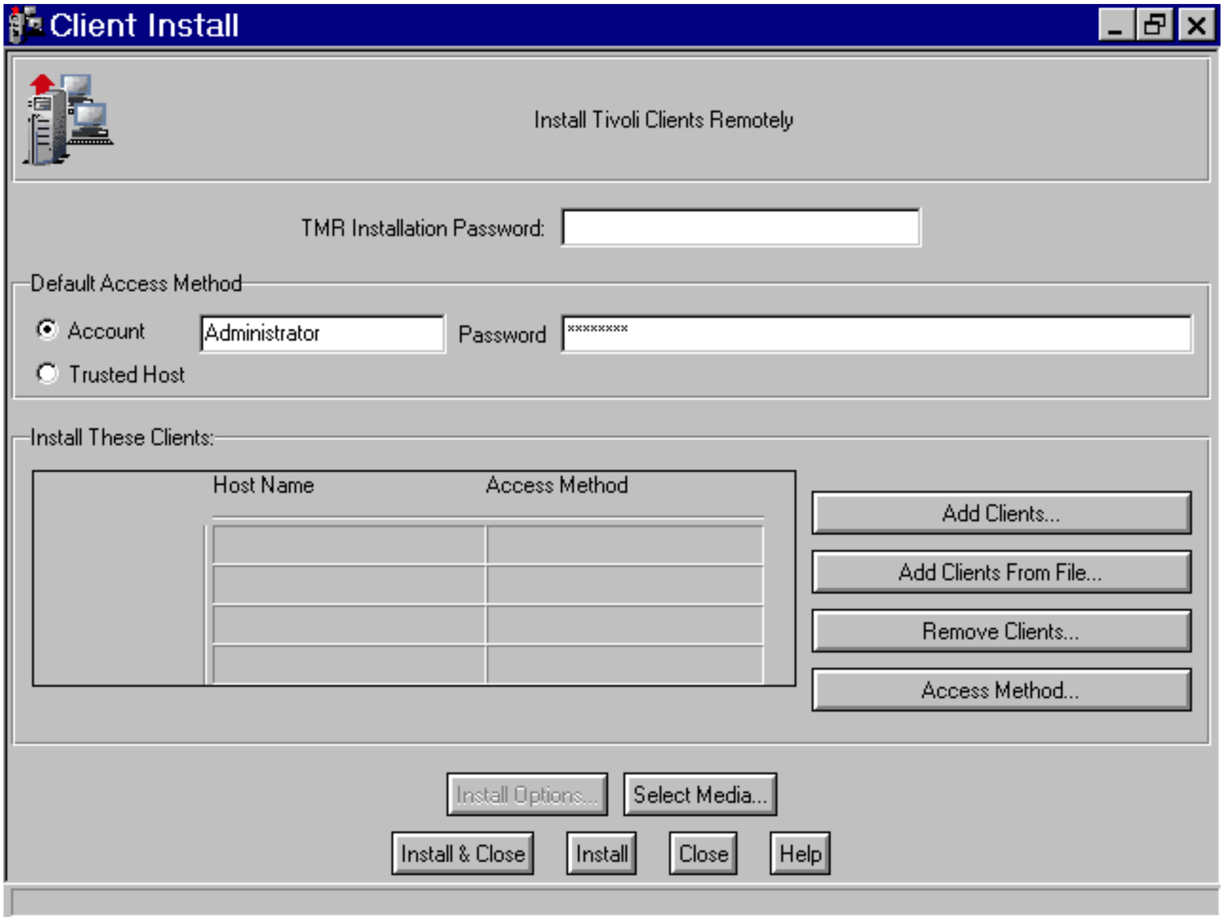

Policy Region: foxtrot-region
Region
Edit
View
Create
Properties
Help
Subregion...
TaskLibrary...
ProfileManager...
ManagedNode...
PcManagedNode...
TMP/NT
foxtrot
Find Next
Find All
Create ManagedNode

Figure 3-9



Client Install

Install Tivoli Clients Remotely

TMR Installation Password:

Default Access Method

● Account: Administrator   Password: *********

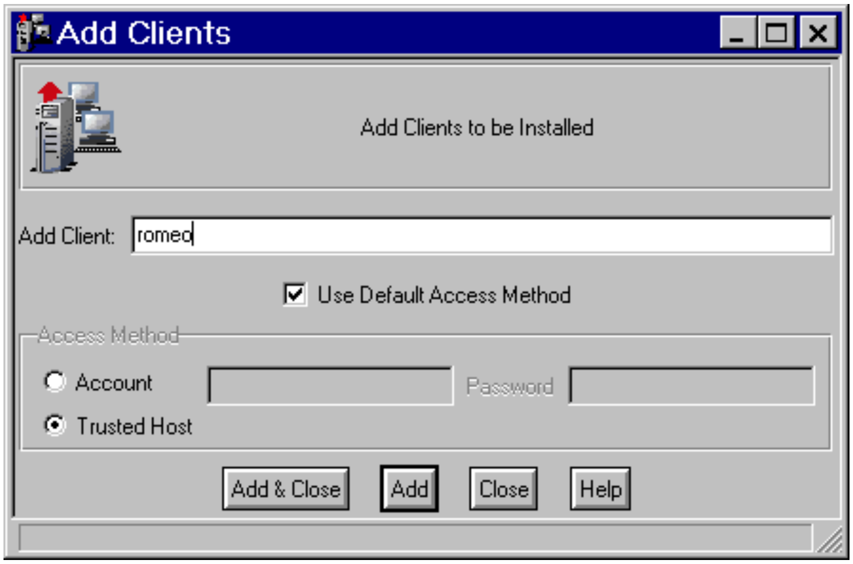
○ Trusted Host

Install These Clients:

Host Name	Access Method

Figure 307

Figure 3.57



Add Clients

Add Clients to be Installed

Add Client: romeo

☑ Use Default Access Method

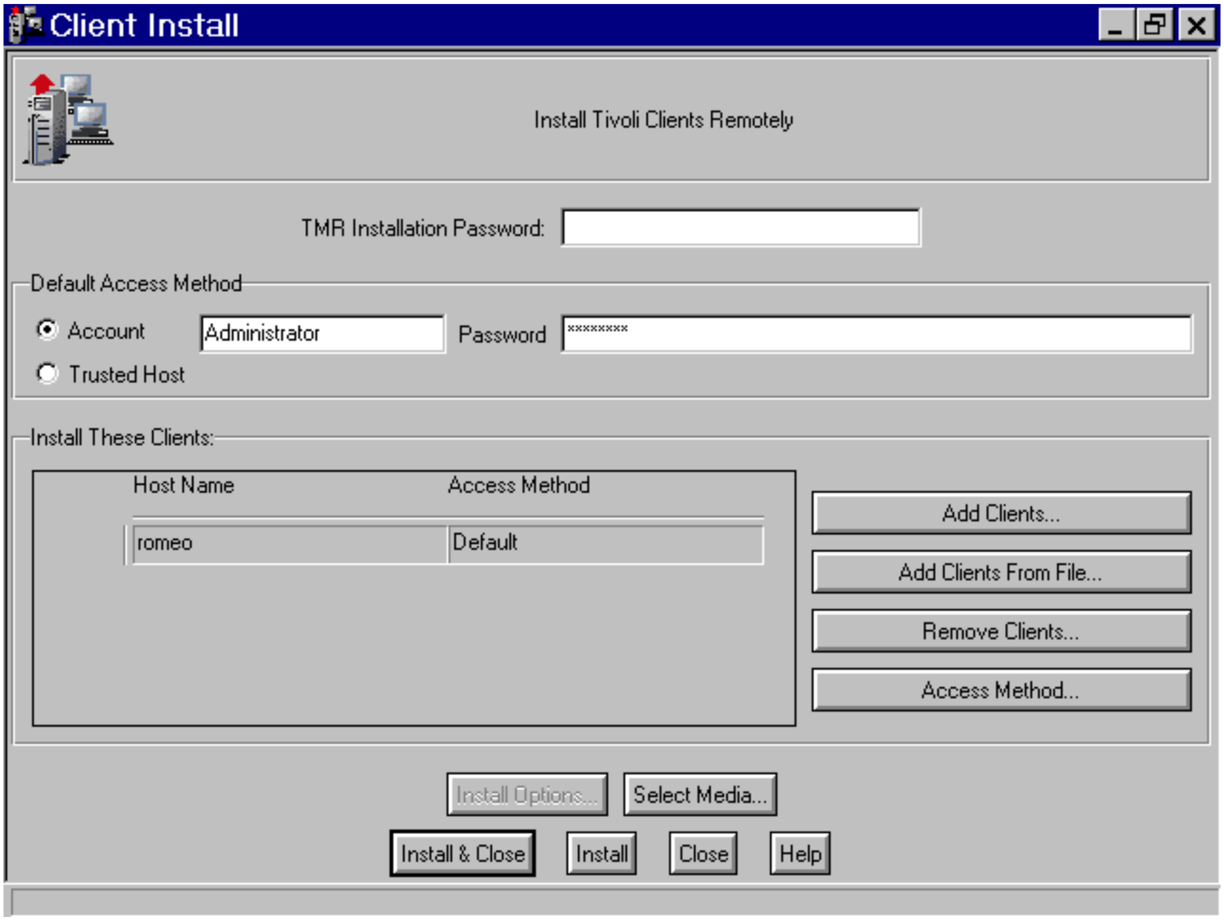
Access Method

○ Account Password

● Trusted Host

Figure 308

Figure 308



TMR Installation Password:

Default Access Method

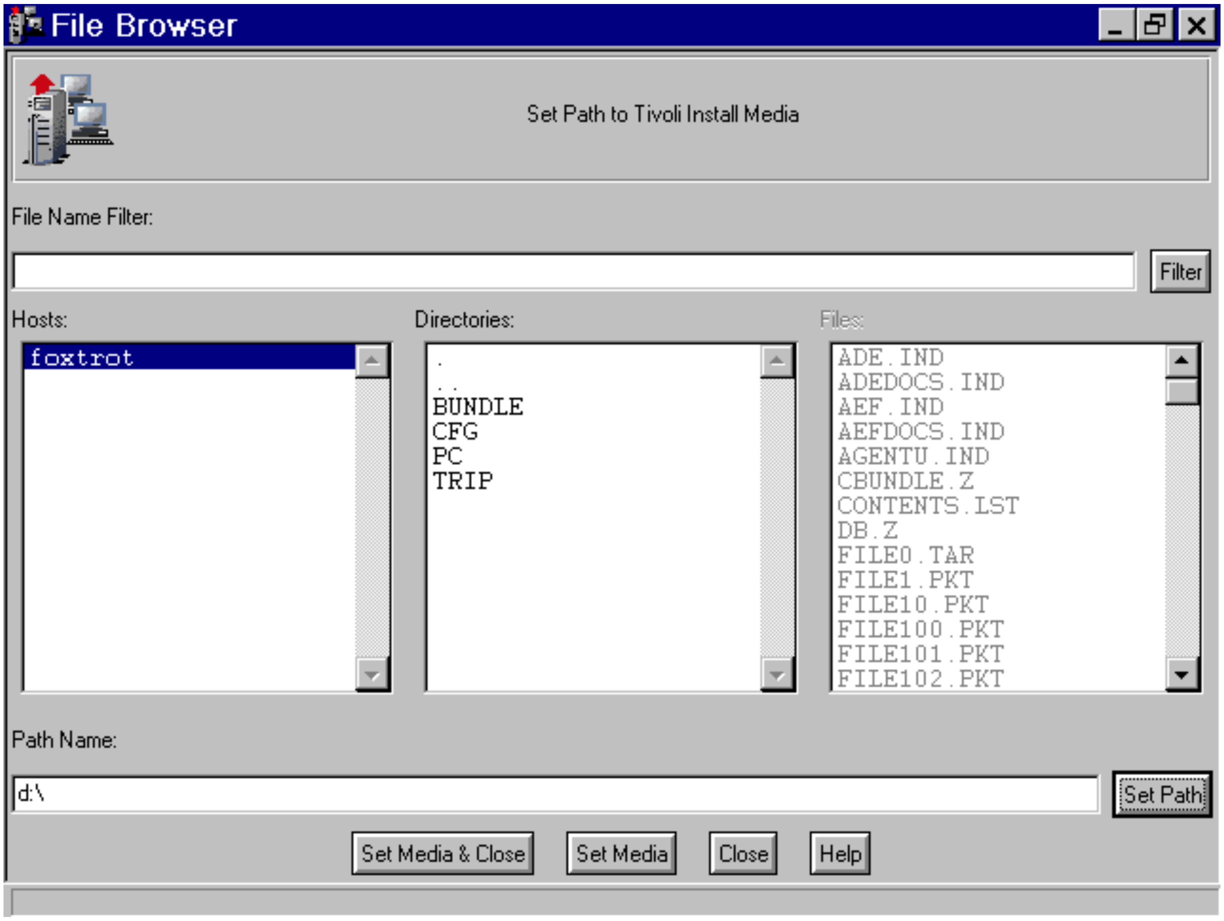
● Account Administrator Password *********

○ Trusted Host

Install These Clients:

Host Name	Access Method
romeo	Default

Figure 3.6



Hosts: foxtrot

Directories:

```
.
..
BUNDLE
CFG
PC
TRIP
```

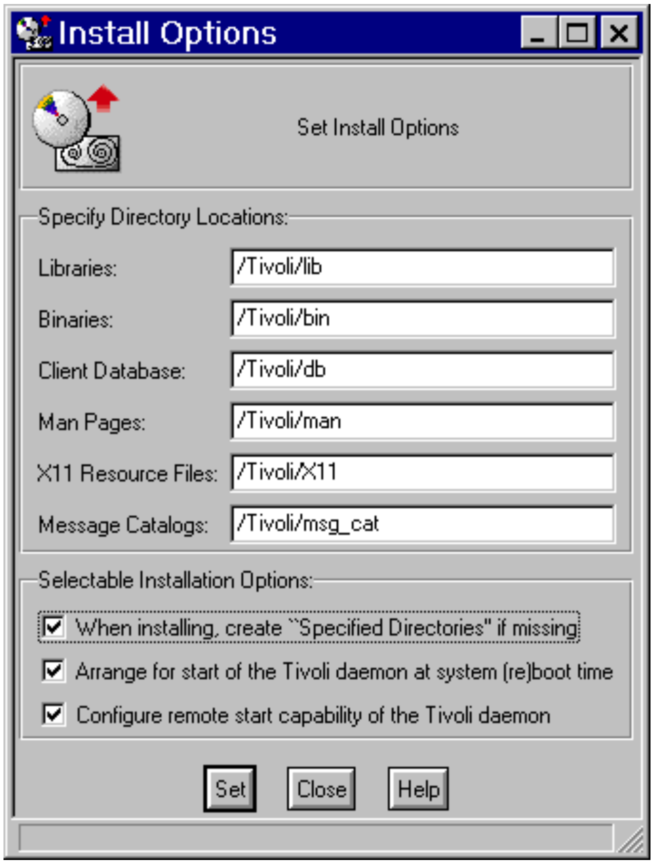
Files:

```
ADE.IND
ADEDOCS.IND
AEF.IND
AEFDOCS.IND
AGENTU.IND
CBUNDLE.Z
CONTENTS.LST
DB.Z
FILE0.TAR
FILE1.PKT
FILE10.PKT
FILE100.PKT
FILE101.PKT
FILE102.PKT
```

Path Name: d:\

Figure 310

Figure 340



Specify Directory Locations:

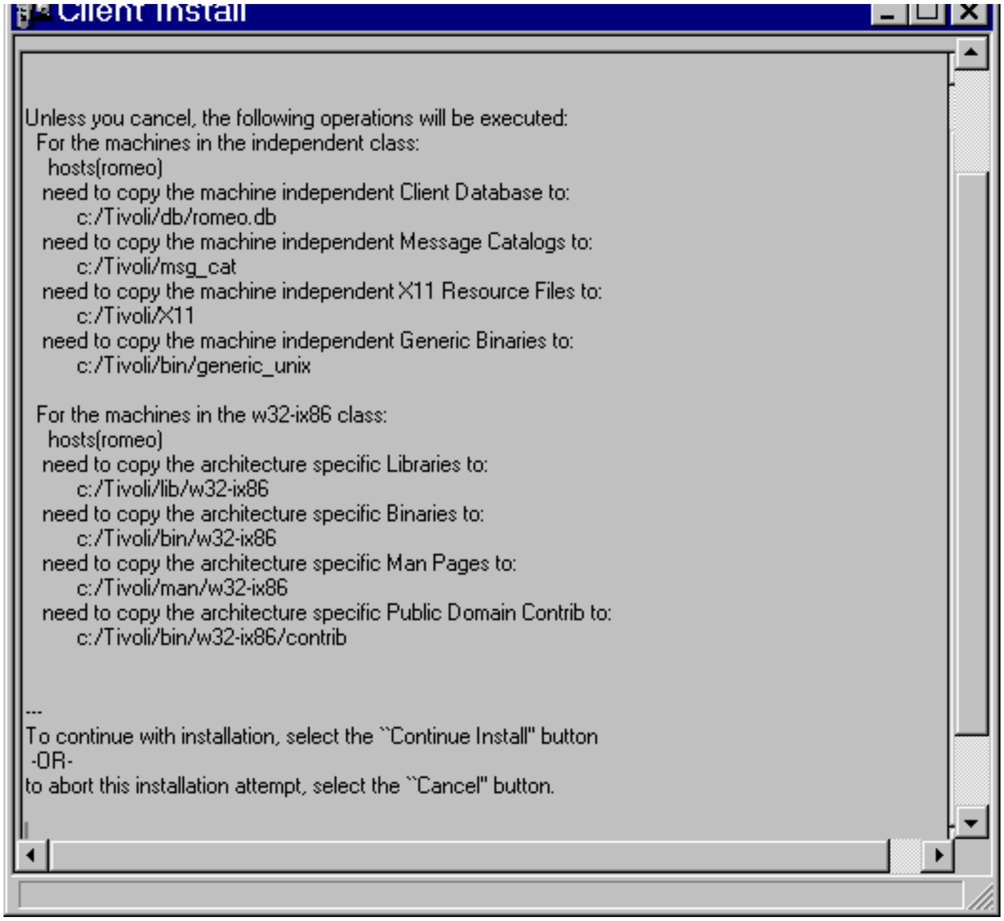
Libraries:	/Tivoli/lib
Binaries:	/Tivoli/bin
Client Database:	/Tivoli/db
Man Pages:	/Tivoli/man
X11 Resource Files:	/Tivoli/X11
Message Catalogs:	/Tivoli/msg_cat

Selectable Installation Options:

- ☑ When installing, create ``Specified Directories'' if missing
- ☑ Arrange for start of the Tivoli daemon at system (re)boot time
- ☑ Configure remote start capability of the Tivoli daemon

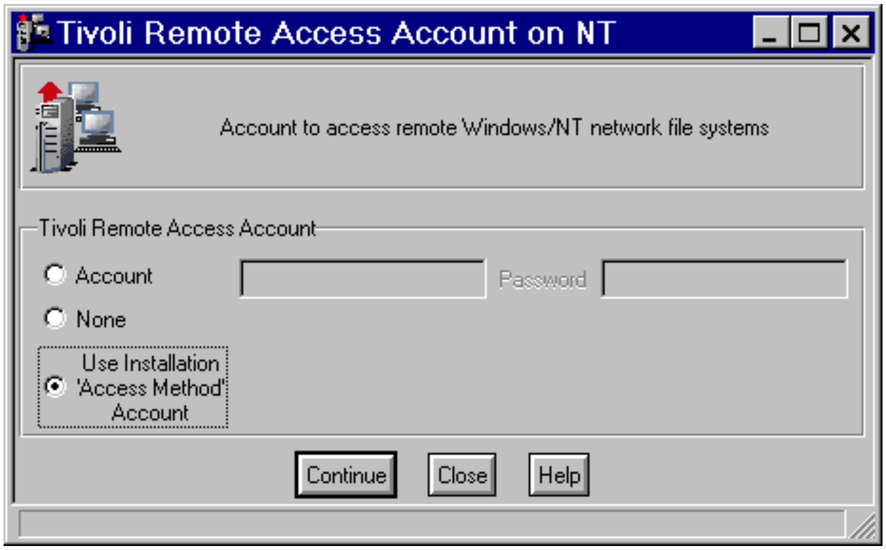
Figure 3.11

Figure 311



```
Unless you cancel, the following operations will be executed:
  For the machines in the independent class:
    hosts(romeo)
   need to copy the machine independent Client Database to:
        c:/Tivoli/db/romeo.db
   need to copy the machine independent Message Catalogs to:
        c:/Tivoli/msg_cat
   need to copy the machine independent X11 Resource Files to:
        c:/Tivoli/X11
   need to copy the machine independent Generic Binaries to:
        c:/Tivoli/bin/generic_unix

  For the machines in the w32-ix86 class:
    hosts(romeo)
   need to copy the architecture specific Libraries to:
        c:/Tivoli/lib/w32-ix86
   need to copy the architecture specific Binaries to:
        c:/Tivoli/bin/w32-ix86
   need to copy the architecture specific Man Pages to:
        c:/Tivoli/man/w32-ix86
   need to copy the architecture specific Public Domain Contrib to:
        c:/Tivoli/bin/w32-ix86/contrib


---
To continue with installation, select the ``Continue Install'' button
 -OR-
to abort this installation attempt, select the ``Cancel'' button.
```

Figure 362.



Tivoli Remote Access Account on NT

Account to access remote Windows/NT network file systems

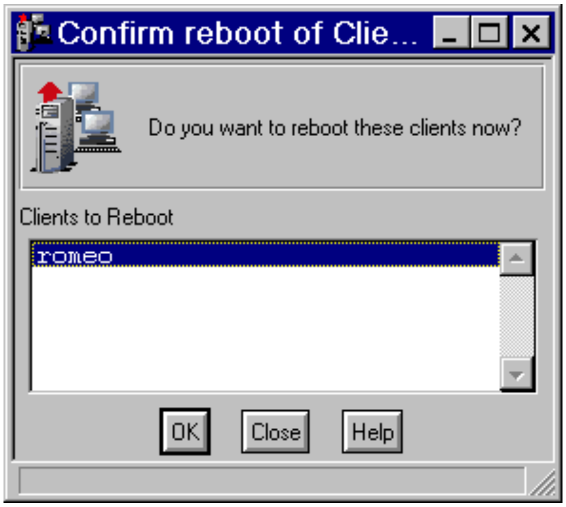
Tivoli Remote Access Account

○ Account

Password

○ None

● Use Installation 'Access Method' Account



Confirm reboot of Clie...

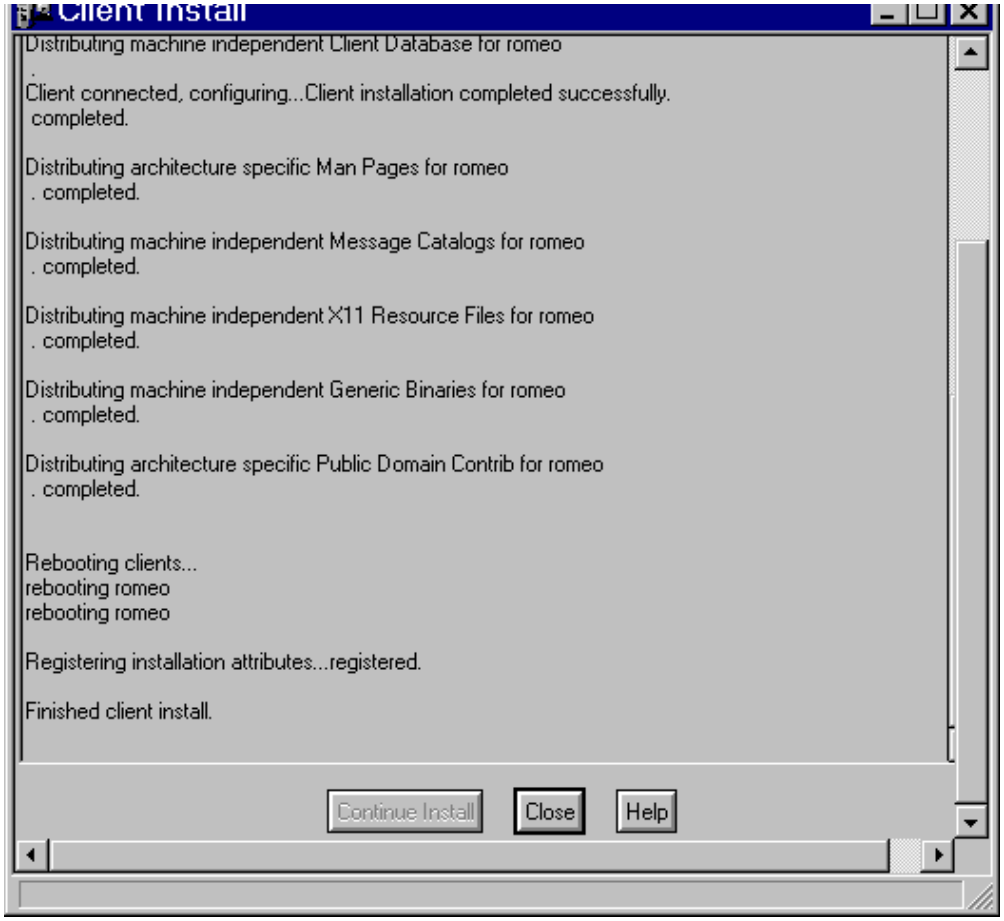
Do you want to reboot these clients now?

Clients to Reboot

romeo

Figure 314

Figure 314.



```
Distributing machine independent Client Database for romeo
 .
Client connected, configuring...Client installation completed successfully.
 completed.

Distributing architecture specific Man Pages for romeo
 . completed.

Distributing machine independent Message Catalogs for romeo
 . completed.

Distributing machine independent X11 Resource Files for romeo
 . completed.

Distributing machine independent Generic Binaries for romeo
 . completed.

Distributing architecture specific Public Domain Contrib for romeo
 . completed.


Rebooting clients...
rebooting romeo
rebooting romeo

Registering installation attributes...registered.

Finished client install.
```

Figure 315

Figure 3.15

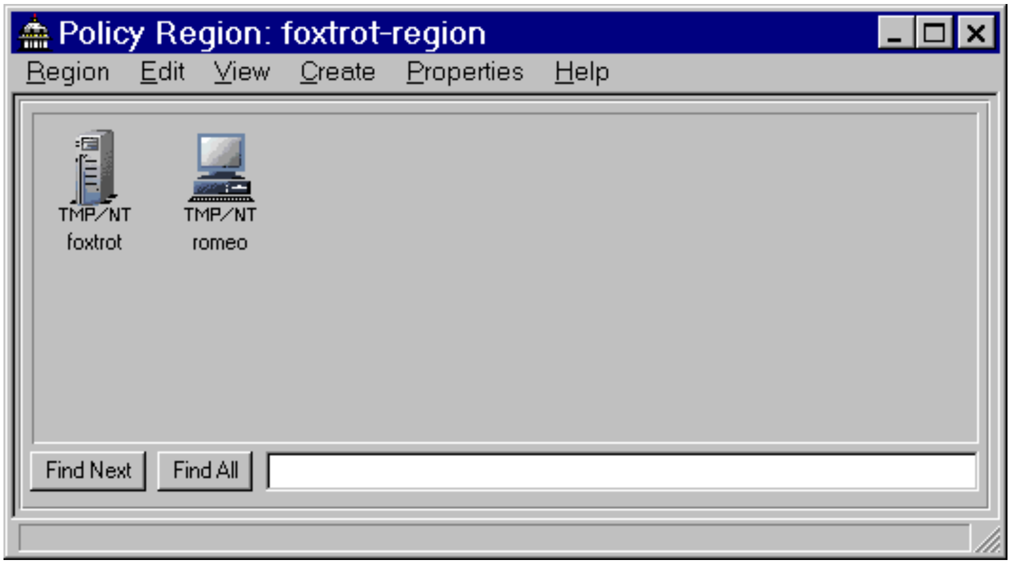

Policy Region: foxtrot-region
Region
Edit
View
Create
Properties
Help
TMP/NT
foxtrot
TMP/NT
romeo
Find Next
Find All

Figure 316

Figure 316

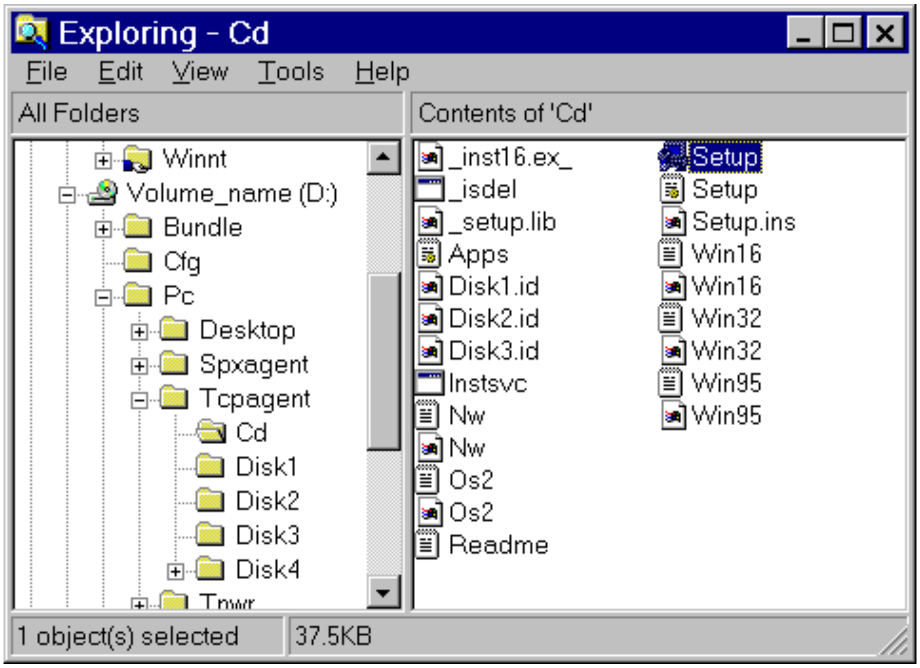
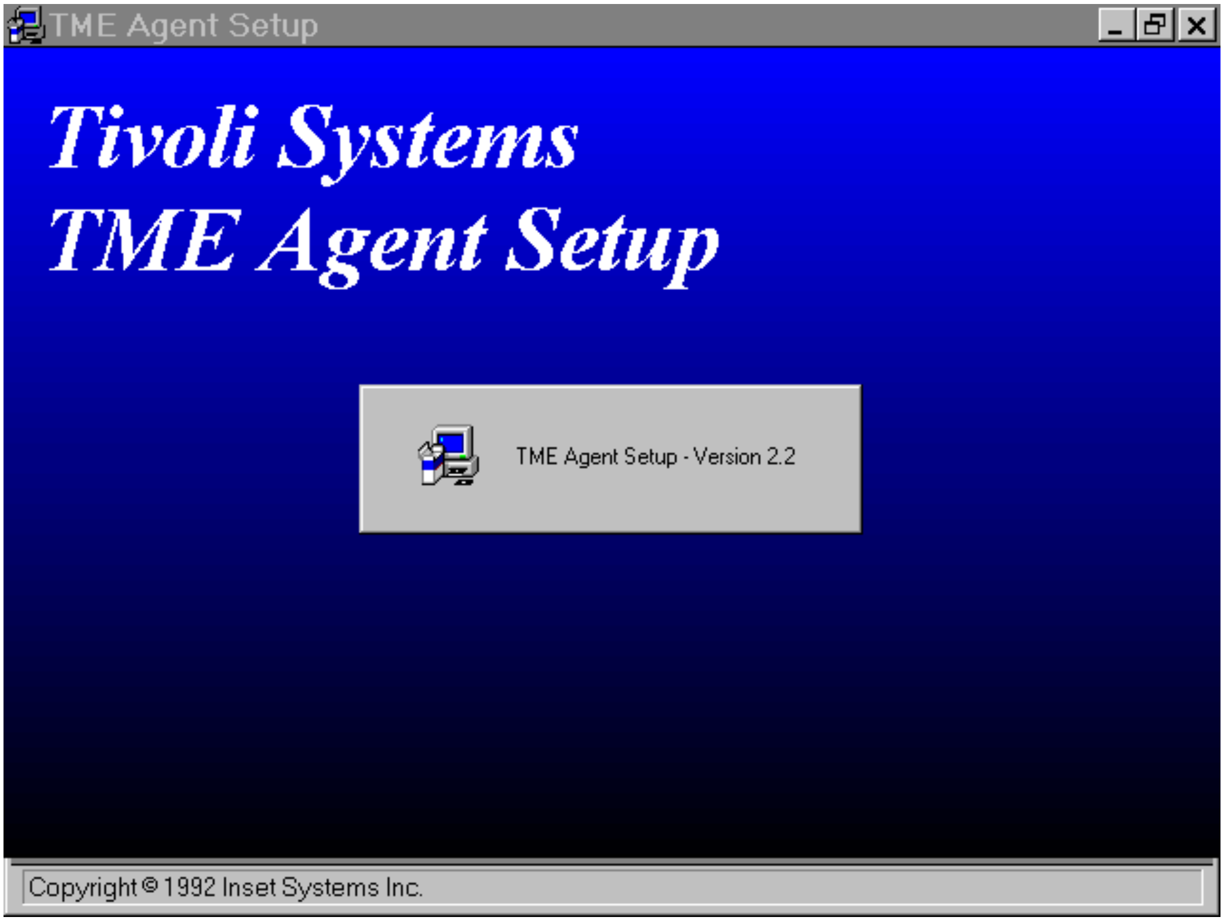

Exploring - Cd
File
Edit
View
Tools
Help
All Folders
Contents of 'Cd'
Winnt
Volume_name (D:)
Bundle
Cfg
Pc
Desktop
Spxagent
Tcpagent
Cd
Disk1
Disk2
Disk3
Disk4
Tpwr
inst16.ex
_isdel
_setup.lib
Apps
Disk1.id
Disk2.id
Disk3.id
Instsvc
Nw
Nw
Os2
Os2
Readme
Setup
Setup
Setup.ins
Win16
Win16
Win32
Win32
Win95
Win95
1 object(s) selected
37.5KB

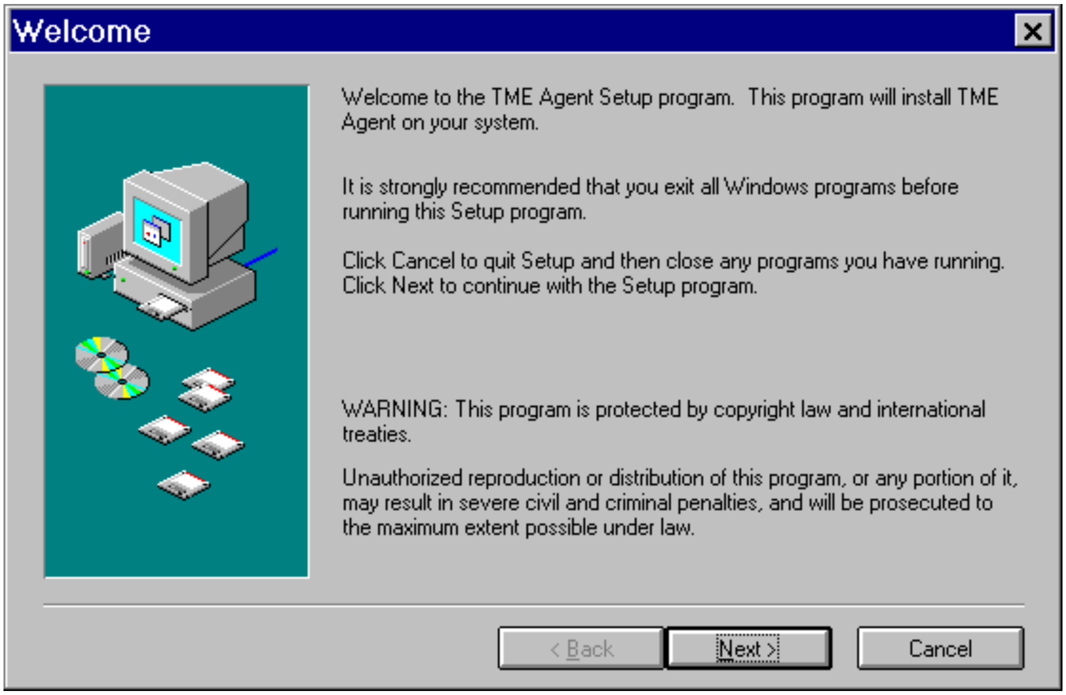
Figure 3-17



Tivoli Systems
TME Agent Setup

Copyright © 1992 Inset Systems Inc.

Figure 318



Welcome to the TME Agent Setup program. This program will install TME Agent on your system.

It is strongly recommended that you exit all Windows programs before running this Setup program.

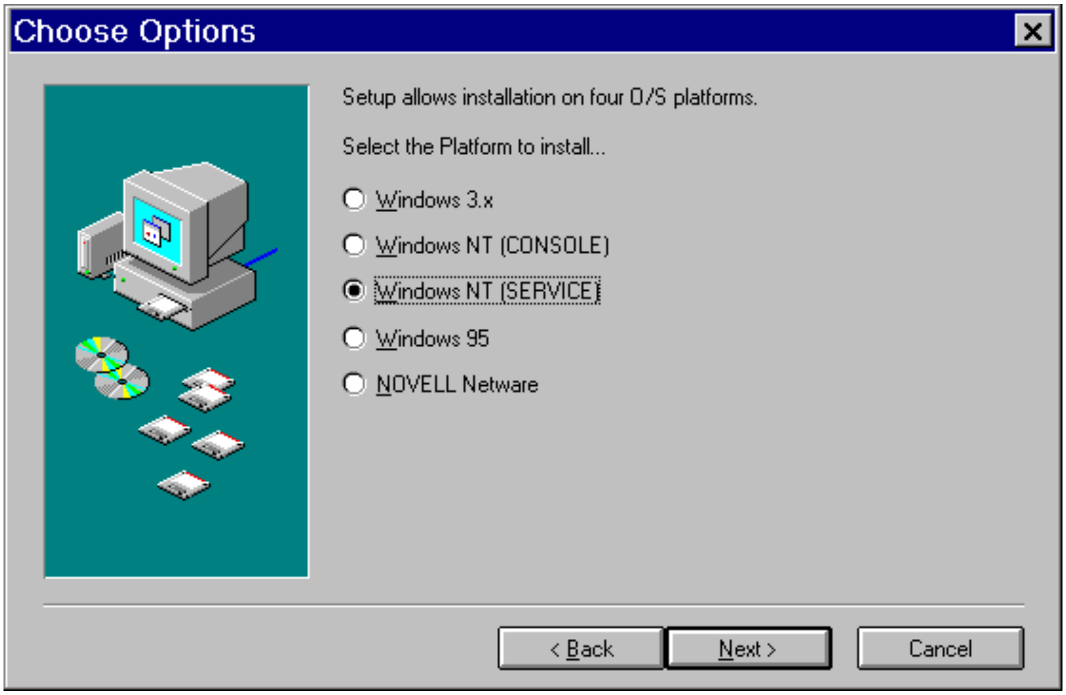
Click Cancel to quit Setup and then close any programs you have running. Click Next to continue with the Setup program.

WARNING: This program is protected by copyright law and international treaties.

Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law.

Figure 319

Figure 319



Choose Options

Setup allows installation on four O/S platforms.

Select the Platform to install...

○ Windows 3.x

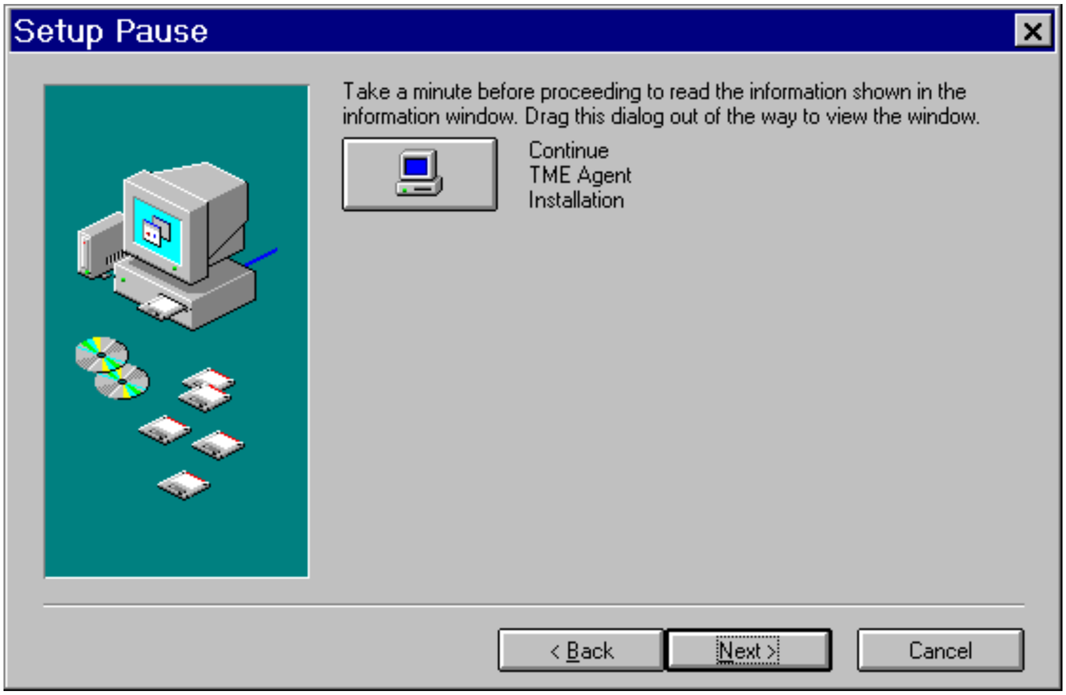
○ Windows NT (CONSOLE)

● Windows NT (SERVICE)

○ Windows 95

○ NOVELL Netware

Figure 320



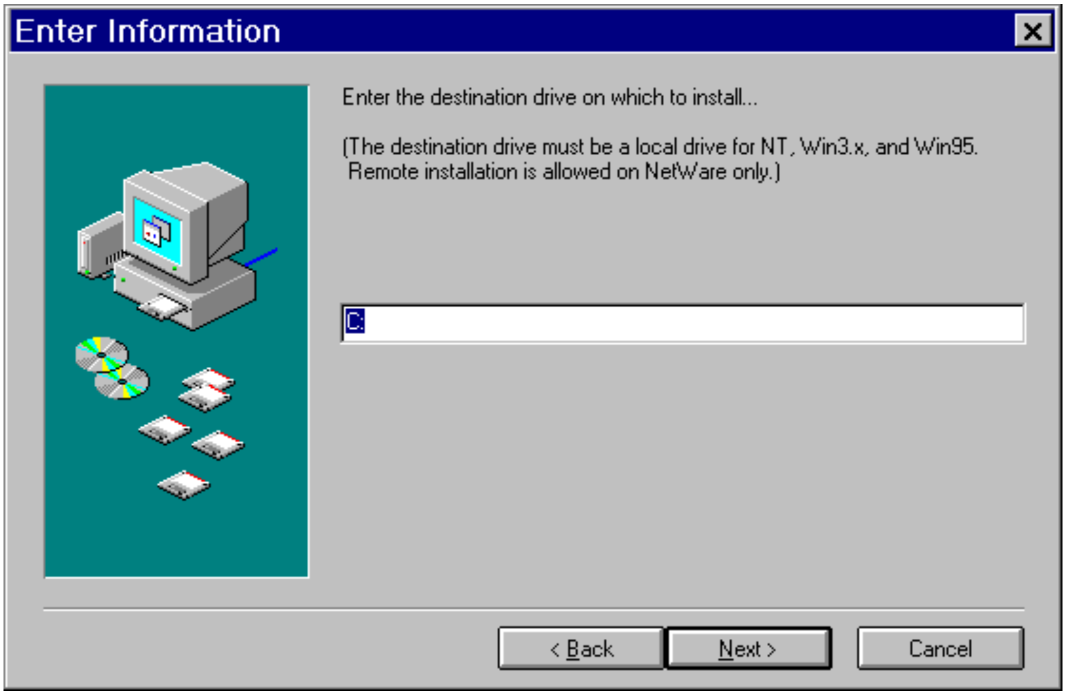
Setup Pause

Take a minute before proceeding to read the information shown in the information window. Drag this dialog out of the way to view the window.

Continue TME Agent Installation

Figure 321

Figure 321

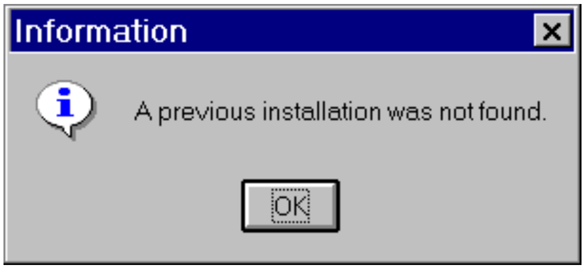


Enter the destination drive on which to install...

(The destination drive must be a local drive for NT, Win3.x, and Win95. Remote installation is allowed on NetWare only.)

C:

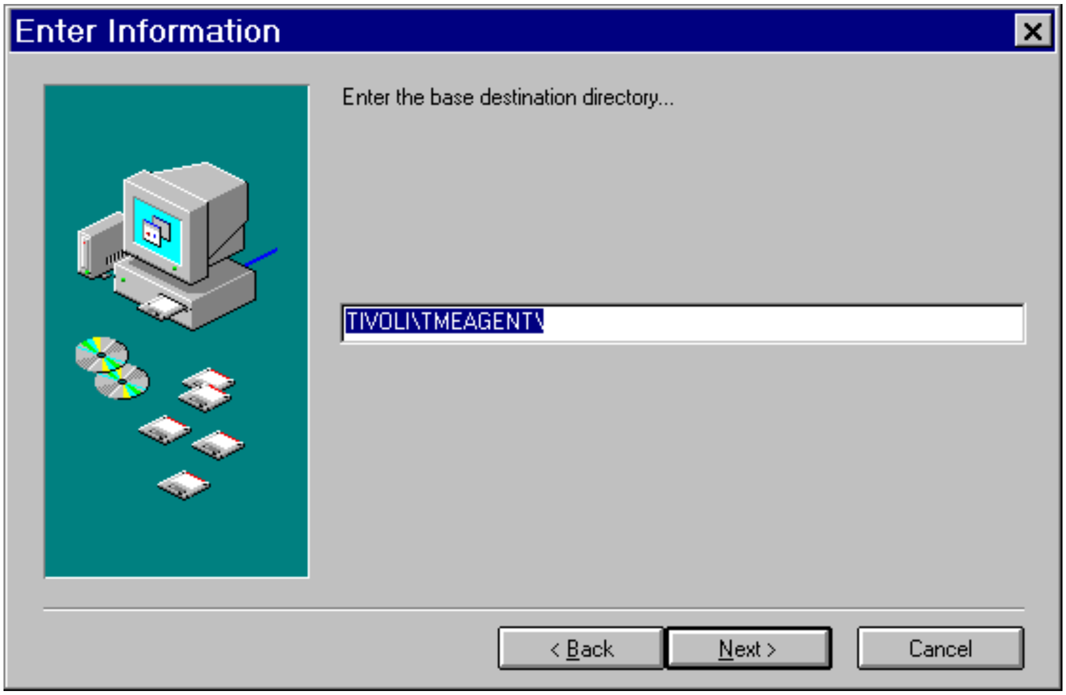
Figure 322



A previous installation was not found.

Figure 323

Figure 3.6.



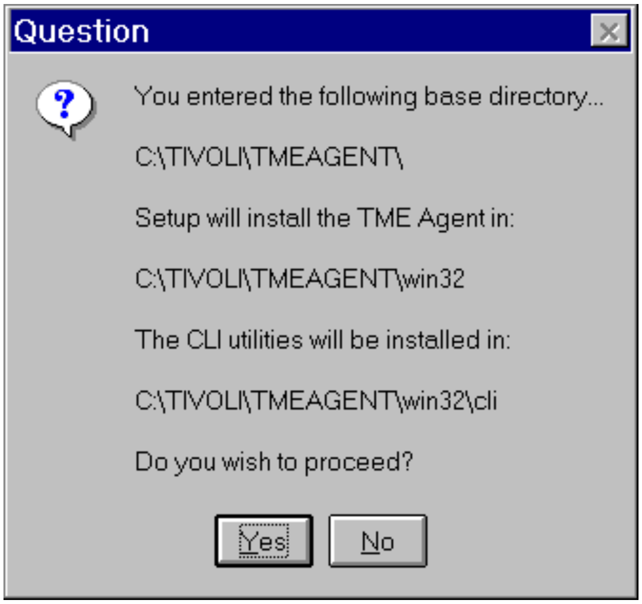
Enter Information

Enter the base destination directory...

TIVOLI\TMEAGENT\

Figure 324

Figure 324



Question

You entered the following base directory...

C:\TIVOLI\TMEAGENT\

Setup will install the TME Agent in:

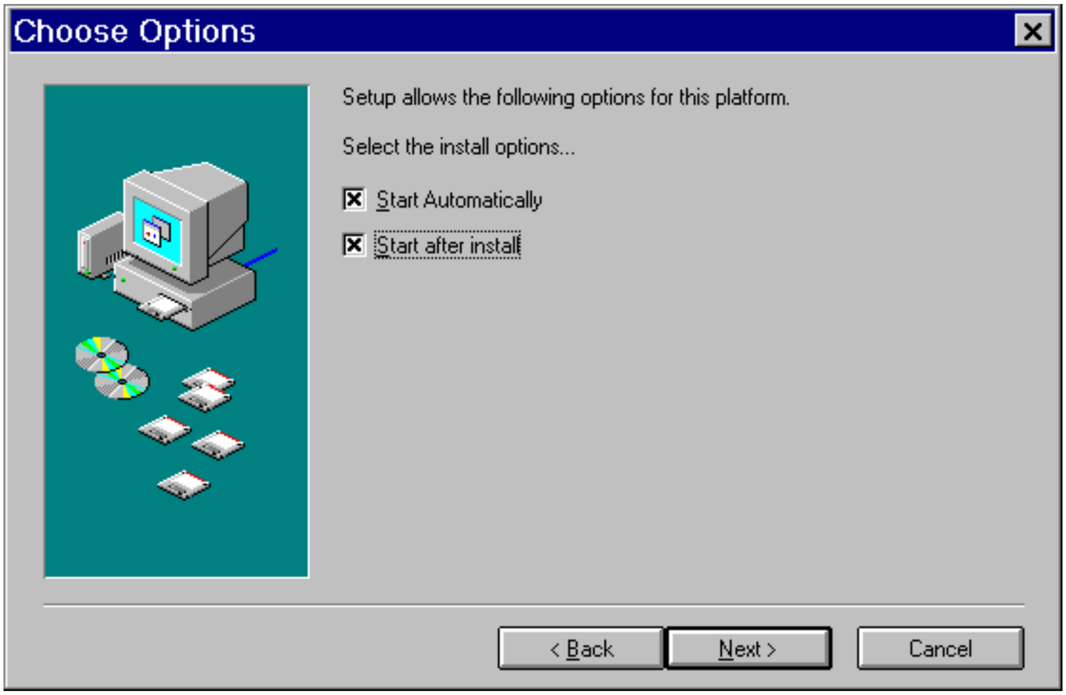
C:\TIVOLI\TMEAGENT\win32

The CLI utilities will be installed in:

C:\TIVOLI\TMEAGENT\win32\cli

Do you wish to proceed?

Figure 3.25



Choose Options

Setup allows the following options for this platform.

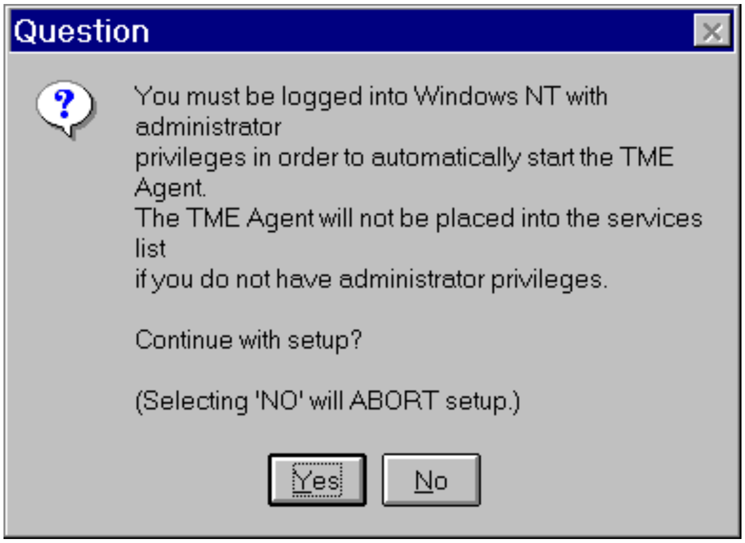
Select the install options...

☒ Start Automatically

☒ Start after install

Figure 326

Figure 326

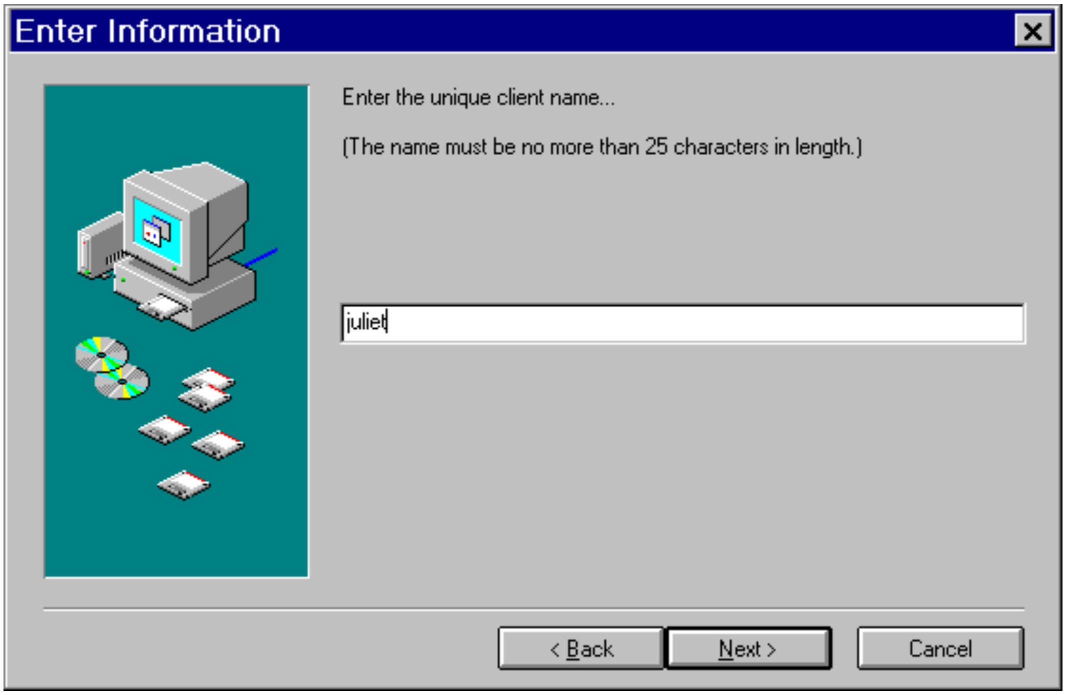


You must be logged into Windows NT with
administrator
privileges in order to automatically start the TME
Agent.
The TME Agent will not be placed into the services
list
if you do not have administrator privileges.

Continue with setup?

(Selecting 'NO' will ABORT setup.)

Figure 327



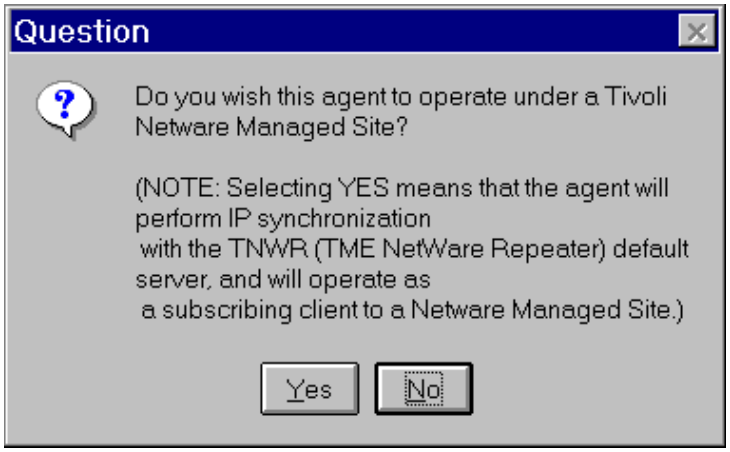
Enter Information

Enter the unique client name...

(The name must be no more than 25 characters in length.)

juliet

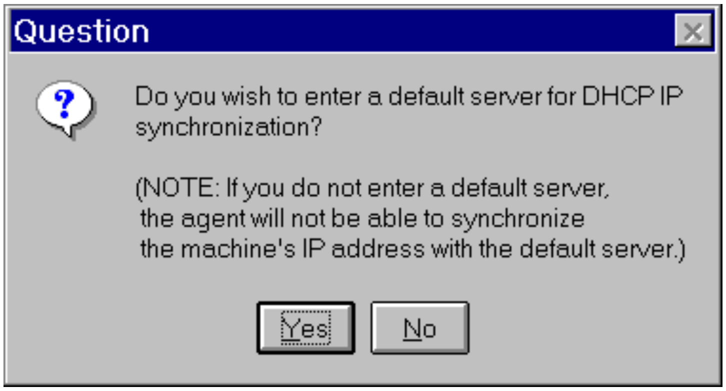
Figure 328.



Do you wish this agent to operate under a Tivoli Netware Managed Site?

(NOTE: Selecting YES means that the agent will perform IP synchronization with the TNWR (TME NetWare Repeater) default server, and will operate as a subscribing client to a Netware Managed Site.)

Figure 329

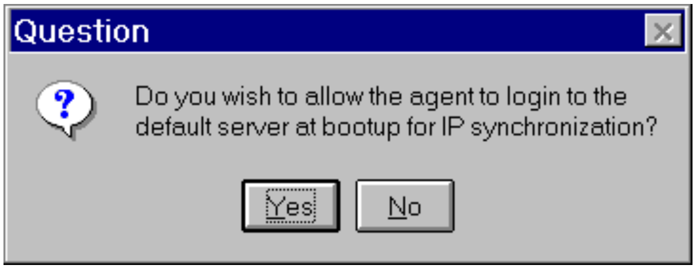


Question

Do you wish to enter a default server for DHCP IP synchronization?

(NOTE: If you do not enter a default server, the agent will not be able to synchronize the machine's IP address with the default server.)

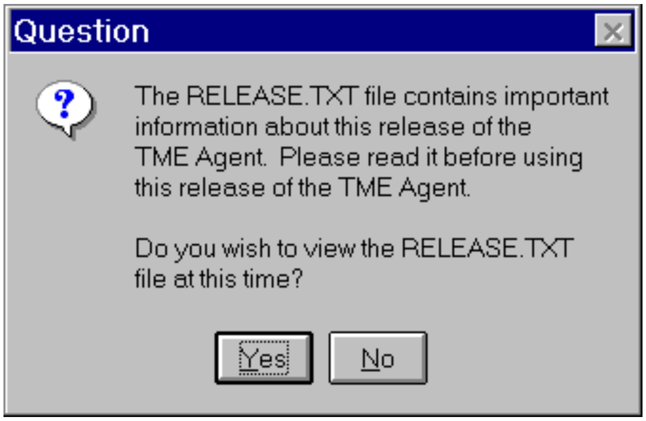
Figure 330



Do you wish to allow the agent to login to the default server at bootup for IP synchronization?

Figure 331

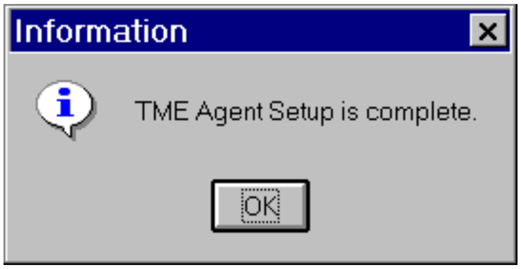
Figure 331



The RELEASE.TXT file contains important information about this release of the TME Agent. Please read it before using this release of the TME Agent.

Do you wish to view the RELEASE.TXT file at this time?

Figure 332



TME Agent Setup is complete.

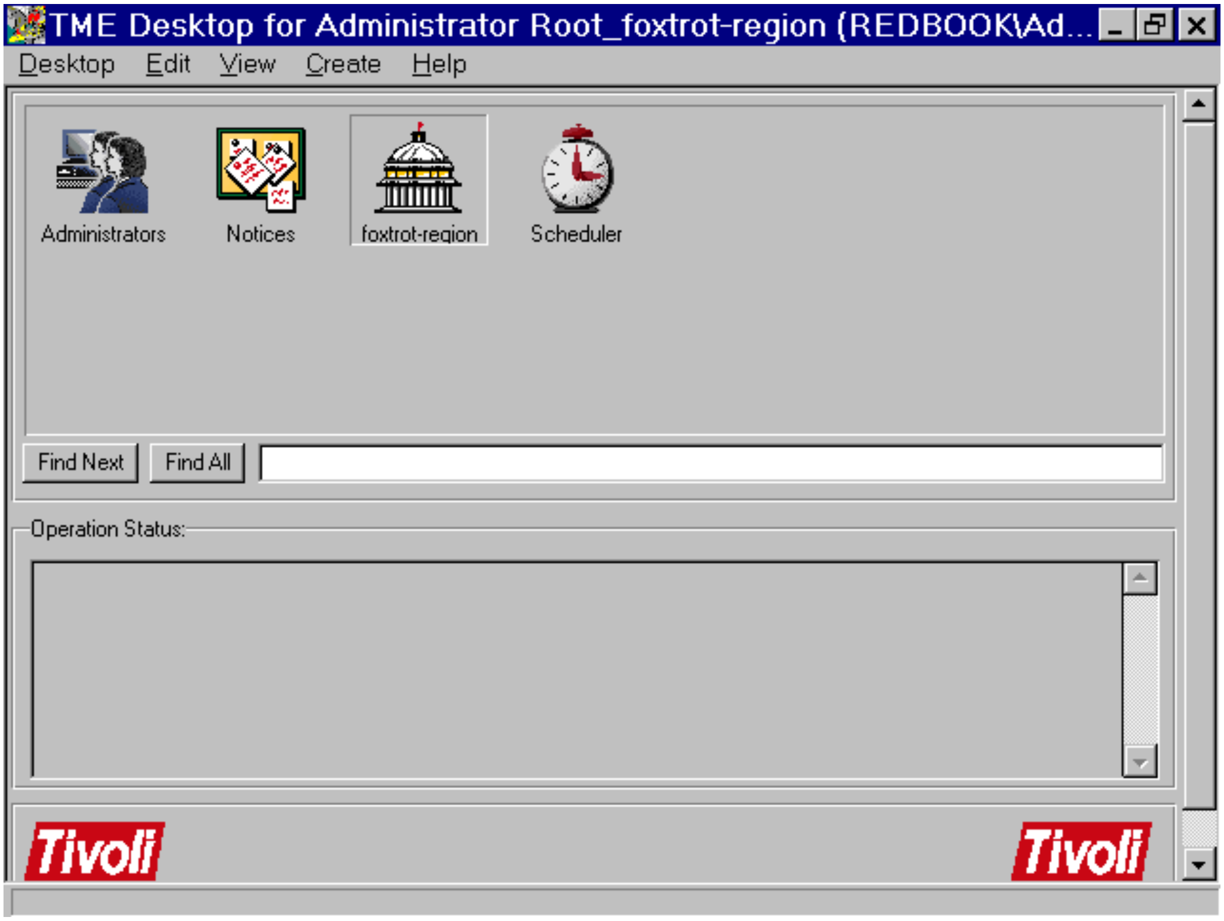

TME Desktop for Administrator Root_foxtrot-region (REDBOOK\Ad...
Desktop
Edit
View
Create
Help
Administrators
Notices
foxtrot-region
Scheduler
Find Next
Find All
Operation Status:
Tivoli
Tivoli

Figure 334

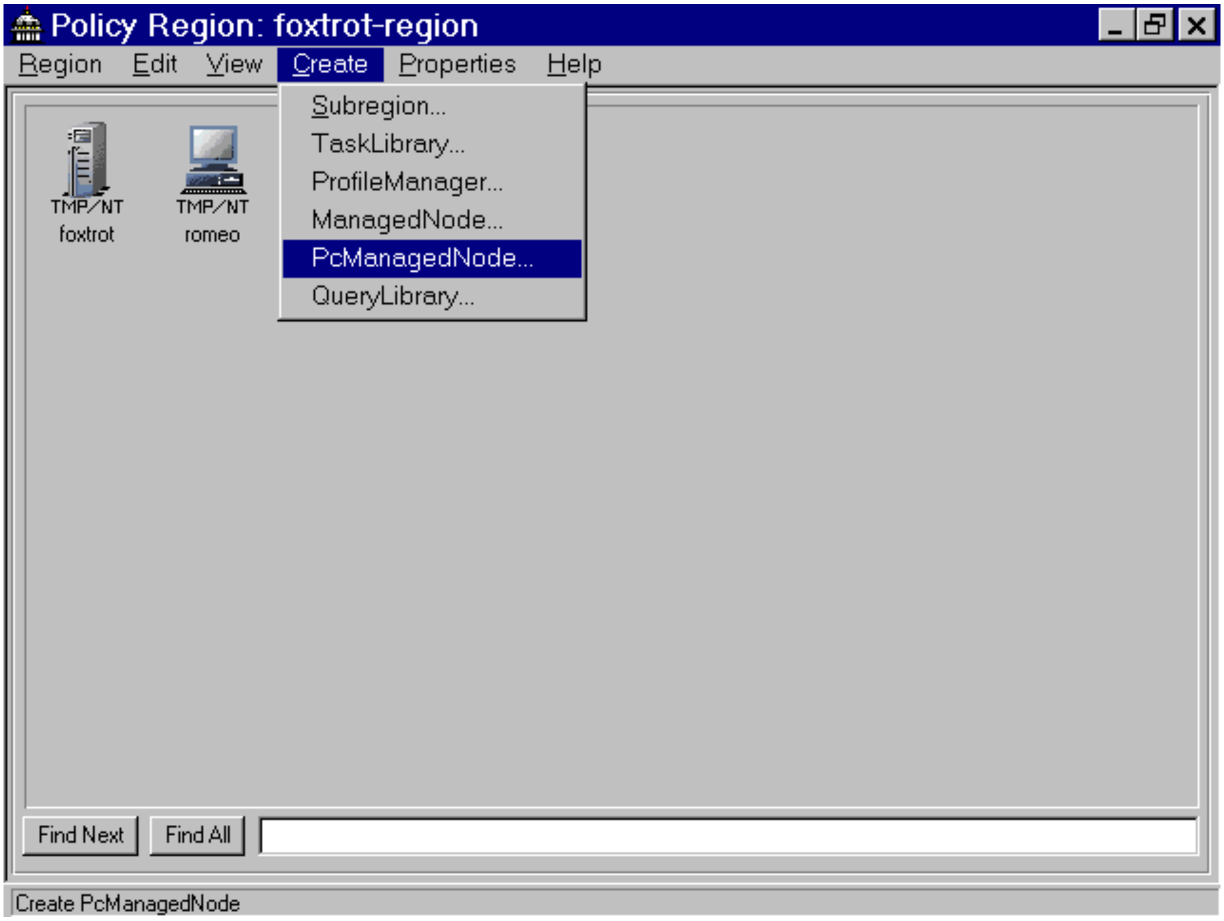
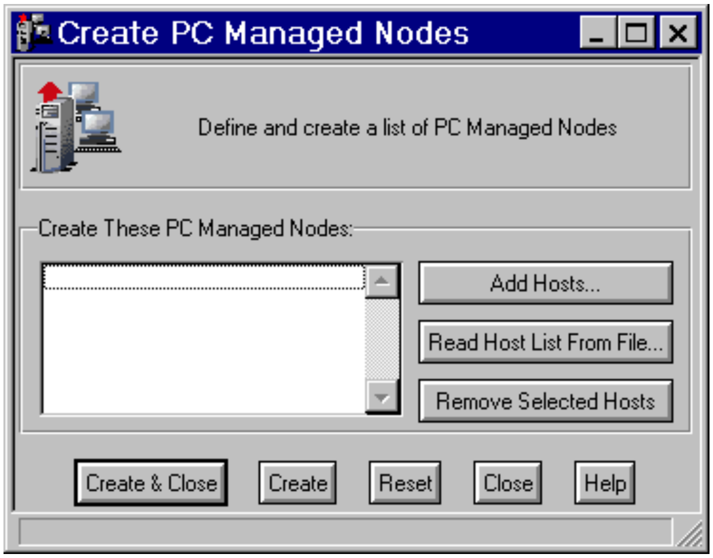
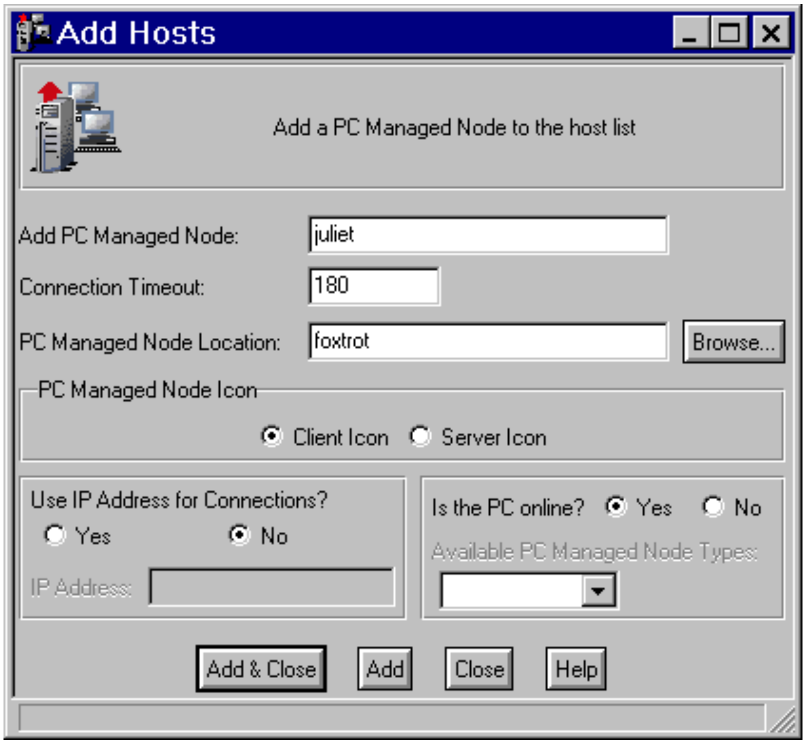

Policy Region: foxtrot-region
Region
Edit
View
Create
Properties
Help
Subregion...
TaskLibrary...
ProfileManager...
ManagedNode...
PcManagedNode...
QueryLibrary...
TMP/NT
foxtrot
TMP/NT
romeo
Find Next
Find All
Create PcManagedNode

Figure 325



Create PC Managed Nodes
Define and create a list of PC Managed Nodes
Create These PC Managed Nodes:
Add Hosts...
Read Host List From File...
Remove Selected Hosts
Create & Close
Create
Reset
Close
Help

Figure 335


Add Hosts

Add a PC Managed Node to the host list

Add PC Managed Node: juliet

Connection Timeout: 180

PC Managed Node Location: foxtrot

PC Managed Node Icon: ● Client Icon ○ Server Icon

Use IP Address for Connections? ○ Yes ● No

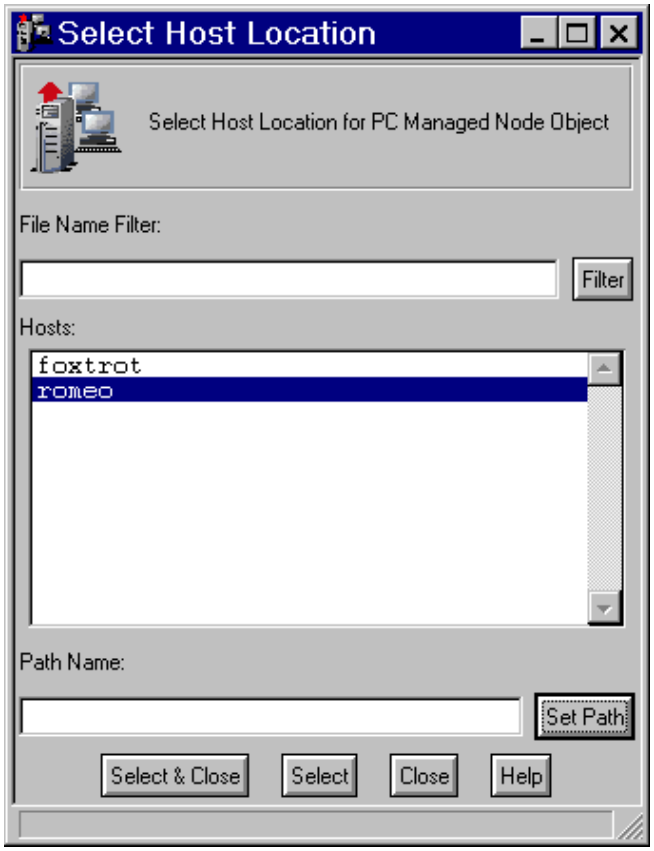
IP Address:

Is the PC online? ● Yes ○ No

Available PC Managed Node Types:

Figure 327

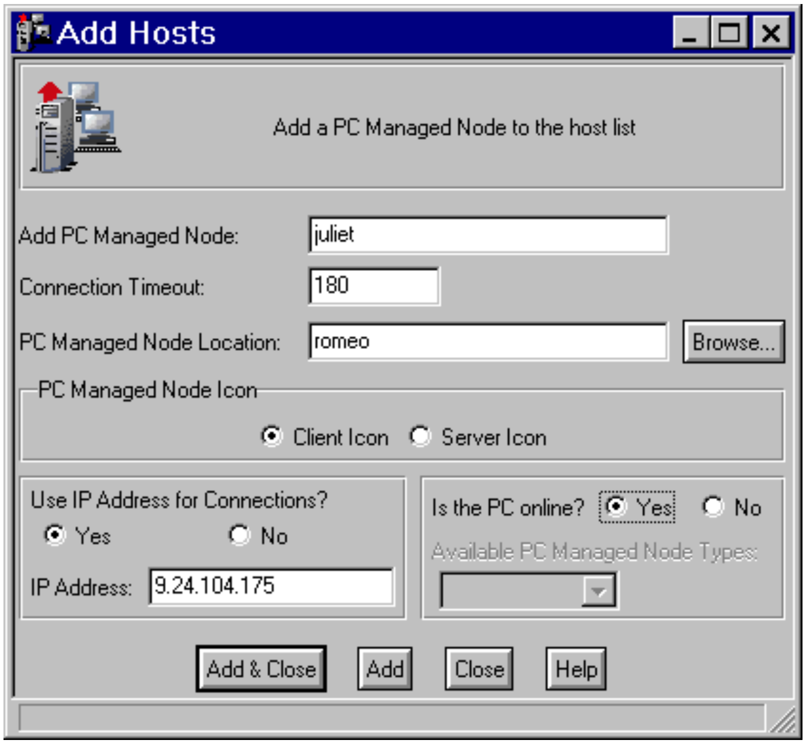
Figure 337



Select Host Location
Select Host Location for PC Managed Node Object
File Name Filter:
Filter
Hosts:
foxtrot
romeo
Path Name:
Set Path
Select & Close
Select
Close
Help

Figure 338

Figure 338



Add Hosts

Add a PC Managed Node to the host list

Add PC Managed Node: juliet

Connection Timeout: 180

PC Managed Node Location: romeo

PC Managed Node Icon

● Client Icon ○ Server Icon

Use IP Address for Connections?

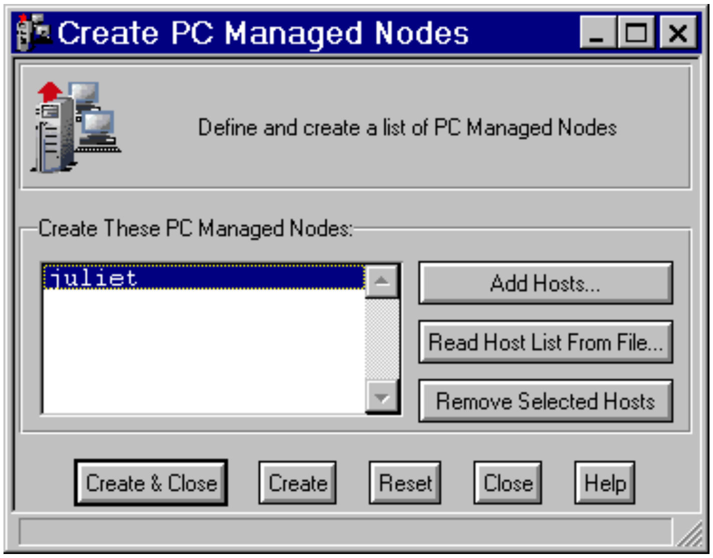
● Yes ○ No

IP Address: 9.24.104.175

Is the PC online? ● Yes ○ No

Available PC Managed Node Types:

Figure 339


Create PC Managed Nodes
Define and create a list of PC Managed Nodes
Create These PC Managed Nodes:
juliet
Add Hosts...
Read Host List From File...
Remove Selected Hosts
Create & Close
Create
Reset
Close
Help

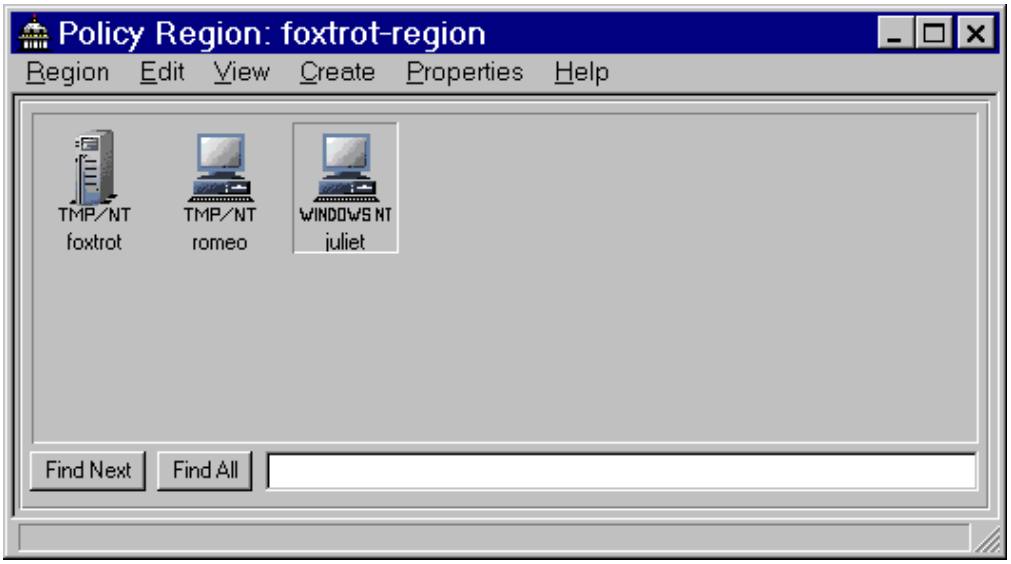
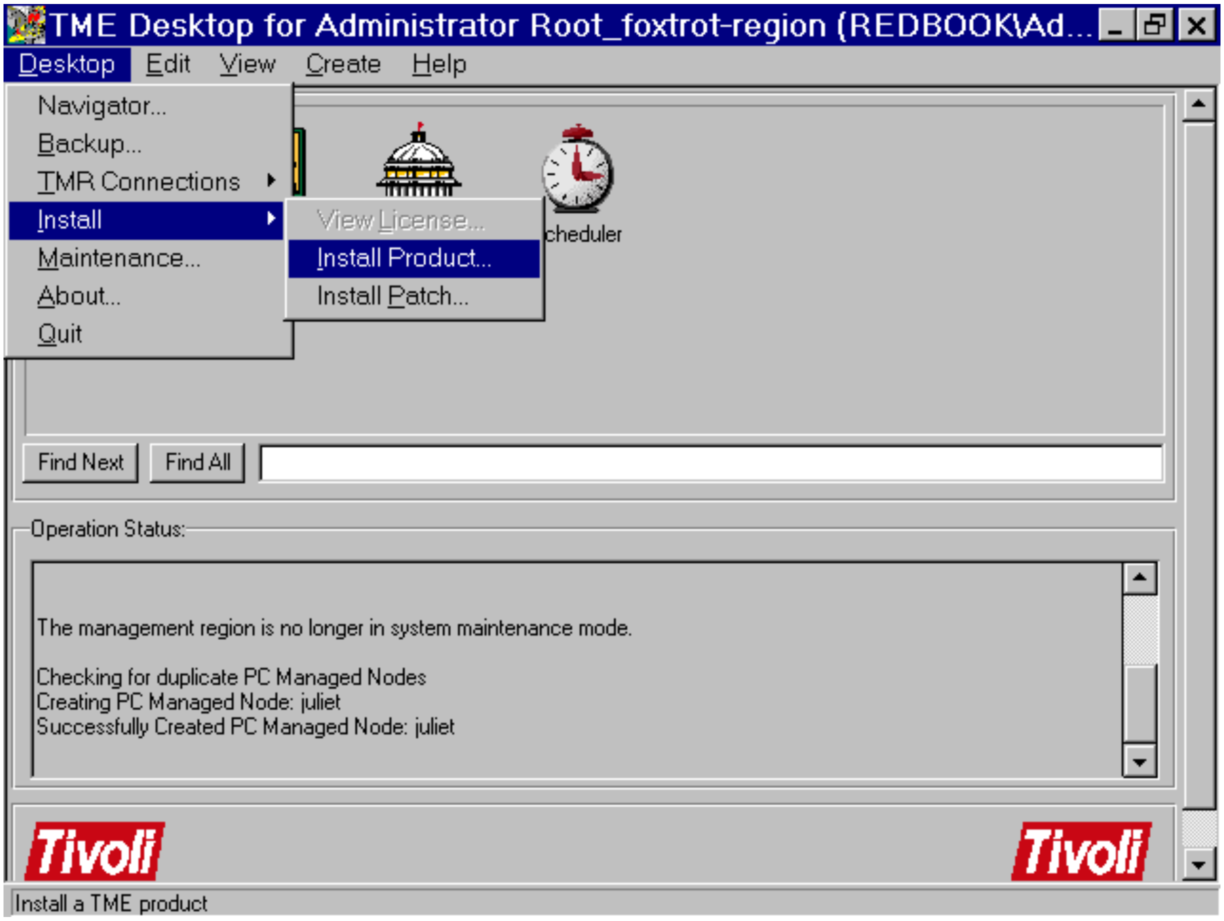

Policy Region: foxtrot-region
Region
Edit
View
Create
Properties
Help
TMP/NT
foxtrot
TMP/NT
romeo
WINDOWS NT
juliet
Find Next
Find All

Figure 341

Figure 341

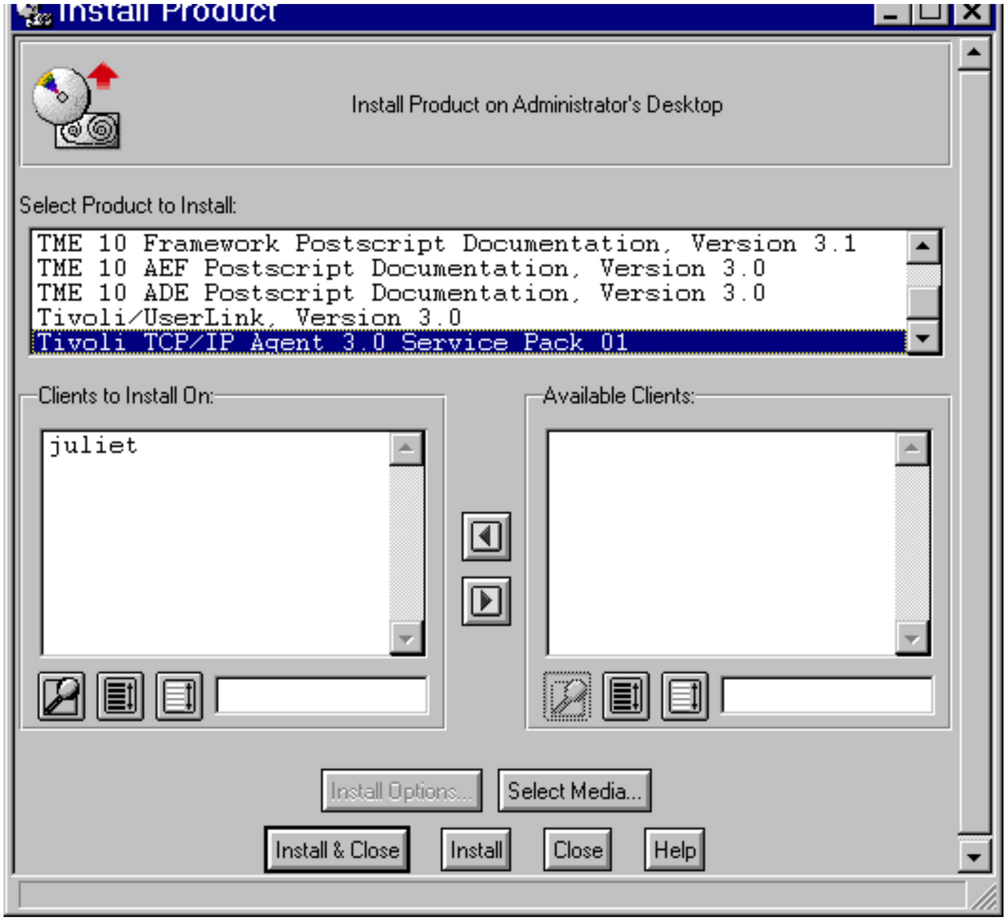


```
The management region is no longer in system maintenance mode.

Checking for duplicate PC Managed Nodes
Creating PC Managed Node: juliet
Successfully Created PC Managed Node: juliet
```

Install a TME product

Figure 342

Figure 342.



Install Product
Install Product on Administrator's Desktop
Select Product to Install:

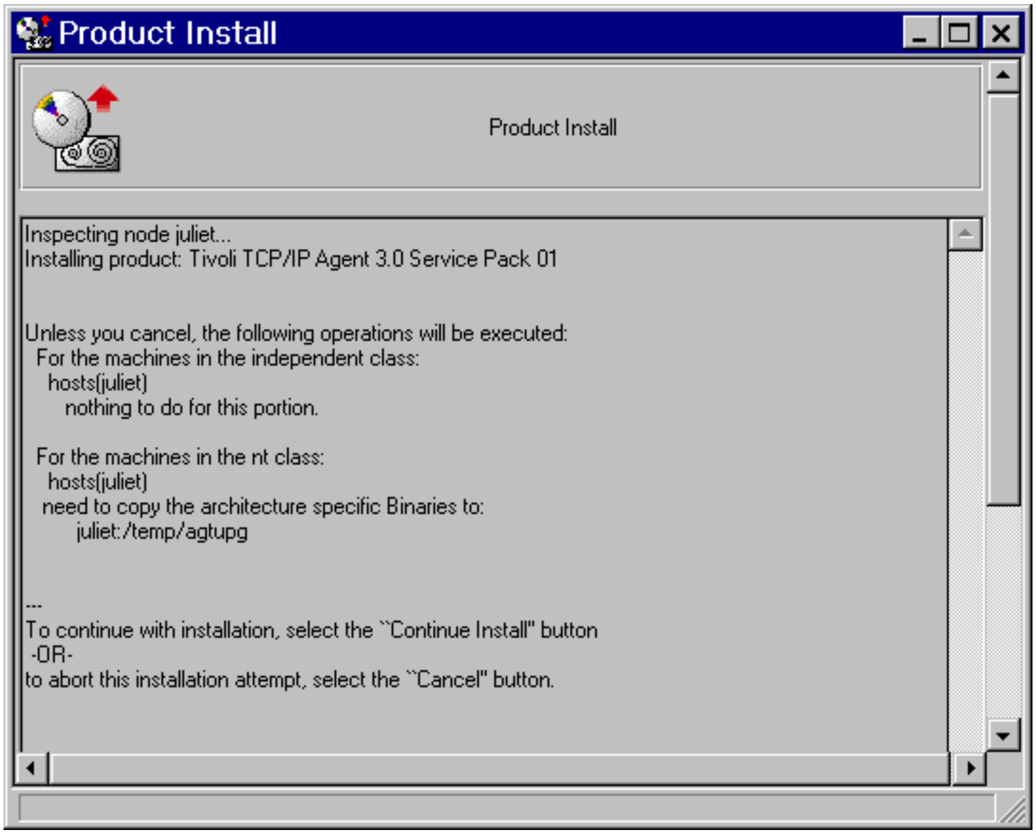
```
TME 10 Framework Postscript Documentation, Version 3.1
TME 10 AEF Postscript Documentation, Version 3.0
TME 10 ADE Postscript Documentation, Version 3.0
Tivoli/UserLink, Version 3.0
Tivoli TCP/IP Agent 3.0 Service Pack 01
```

Clients to Install On:

juliet

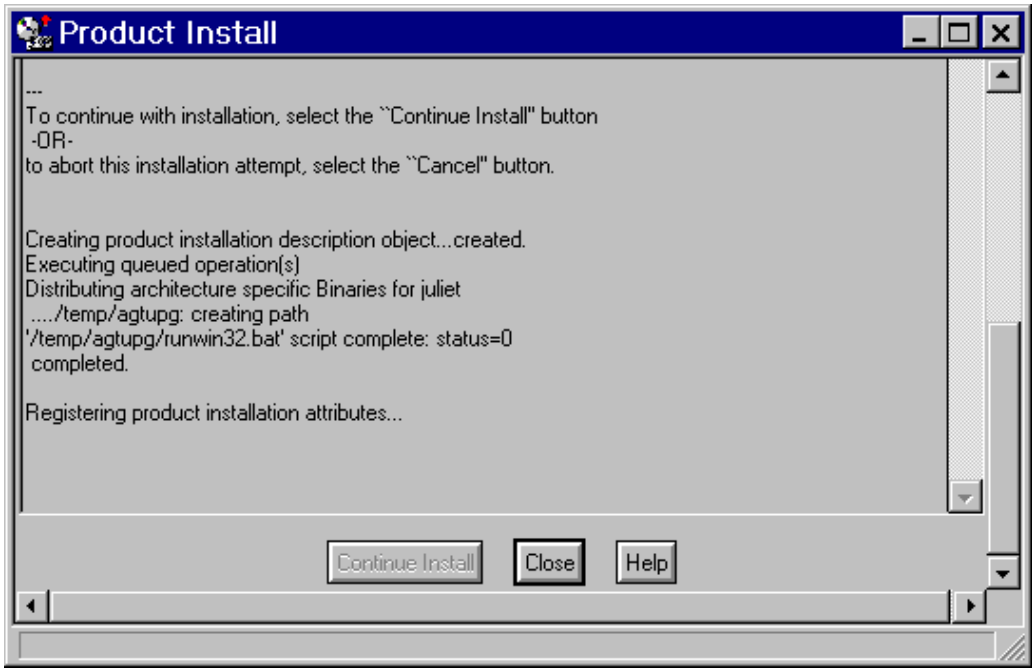
Available Clients:

Figure 343



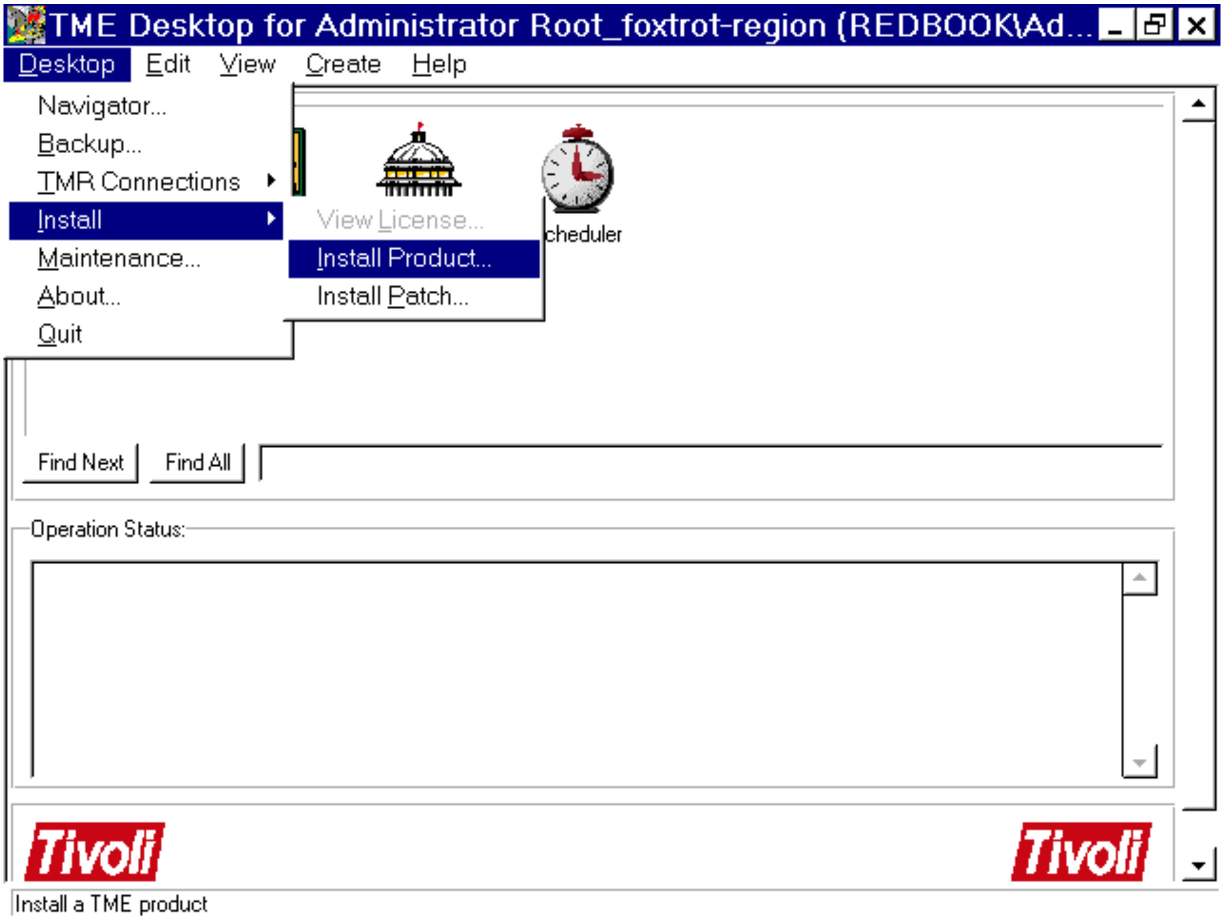
```
Inspecting node juliet...
Installing product: Tivoli TCP/IP Agent 3.0 Service Pack 01


Unless you cancel, the following operations will be executed:
  For the machines in the independent class:
    hosts(juliet)
       nothing to do for this portion.

  For the machines in the nt class:
    hosts(juliet)
   need to copy the architecture specific Binaries to:
         juliet:/temp/agtupg


---
To continue with installation, select the ``Continue Install'' button
 -OR-
to abort this installation attempt, select the ``Cancel'' button.
```

Figure 344

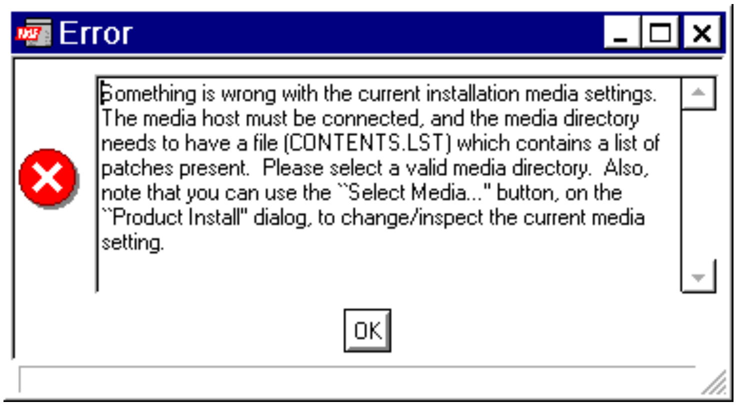


```
---
To continue with installation, select the ``Continue Install'' button
 -OR-
to abort this installation attempt, select the ``Cancel'' button.


Creating product installation description object...created.
Executing queued operation(s)
Distributing architecture specific Binaries for juliet
 ...../temp/agtupg: creating path
'/temp/agtupg/runwin32.bat' script complete: status=0
 completed.

Registering product installation attributes...
```

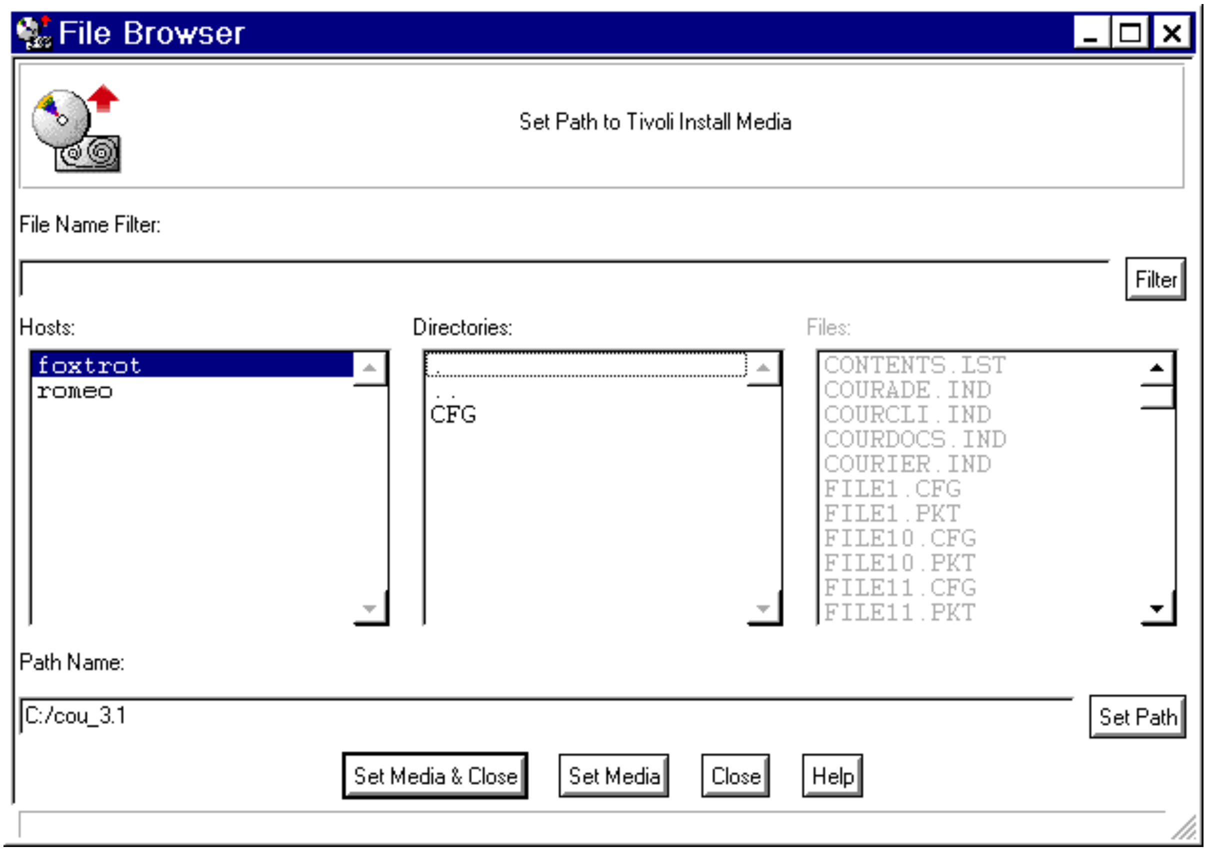
Figure 345



Install a TME product



Something is wrong with the current installation media settings. The media host must be connected, and the media directory needs to have a file (CONTENTS.LST) which contains a list of patches present. Please select a valid media directory. Also, note that you can use the ``Select Media..." button, on the ``Product Install" dialog, to change/inspect the current media setting.



Set Path to Tivoli Install Media

File Name Filter:

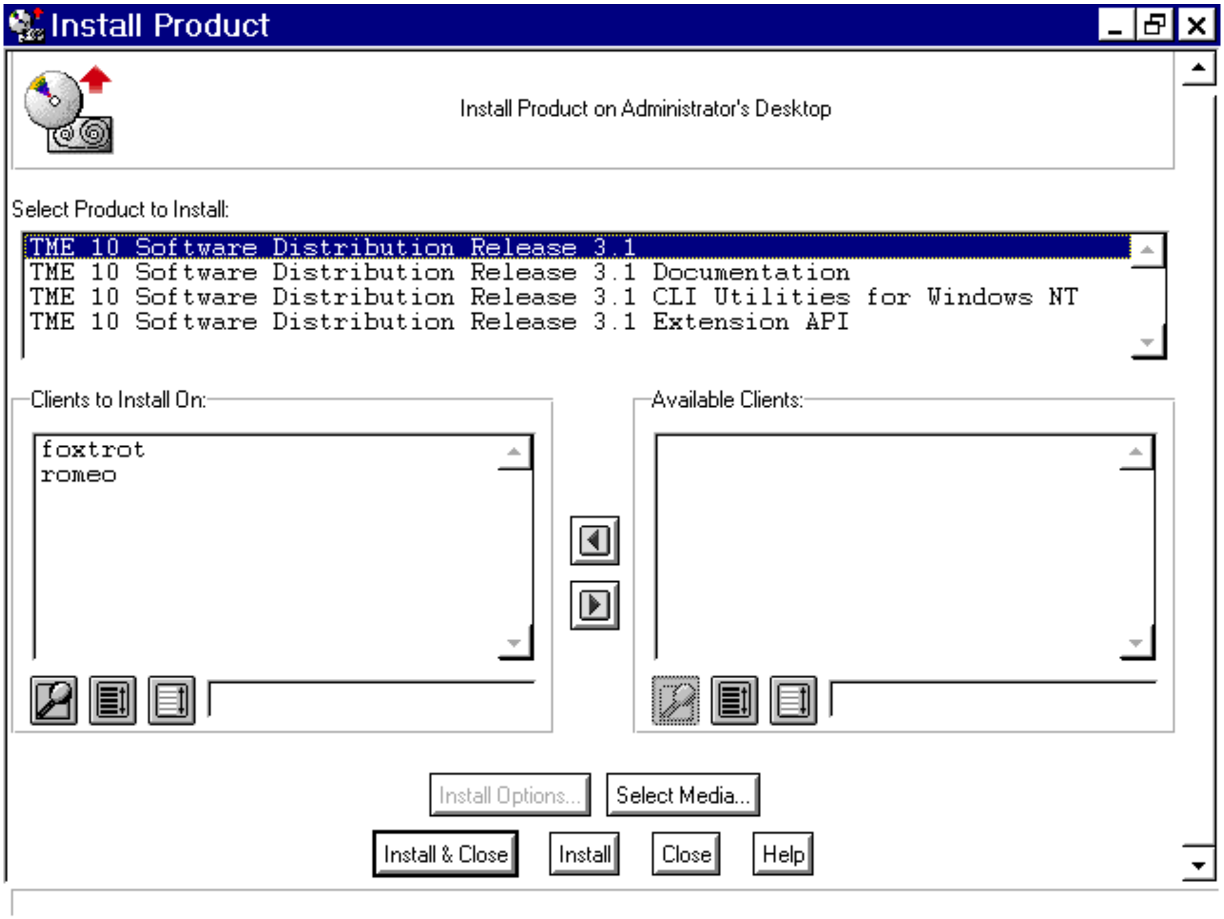
Hosts:
foxtrot
romeo

Directories:
.
..
CFG

Files:
CONTENTS.LST
COURADE.IND
COURCLI.IND
COURDOCS.IND
COURIER.IND
FILE1.CFG
FILE1.PKT
FILE10.CFG
FILE10.PKT
FILE11.CFG
FILE11.PKT

Path Name:
C:/cou_3.1

Figure 348

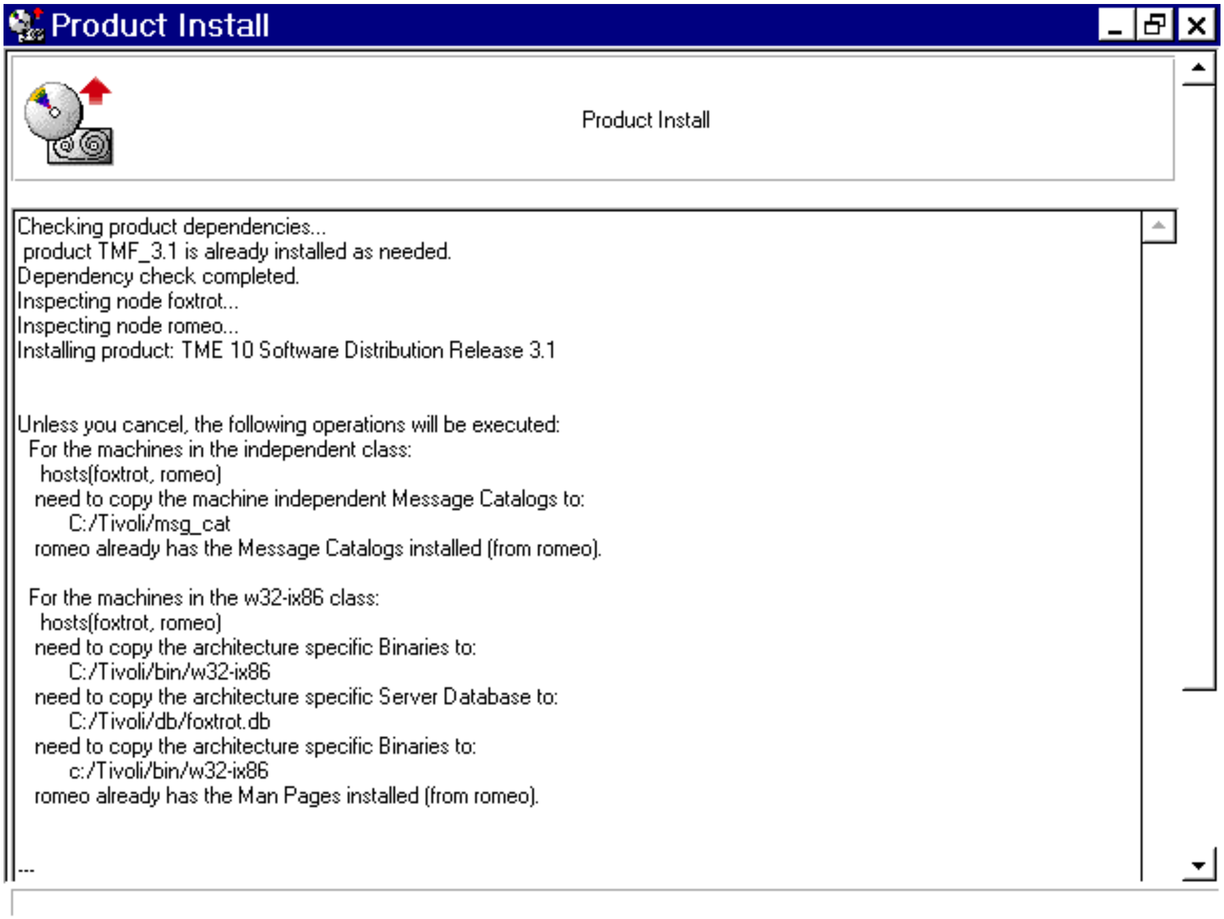


Select Product to Install:

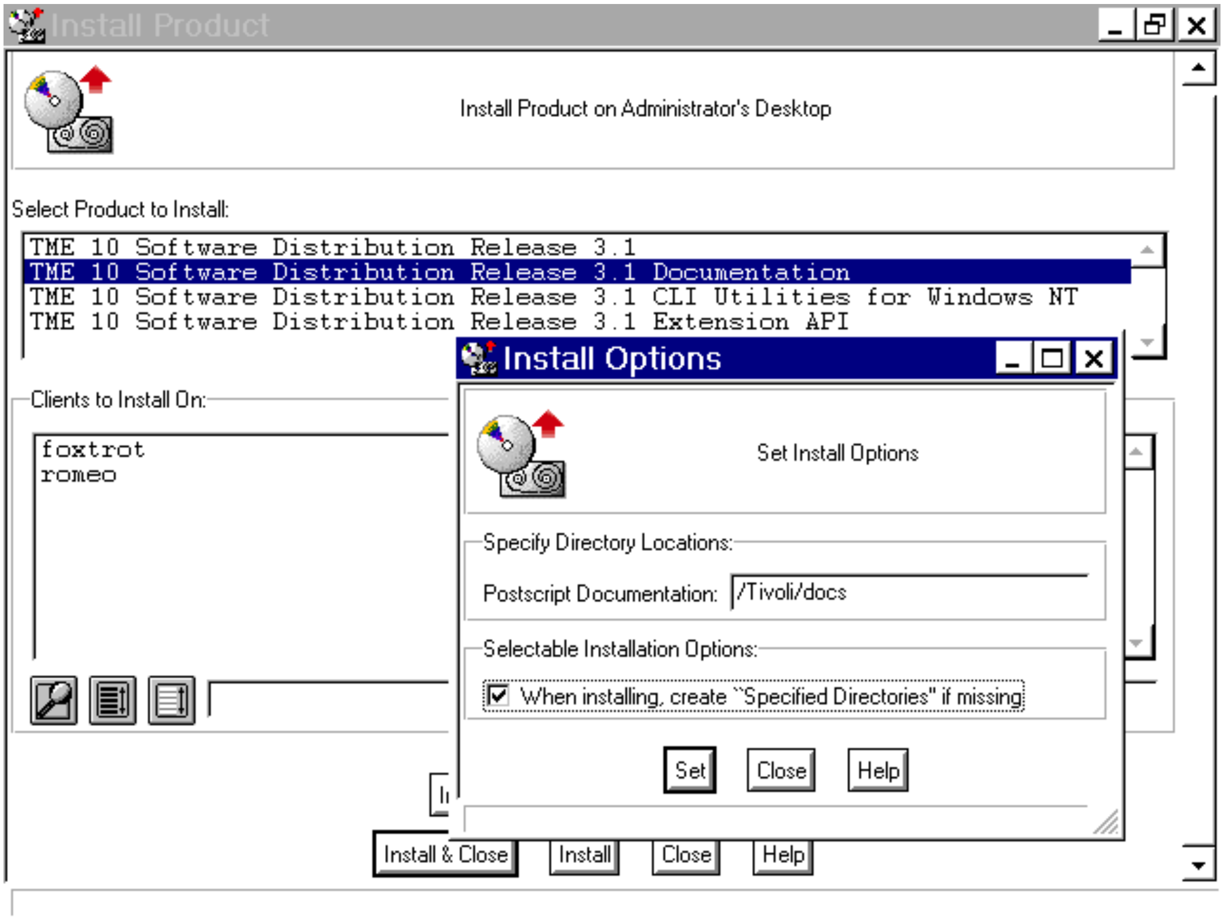
```
TME 10 Software Distribution Release 3.1
TME 10 Software Distribution Release 3.1 Documentation
TME 10 Software Distribution Release 3.1 CLI Utilities for Windows NT
TME 10 Software Distribution Release 3.1 Extension API
```

Clients to Install On:

```
foxtrot
romeo
```



```
Checking product dependencies...
 product TMF_3.1 is already installed as needed.
Dependency check completed.
Inspecting node foxtrot...
Inspecting node romeo...
Installing product: TME 10 Software Distribution Release 3.1


Unless you cancel, the following operations will be executed:
  For the machines in the independent class:
    hosts(foxtrot, romeo)
   need to copy the machine independent Message Catalogs to:
         C:/Tivoli/msg_cat
   romeo already has the Message Catalogs installed (from romeo).

  For the machines in the w32-ix86 class:
    hosts(foxtrot, romeo)
   need to copy the architecture specific Binaries to:
         C:/Tivoli/bin/w32-ix86
   need to copy the architecture specific Server Database to:
         C:/Tivoli/db/foxtrot.db
   need to copy the architecture specific Binaries to:
         c:/Tivoli/bin/w32-ix86
   romeo already has the Man Pages installed (from romeo).


---
```



Install Product on Administrator's Desktop

Select Product to Install:

```
TME 10 Software Distribution Release 3.1
TME 10 Software Distribution Release 3.1 Documentation
TME 10 Software Distribution Release 3.1 CLI Utilities for Windows NT
TME 10 Software Distribution Release 3.1 Extension API
```

Clients to Install On:

```
foxtrot
romeo
```

Set Install Options

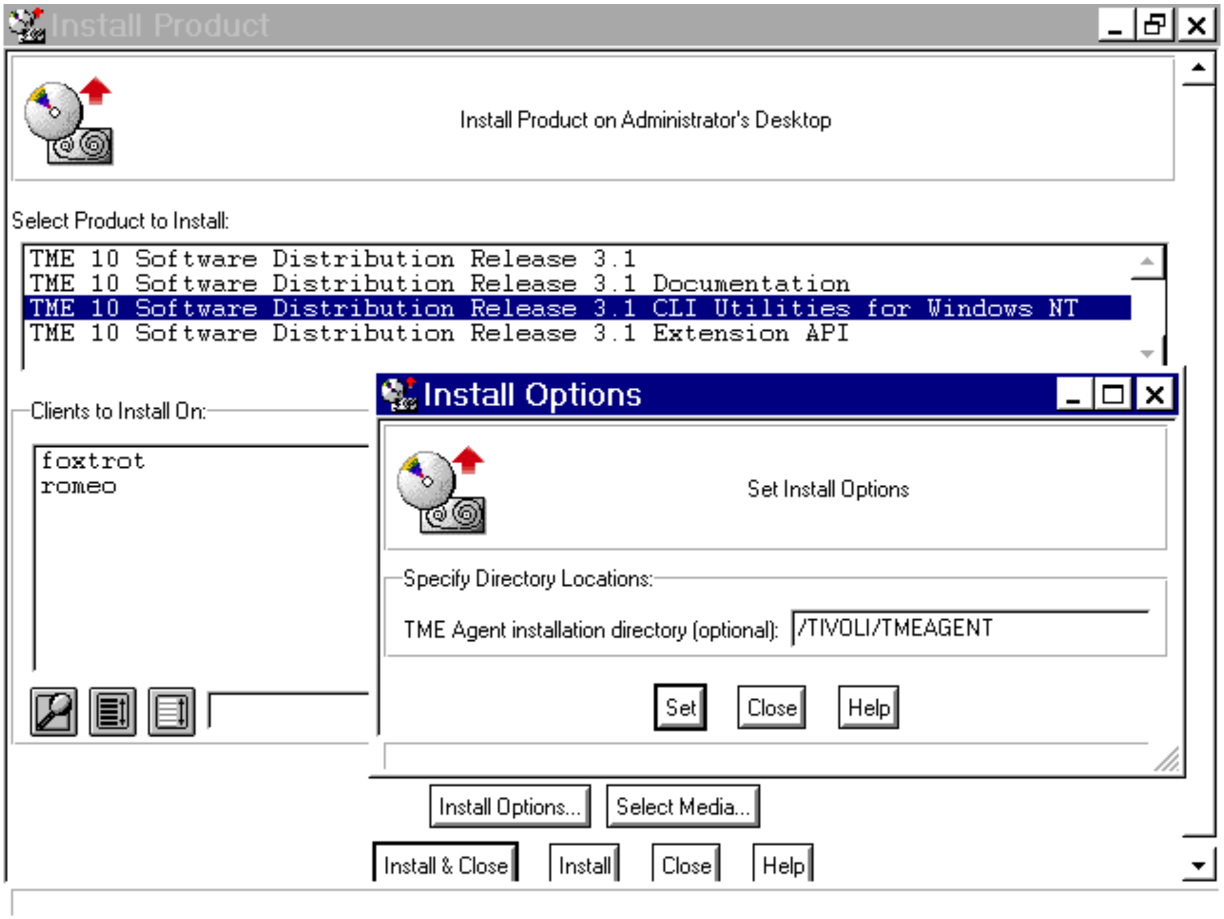
Specify Directory Locations:

Postscript Documentation: /Tivoli/docs

Selectable Installation Options:

☑ When installing, create ``Specified Directories'' if missing

Figure 351



Install Product

Install Product on Administrator's Desktop

Select Product to Install:

```
TME 10 Software Distribution Release 3.1
TME 10 Software Distribution Release 3.1 Documentation
TME 10 Software Distribution Release 3.1 CLI Utilities for Windows NT
TME 10 Software Distribution Release 3.1 Extension API
```

Clients to Install On:

```
foxtrot
romeo
```

Install Options

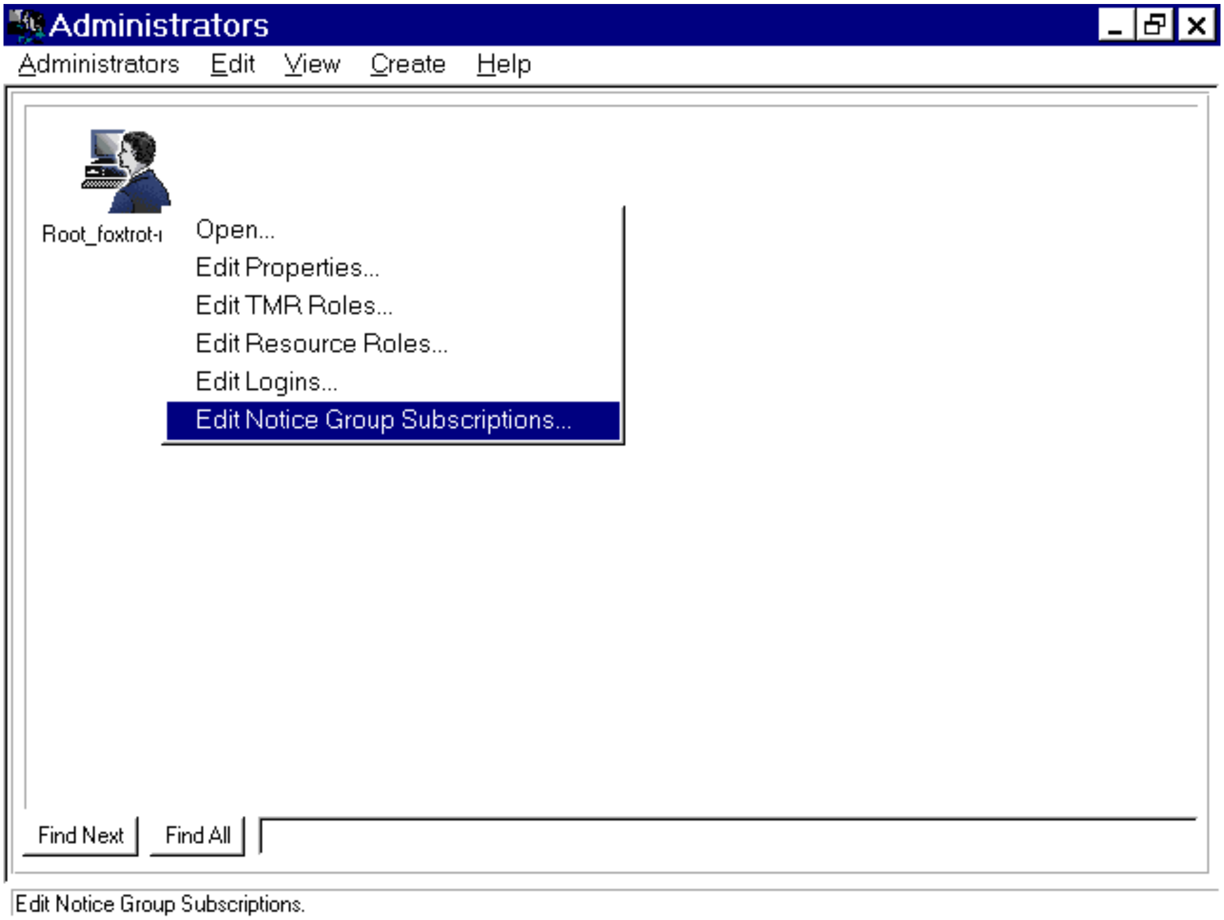
Set Install Options

Specify Directory Locations:

TME Agent installation directory (optional): /TIVOLI/TMEAGENT

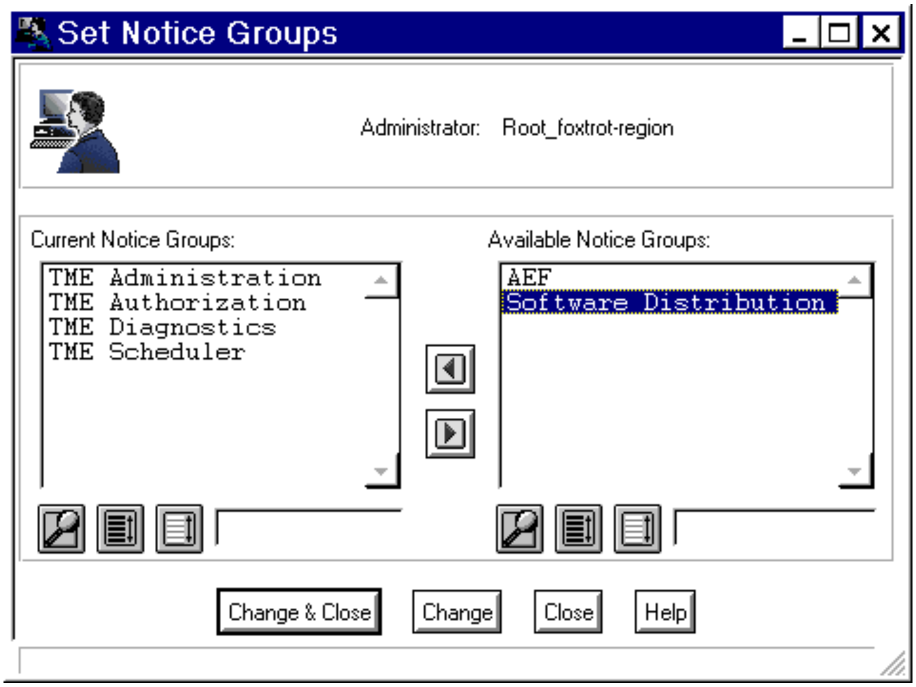
https://web.archive.org/web/19970803072110/http://www.redbooks.ibm.com:80/SG244976/xswdi07.gif

Figure 352



Edit Notice Group Subscriptions.

Figure 353



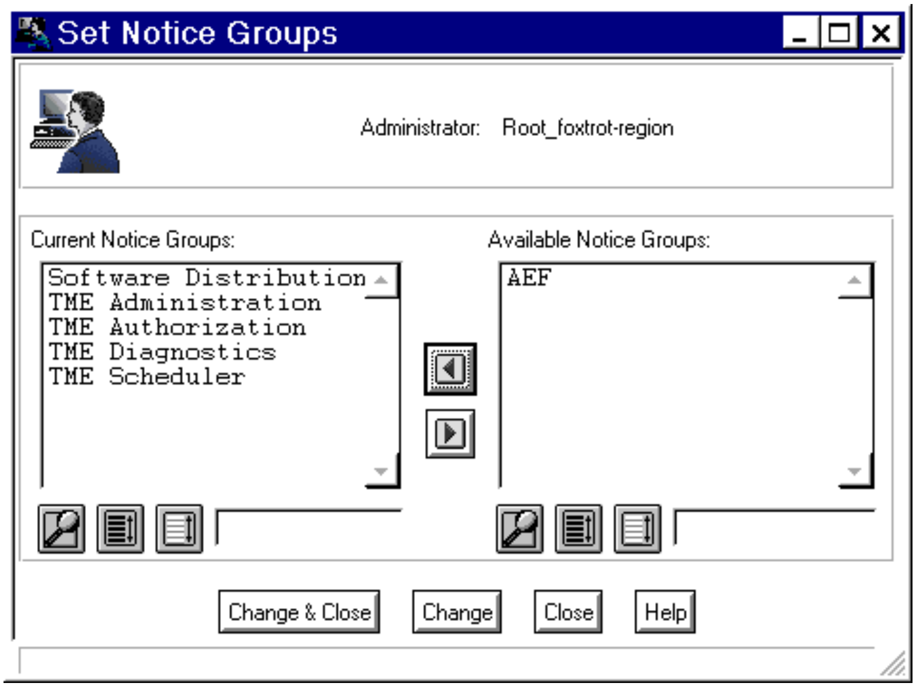
Administrator: Root_foxtrot-region

Current Notice Groups:

```
TME Administration
TME Authorization
TME Diagnostics
TME Scheduler
```

Available Notice Groups:

```
AEF
Software Distribution
```



Set Notice Groups

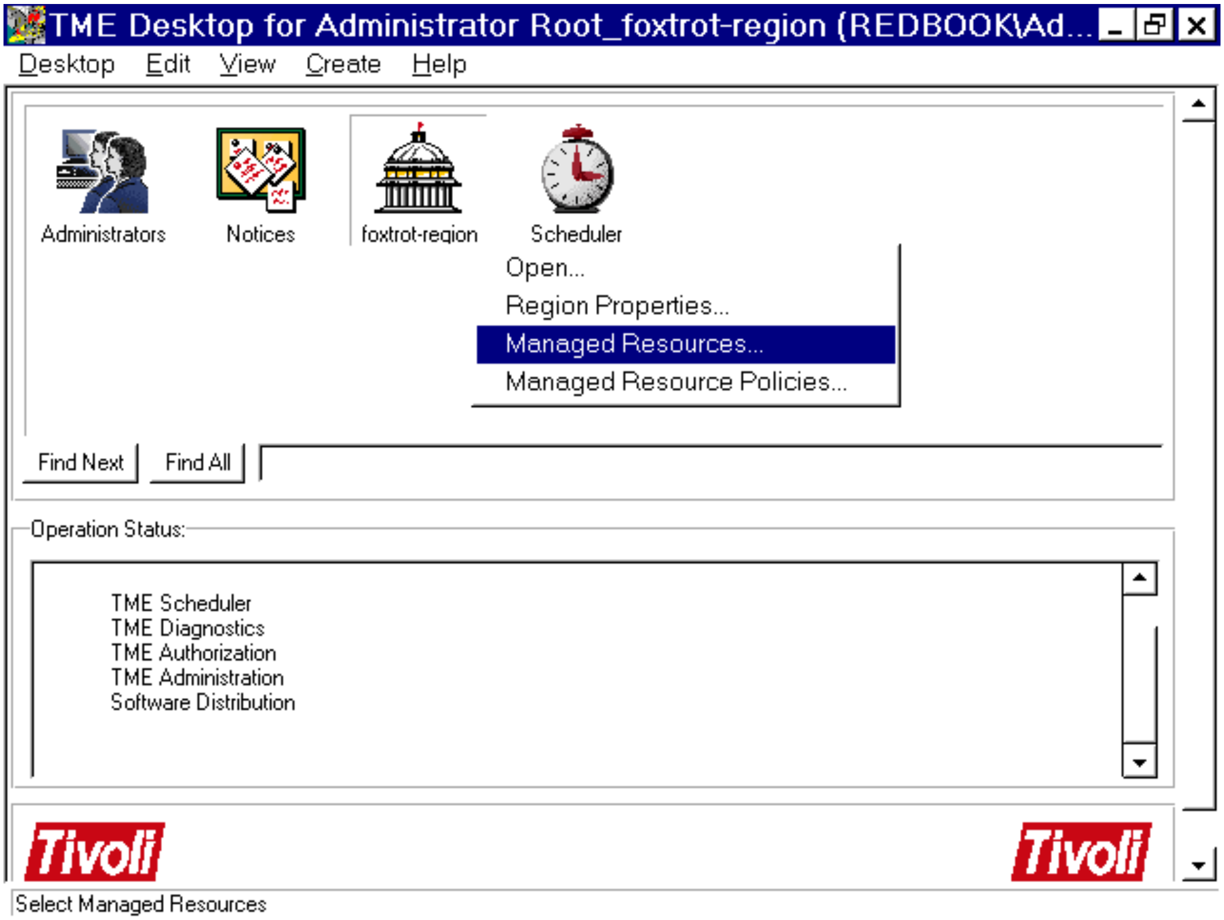
Administrator: Root_foxtrot-region

Current Notice Groups:

```
Software Distribution
TME Administration
TME Authorization
TME Diagnostics
TME Scheduler
```

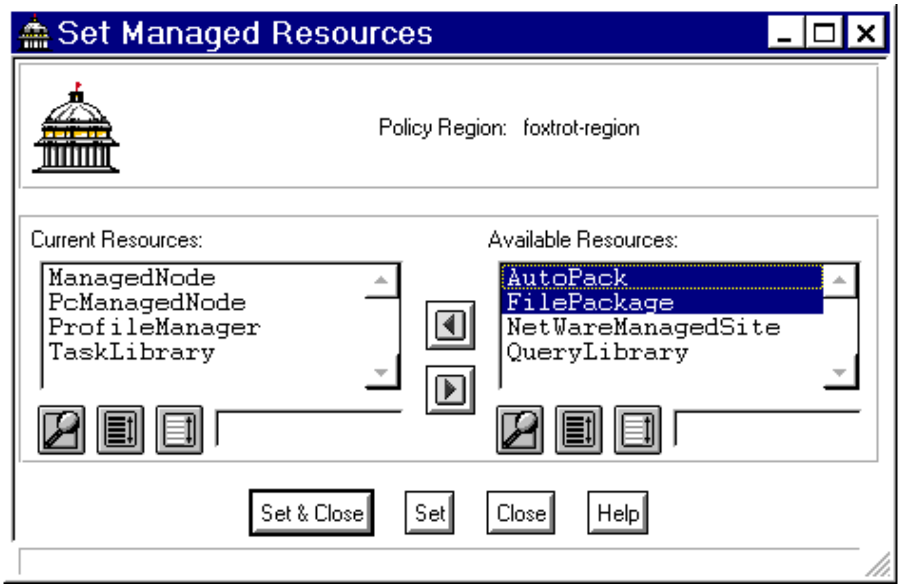
Available Notice Groups:

```
AEF
```



TME Scheduler
TME Diagnostics
TME Authorization
TME Administration
Software Distribution

Figure 356



Policy Region: foxtrot-region

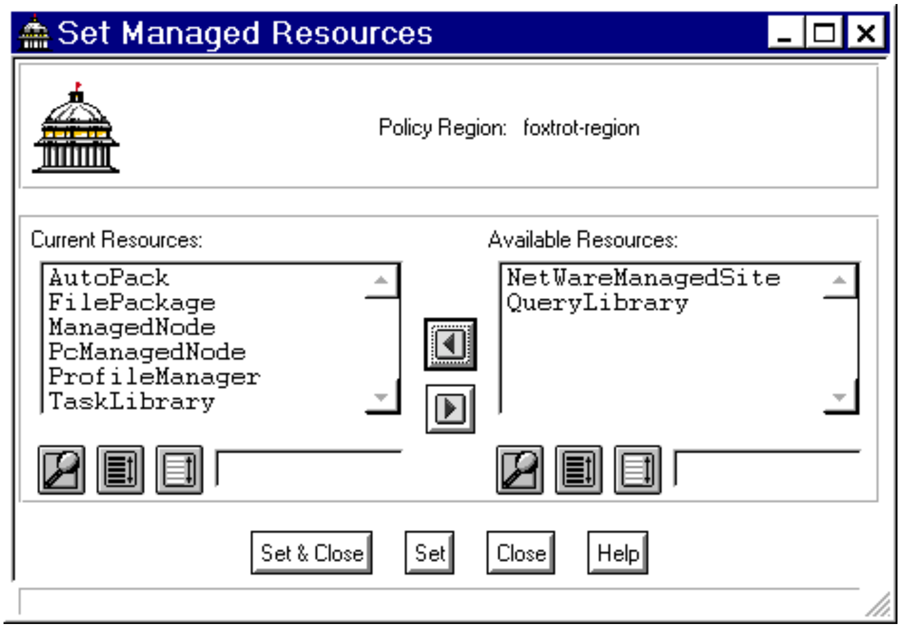
Current Resources:

- ManagedNode
- PcManagedNode
- ProfileManager
- TaskLibrary

Available Resources:

- AutoPack
- FilePackage
- NetWareManagedSite
- QueryLibrary

Figure 357



Policy Region: foxtrot-region

Current Resources:

```
AutoPack
FilePackage
ManagedNode
PcManagedNode
ProfileManager
TaskLibrary
```

Available Resources:

```
NetWareManagedSite
QueryLibrary
```

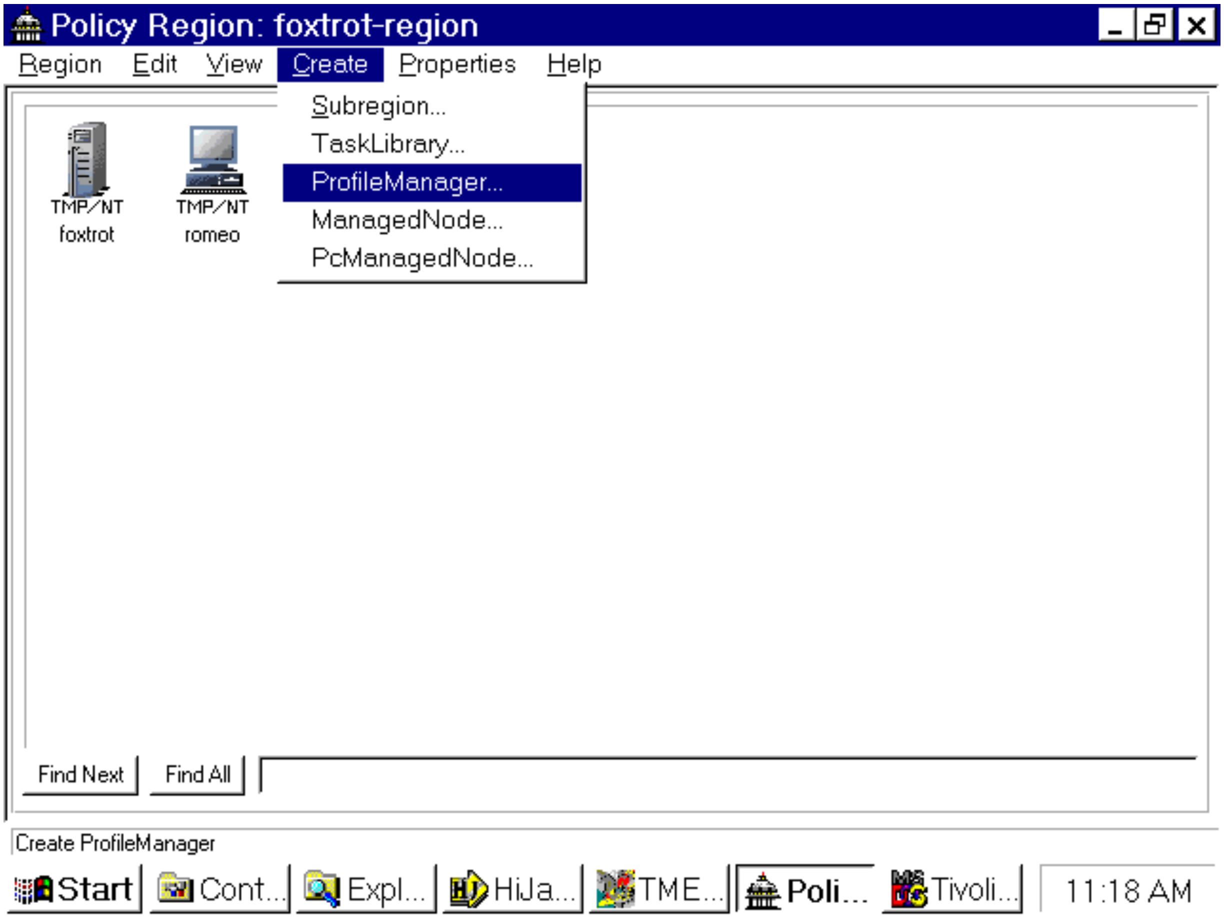
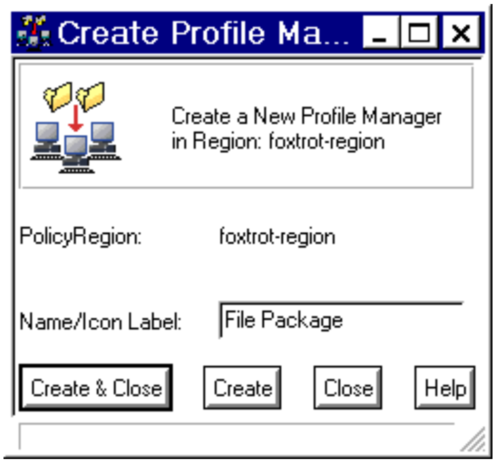

Policy Region: foxtrot-region
Region
Edit
View
Create
Properties
Help
Subregion...
TaskLibrary...
ProfileManager...
ManagedNode...
PcManagedNode...
TMP/NT
foxtrot
TMP/NT
romeo
Find Next
Find All
Create ProfileManager
Start
Cont...
Expl...
HiJa...
TME...
Poli...
Tivoli...
11:18 AM

Figure 359



Create a New Profile Manager
in Region: foxtrot-region

PolicyRegion: foxtrot-region

Name/Icon Label: File Package

Figure 360

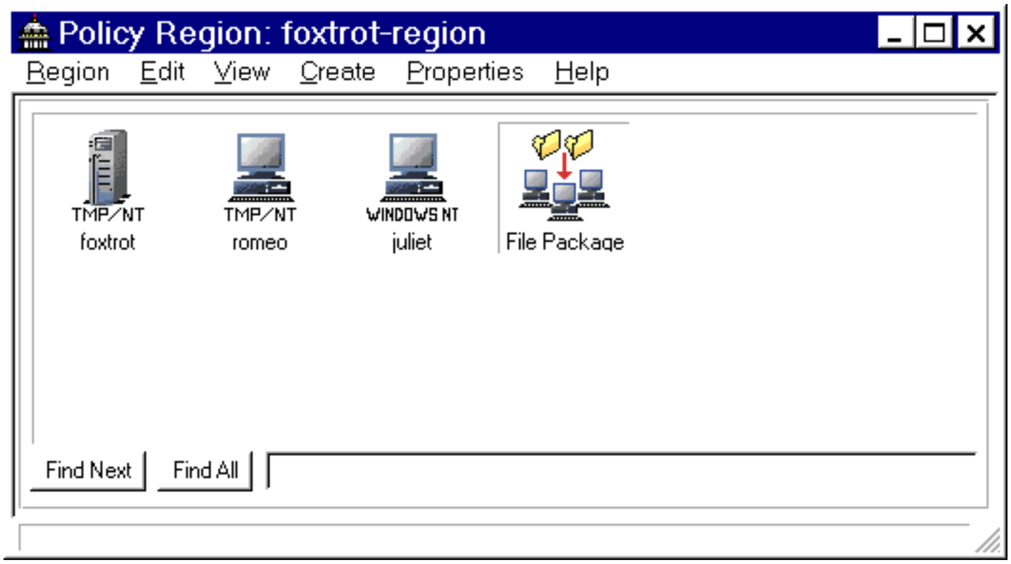
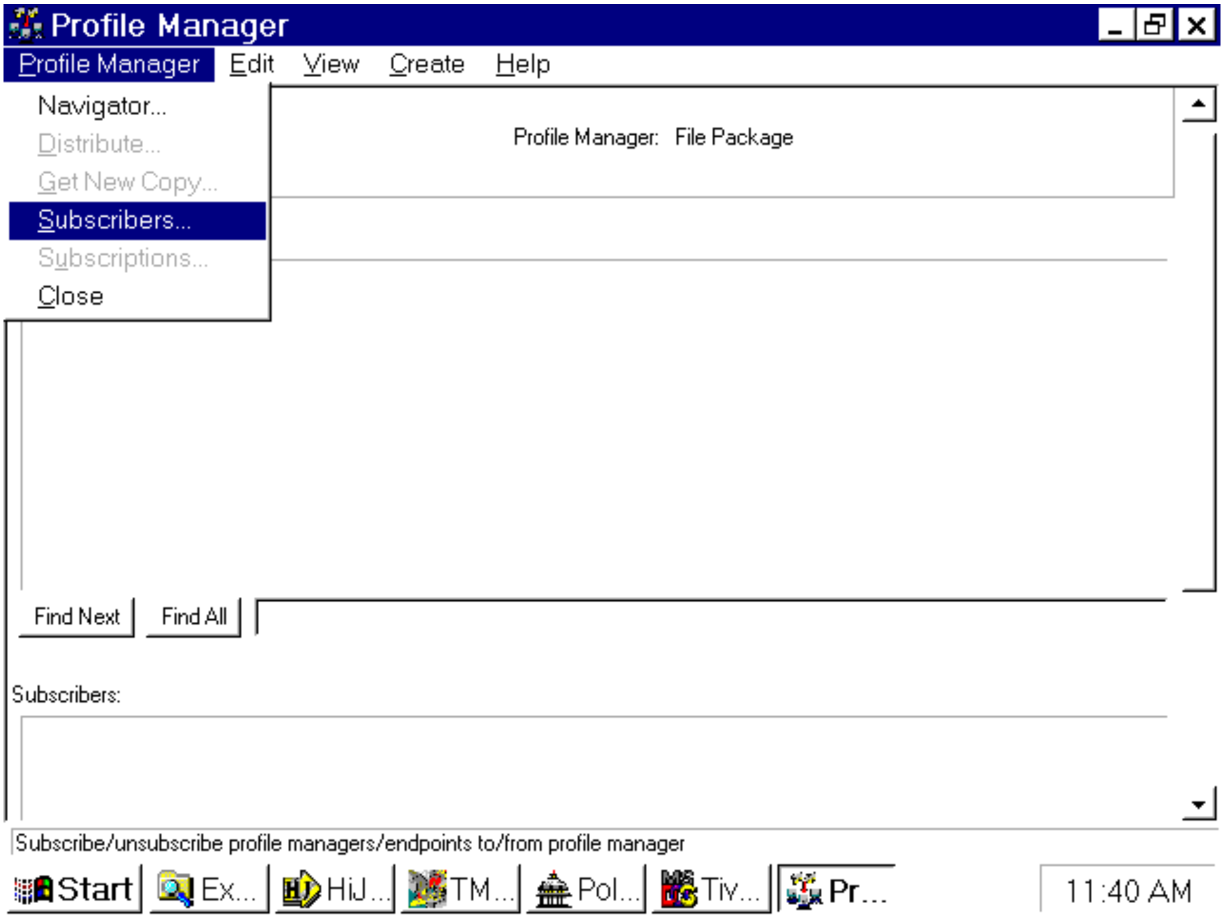

Policy Region: foxtrot-region
Region
Edit
View
Create
Properties
Help
TMP/NT
foxtrot
TMP/NT
romeo
WINDOWS NT
juliet
File Package
Find Next
Find All

Figure 361

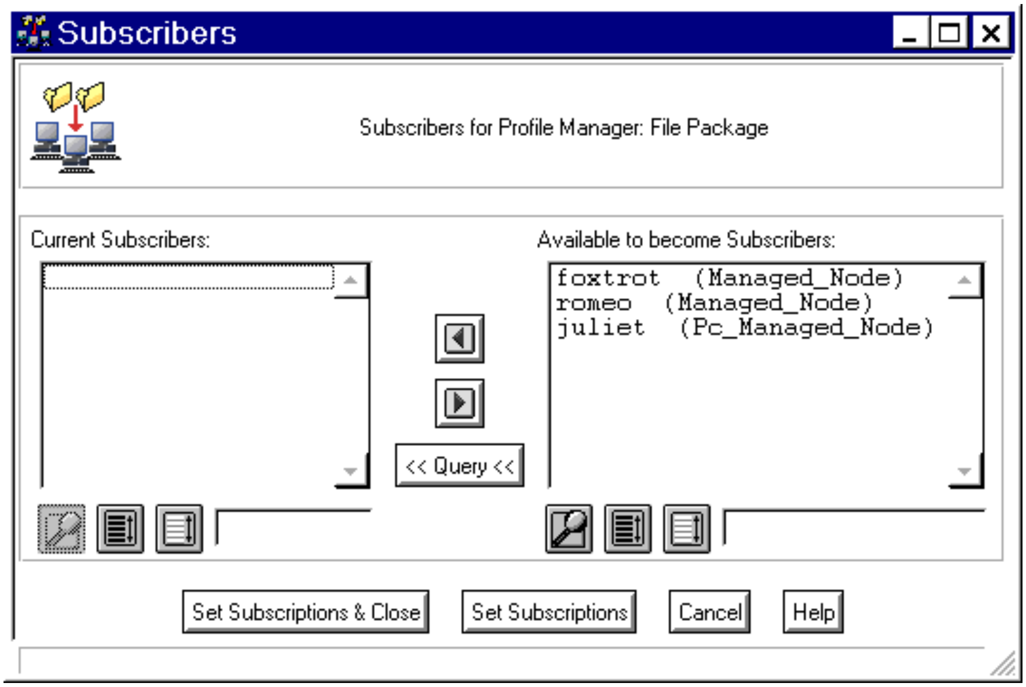


Profile Manager: File Package

Subscribers:

Subscribe/unsubscribe profile managers/endpoints to/from profile manager

Figure 363



Subscribers

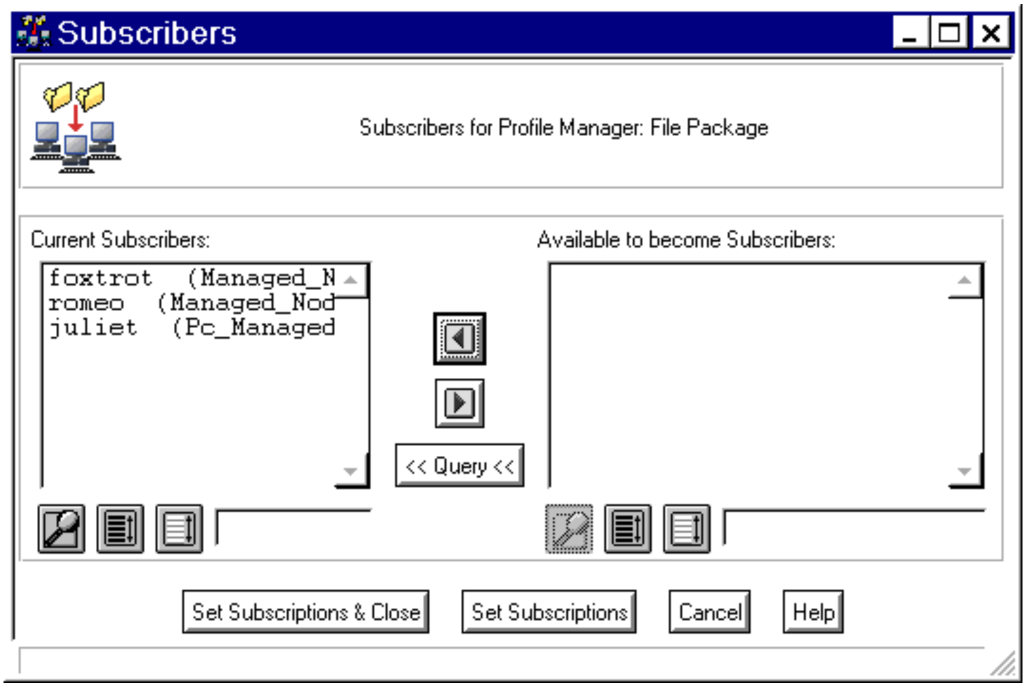
Subscribers for Profile Manager: File Package

Current Subscribers:

Available to become Subscribers:

```
foxtrot  (Managed_Node)
romeo  (Managed_Node)
juliet  (Pc_Managed_Node)
```

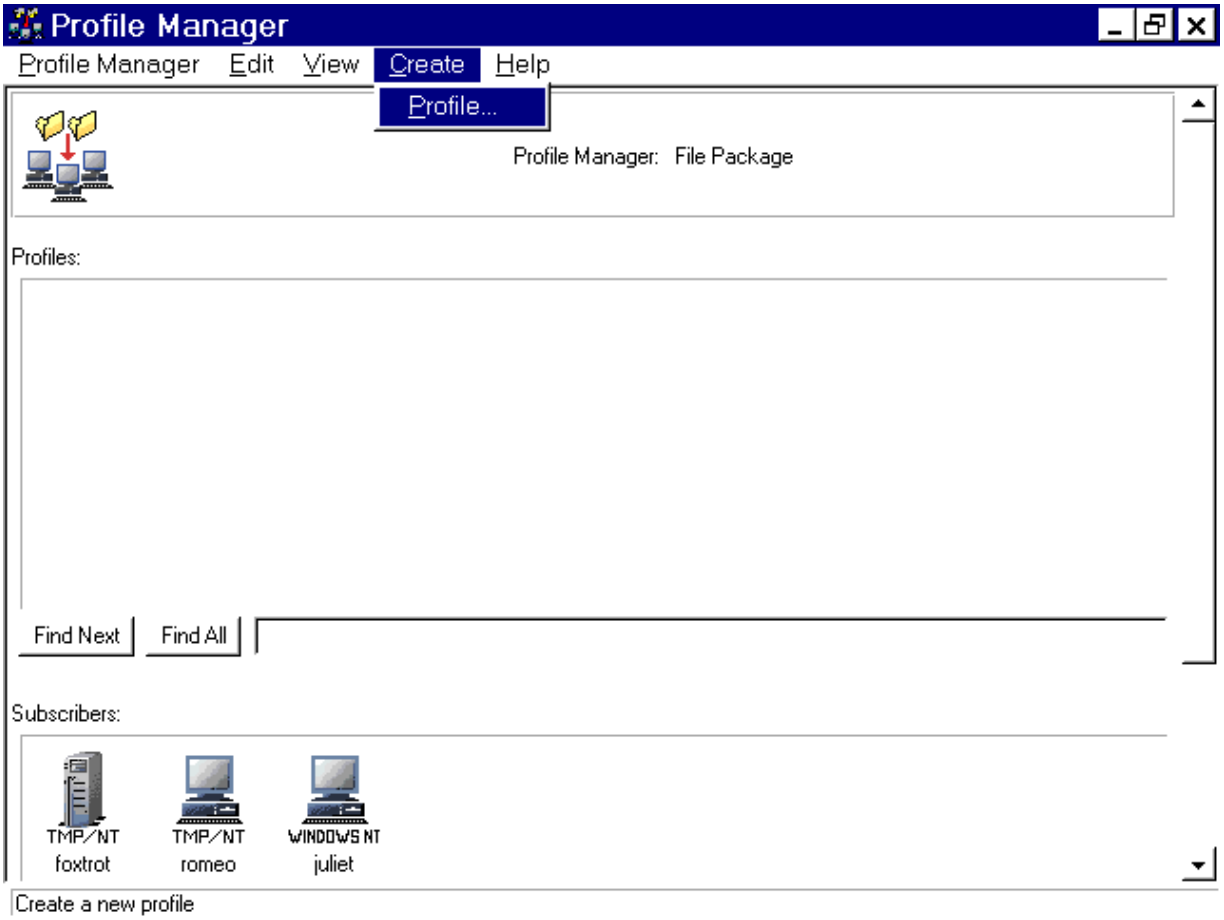
Figure 363

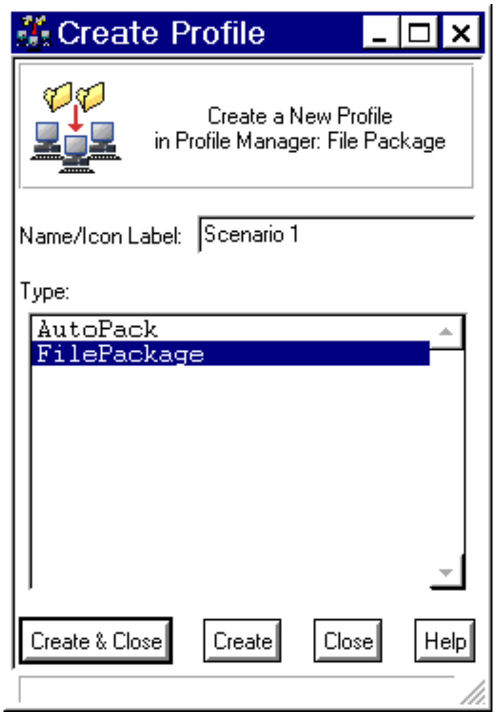


Subscribers for Profile Manager: File Package

```
foxtrot   (Managed_N
romeo  (Managed_Nod
juliet   (Pc_Managed
```

Figure 364


Profile Manager
Profile Manager
Edit
View
Create
Help
Profile...
Profile Manager: File Package
Profiles:
Find Next
Find All
Subscribers:
TMP/NT
foxtrot
TMP/NT
romeo
WINDOWS NT
juliet
Create a new profile



Name/Icon Label: Scenario 1

Type:

AutoPack
FilePackage

Figure 369

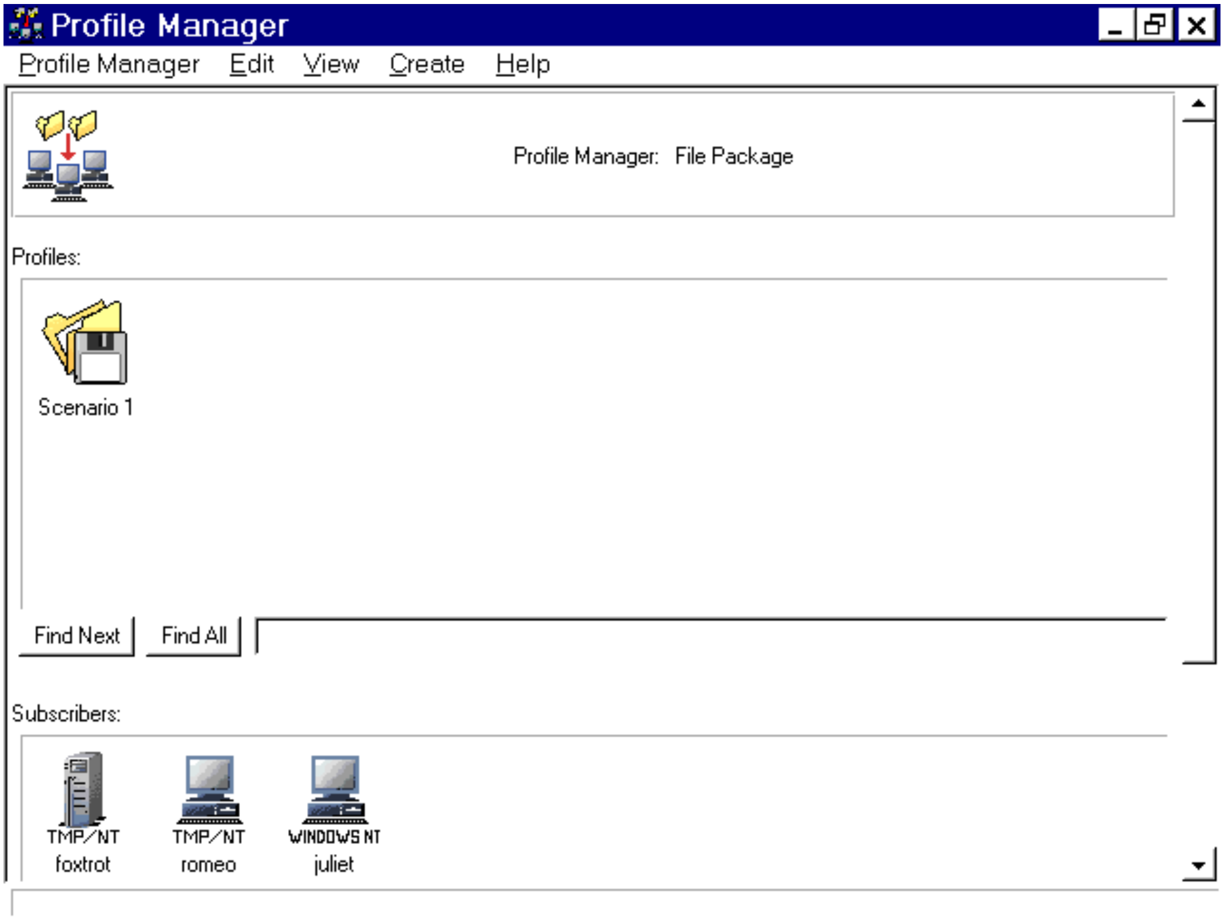
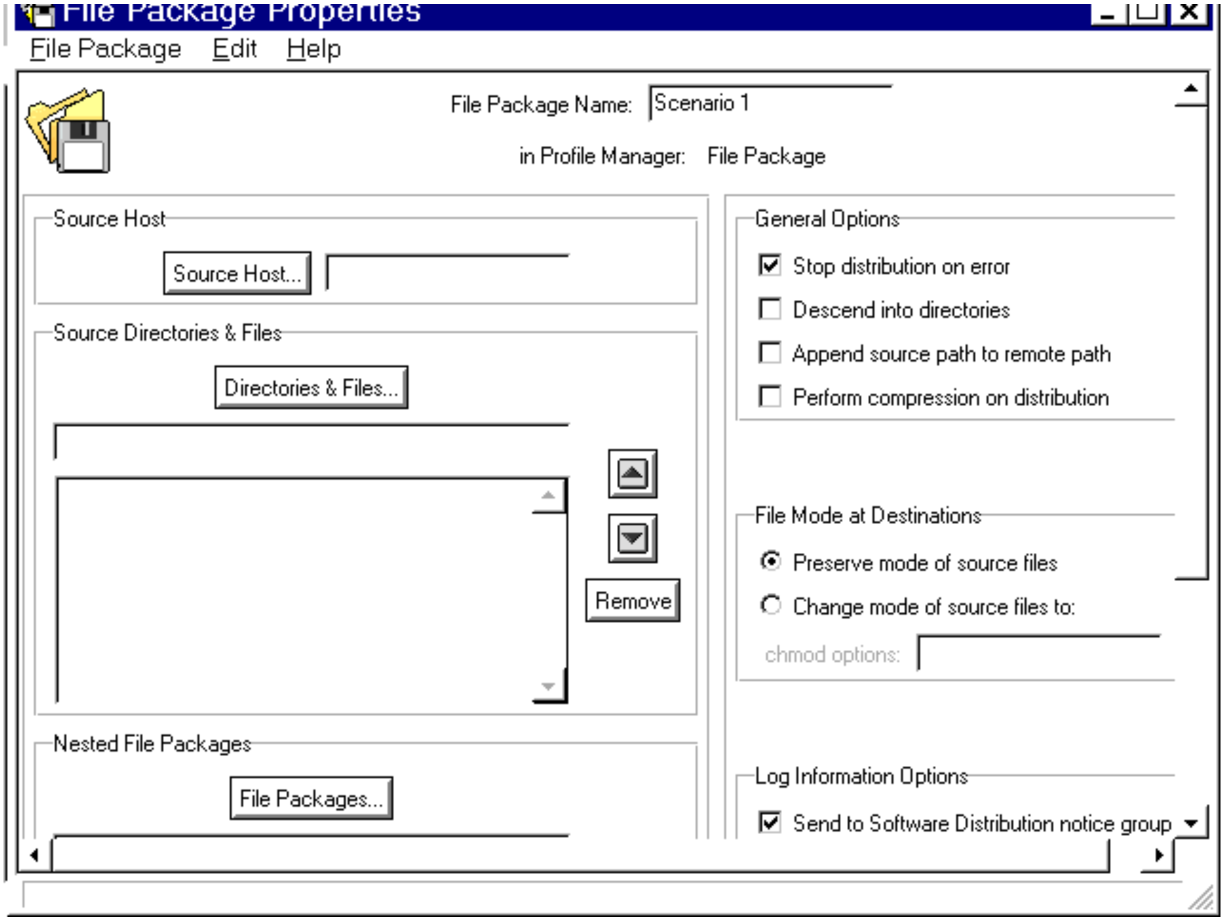

Profile Manager
Profile Manager
Edit
View
Create
Help
Profile Manager: File Package
Profiles:
Scenario 1
Find Next
Find All
Subscribers:
TMP/NT
foxtrot
TMP/NT
romeo
WINDOWS NT
juliet

Figure 367



File Package Name: Scenario 1

in Profile Manager: File Package

Source Host

Source Directories & Files

Nested File Packages

General Options

☑ Stop distribution on error

□ Descend into directories

□ Append source path to remote path

□ Perform compression on distribution

File Mode at Destinations

● Preserve mode of source files

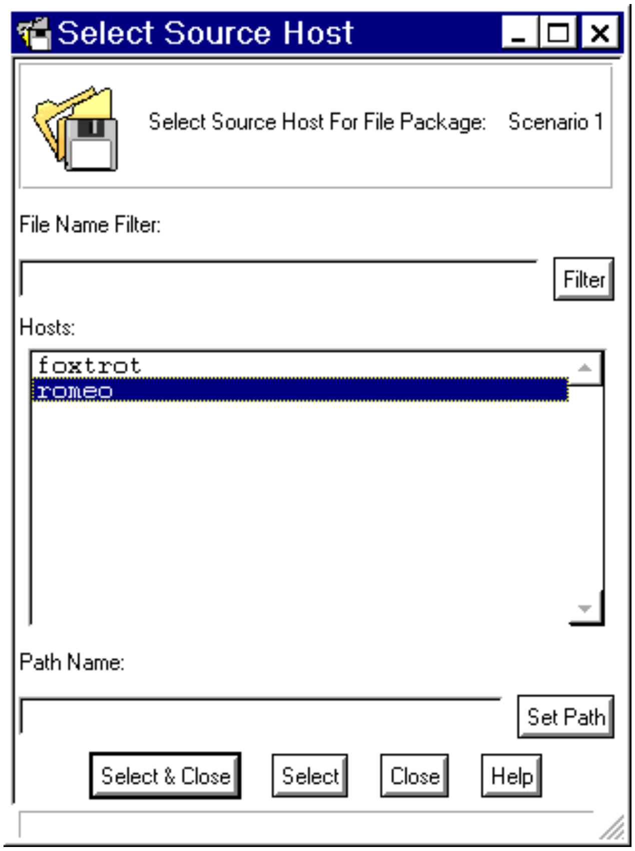
○ Change mode of source files to:

chmod options:

Log Information Options

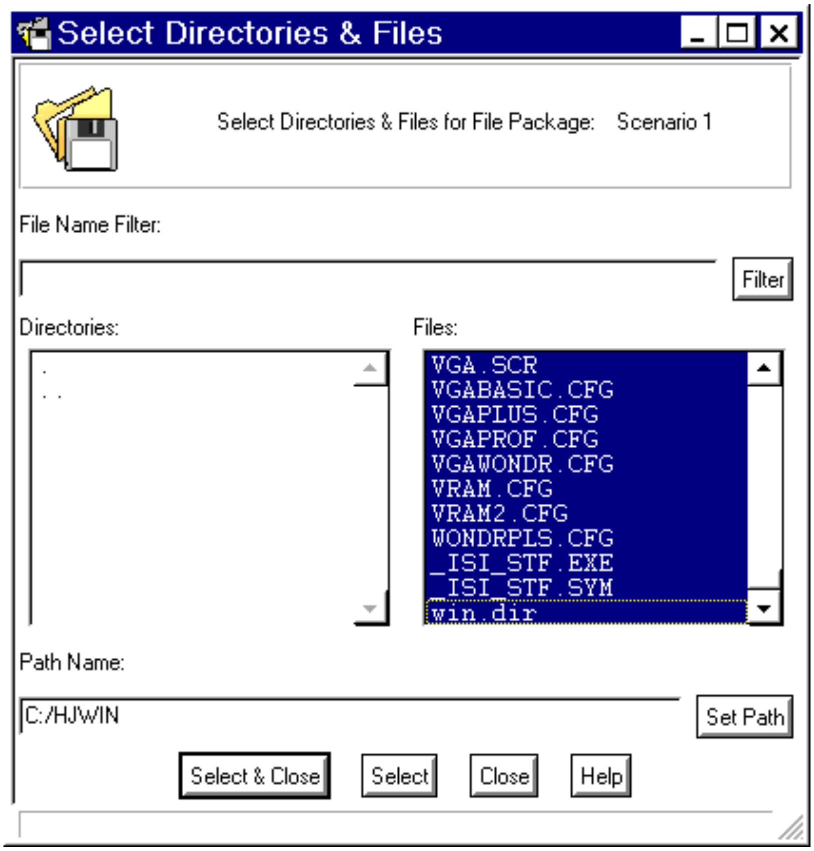
☑ Send to Software Distribution notice group

Figure 368



Select Source Host For File Package: Scenario 1

foxtrot
romeo



Select Directories & Files

Select Directories & Files for File Package: Scenario 1

File Name Filter:

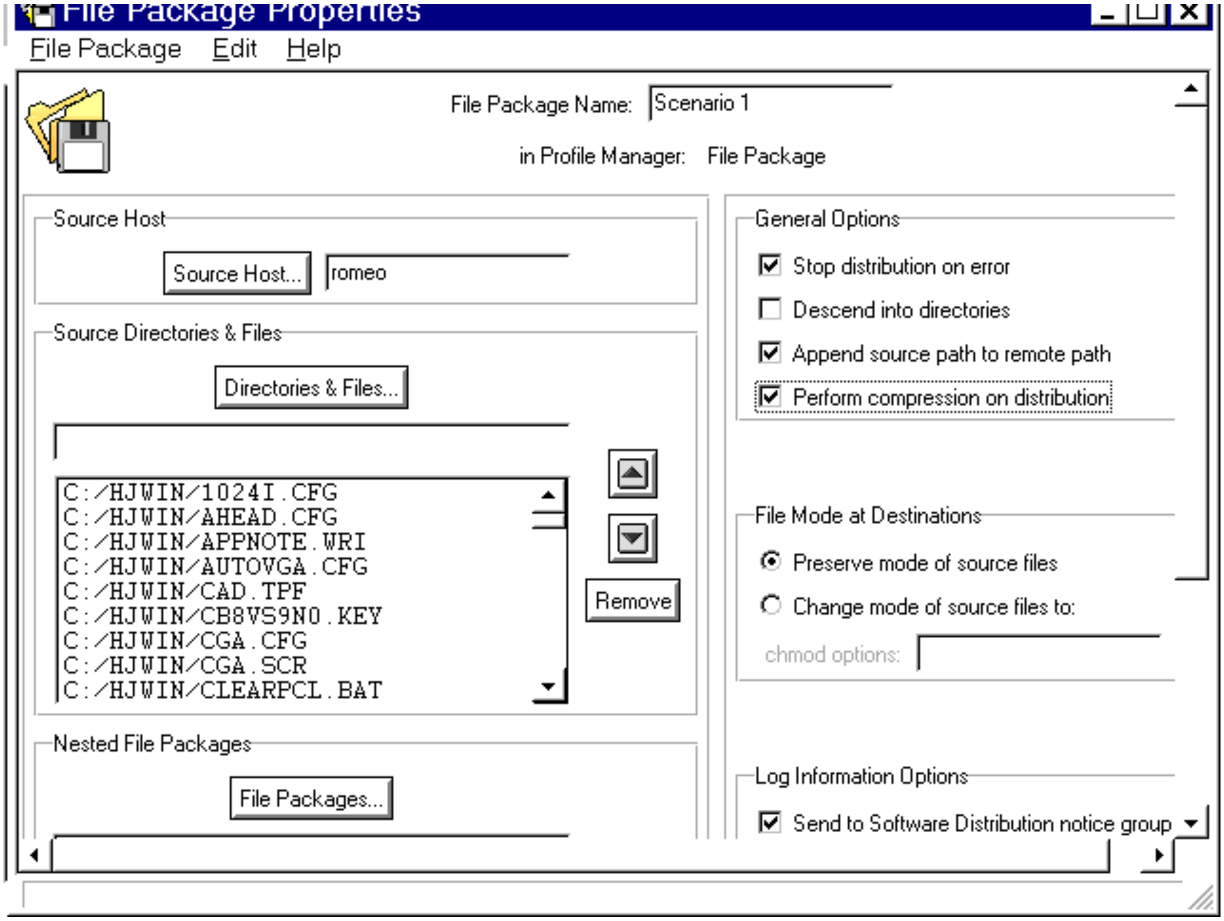
Directories:

```
.
..
```

Files:

```
VGA.SCR
VGABASIC.CFG
VGAPLUS.CFG
VGAPROF.CFG
VGAWONDR.CFG
VRAM.CFG
VRAM2.CFG
WONDRPLS.CFG
_ISI_STF.EXE
_ISI_STF.SYM
win.dir
```

Path Name: C:/HJWIN



File Package Name: Scenario 1

in Profile Manager: File Package

Source Host

romeo

Source Directories & Files

```
C:/HJWIN/1024I.CFG
C:/HJWIN/AHEAD.CFG
C:/HJWIN/APPNOTE.WRI
C:/HJWIN/AUTOVGA.CFG
C:/HJWIN/CAD.TPF
C:/HJWIN/CB8VS9N0.KEY
C:/HJWIN/CGA.CFG
C:/HJWIN/CGA.SCR
C:/HJWIN/CLEARPCL.BAT
```

Nested File Packages

General Options

☑ Stop distribution on error

☐ Descend into directories

☑ Append source path to remote path

☑ Perform compression on distribution

File Mode at Destinations

● Preserve mode of source files

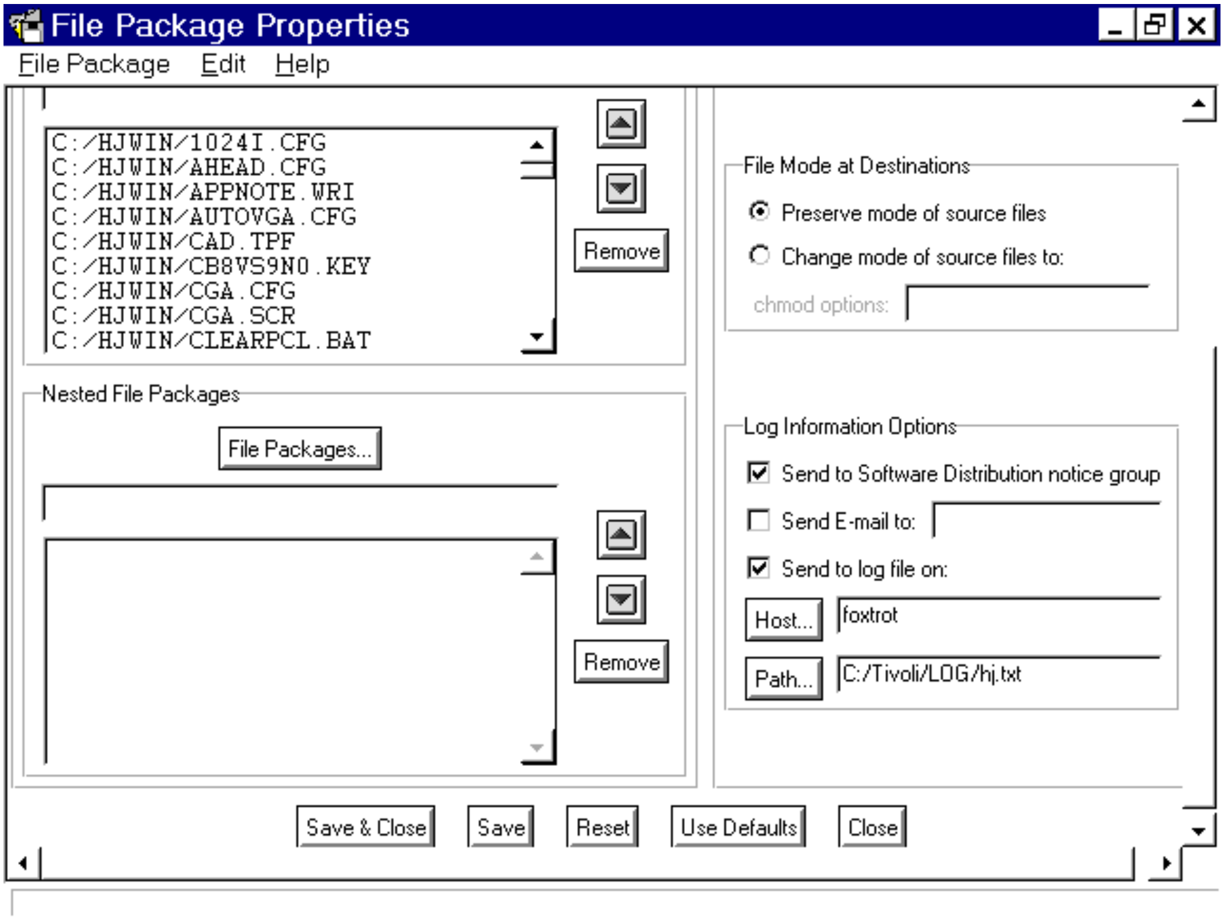
○ Change mode of source files to:

chmod options:

Log Information Options

☑ Send to Software Distribution notice group

Figure 371



File Package Properties

```
C:/HJWIN/1024I.CFG
C:/HJWIN/AHEAD.CFG
C:/HJWIN/APPNOTE.WRI
C:/HJWIN/AUTOVGA.CFG
C:/HJWIN/CAD.TPF
C:/HJWIN/CB8VS9N0.KEY
C:/HJWIN/CGA.CFG
C:/HJWIN/CGA.SCR
C:/HJWIN/CLEARPCL.BAT
```

File Mode at Destinations

● Preserve mode of source files

○ Change mode of source files to:

chmod options:

Log Information Options

☑ Send to Software Distribution notice group

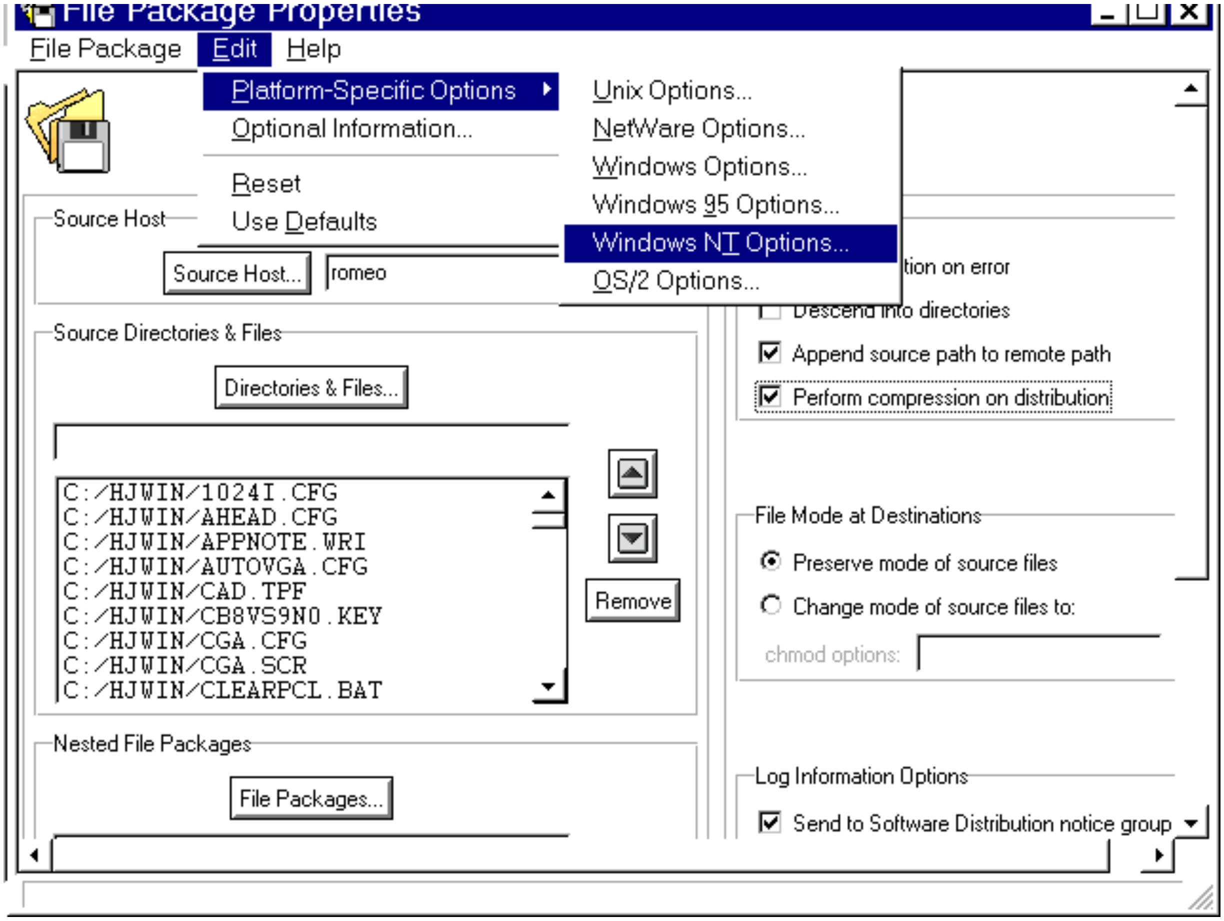
□ Send E-mail to:

☑ Send to log file on:

Host... foxtrot

Path... C:/Tivoli/LOG/hj.txt

Figure 372



Source Host: romeo

```
C:/HJWIN/1024I.CFG
C:/HJWIN/AHEAD.CFG
C:/HJWIN/APPNOTE.WRI
C:/HJWIN/AUTOVGA.CFG
C:/HJWIN/CAD.TPF
C:/HJWIN/CB8VS9N0.KEY
C:/HJWIN/CGA.CFG
C:/HJWIN/CGA.SCR
C:/HJWIN/CLEARPCL.BAT
```

tion on error

□ Descend into directories

☑ Append source path to remote path

☑ Perform compression on distribution

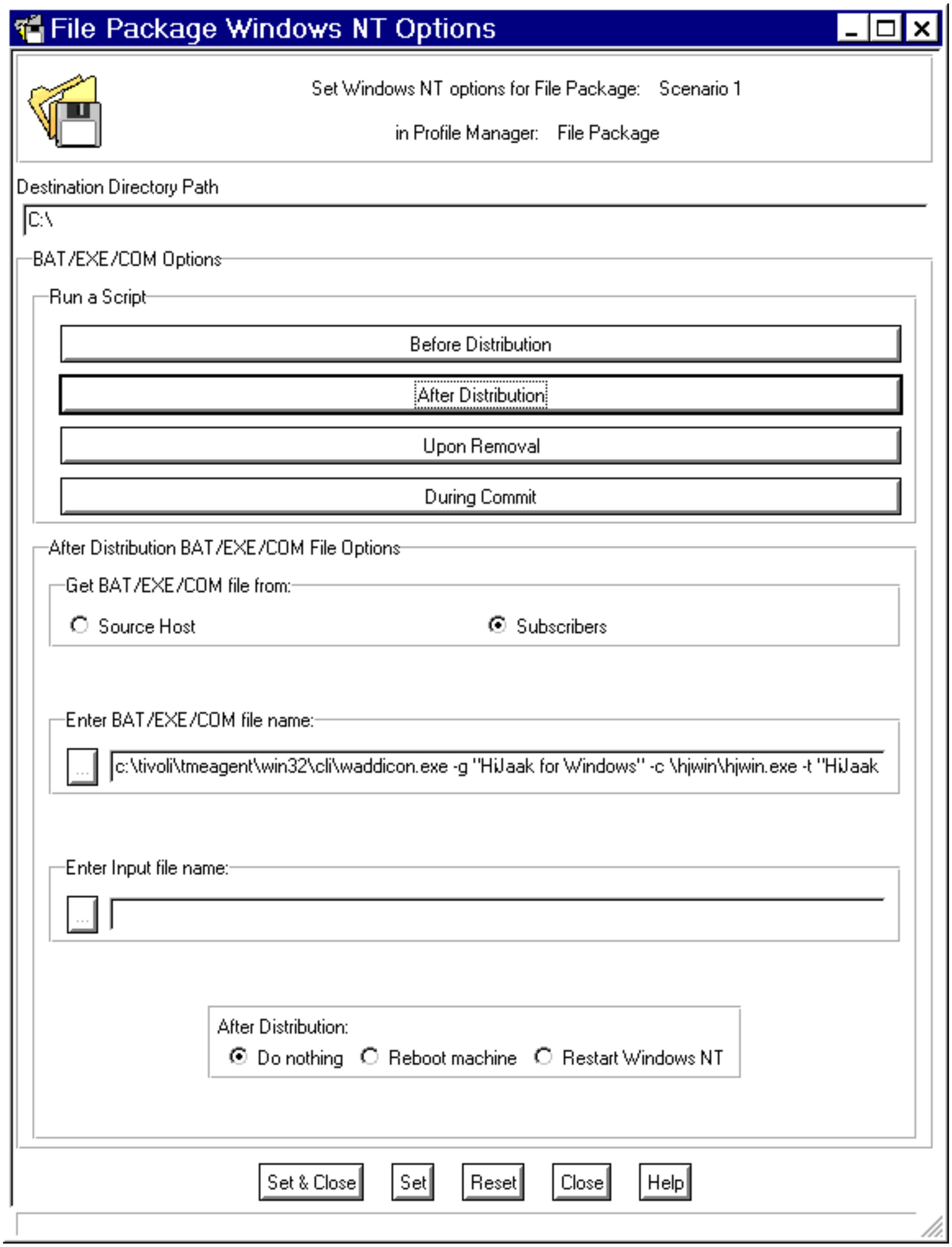
● Preserve mode of source files

○ Change mode of source files to:

chmod options:

☑ Send to Software Distribution notice group

Figure 373



File Package Windows NT Options

Set Windows NT options for File Package: Scenario 1

in Profile Manager: File Package

Destination Directory Path

C:\

BAT/EXE/COM Options

Run a Script

After Distribution BAT/EXE/COM File Options

Get BAT/EXE/COM file from:

○ Source Host ● Subscribers

Enter BAT/EXE/COM file name:

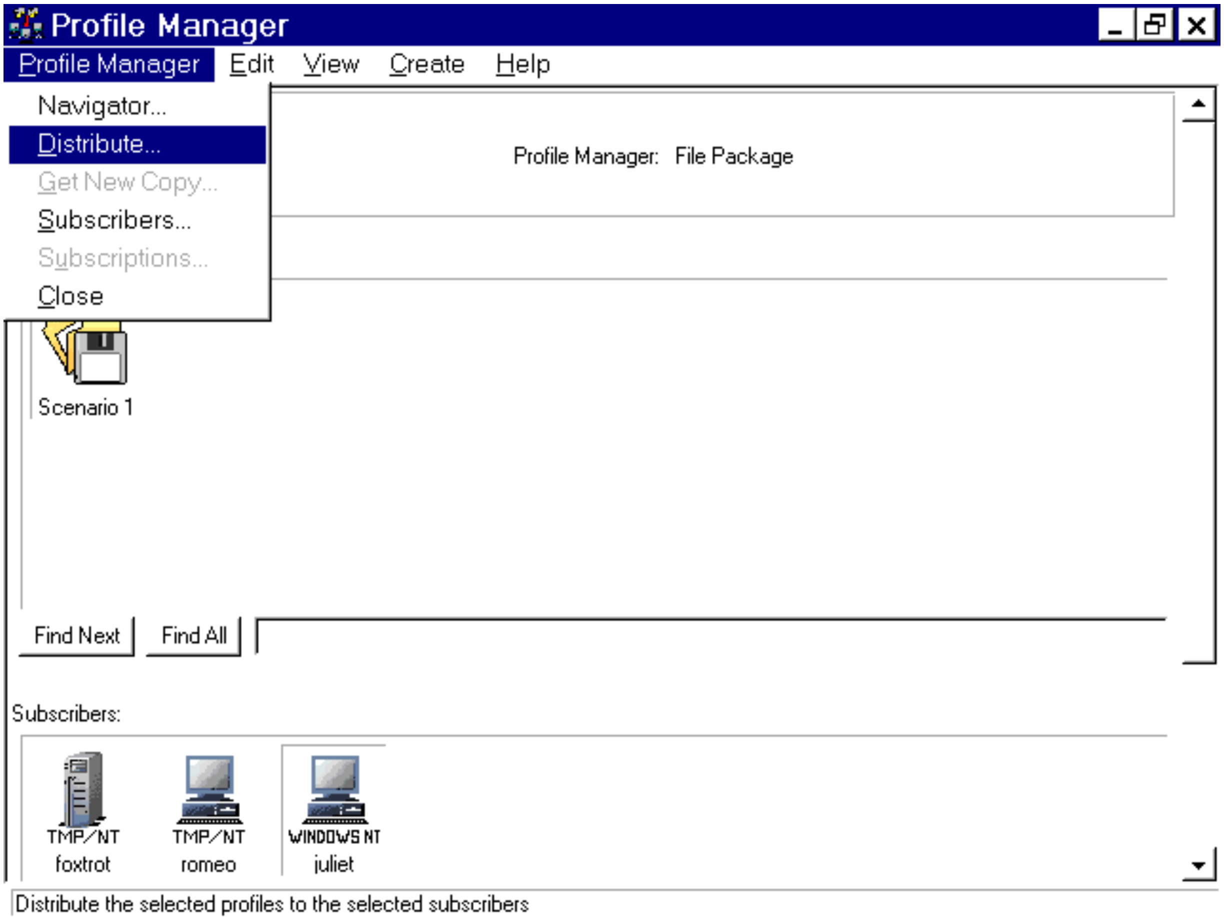
```
c:\tivoli\tmeagent\win32\cli\waddicon.exe -g "HiJaak for Windows" -c \hjwin\hjwin.exe -t "HiJaak
```

Enter Input file name:

After Distribution:

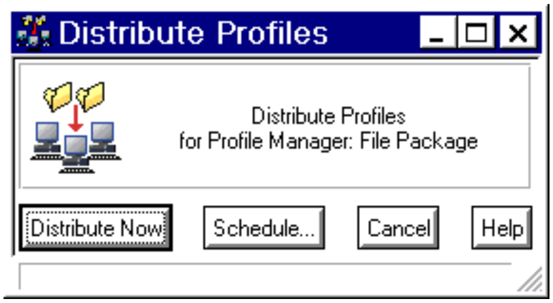
● Do nothing ○ Reboot machine ○ Restart Windows NT

Figure 374

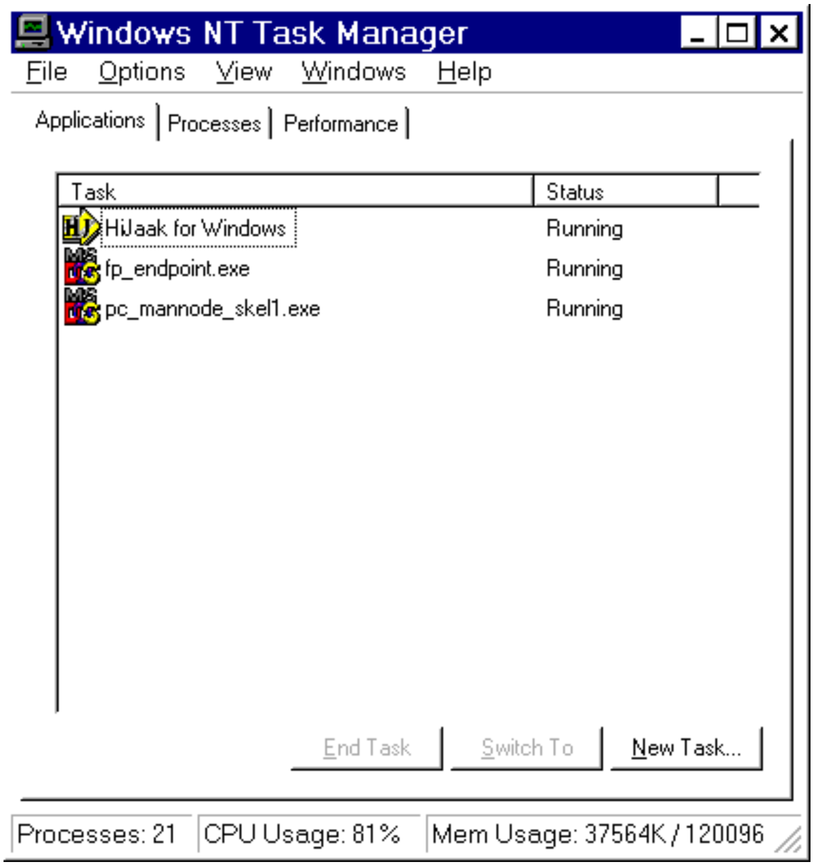


Distribute the selected profiles to the selected subscribers

Figure 375



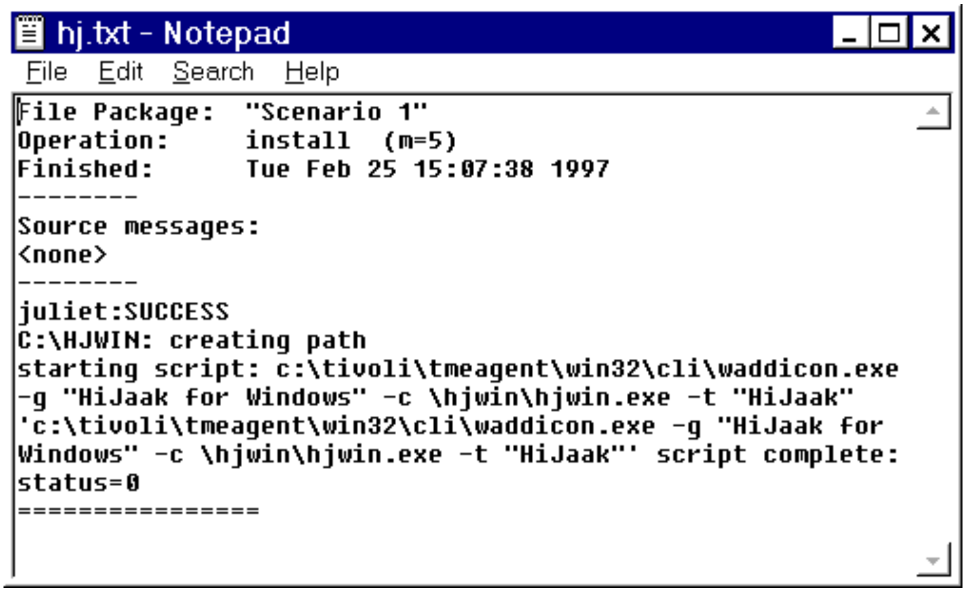
Distribute Profiles
for Profile Manager: File Package



Task	Status
HiJaak for Windows	Running
fp_endpoint.exe	Running
pc_mannode_skel1.exe	Running

Processes: 21 | CPU Usage: 81% | Mem Usage: 37564K / 120096

Figure 377



```
File Package:  "Scenario 1"
Operation:     install  (m=5)
Finished:      Tue Feb 25 15:07:38 1997
--------
Source messages:
<none>
--------
juliet:SUCCESS
C:\HJWIN: creating path
starting script: c:\tivoli\tmeagent\win32\cli\waddicon.exe
-g "HiJaak for Windows" -c \hjwin\hjwin.exe -t "HiJaak"
'c:\tivoli\tmeagent\win32\cli\waddicon.exe -g "HiJaak for
Windows" -c \hjwin\hjwin.exe -t "HiJaak"' script complete:
status=0
================
```

Figure 378

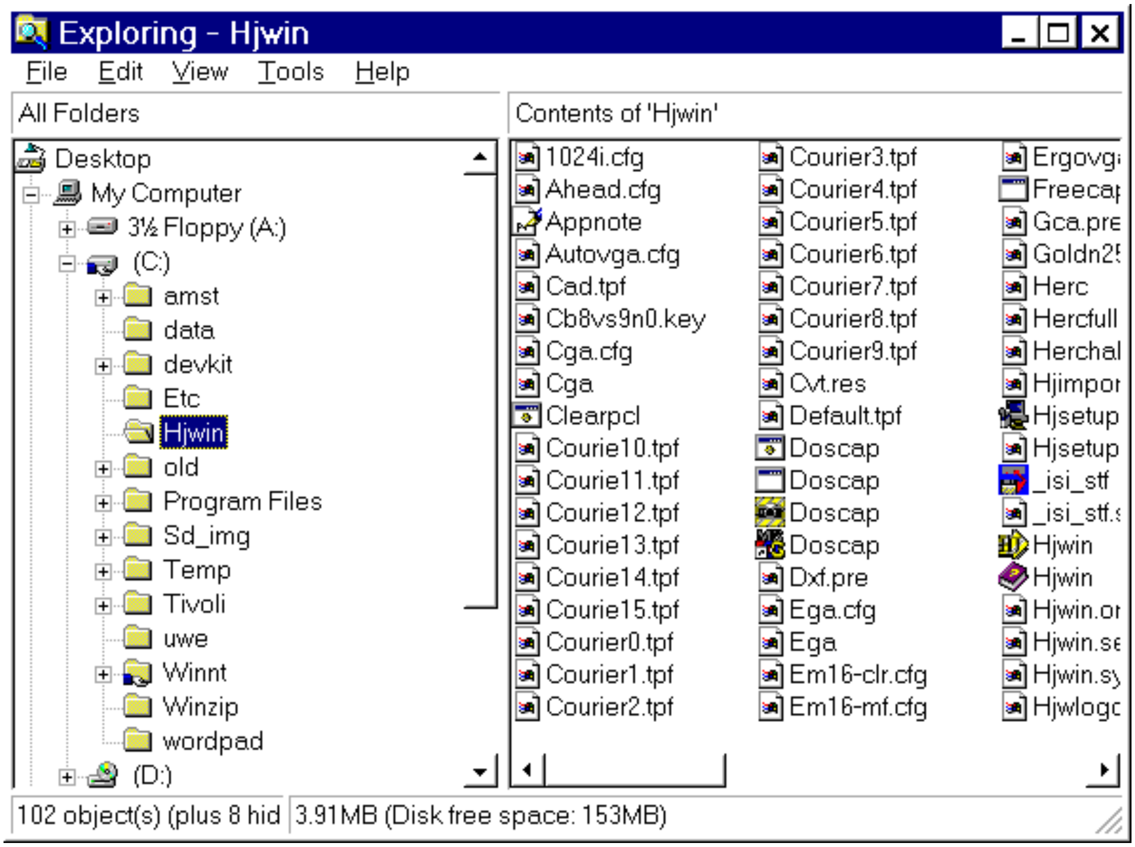
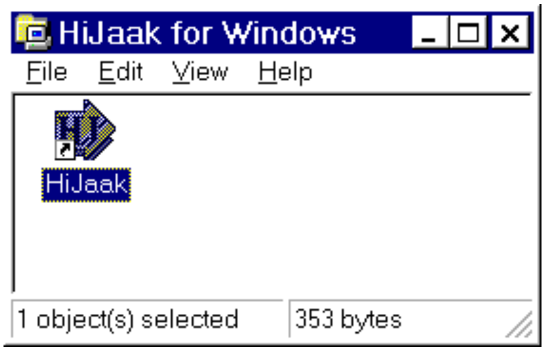
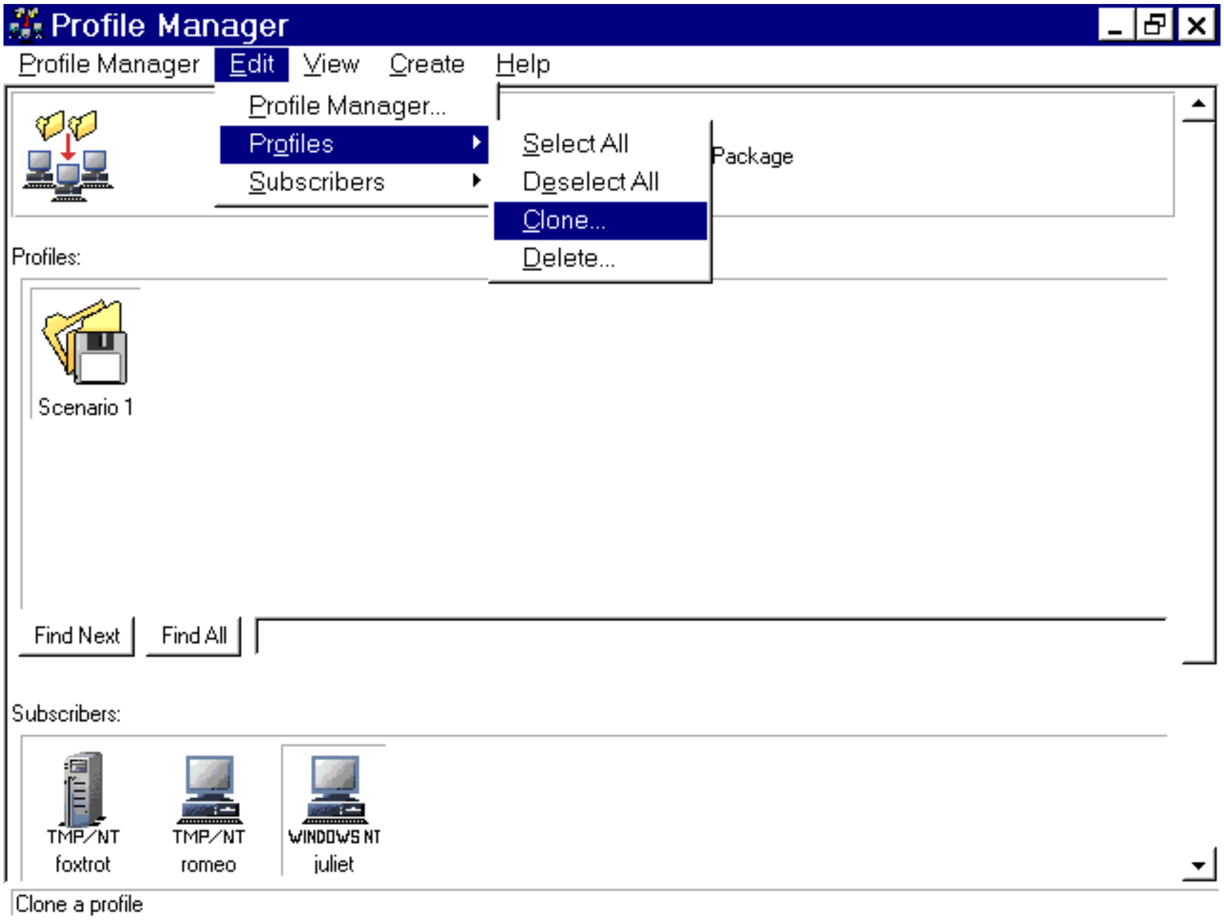

Exploring - Hjwin
File Edit View Tools Help
All Folders
Contents of 'Hjwin'
Desktop
My Computer
3½ Floppy (A:)
(C:)
amst
data
devkit
Etc
Hjwin
old
Program Files
Sd_img
Temp
Tivoli
uwe
Winnt
Winzip
wordpad
(D:)
1024i.cfg
Ahead.cfg
Appnote
Autovga.cfg
Cad.tpf
Cb8vs9n0.key
Cga.cfg
Cga
Clearpcl
Courie10.tpf
Courie11.tpf
Courie12.tpf
Courie13.tpf
Courie14.tpf
Courie15.tpf
Courier0.tpf
Courier1.tpf
Courier2.tpf
Courier3.tpf
Courier4.tpf
Courier5.tpf
Courier6.tpf
Courier7.tpf
Courier8.tpf
Courier9.tpf
Cvt.res
Default.tpf
Doscap
Doscap
Doscap
Doscap
Dxf.pre
Ega.cfg
Ega
Em16-clr.cfg
Em16-mf.cfg
Ergovg
Freeca
Gca.pre
Goldn2
Herc
Hercfull
Herchal
Hjimpor
Hjsetup
Hjsetup
_isi_stf
_isi_stf.
Hjwin
Hjwin
Hjwin.or
Hjwin.se
Hjwin.sy
Hjwlogc
102 object(s) (plus 8 hid
3.91MB (Disk free space: 153MB)

Figure 379



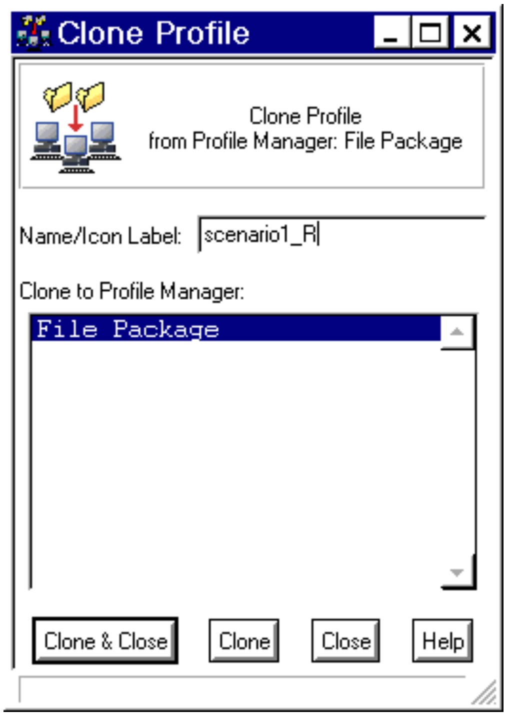
1 object(s) selected

353 bytes



Profile Manager
Profile Manager
Edit
View
Create
Help
Profile Manager...
Profiles
Subscribers
Select All
Deselect All
Clone...
Delete...
Package
Profiles:
Scenario 1
Find Next
Find All
Subscribers:
TMP/NT
foxtrot
TMP/NT
romeo
WINDOWS NT
juliet
Clone a profile

Figure 381



Clone Profile

Clone Profile
from Profile Manager: File Package

Name/Icon Label: scenario1_R

Clone to Profile Manager:

File Package

Figure 382

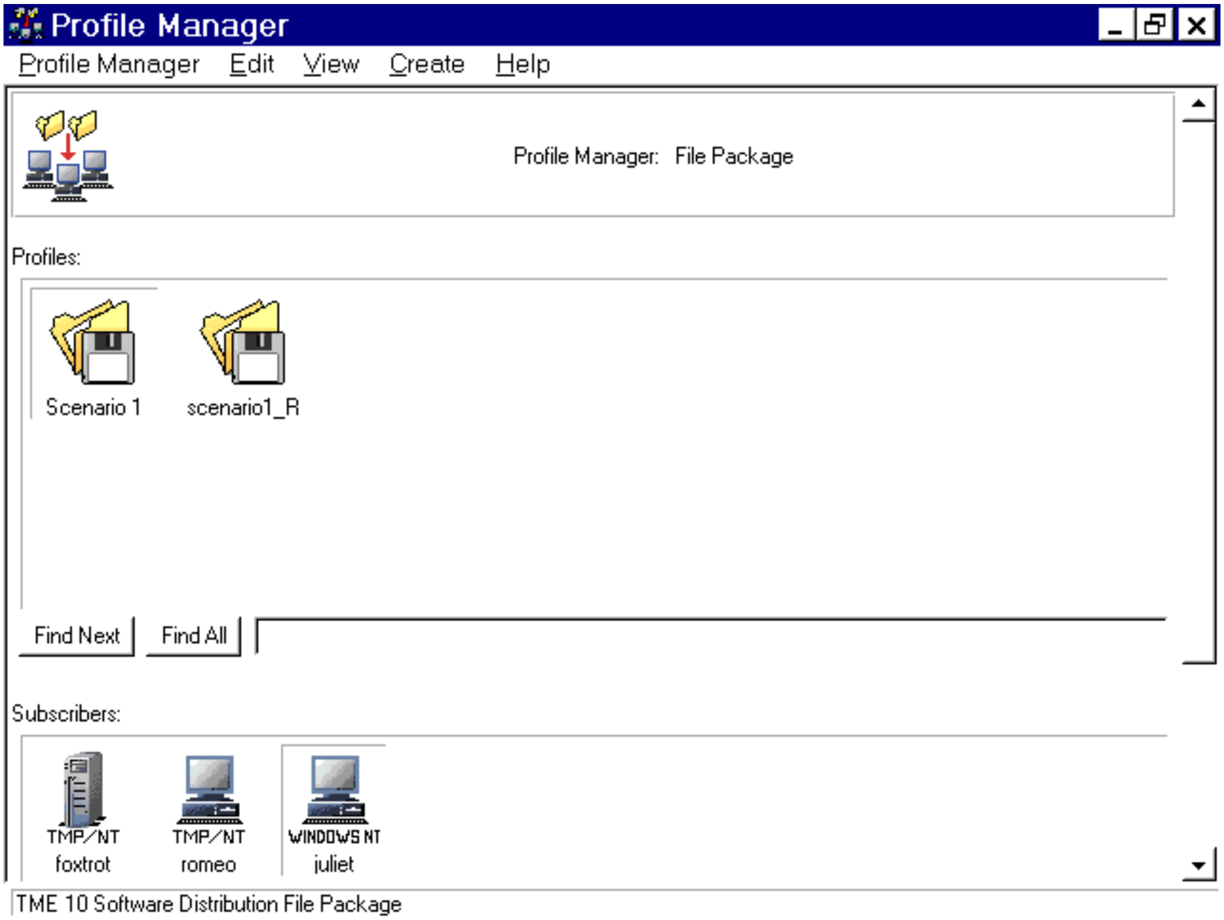
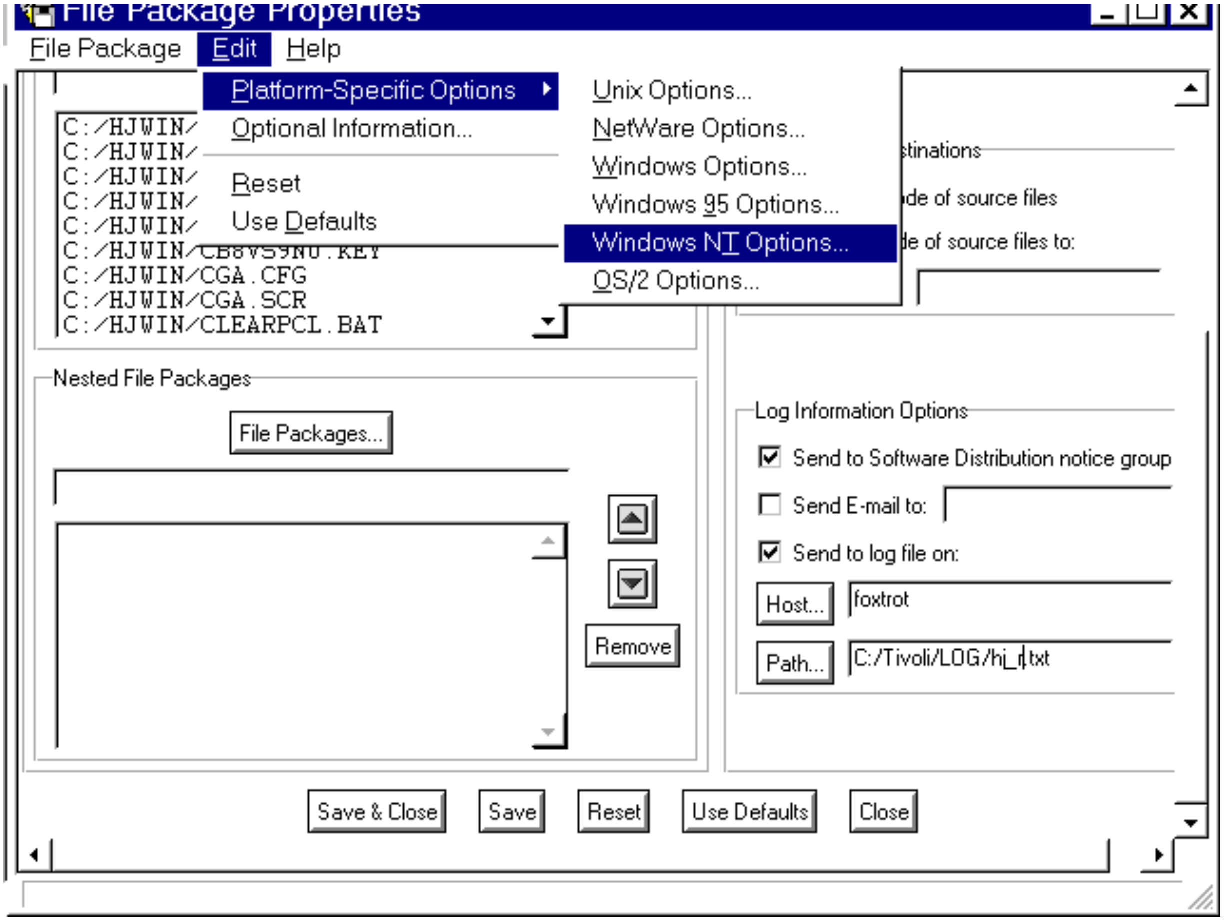

Profile Manager
Profile Manager Edit View Create Help
Profile Manager: File Package
Profiles:
Scenario 1
scenario1_R
Find Next
Find All
Subscribers:
TMP/NT
foxtrot
TMP/NT
romeo
WINDOWS NT
juliet
TME 10 Software Distribution File Package

Figure 383



```
C:/HJWIN/
C:/HJWIN/
C:/HJWIN/
C:/HJWIN/
C:/HJWIN/
C:/HJWIN/CB8VS9N0.KEY
C:/HJWIN/CGA.CFG
C:/HJWIN/CGA.SCR
C:/HJWIN/CLEARPCL.BAT
```

☑ Send to Software Distribution notice group

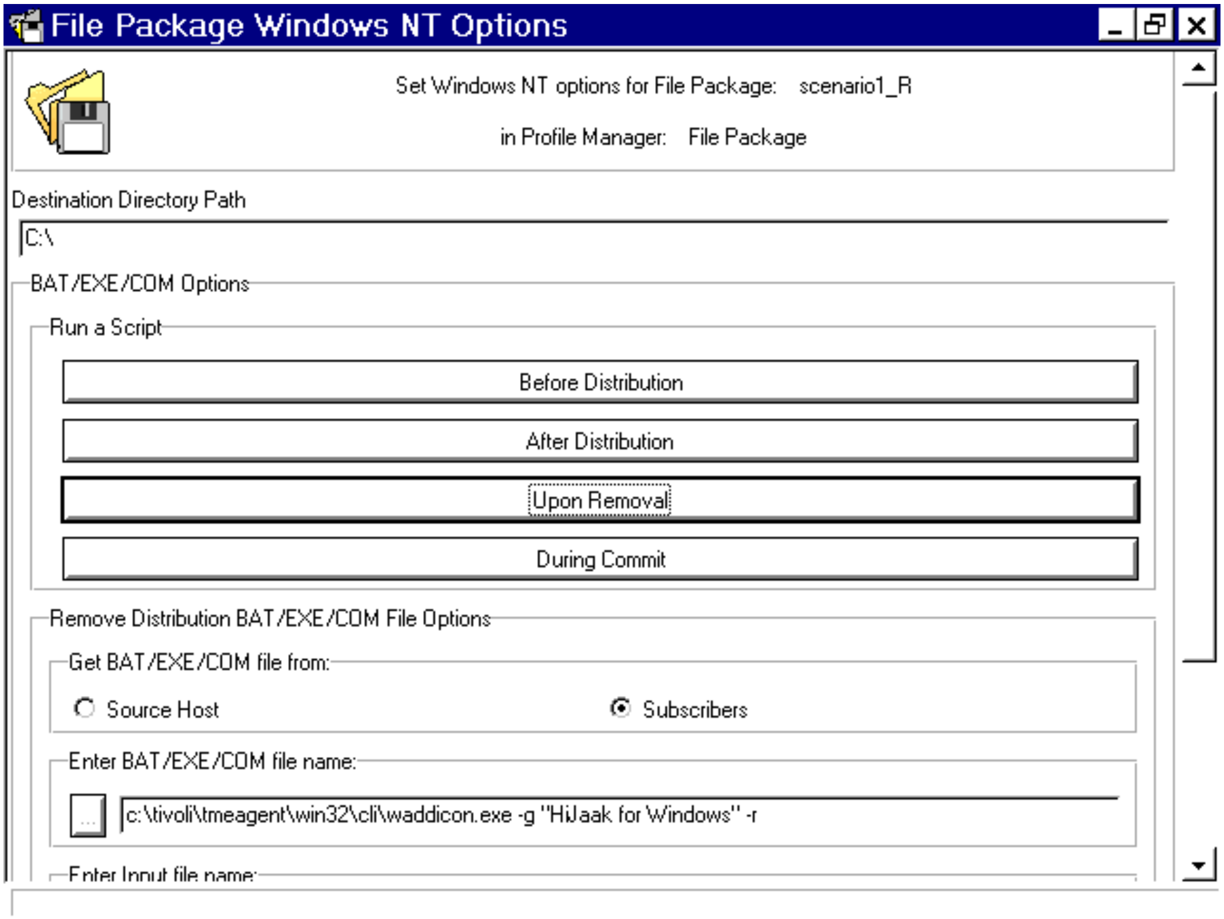
□ Send E-mail to:

☑ Send to log file on:

Host... foxtrot

Path... C:/Tivoli/LOG/hj_r.txt

Figure 384



Set Windows NT options for File Package: scenario1_R

in Profile Manager: File Package

Destination Directory Path: C:\

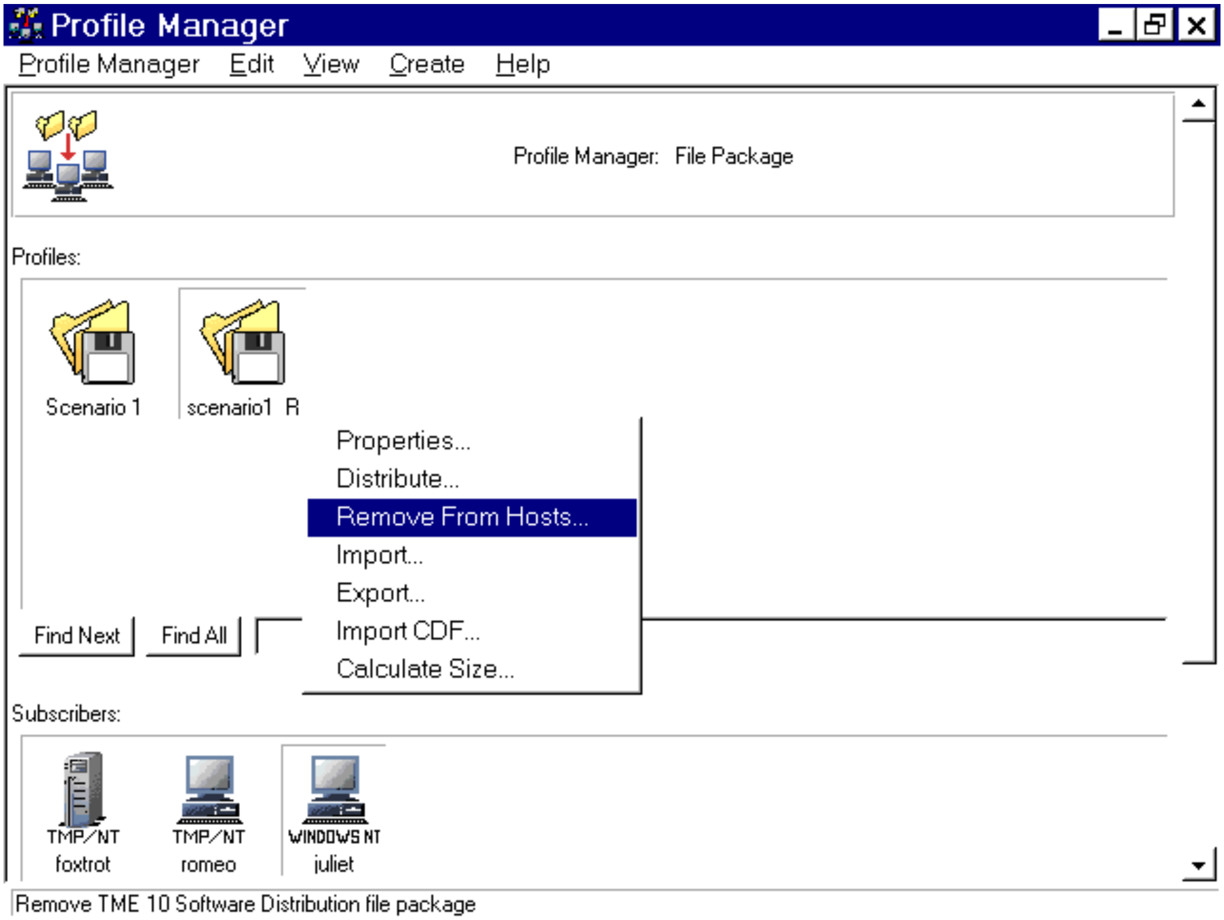
Get BAT/EXE/COM file from:

○ Source Host ● Subscribers

Enter BAT/EXE/COM file name:

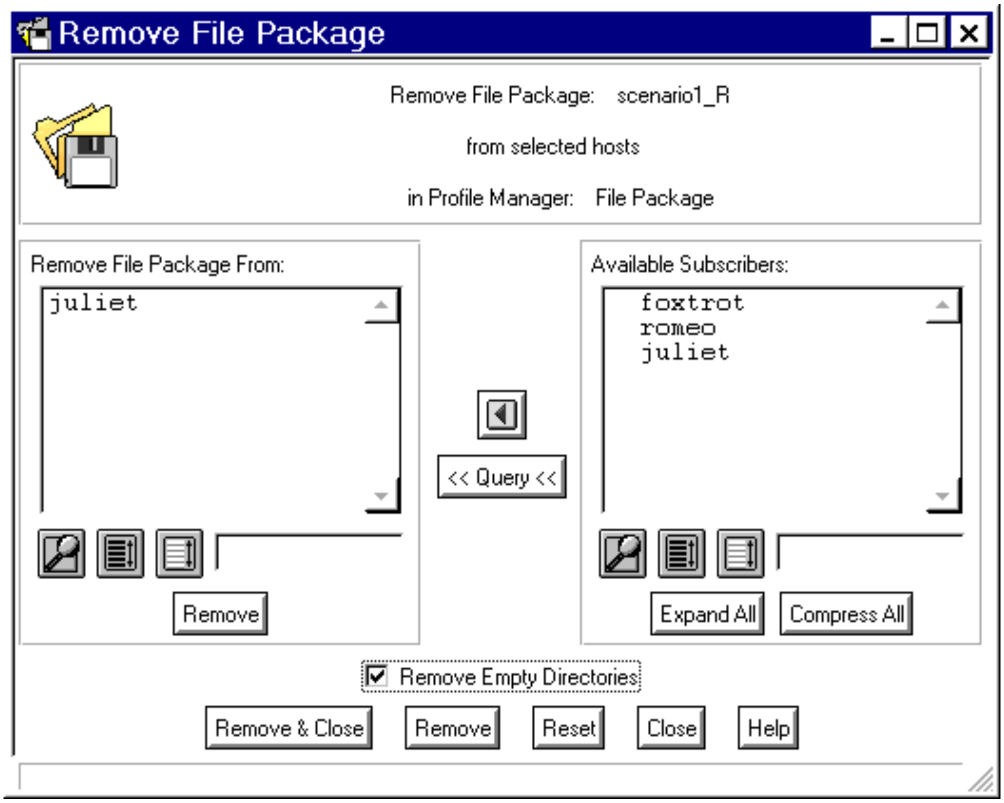
```
c:\tivoli\tmeagent\win32\cli\waddicon.exe -g "HiJaak for Windows" -r
```

Figure 385



Remove TME 10 Software Distribution file package

Figure 386



Remove File Package

Remove File Package: scenario1_R

from selected hosts

in Profile Manager: File Package

Remove File Package From:

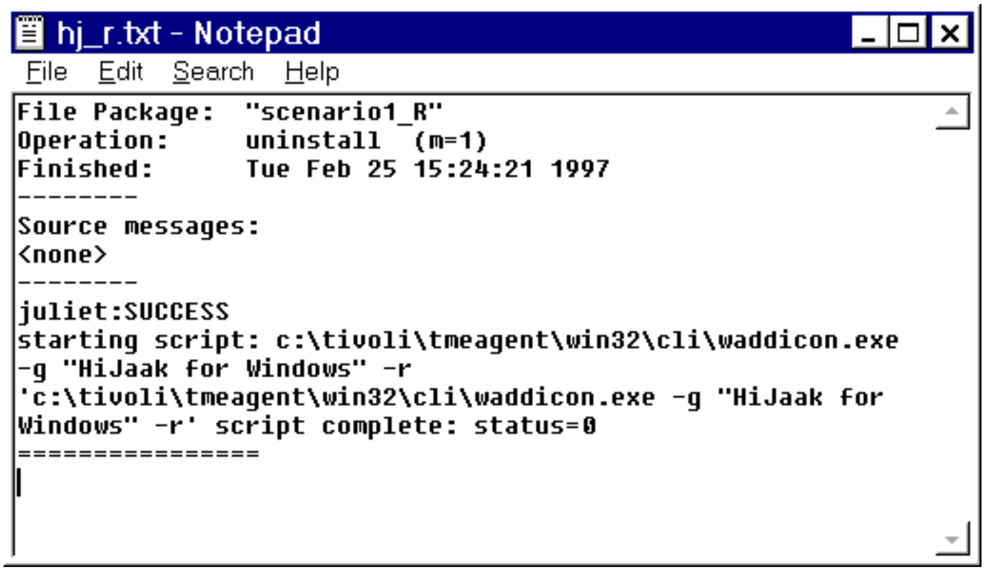
juliet

Available Subscribers:

foxtrot
romeo
juliet

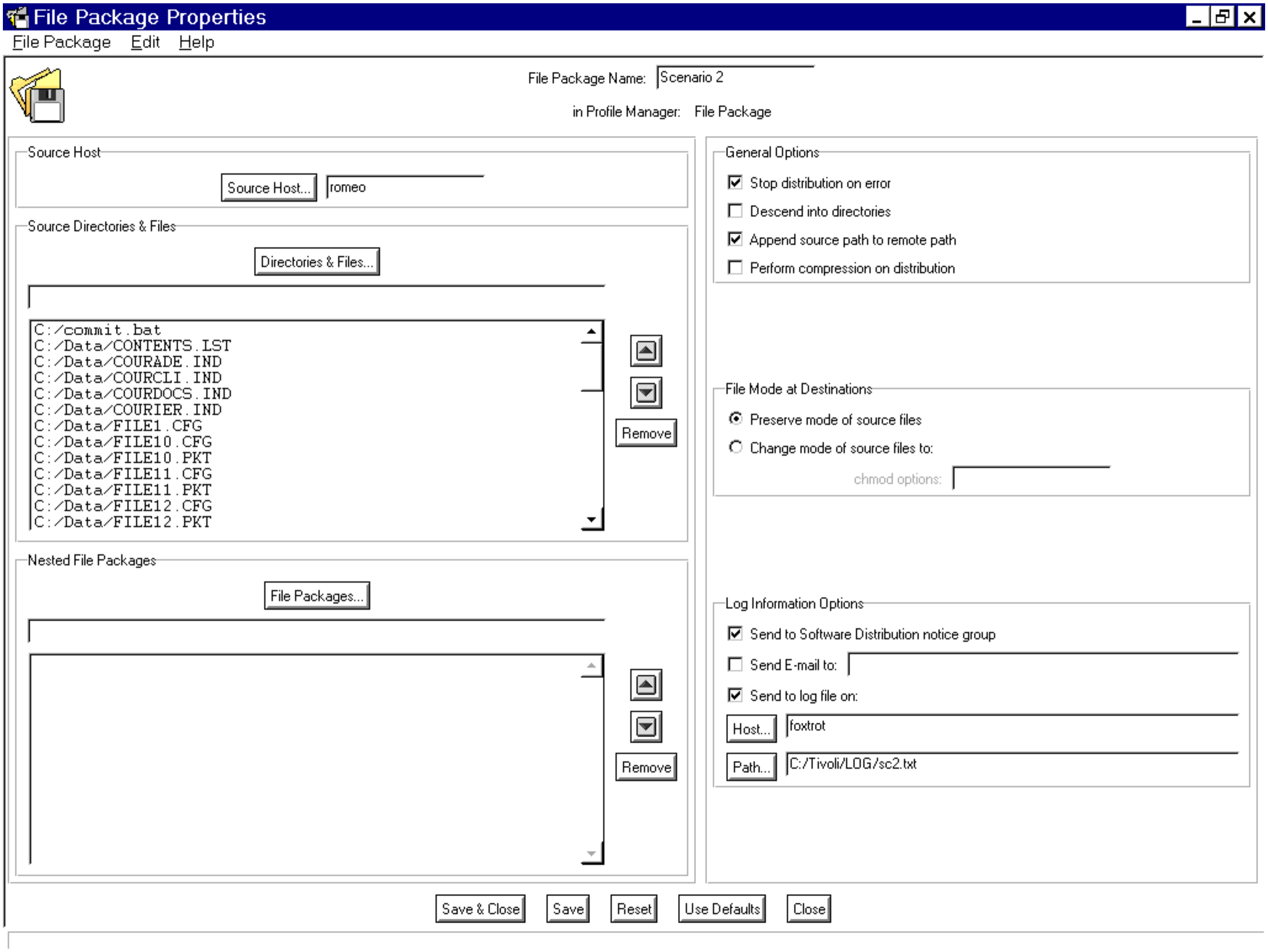
☑ Remove Empty Directories

Figure 387



```
File Package:  "scenario1_R"
Operation:     uninstall  (m=1)
Finished:      Tue Feb 25 15:24:21 1997
--------
Source messages:
<none>
--------
juliet:SUCCESS
starting script: c:\tivoli\tmeagent\win32\cli\waddicon.exe
-g "HiJaak for Windows" -r
'c:\tivoli\tmeagent\win32\cli\waddicon.exe -g "HiJaak for
Windows" -r' script complete: status=0
================
```

Figure 388



File Package Name: Scenario 2

in Profile Manager: File Package

Source Host

Source Host... romeo

Source Directories & Files

Directories & Files...

```
C:/commit.bat
C:/Data/CONTENTS.LST
C:/Data/COURADE.IND
C:/Data/COURCLI.IND
C:/Data/COURDOCS.IND
C:/Data/COURIER.IND
C:/Data/FILE1.CFG
C:/Data/FILE10.CFG
C:/Data/FILE10.PKT
C:/Data/FILE11.CFG
C:/Data/FILE11.PKT
C:/Data/FILE12.CFG
C:/Data/FILE12.PKT
```

Nested File Packages

File Packages...

General Options

☑ Stop distribution on error

□ Descend into directories

☑ Append source path to remote path

□ Perform compression on distribution

File Mode at Destinations

● Preserve mode of source files

○ Change mode of source files to:

chmod options:

Log Information Options

☑ Send to Software Distribution notice group

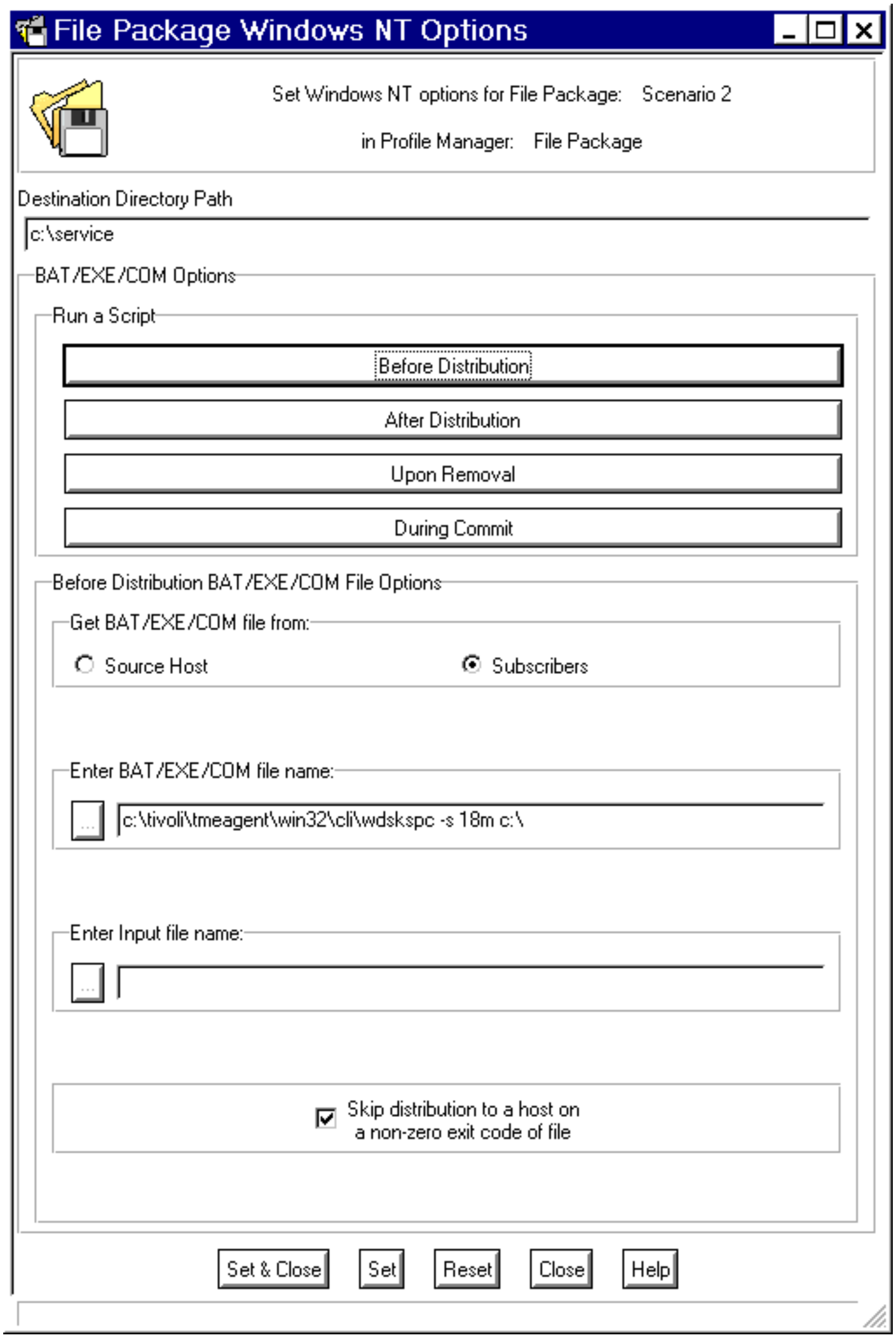
□ Send E-mail to:

☑ Send to log file on:

Host... foxtrot

Path... C:/Tivoli/LOG/sc2.txt

Figure 389



File Package Windows NT Options

Set Windows NT options for File Package: Scenario 2

in Profile Manager: File Package

Destination Directory Path

c:\service

BAT/EXE/COM Options

Run a Script

Before Distribution BAT/EXE/COM File Options

Get BAT/EXE/COM file from:

○ Source Host ● Subscribers

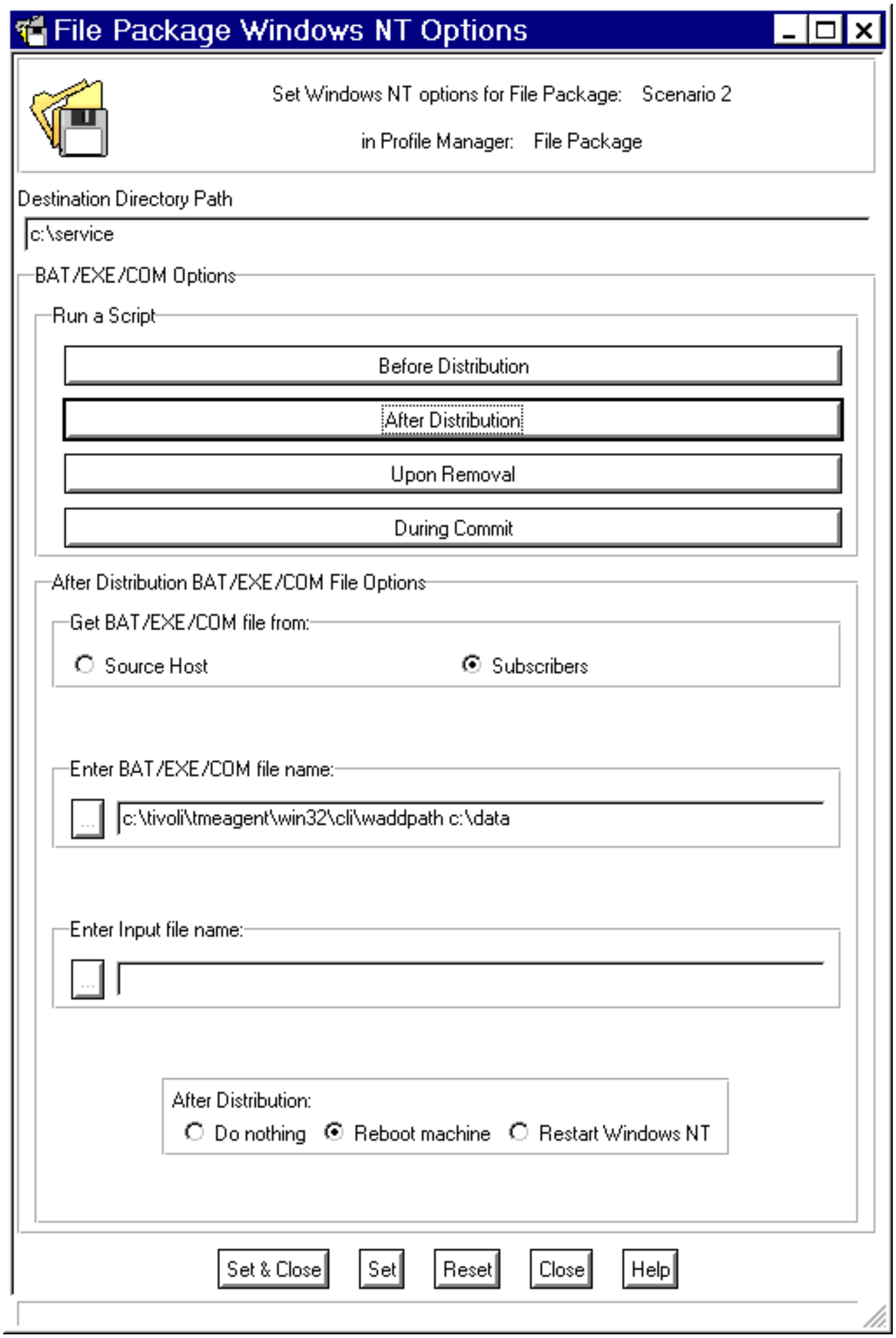
Enter BAT/EXE/COM file name:

c:\tivoli\tmeagent\win32\cli\wdskspc -s 18m c:\

Enter Input file name:

☑ Skip distribution to a host on a non-zero exit code of file

Figure 390



File Package Windows NT Options

Set Windows NT options for File Package: Scenario 2

in Profile Manager: File Package

Destination Directory Path: c:\service

BAT/EXE/COM Options

Run a Script

After Distribution BAT/EXE/COM File Options

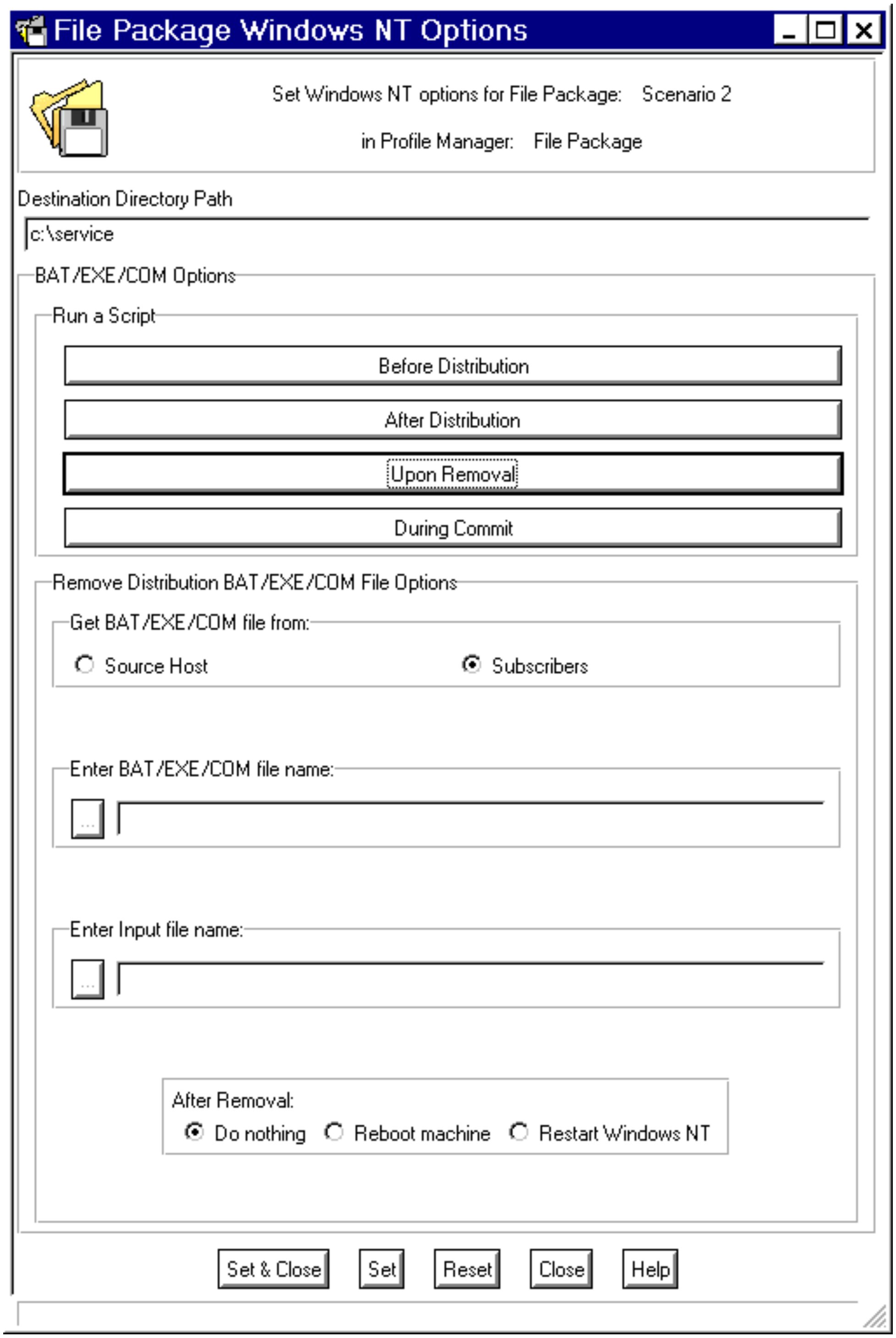
Get BAT/EXE/COM file from: ○ Source Host ● Subscribers

Enter BAT/EXE/COM file name: c:\tivoli\tmeagent\win32\cli\waddpath c:\data

Enter Input file name:

After Distribution: ○ Do nothing ● Reboot machine ○ Restart Windows NT

Figure 391



File Package Windows NT Options

Set Windows NT options for File Package: Scenario 2

in Profile Manager: File Package

Destination Directory Path: c:\service

BAT/EXE/COM Options

Run a Script

Remove Distribution BAT/EXE/COM File Options

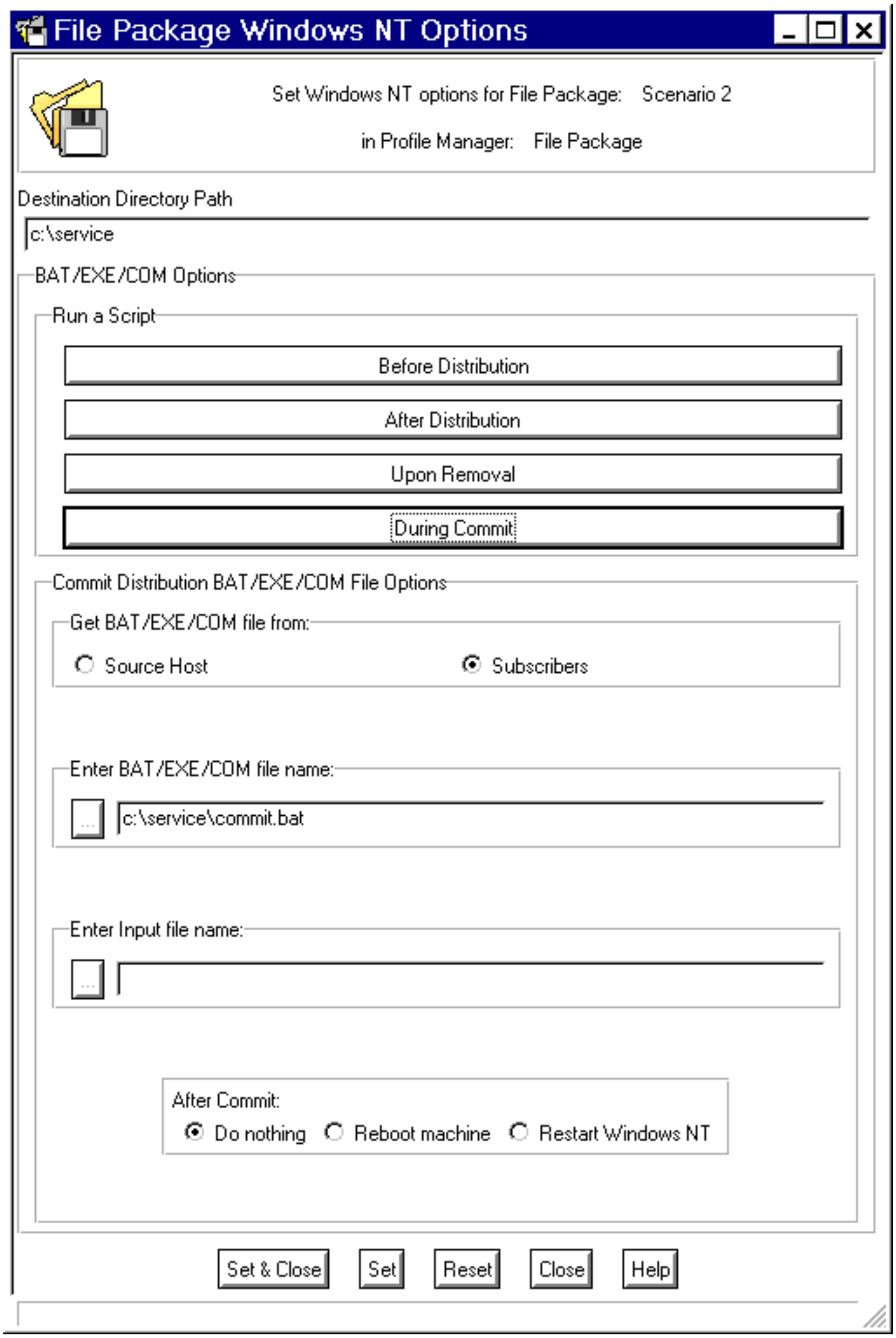
Get BAT/EXE/COM file from: ○ Source Host ● Subscribers

Enter BAT/EXE/COM file name:

Enter Input file name:

After Removal: ● Do nothing ○ Reboot machine ○ Restart Windows NT

Figure 392



Set Windows NT options for File Package: Scenario 2

in Profile Manager: File Package

Destination Directory Path: c:\service

BAT/EXE/COM Options

Run a Script

Commit Distribution BAT/EXE/COM File Options

Get BAT/EXE/COM file from:

○ Source Host ● Subscribers

Enter BAT/EXE/COM file name: c:\service\commit.bat

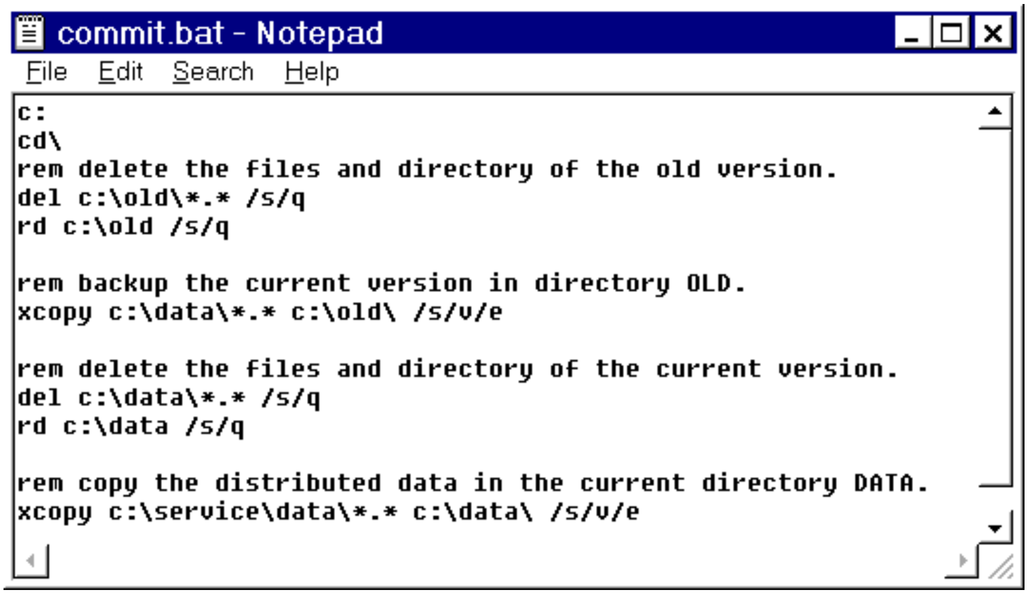
Enter Input file name:

After Commit:

● Do nothing ○ Reboot machine ○ Restart Windows NT

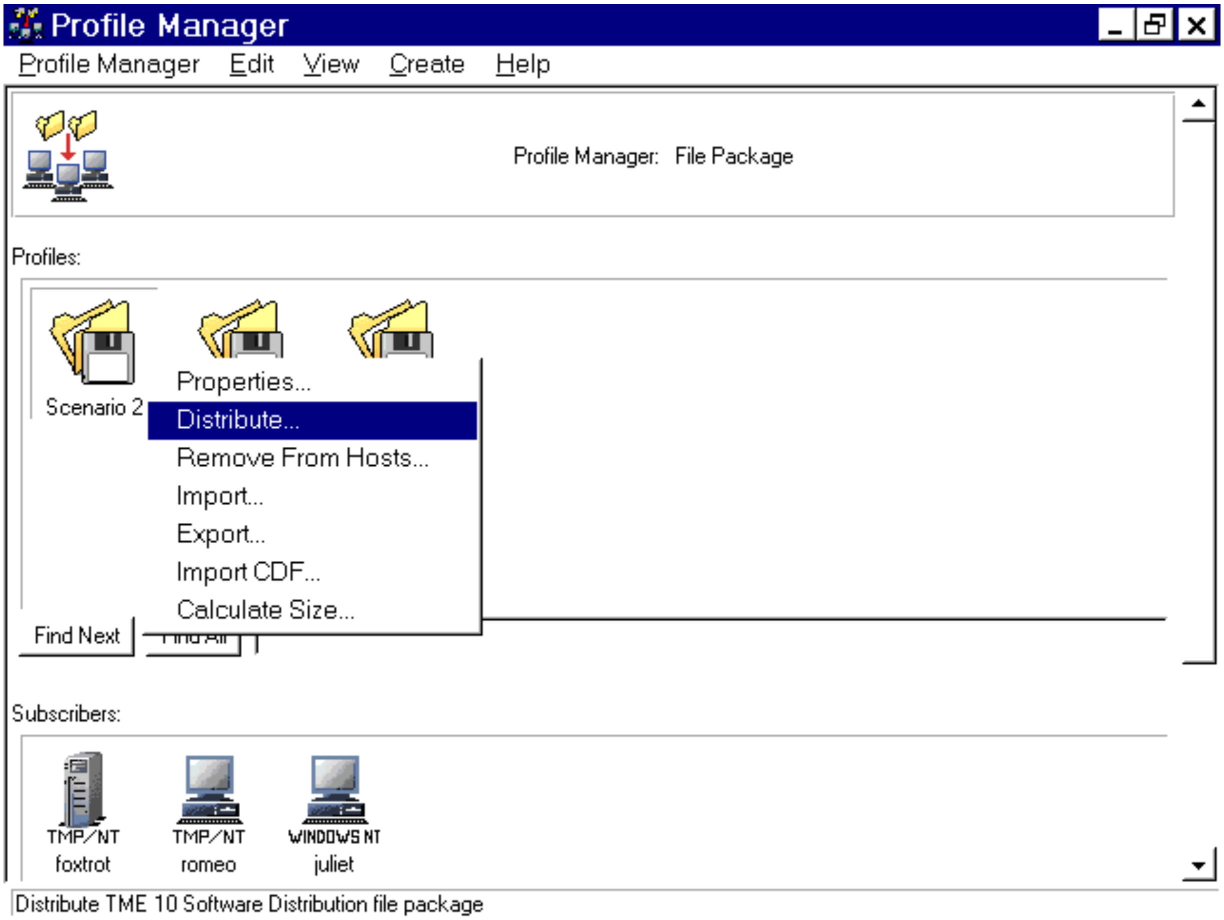
https://web.archive.org/web/19970803072739/http://www.redbooks.ibm.com:80/SG244976/xsc205.gif

Figure 393



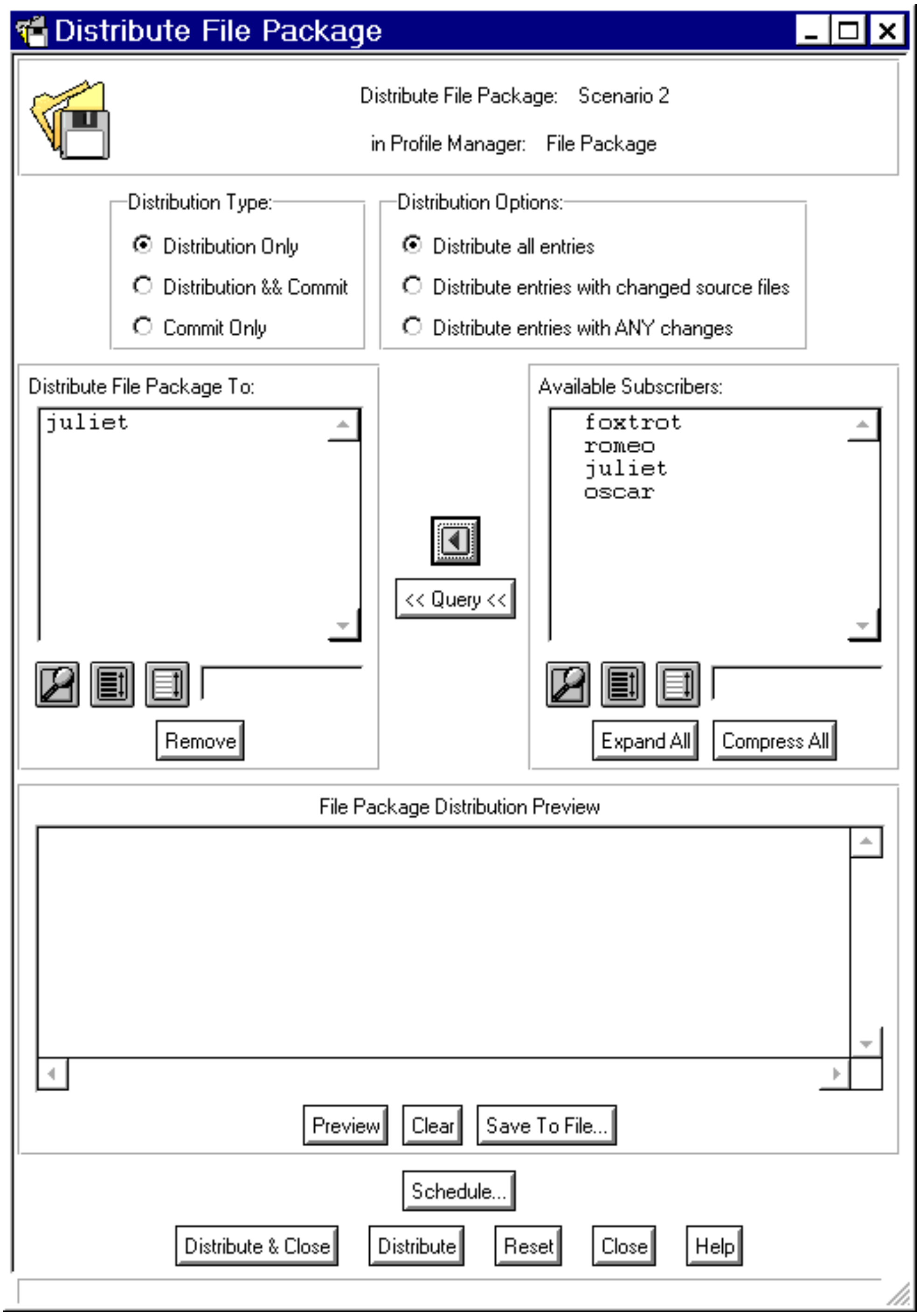
```
c:
cd\
rem delete the files and directory of the old version.
del c:\old\*.* /s/q
rd c:\old /s/q

rem backup the current version in directory OLD.
xcopy c:\data\*.* c:\old\ /s/v/e

rem delete the files and directory of the current version.
del c:\data\*.* /s/q
rd c:\data /s/q

rem copy the distributed data in the current directory DATA.
xcopy c:\service\data\*.* c:\data\ /s/v/e
```

Figure 394



Distribute TME 10 Software Distribution file package

Figure 395



Distribute File Package

Distribute File Package: Scenario 2

in Profile Manager: File Package

Distribution Type:

- ● Distribution Only
- ○ Distribution && Commit
- ○ Commit Only

Distribution Options:

- ● Distribute all entries
- ○ Distribute entries with changed source files
- ○ Distribute entries with ANY changes

Distribute File Package To:

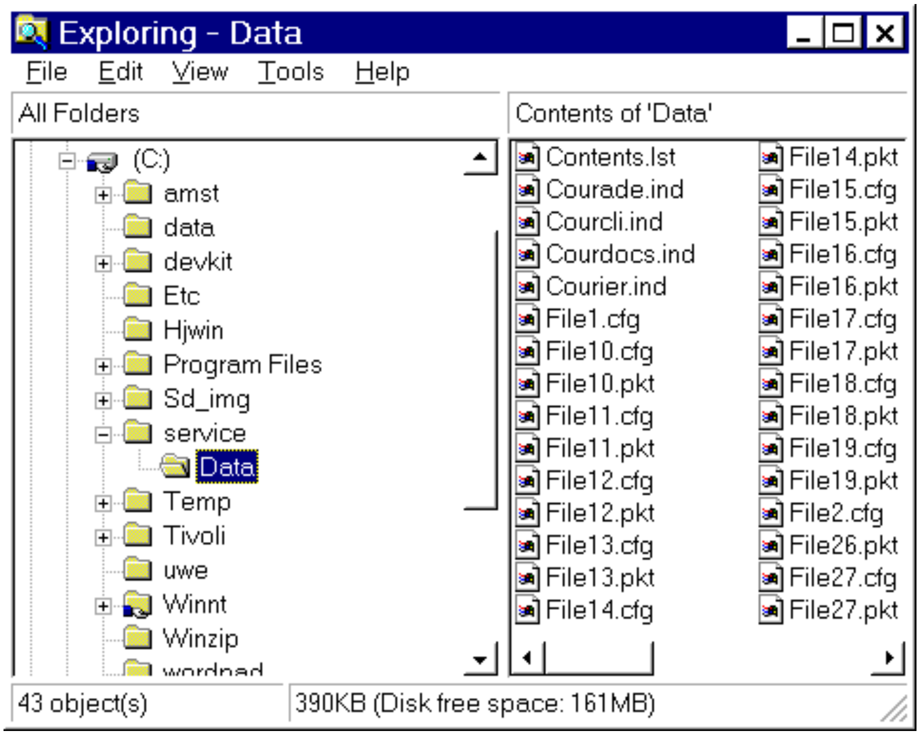
```
juliet
```

Available Subscribers:

```
foxtrot
romeo
juliet
oscar
```

File Package Distribution Preview

Figure 396

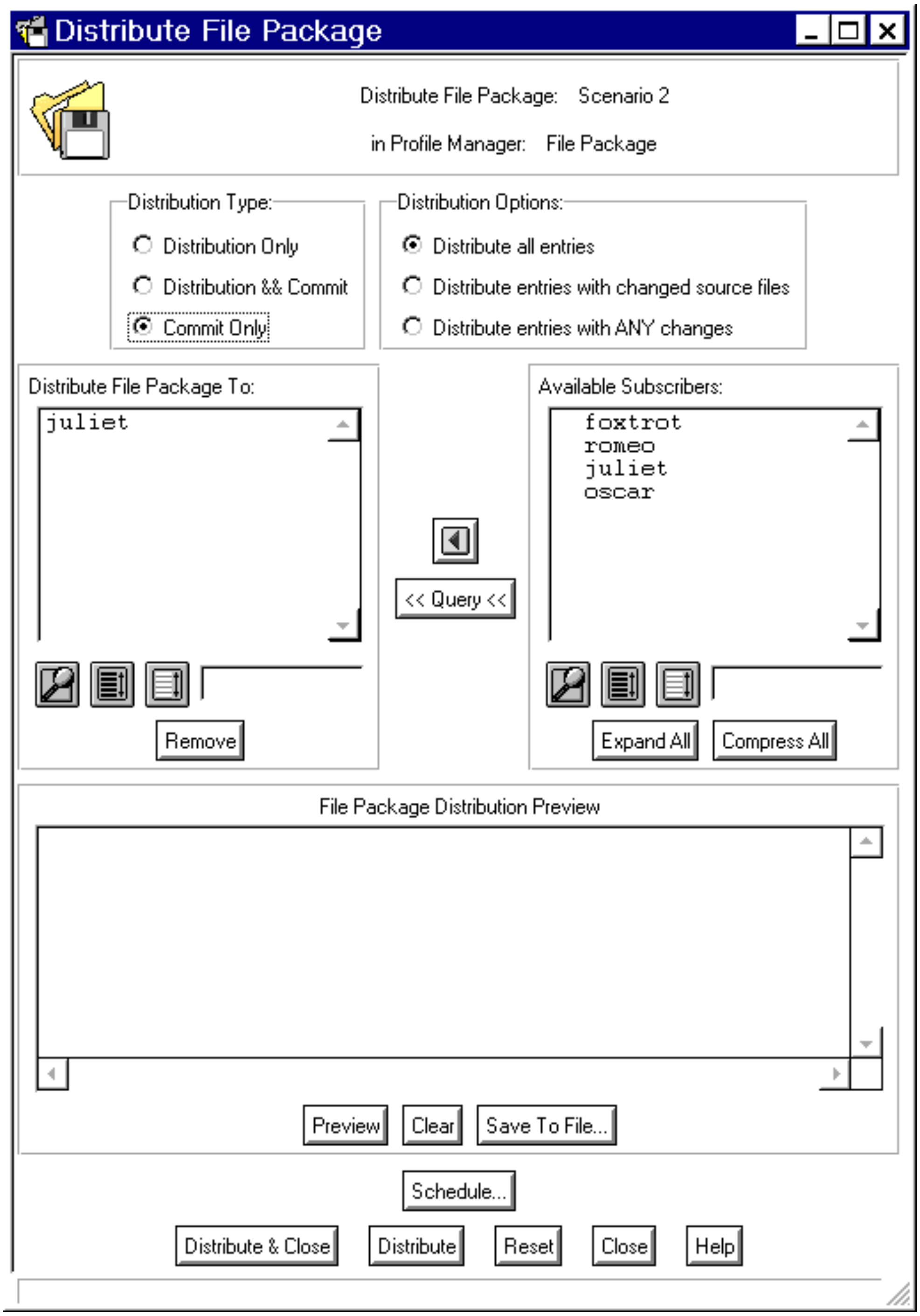


(C:)
amst
data
devkit
Etc
Hjwin
Program Files
Sd_img
service
Data
Temp
Tivoli
uwe
Winnt
Winzip
wordpad

Contents.lst
Courade.ind
Courcli.ind
Courdocs.ind
Courier.ind
File1.cfg
File10.cfg
File10.pkt
File11.cfg
File11.pkt
File12.cfg
File12.pkt
File13.cfg
File13.pkt
File14.cfg
File14.pkt
File15.cfg
File15.pkt
File16.cfg
File16.pkt
File17.cfg
File17.pkt
File18.cfg
File18.pkt
File19.cfg
File19.pkt
File2.cfg
File26.pkt
File27.cfg
File27.pkt

43 object(s)
390KB (Disk free space: 161MB)

Figure 397



Distribute File Package: Scenario 2

in Profile Manager: File Package

Distribution Type:

○ Distribution Only

○ Distribution && Commit

● Commit Only

Distribution Options:

● Distribute all entries

○ Distribute entries with changed source files

○ Distribute entries with ANY changes

Distribute File Package To:

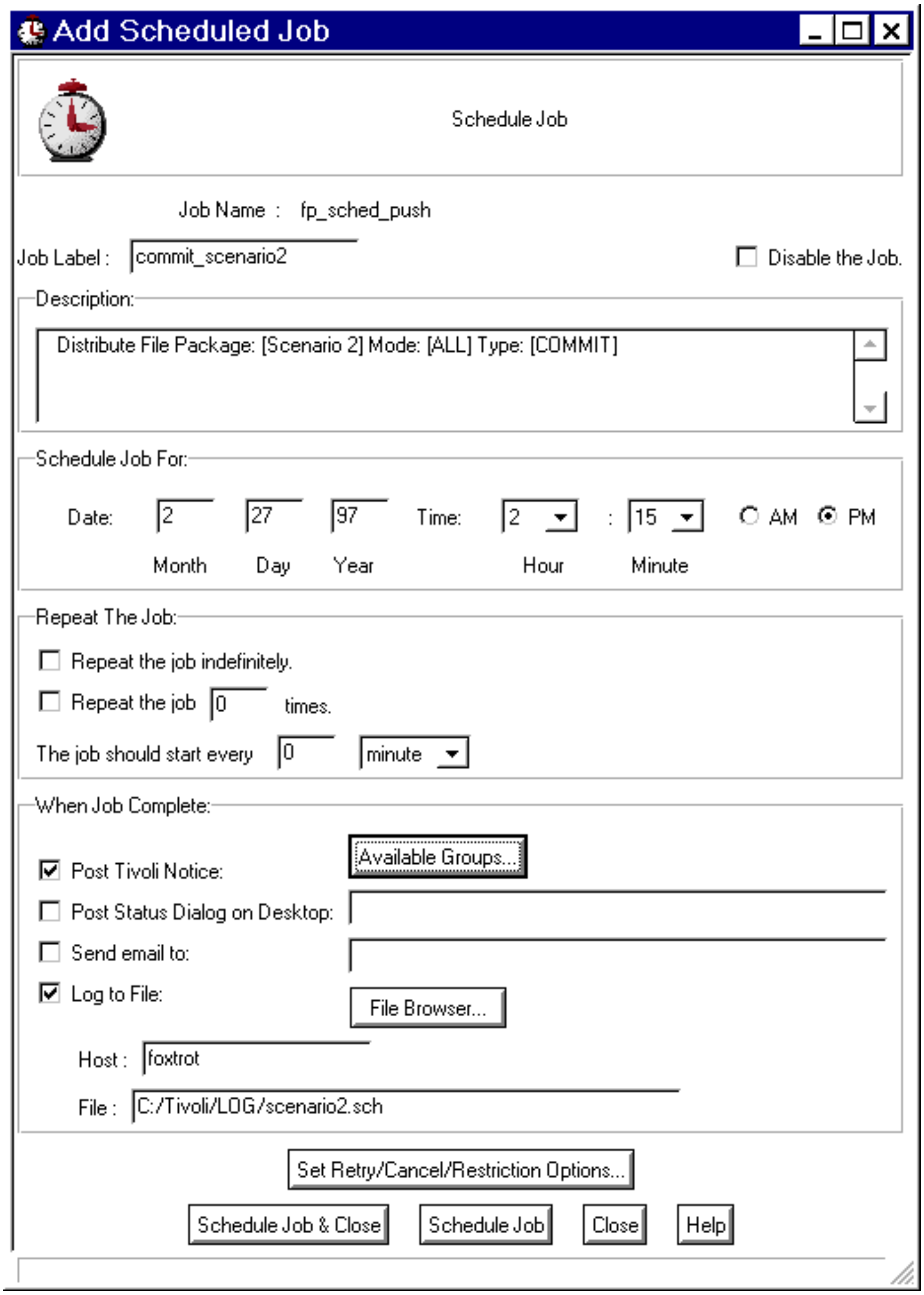
```
juliet
```

Available Subscribers:

```
foxtrot
romeo
juliet
oscar
```

File Package Distribution Preview

Figure 398



Add Scheduled Job

Schedule Job

Job Name : fp_sched_push

Job Label : commit_scenario2

□ Disable the Job.

Description:

Distribute File Package: [Scenario 2] Mode: [ALL] Type: [COMMIT]

Schedule Job For:

Date: 2 (Month) 27 (Day) 97 (Year) Time: 2 (Hour) : 15 (Minute) ○ AM ● PM

Repeat The Job:

□ Repeat the job indefinitely.

□ Repeat the job 0 times.

The job should start every 0 minute

When Job Complete:

☑ Post Tivoli Notice: Available Groups...

□ Post Status Dialog on Desktop:

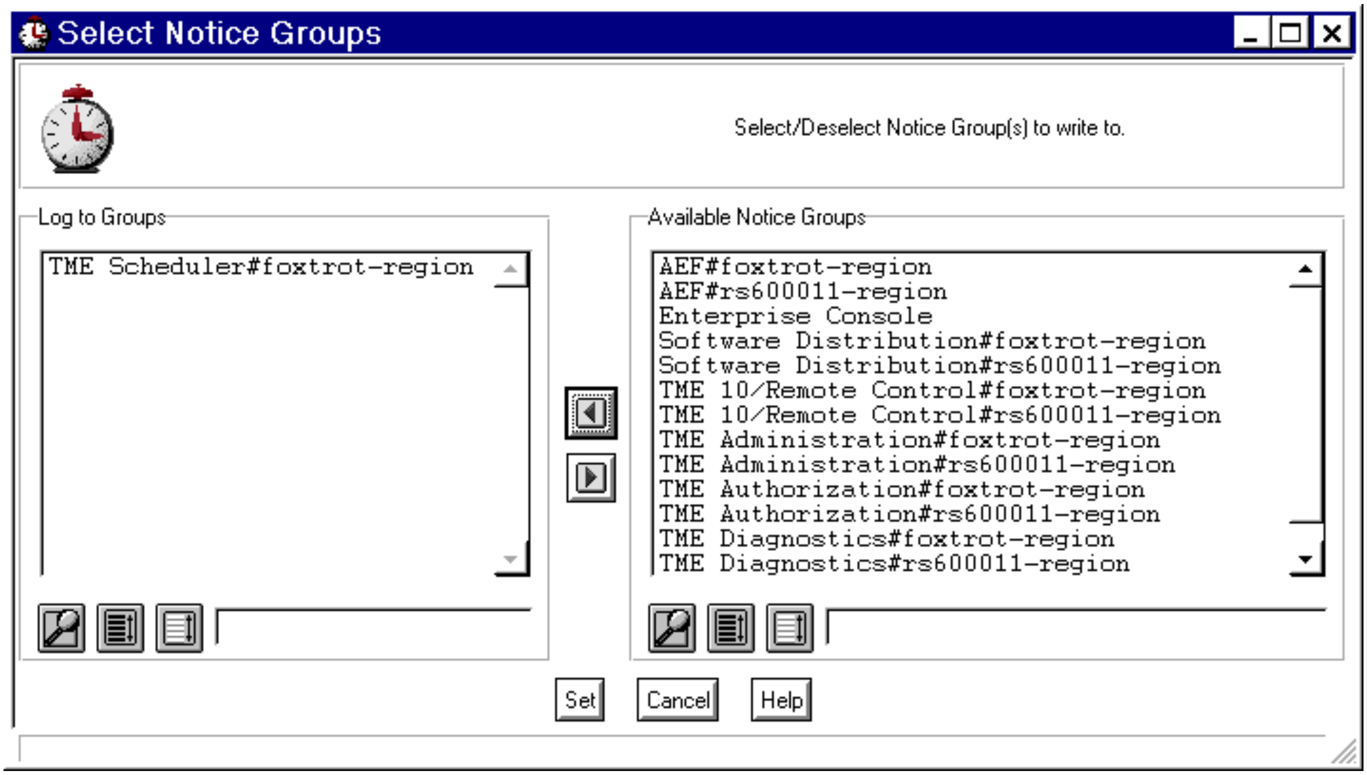
□ Send email to:

☑ Log to File: File Browser...

Host : foxtrot

File : C:/Tivoli/LOG/scenario2.sch

Figure 399



Select Notice Groups

Select/Deselect Notice Group(s) to write to.

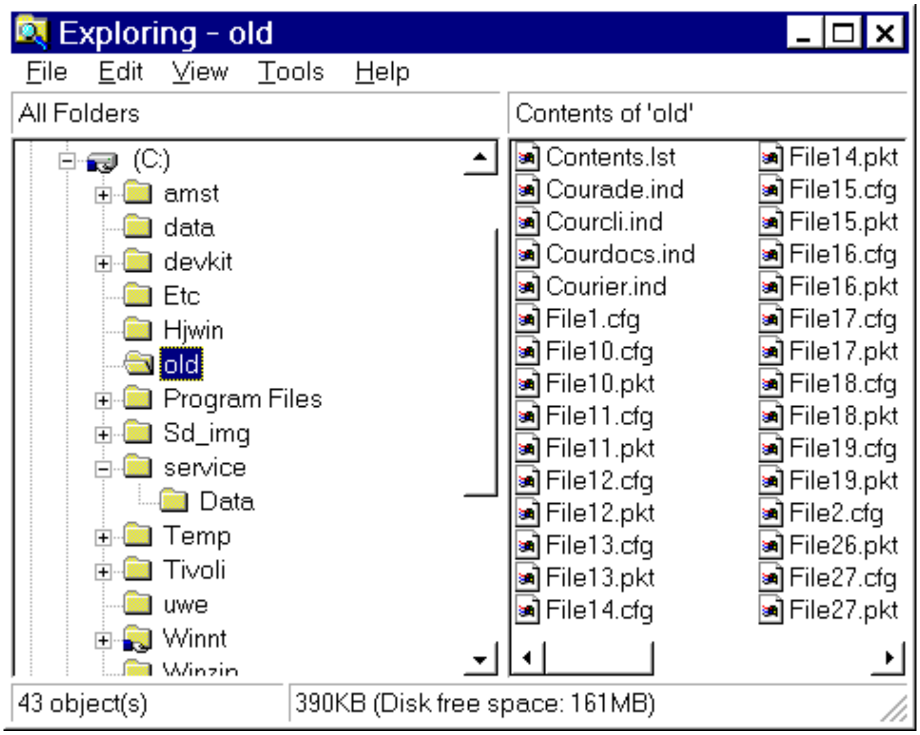
Log to Groups

```
TME Scheduler#foxtrot-region
```

Available Notice Groups

```
AEF#foxtrot-region
AEF#rs600011-region
Enterprise Console
Software Distribution#foxtrot-region
Software Distribution#rs600011-region
TME 10/Remote Control#foxtrot-region
TME 10/Remote Control#rs600011-region
TME Administration#foxtrot-region
TME Administration#rs600011-region
TME Authorization#foxtrot-region
TME Authorization#rs600011-region
TME Diagnostics#foxtrot-region
TME Diagnostics#rs600011-region
```

Figure 400



(C:)
amst
data
devkit
Etc
Hjwin
old
Program Files
Sd_img
service
Data
Temp
Tivoli
uwe
Winnt
Winzip

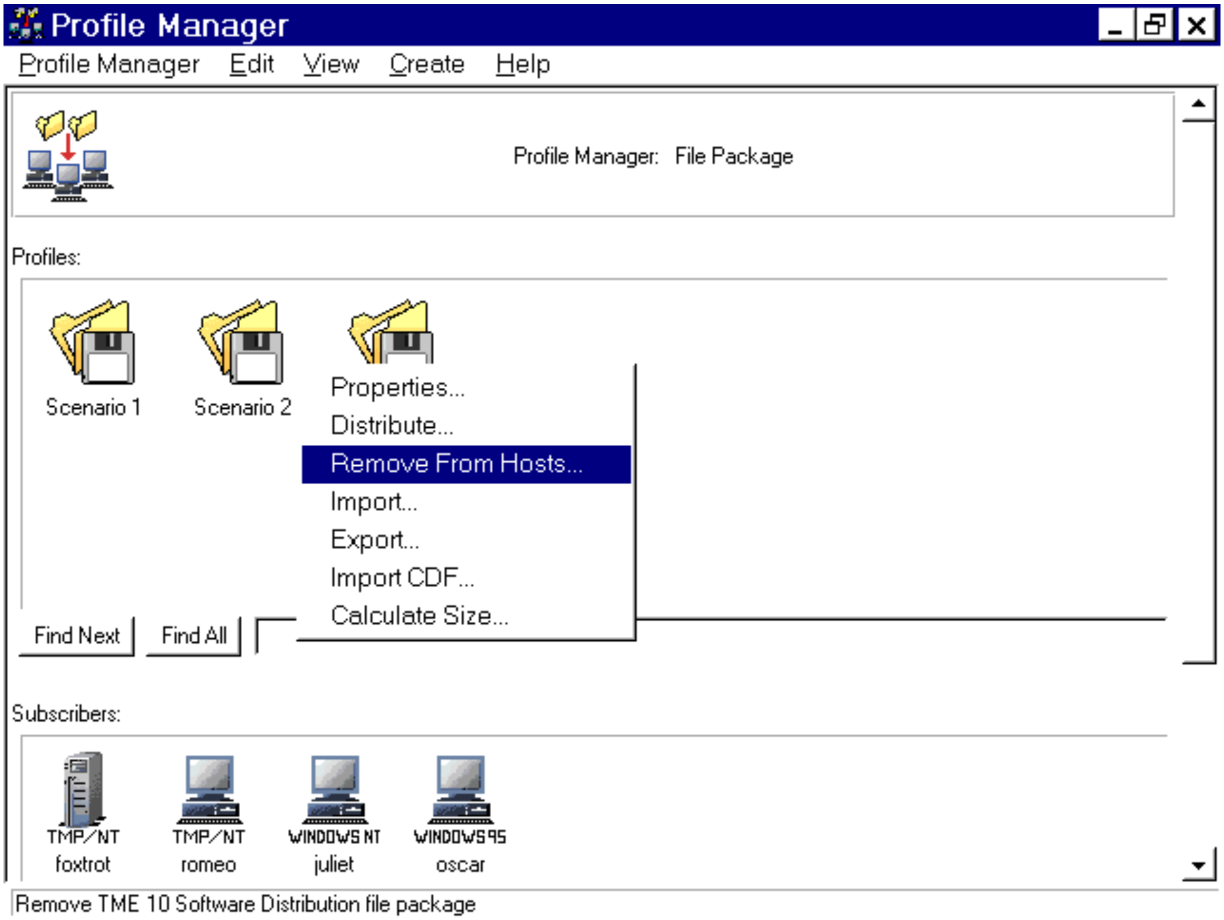
Contents.lst
Courade.ind
Courcli.ind
Courdocs.ind
Courier.ind
File1.cfg
File10.cfg
File10.pkt
File11.cfg
File11.pkt
File12.cfg
File12.pkt
File13.cfg
File13.pkt
File14.cfg
File14.pkt
File15.cfg
File15.pkt
File16.cfg
File16.pkt
File17.cfg
File17.pkt
File18.cfg
File18.pkt
File19.cfg
File19.pkt
File2.cfg
File26.pkt
File27.cfg
File27.pkt

43 object(s)

390KB (Disk free space: 161MB)

Figure 401

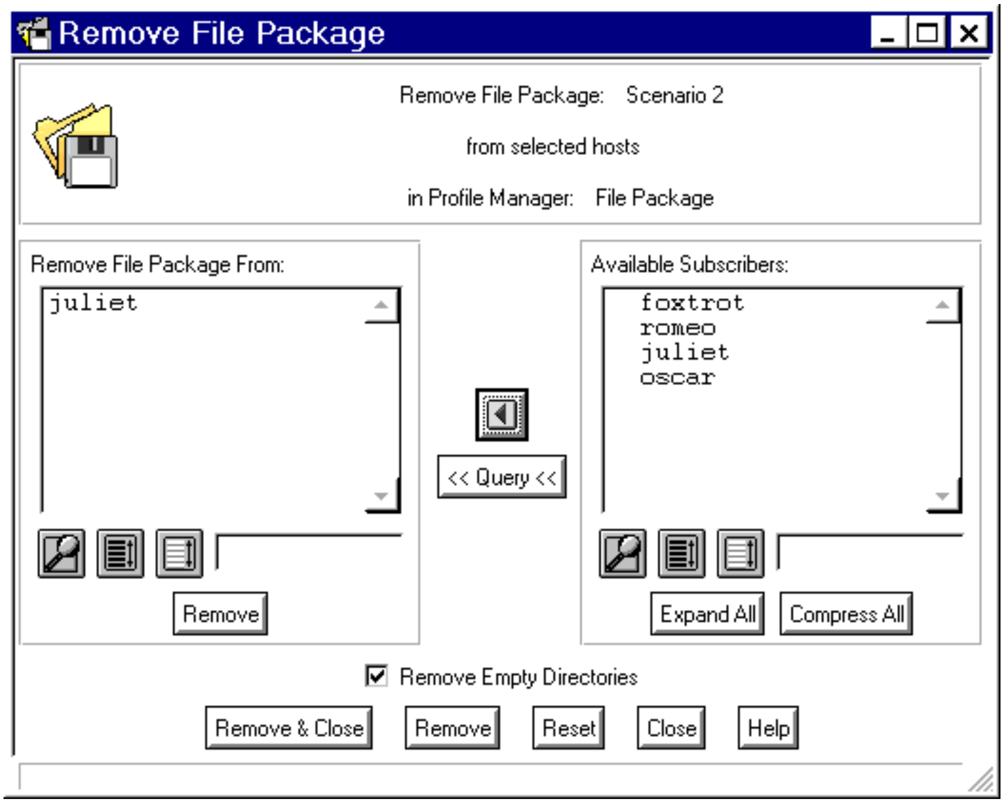
Figure 491



Remove TME 10 Software Distribution file package

Figure 402

Figure 402



Remove File Package: Scenario 2

from selected hosts

in Profile Manager: File Package

Remove File Package From:

juliet

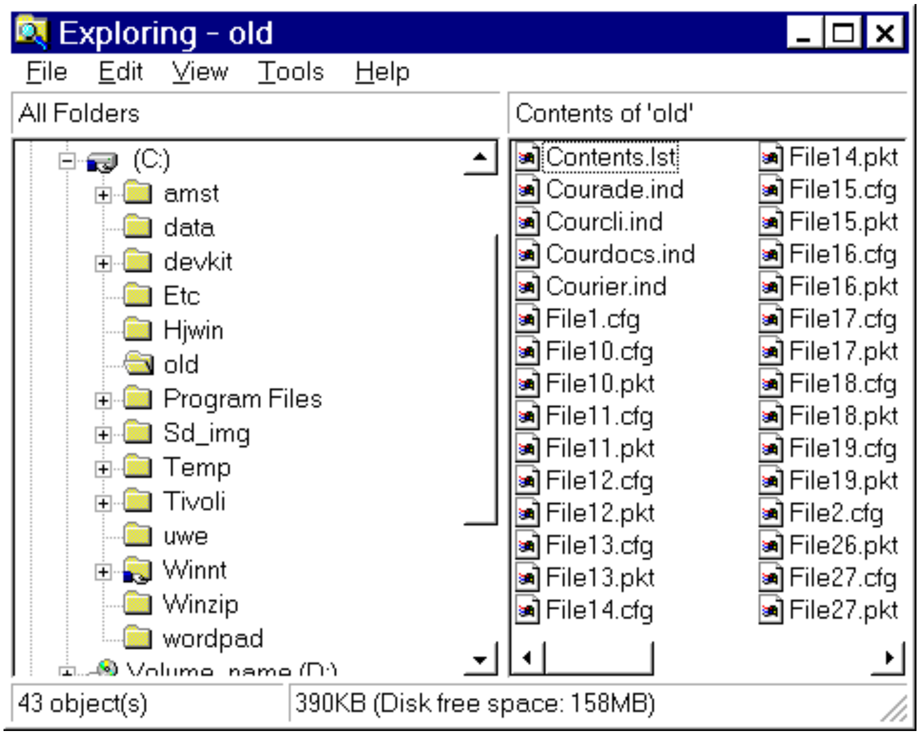
Available Subscribers:

foxtrot
romeo
juliet
oscar

☑ Remove Empty Directories

Figure 403

Figure 493



Exploring - old

All Folders

- (C:)
  - amst
  - data
  - devkit
  - Etc
  - Hjwin
  - old
  - Program Files
  - Sd_img
  - Temp
  - Tivoli
  - uwe
  - Winnt
  - Winzip
  - wordpad
- Volume_name (D:)

Contents of 'old'

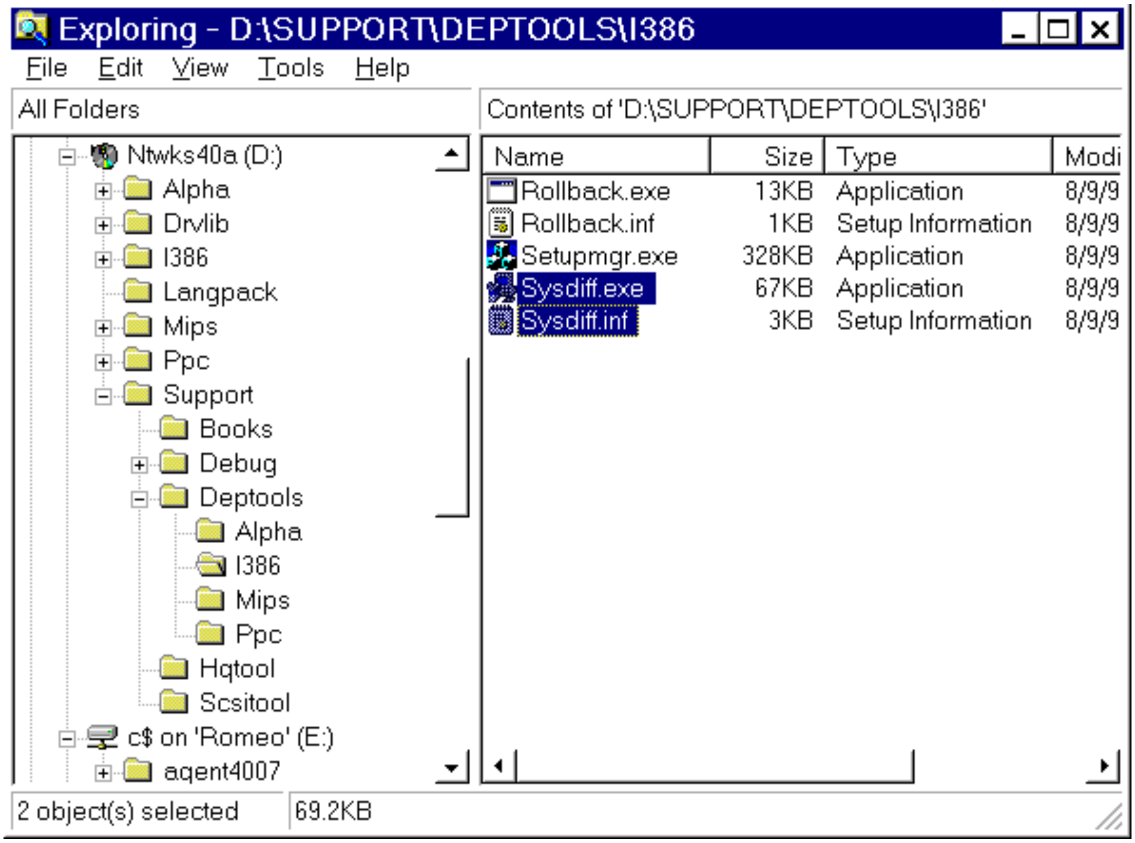
Contents.lst
Courade.ind
Courcli.ind
Courdocs.ind
Courier.ind
File1.cfg
File10.cfg
File10.pkt
File11.cfg
File11.pkt
File12.cfg
File12.pkt
File13.cfg
File13.pkt
File14.cfg
File14.pkt
File15.cfg
File15.pkt
File16.cfg
File16.pkt
File17.cfg
File17.pkt
File18.cfg
File18.pkt
File19.cfg
File19.pkt
File2.cfg
File26.pkt
File27.cfg
File27.pkt

43 object(s)

390KB (Disk free space: 158MB)

Figure 494

Figure 474



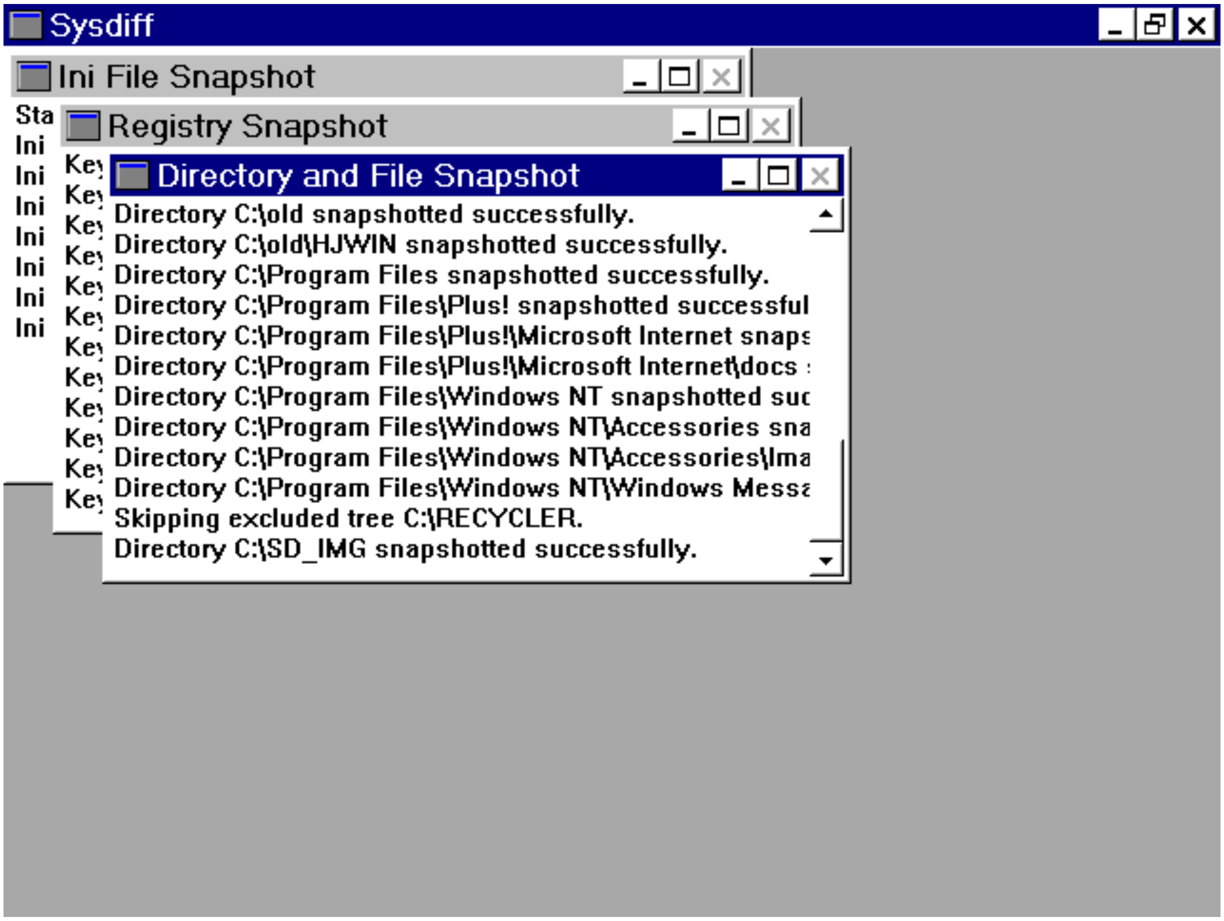
Contents of 'D:\SUPPORT\DEPTOOLS\I386'

Name	Size	Type	Modi
Rollback.exe	13KB	Application	8/9/9
Rollback.inf	1KB	Setup Information	8/9/9
Setupmgr.exe	328KB	Application	8/9/9
Sysdiff.exe	67KB	Application	8/9/9
Sysdiff.inf	3KB	Setup Information	8/9/9

2 object(s) selected | 69.2KB

Figure 495

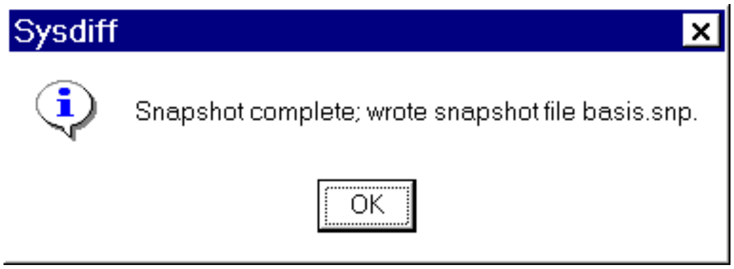
Figure 405.



```
Directory C:\old snapshotted successfully.
Directory C:\old\HJWIN snapshotted successfully.
Directory C:\Program Files snapshotted successfully.
Directory C:\Program Files\Plus! snapshotted successful
Directory C:\Program Files\Plus!\Microsoft Internet snaps
Directory C:\Program Files\Plus!\Microsoft Internet\docs :
Directory C:\Program Files\Windows NT snapshotted suc
Directory C:\Program Files\Windows NT\Accessories sna
Directory C:\Program Files\Windows NT\Accessories\Ima
Directory C:\Program Files\Windows NT\Windows Messa
Skipping excluded tree C:\RECYCLER.
Directory C:\SD_IMG snapshotted successfully.
```

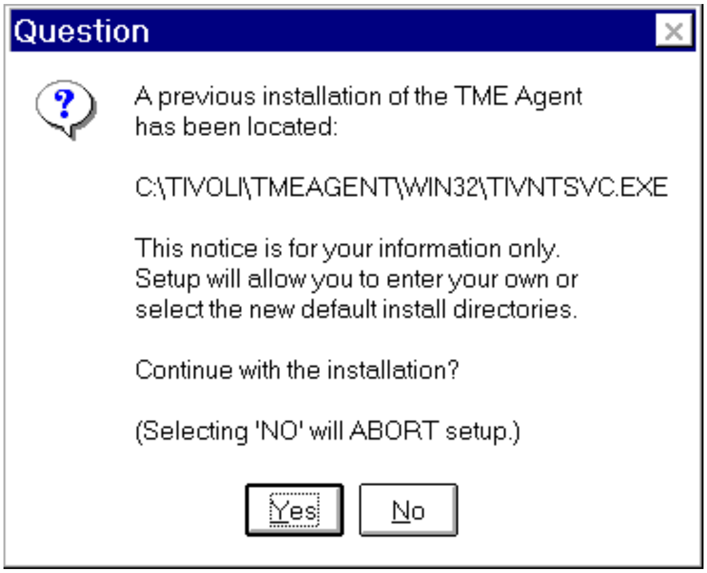
Figure 406

Figure 496



Snapshot complete; wrote snapshot file basis.snp.

Figure 407.



A previous installation of the TME Agent has been located:

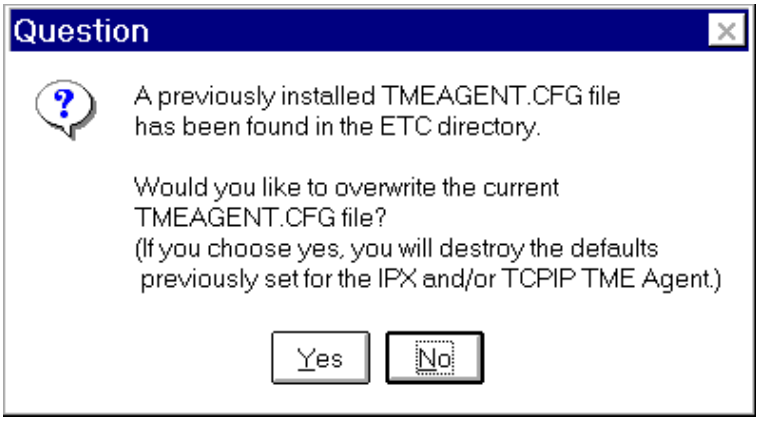
C:\TIVOLI\TMEAGENT\WIN32\TIVNTSVC.EXE

This notice is for your information only. Setup will allow you to enter your own or select the new default install directories.

Continue with the installation?

(Selecting 'NO' will ABORT setup.)

Figure 408



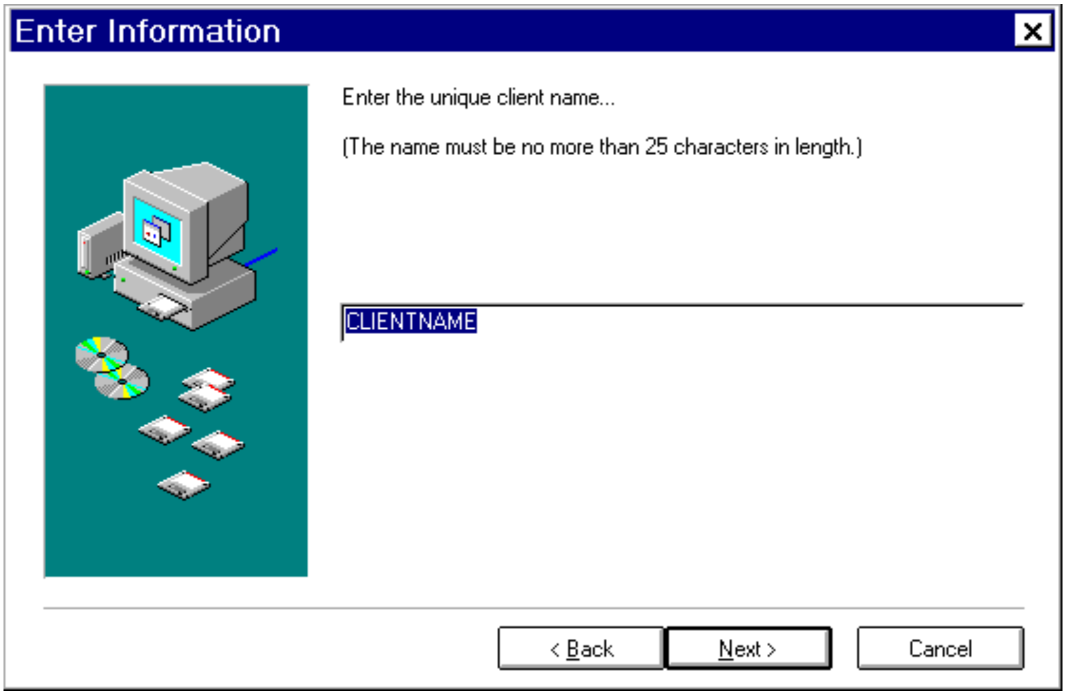
Question

A previously installed TMEAGENT.CFG file
has been found in the ETC directory.

Would you like to overwrite the current
TMEAGENT.CFG file?
(If you choose yes, you will destroy the defaults
previously set for the IPX and/or TCPIP TME Agent.)

Figure 409

Figure 409



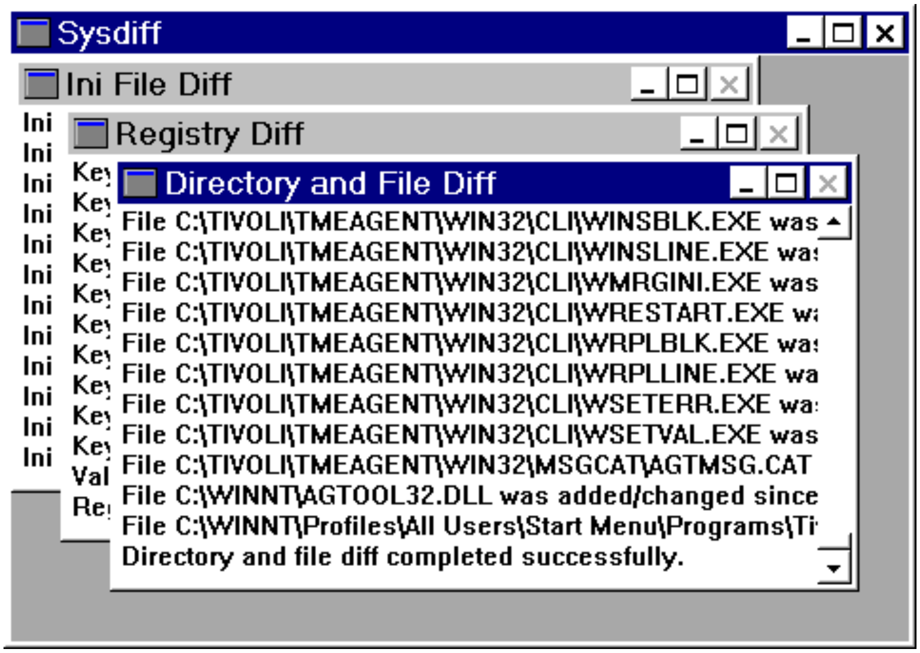
Enter Information

Enter the unique client name...

(The name must be no more than 25 characters in length.)

CLIENTNAME

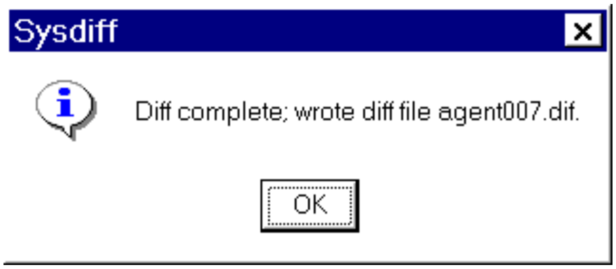
Figure 410



```
File C:\TIVOLI\TMEAGENT\WIN32\CLI\WINSBLK.EXE was
File C:\TIVOLI\TMEAGENT\WIN32\CLI\WINSLINE.EXE was
File C:\TIVOLI\TMEAGENT\WIN32\CLI\WMRGINI.EXE was
File C:\TIVOLI\TMEAGENT\WIN32\CLI\WRESTART.EXE wa
File C:\TIVOLI\TMEAGENT\WIN32\CLI\WRPLBLK.EXE was
File C:\TIVOLI\TMEAGENT\WIN32\CLI\WRPLLINE.EXE wa
File C:\TIVOLI\TMEAGENT\WIN32\CLI\WSETERR.EXE was
File C:\TIVOLI\TMEAGENT\WIN32\CLI\WSETVAL.EXE was
File C:\TIVOLI\TMEAGENT\WIN32\MSGCAT\AGTMSG.CAT
File C:\WINNT\AGTOOL32.DLL was added/changed since
File C:\WINNT\Profiles\All Users\Start Menu\Programs\Ti
Directory and file diff completed successfully.
```

Figure 47

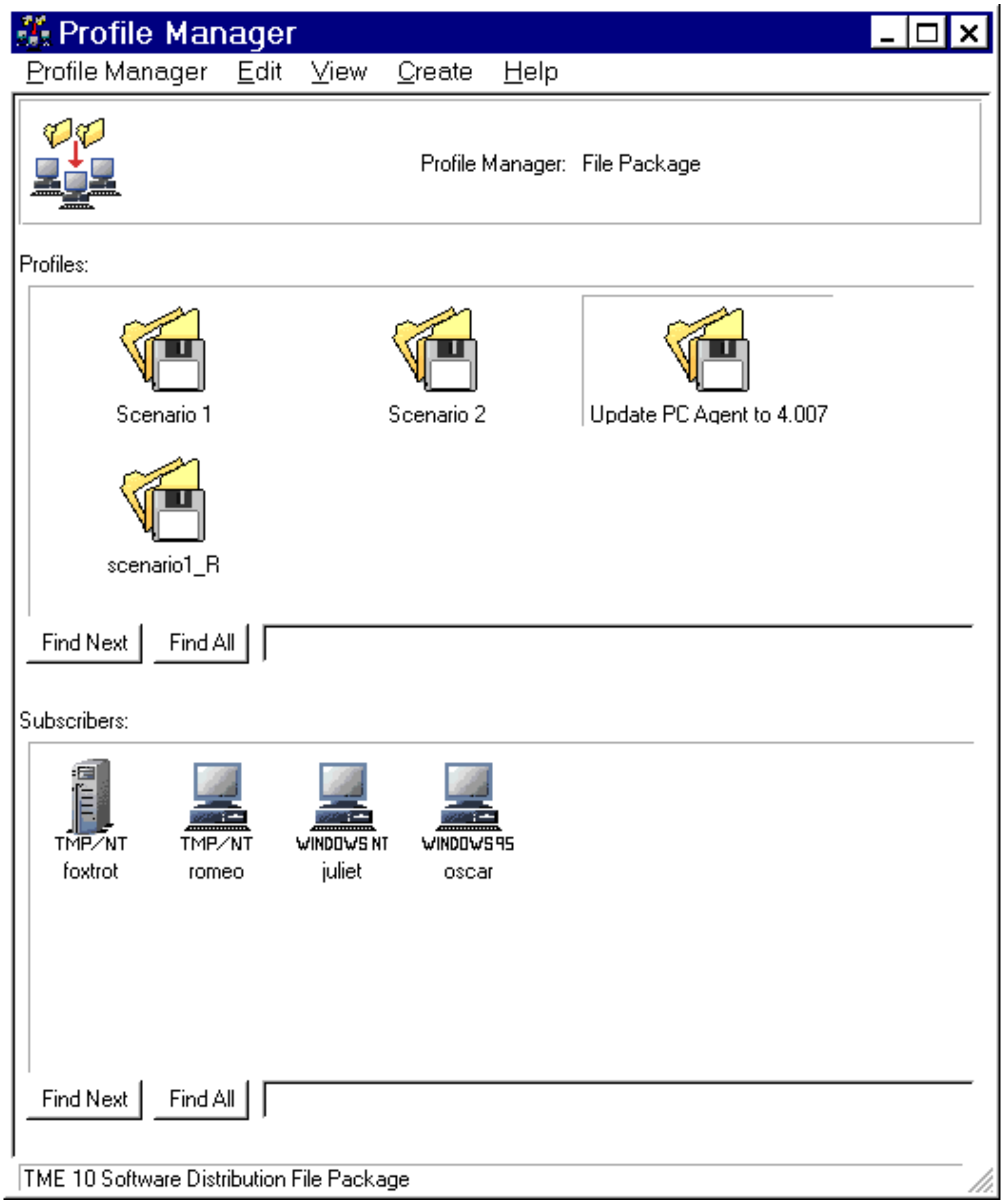
Figure 471



Diff complete; wrote diff file agent007.dif.

Figure 412

Figure 412



Profile Manager: File Package

Profiles:

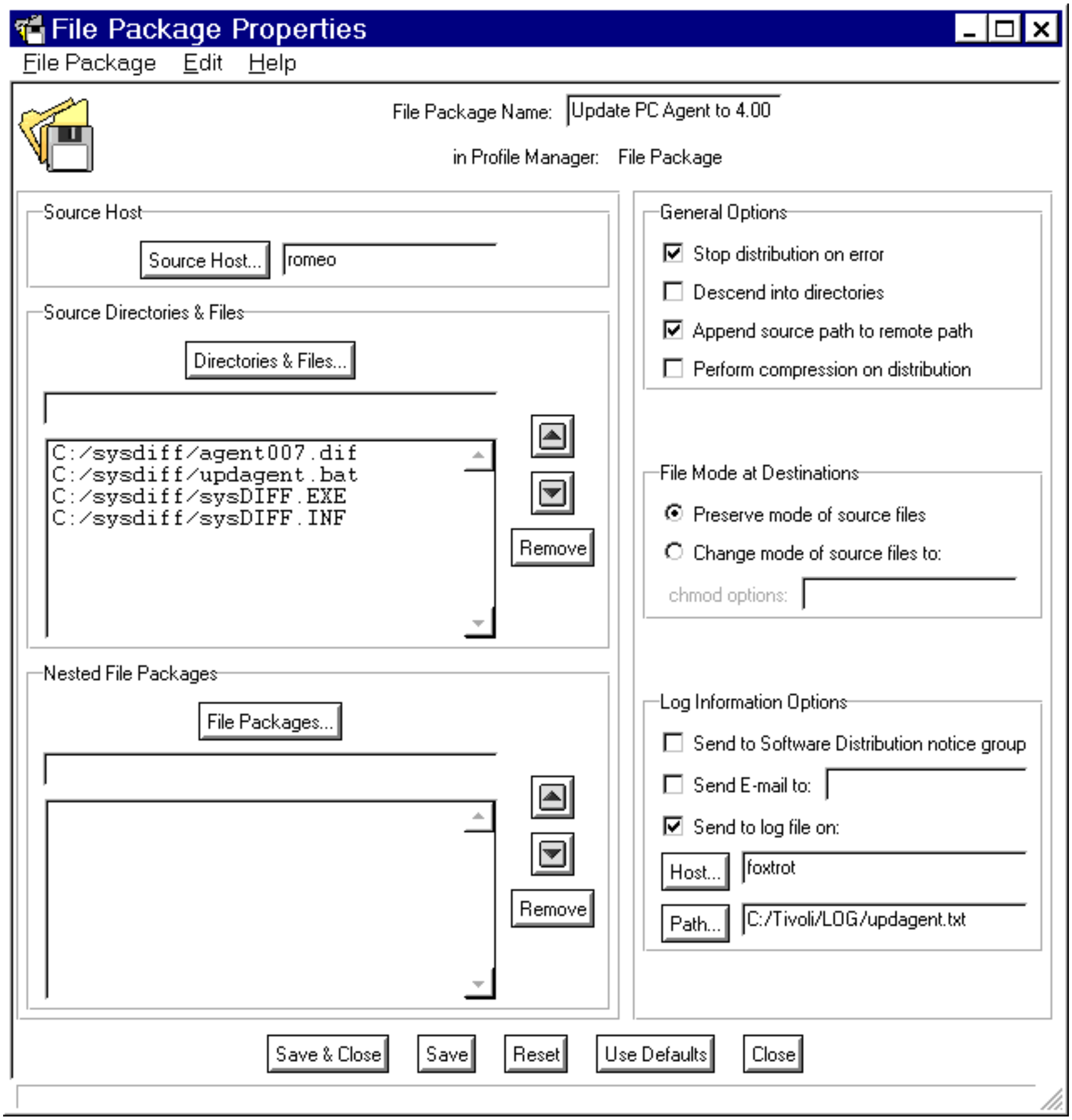
- Scenario 1
- Scenario 2
- Update PC Agent to 4.007
- scenario1_R

Subscribers:

TMP/NT	foxtrot
TMP/NT	romeo
WINDOWS NT	juliet
WINDOWS95	oscar

TME 10 Software Distribution File Package

Figure 413



File Package Name: Update PC Agent to 4.00

in Profile Manager: File Package

Source Host

romeo

Source Directories & Files

```
C:/sysdiff/agent007.dif
C:/sysdiff/updagent.bat
C:/sysdiff/sysDIFF.EXE
C:/sysdiff/sysDIFF.INF
```

Nested File Packages

General Options

- ☑ Stop distribution on error
- □ Descend into directories
- ☑ Append source path to remote path
- □ Perform compression on distribution

File Mode at Destinations

- ● Preserve mode of source files
- ○ Change mode of source files to:

chmod options:

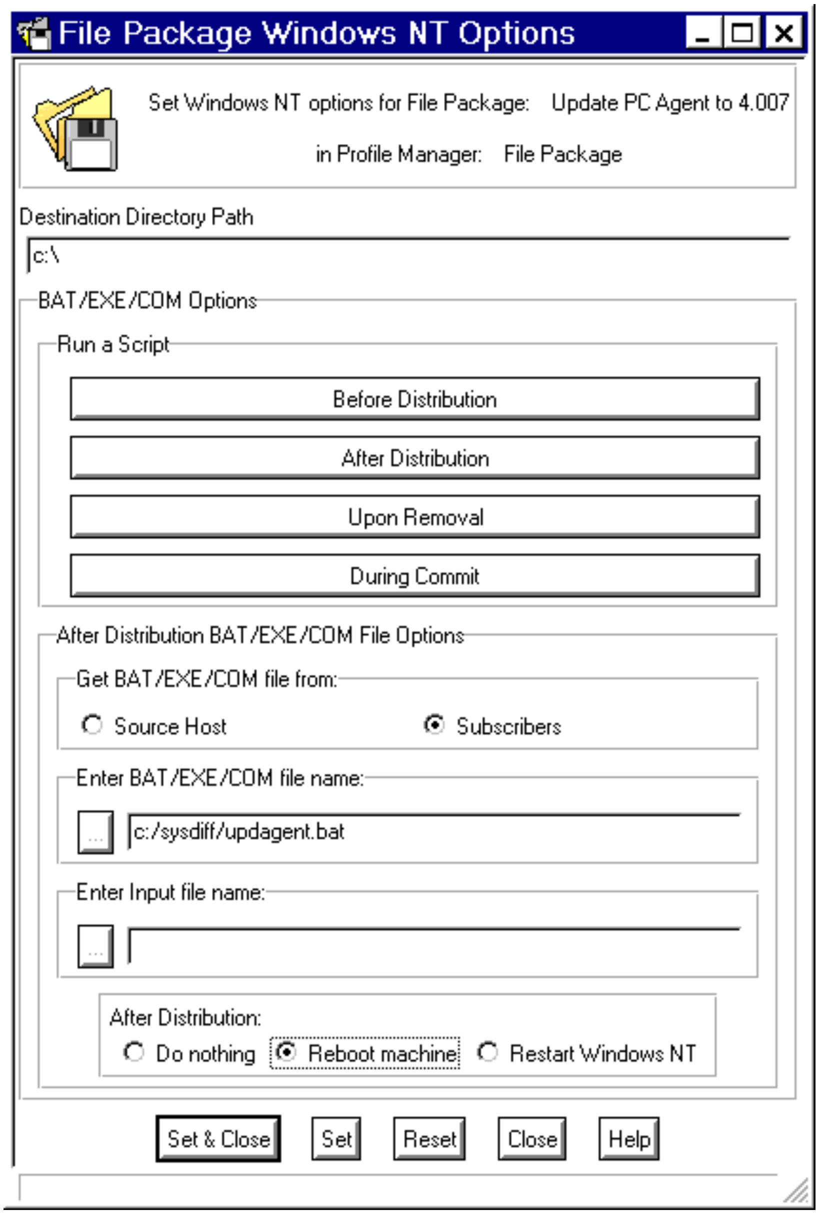
Log Information Options

- □ Send to Software Distribution notice group
- □ Send E-mail to:
- ☑ Send to log file on:

Host... foxtrot

Path... C:/Tivoli/LOG/updagent.txt

https://web.archive.org/web/19970803073047/http://www.redbooks.ibm.com:80/SG244976/xupda10.gif



File Package Windows NT Options

Set Windows NT options for File Package: Update PC Agent to 4.007

in Profile Manager: File Package

Destination Directory Path: c:\

BAT/EXE/COM Options

After Distribution BAT/EXE/COM File Options

Get BAT/EXE/COM file from: ○ Source Host ● Subscribers

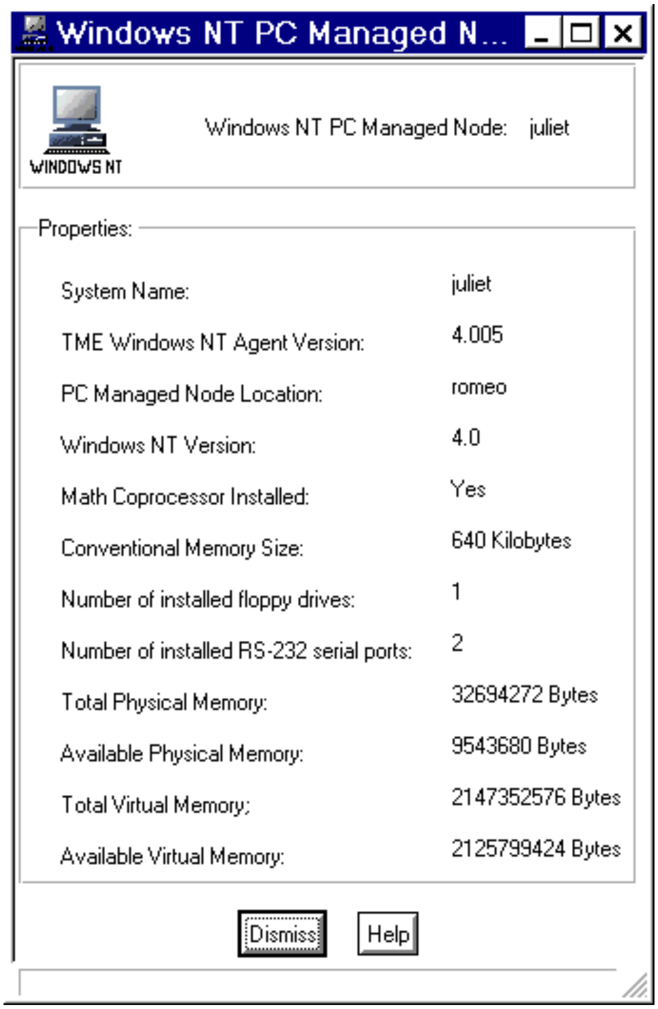
Enter BAT/EXE/COM file name: c:/sysdiff/updagent.bat

Enter Input file name:

After Distribution: ○ Do nothing ● Reboot machine ○ Restart Windows NT

Figure 415

Figure 415



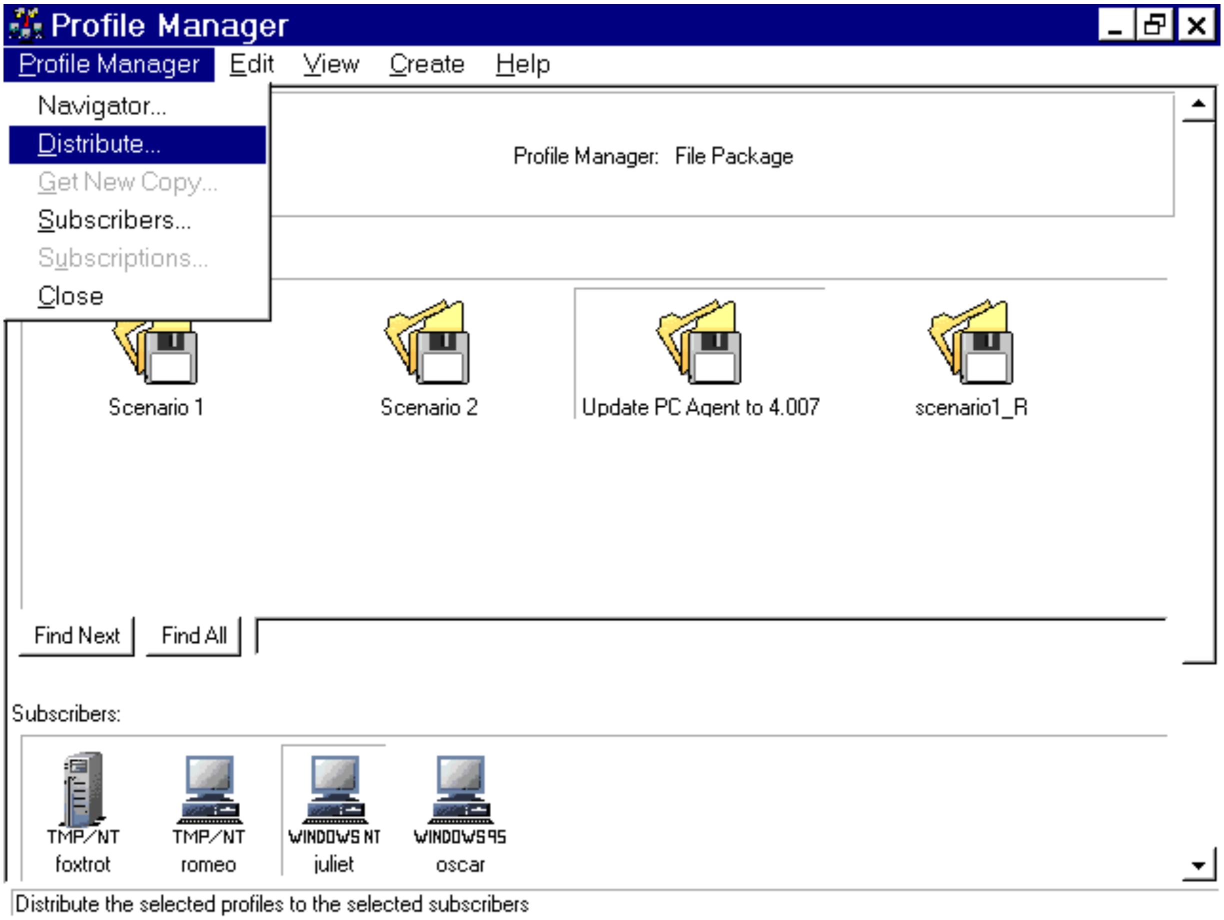
Windows NT PC Managed Node: juliet

Properties:

System Name:	juliet
TME Windows NT Agent Version:	4.005
PC Managed Node Location:	romeo
Windows NT Version:	4.0
Math Coprocessor Installed:	Yes
Conventional Memory Size:	640 Kilobytes
Number of installed floppy drives:	1
Number of installed RS-232 serial ports:	2
Total Physical Memory:	32694272 Bytes
Available Physical Memory:	9543680 Bytes
Total Virtual Memory;	2147352576 Bytes
Available Virtual Memory:	2125799424 Bytes

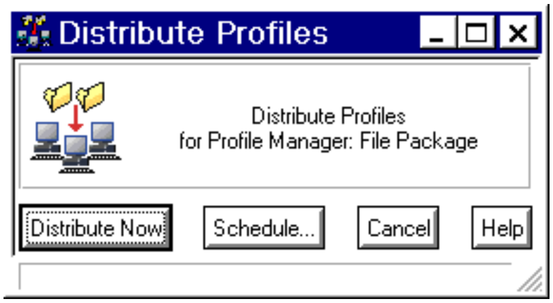
Figure 416

Figure 416.



Distribute the selected profiles to the selected subscribers

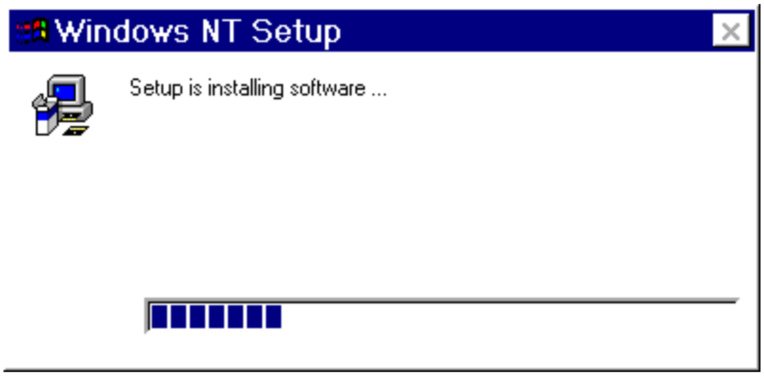
Figure 477



Distribute Profiles
for Profile Manager: File Package

Figure 418

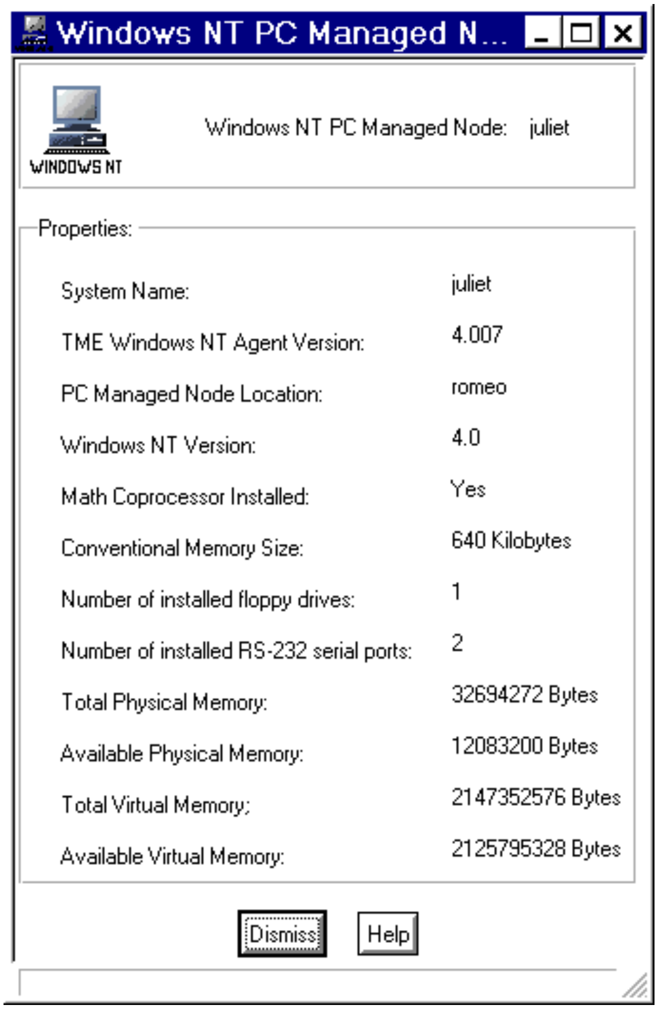
Figure 418



Setup is installing software ...

Figure 419

Figure 419

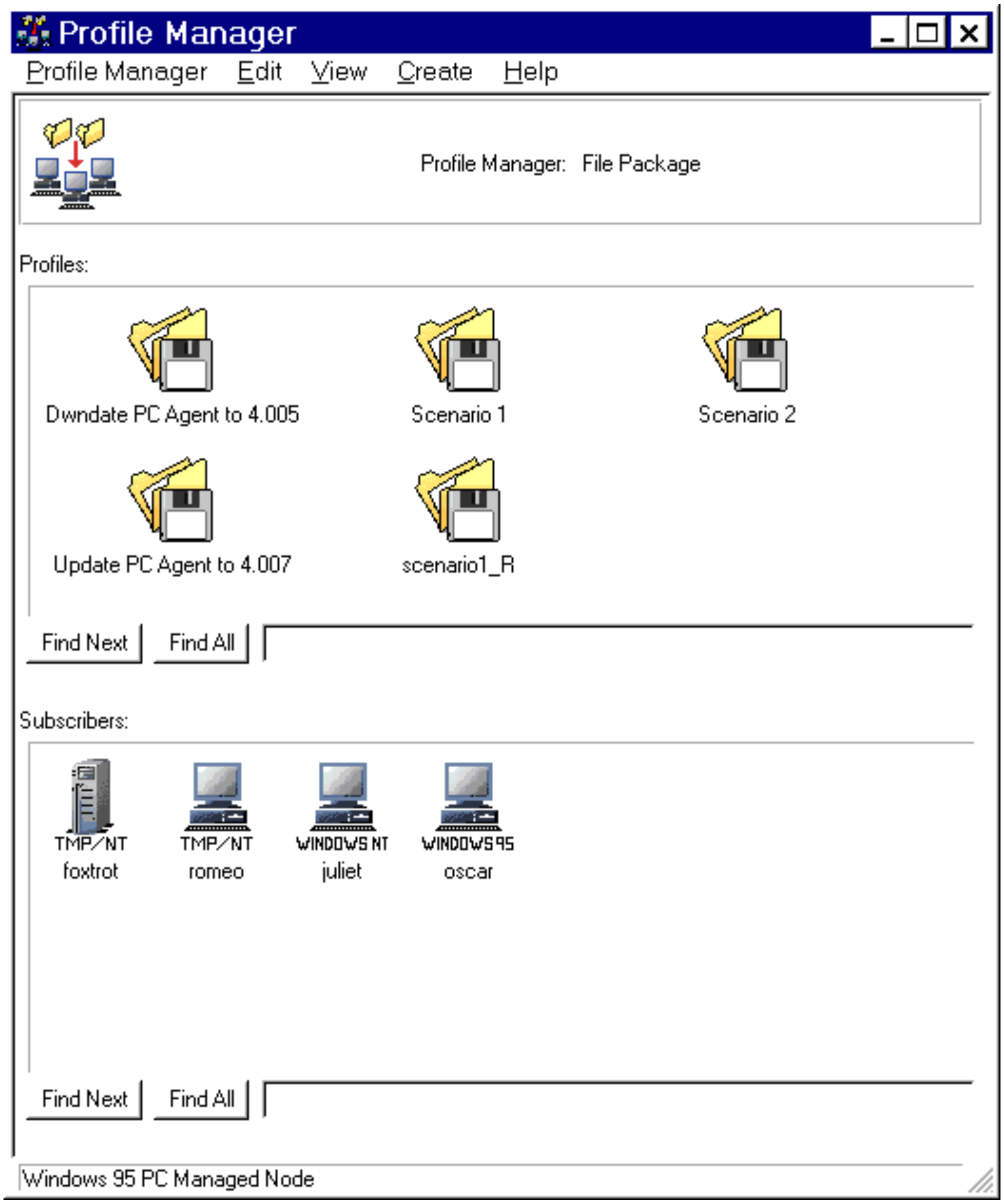


Windows NT PC Managed Node: juliet

Properties:

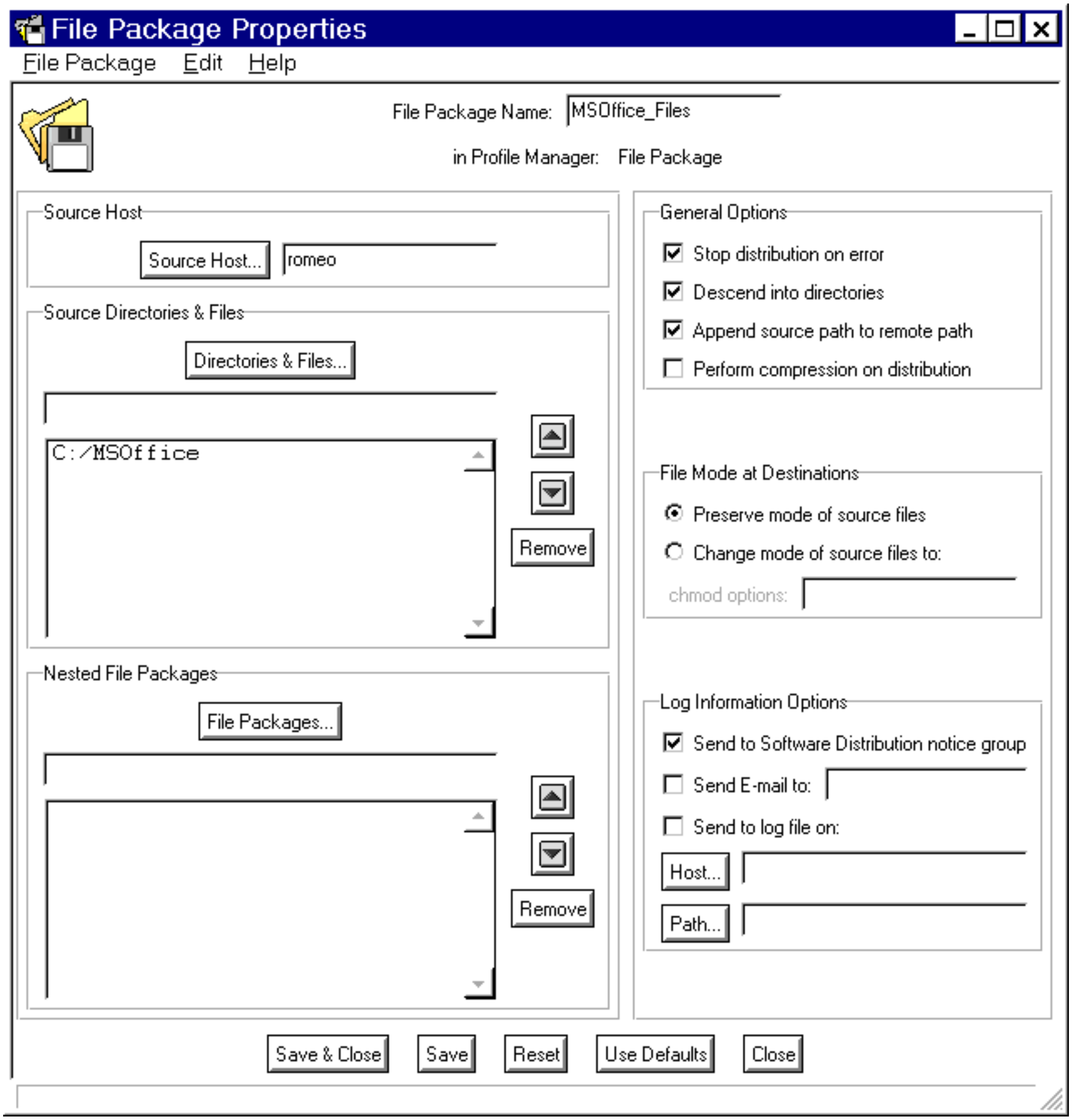
System Name:	juliet
TME Windows NT Agent Version:	4.007
PC Managed Node Location:	romeo
Windows NT Version:	4.0
Math Coprocessor Installed:	Yes
Conventional Memory Size:	640 Kilobytes
Number of installed floppy drives:	1
Number of installed RS-232 serial ports:	2
Total Physical Memory:	32694272 Bytes
Available Physical Memory:	12083200 Bytes
Total Virtual Memory:	2147352576 Bytes
Available Virtual Memory:	2125795328 Bytes

Figure 4-70



Profile Manager
Profile Manager Edit View Create Help
Profile Manager: File Package
Profiles:
Dwndate PC Agent to 4.005
Scenario 1
Scenario 2
Update PC Agent to 4.007
scenario1_R
Find Next
Find All
Subscribers:
TMP/NT
foxtrot
TMP/NT
romeo
WINDOWS NT
juliet
WINDOWS 95
oscar
Find Next
Find All
Windows 95 PC Managed Node

Figure 421



File Package Name: MSOffice_Files

in Profile Manager: File Package

Source Host

romeo

Source Directories & Files

C:/MSOffice

Nested File Packages

General Options

☑ Stop distribution on error
☑ Descend into directories
☑ Append source path to remote path
☐ Perform compression on distribution

File Mode at Destinations

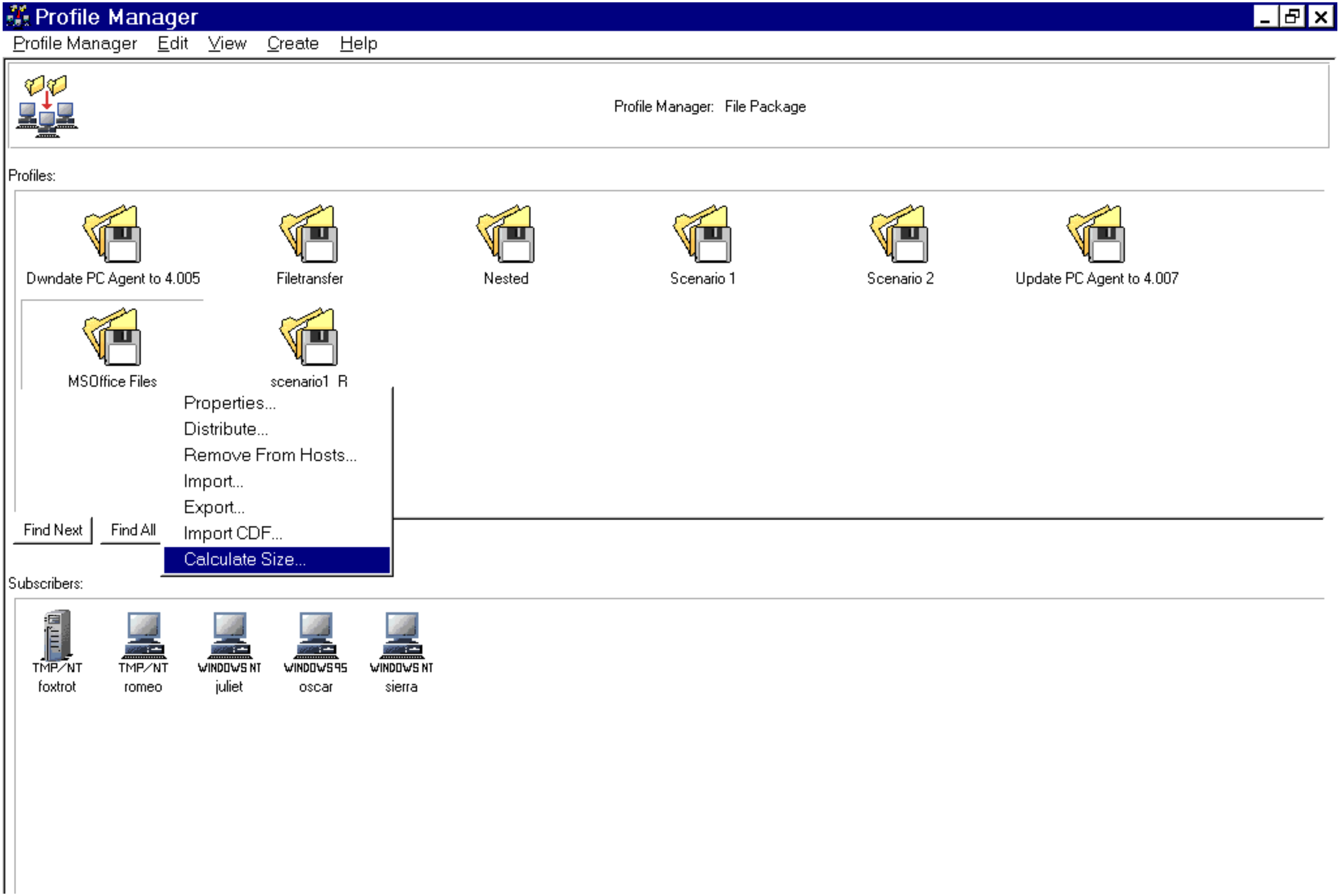
● Preserve mode of source files
○ Change mode of source files to:
chmod options:

Log Information Options

☑ Send to Software Distribution notice group
☐ Send E-mail to:
☐ Send to log file on:

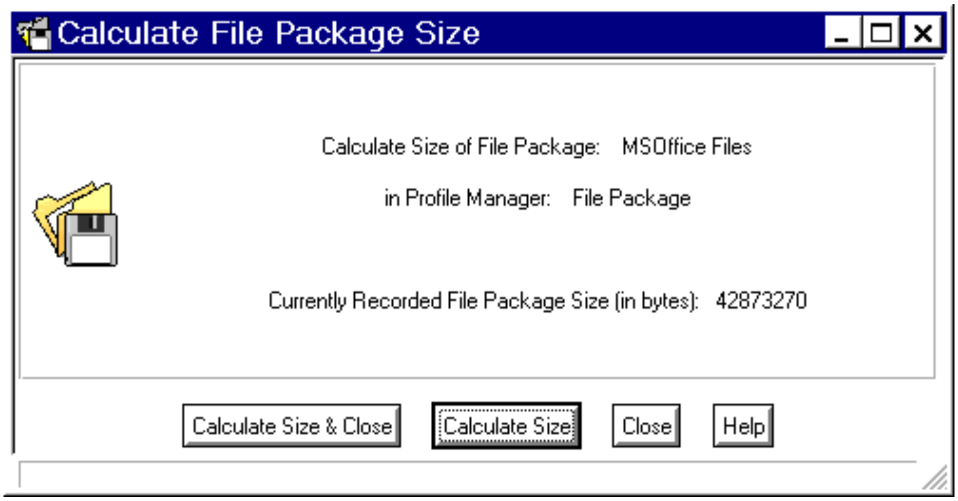
Figure 422

Figure 422


Profile Manager
Profile Manager
Edit
View
Create
Help
Profile Manager: File Package
Profiles:
Dwndate PC Agent to 4.005
Filetransfer
Nested
Scenario 1
Scenario 2
Update PC Agent to 4.007
MSOffice Files
scenario1 R
Properties...
Distribute...
Remove From Hosts...
Import...
Export...
Import CDF...
Calculate Size...
Find Next
Find All
Subscribers:
TMP/NT
foxtrot
TMP/NT
romeo
WINDOWS NT
juliet
WINDOWS 95
oscar
WINDOWS NT
sierra

Calculate and set TME 10 Software Distribution file package size

Figure 423



Calculate File Package Size

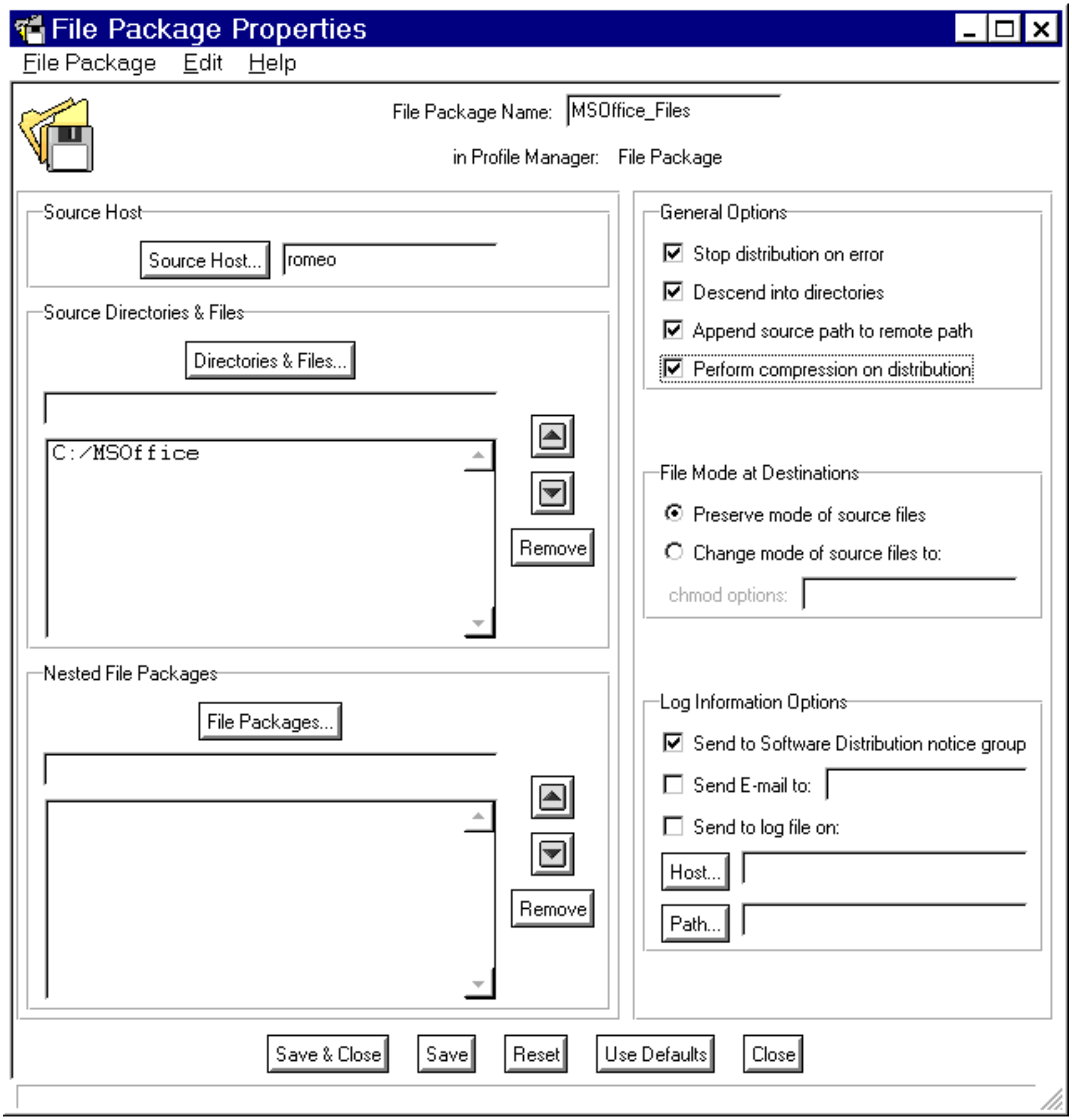
Calculate Size of File Package: MSOffice Files

in Profile Manager: File Package

Currently Recorded File Package Size (in bytes): 42873270

Figure 4-24

Figure 424.



File Package Name: MSOffice_Files

in Profile Manager: File Package

Source Host

romeo

Source Directories & Files

C:/MSOffice

Nested File Packages

General Options

☑ Stop distribution on error

☑ Descend into directories

☑ Append source path to remote path

☑ Perform compression on distribution

File Mode at Destinations

● Preserve mode of source files

○ Change mode of source files to:

chmod options:

Log Information Options

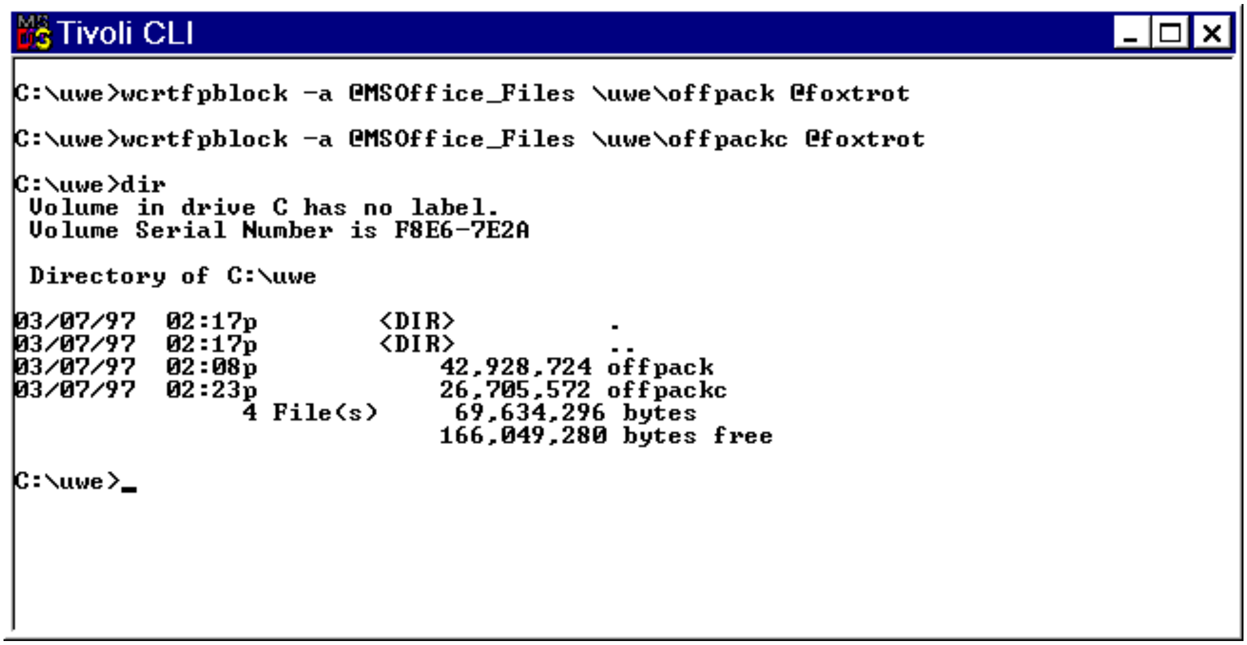
☑ Send to Software Distribution notice group

□ Send E-mail to:

□ Send to log file on:

Figure 425

Figure 425



```
C:\uwe>wcrtfpblock -a @MSOffice_Files \uwe\offpack @foxtrot

C:\uwe>wcrtfpblock -a @MSOffice_Files \uwe\offpackc @foxtrot

C:\uwe>dir
 Volume in drive C has no label.
 Volume Serial Number is F8E6-7E2A

 Directory of C:\uwe

03/07/97  02:17p        <DIR>          .
03/07/97  02:17p        <DIR>          ..
03/07/97  02:08p            42,928,724 offpack
03/07/97  02:23p            26,705,572 offpackc
               4 File(s)     69,634,296 bytes
                            166,049,280 bytes free

C:\uwe>_
```

Figure 426

http://www.redbooks.ibm.com:80/SG244976/xfbc07s.gif

Latest

Show All

Hrm.

Wayback Machine doesn't have that page archived.
Want to search for all archived pages under
http://www.redbooks.ibm.com:80/SG244976/ ?

This page is available on the web!

Help make the Wayback Machine more complete!
Save this url in the Wayback Machine

http://www.redbooks.ibm.com:80/SG244976/xfbc08s.gif

Latest

Show All

Hrm.

Wayback Machine doesn't have that page archived.
Want to search for all archived pages under
http://www.redbooks.ibm.com:80/SG244976/ ?

This page is available on the web!

Help make the Wayback Machine more complete!
Save this url in the Wayback Machine

http://www.redbooks.ibm.com:80/SG244976/xfbc09s.gif

Latest

Show All

Hrm.

Wayback Machine doesn't have that page archived.
Want to search for all archived pages under
http://www.redbooks.ibm.com:80/SG244976/ ?

This page is available on the web!

Help make the Wayback Machine more complete!
Save this url in the Wayback Machine

http://www.redbooks.ibm.com:80/SG244976/xfbc11s.gif

Latest

Show All

Hrm.

Wayback Machine doesn't have that page archived.
Want to search for all archived pages under
http://www.redbooks.ibm.com:80/SG244976/ ?

This page is available on the web!

Help make the Wayback Machine more complete!
Save this url in the Wayback Machine

Figure 4.30

http://www.redbooks.ibm.com:80/SG244976/xfbc12s.gif

Latest

Show All

Hrm.

Wayback Machine doesn't have that page archived.
Want to search for all archived pages under
http://www.redbooks.ibm.com:80/SG244976/ ?

This page is available on the web!

Help make the Wayback Machine more complete!
Save this url in the Wayback Machine

http://www.redbooks.ibm.com:80/SG244976/xfbc14s.gif

Latest

Show All

Hrm.

Wayback Machine doesn't have that page archived.
Want to search for all archived pages under
http://www.redbooks.ibm.com:80/SG244976/ ?

This page is available on the web!

Help make the Wayback Machine more complete!
Save this url in the Wayback Machine

http://www.redbooks.ibm.com:80/SG244976/xfbc15s.gif

Latest

Show All

Hrm.

Wayback Machine doesn't have that page archived.
Want to search for all archived pages under
http://www.redbooks.ibm.com:80/SG244976/ ?

This page is available on the web!

Help make the Wayback Machine more complete!
Save this url in the Wayback Machine

http://www.redbooks.ibm.com:80/SG244976/xfbc16s.gif

Latest

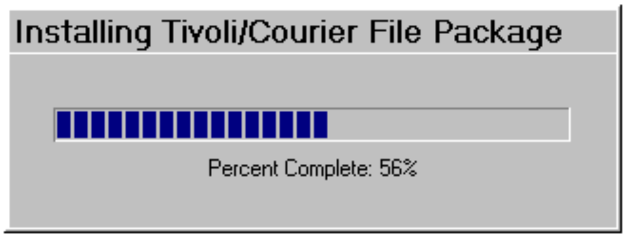
Show All

Hrm.

Wayback Machine doesn't have that page archived.
Want to search for all archived pages under
http://www.redbooks.ibm.com:80/SG244976/ ?

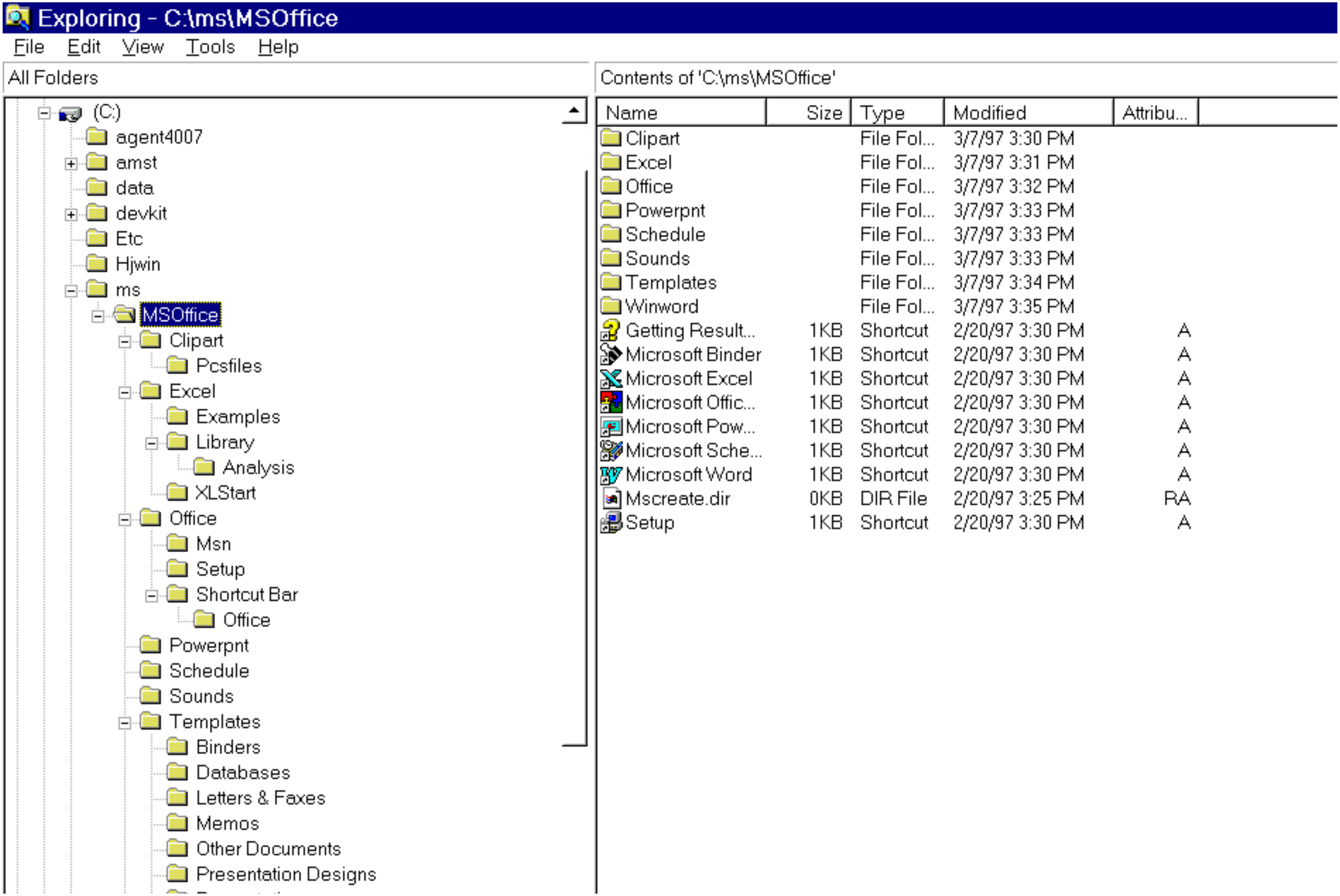
This page is available on the web!

Help make the Wayback Machine more complete!
Save this url in the Wayback Machine



Installing Tivoli/Courier File Package

Percent Complete: 56%



Exploring - C:\ms\MSOffice

All Folders

- (C:)
  - agent4007
  - amst
  - data
  - devkit
  - Etc
  - Hjwin
  - ms
    - MSOffice
      - Clipart
        - Pcsfiles
      - Excel
        - Examples
        - Library
          - Analysis
        - XLStart
      - Office
        - Msn
        - Setup
        - Shortcut Bar
          - Office
      - Powerpnt
      - Schedule
      - Sounds
      - Templates
        - Binders
        - Databases
        - Letters & Faxes
        - Memos
        - Other Documents
        - Presentation Designs

Contents of 'C:\ms\MSOffice'

Name	Size	Type	Modified	Attribu...
Clipart		File Fol...	3/7/97 3:30 PM	
Excel		File Fol...	3/7/97 3:31 PM	
Office		File Fol...	3/7/97 3:32 PM	
Powerpnt		File Fol...	3/7/97 3:33 PM	
Schedule		File Fol...	3/7/97 3:33 PM	
Sounds		File Fol...	3/7/97 3:33 PM	
Templates		File Fol...	3/7/97 3:34 PM	
Winword		File Fol...	3/7/97 3:35 PM	
Getting Result...	1KB	Shortcut	2/20/97 3:30 PM	A
Microsoft Binder	1KB	Shortcut	2/20/97 3:30 PM	A
Microsoft Excel	1KB	Shortcut	2/20/97 3:30 PM	A
Microsoft Offic...	1KB	Shortcut	2/20/97 3:30 PM	A
Microsoft Pow...	1KB	Shortcut	2/20/97 3:30 PM	A
Microsoft Sche...	1KB	Shortcut	2/20/97 3:30 PM	A
Microsoft Word	1KB	Shortcut	2/20/97 3:30 PM	A
Mscreate.dir	0KB	DIR File	2/20/97 3:25 PM	RA
Setup	1KB	Shortcut	2/20/97 3:30 PM	A

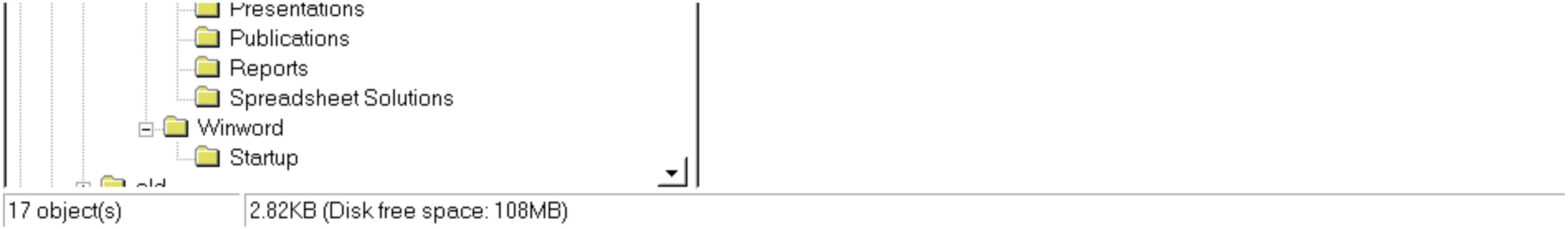

Presentations
Publications
Reports
Spreadsheet Solutions
Winword
Startup
old
17 object(s)
2.82KB (Disk free space: 108MB)

Figure 436

http://www.redbooks.ibm.com:80/SG244976/xfbc19s.gif

Latest

Show All

Hrm.

Wayback Machine doesn't have that page archived.
Want to search for all archived pages under
http://www.redbooks.ibm.com:80/SG244976/ ?

This page is available on the web!

Help make the Wayback Machine more complete!
Save this url in the Wayback Machine

http://www.redbooks.ibm.com:80/SG244976/xfbc20s.gif

Latest

Show All

Hrm.

Wayback Machine doesn't have that page archived.
Want to search for all archived pages under
http://www.redbooks.ibm.com:80/SG244976/ ?

This page is available on the web!

Help make the Wayback Machine more complete!
Save this url in the Wayback Machine

http://www.redbooks.ibm.com:80/SG244976/xfbc21s.gif

Latest

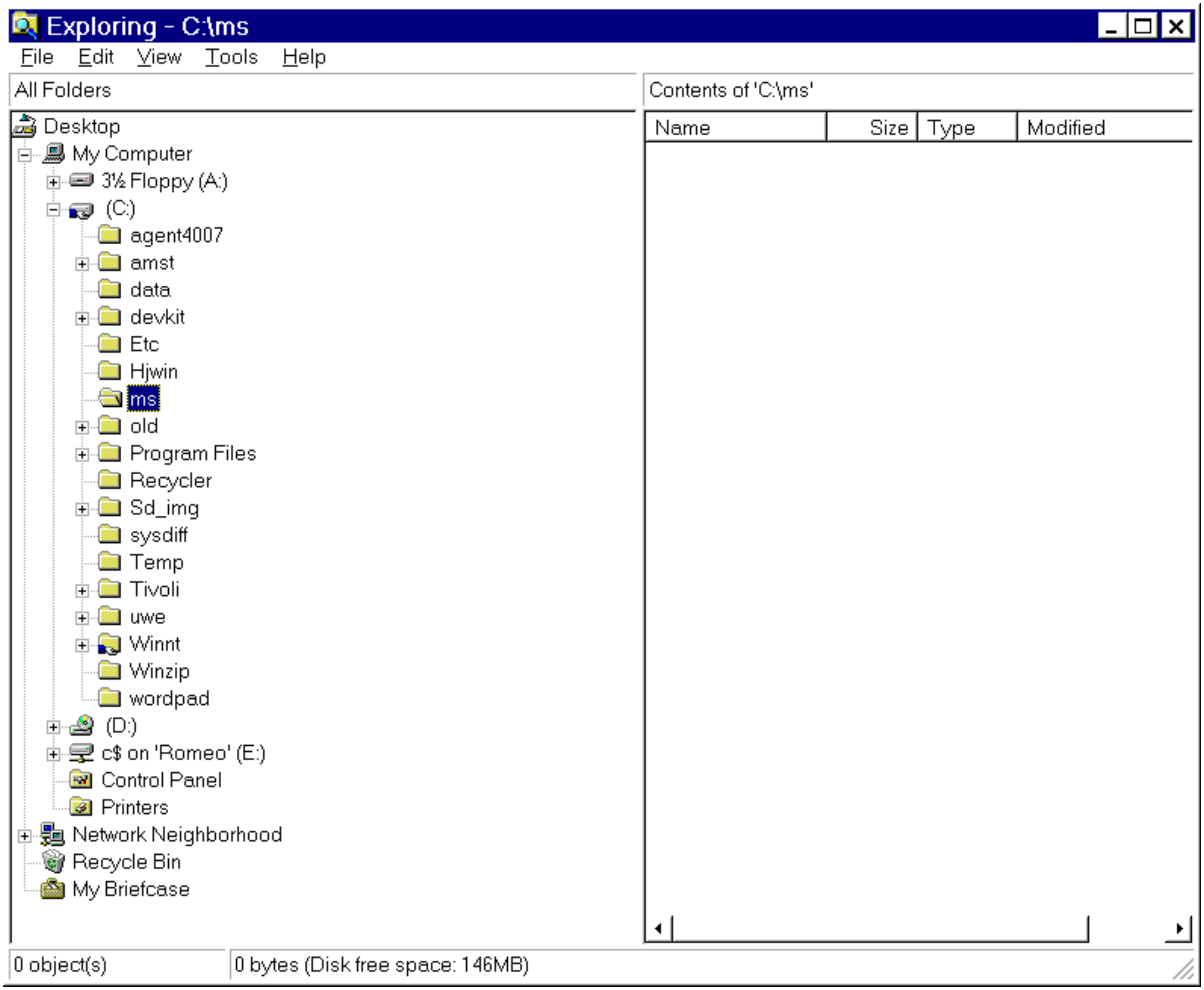
Show All

Hrm.

Wayback Machine doesn't have that page archived.
Want to search for all archived pages under
http://www.redbooks.ibm.com:80/SG244976/ ?

This page is available on the web!

Help make the Wayback Machine more complete!
Save this url in the Wayback Machine

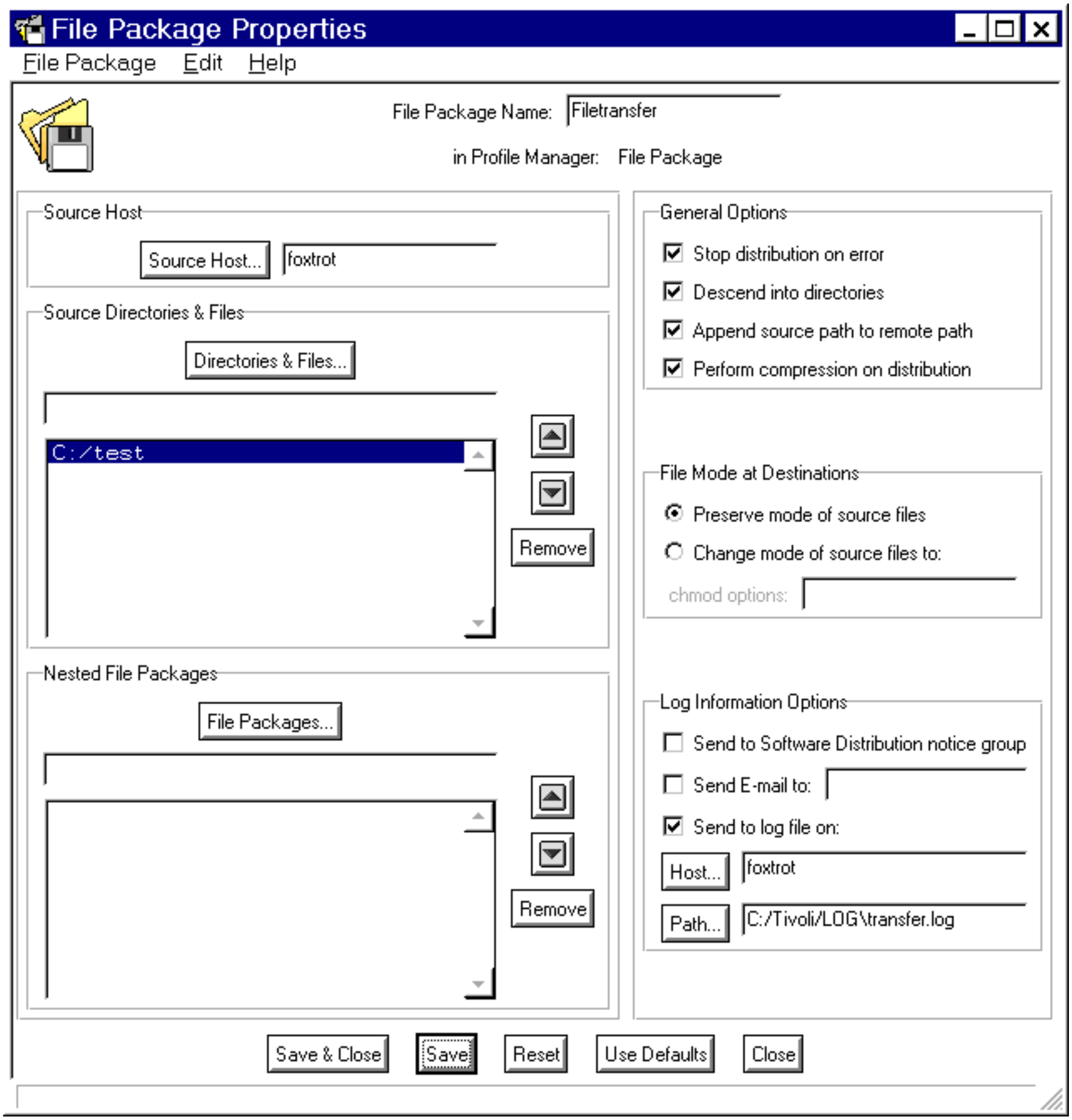


0 object(s)

0 bytes (Disk free space: 146MB)

Figure 440

Figure 440



File Package Name: Filetransfer

in Profile Manager: File Package

Source Host

foxtrot

Source Directories & Files

C:/test

Nested File Packages

General Options

☑ Stop distribution on error

☑ Descend into directories

☑ Append source path to remote path

☑ Perform compression on distribution

File Mode at Destinations

● Preserve mode of source files

○ Change mode of source files to:

chmod options:

Log Information Options

□ Send to Software Distribution notice group

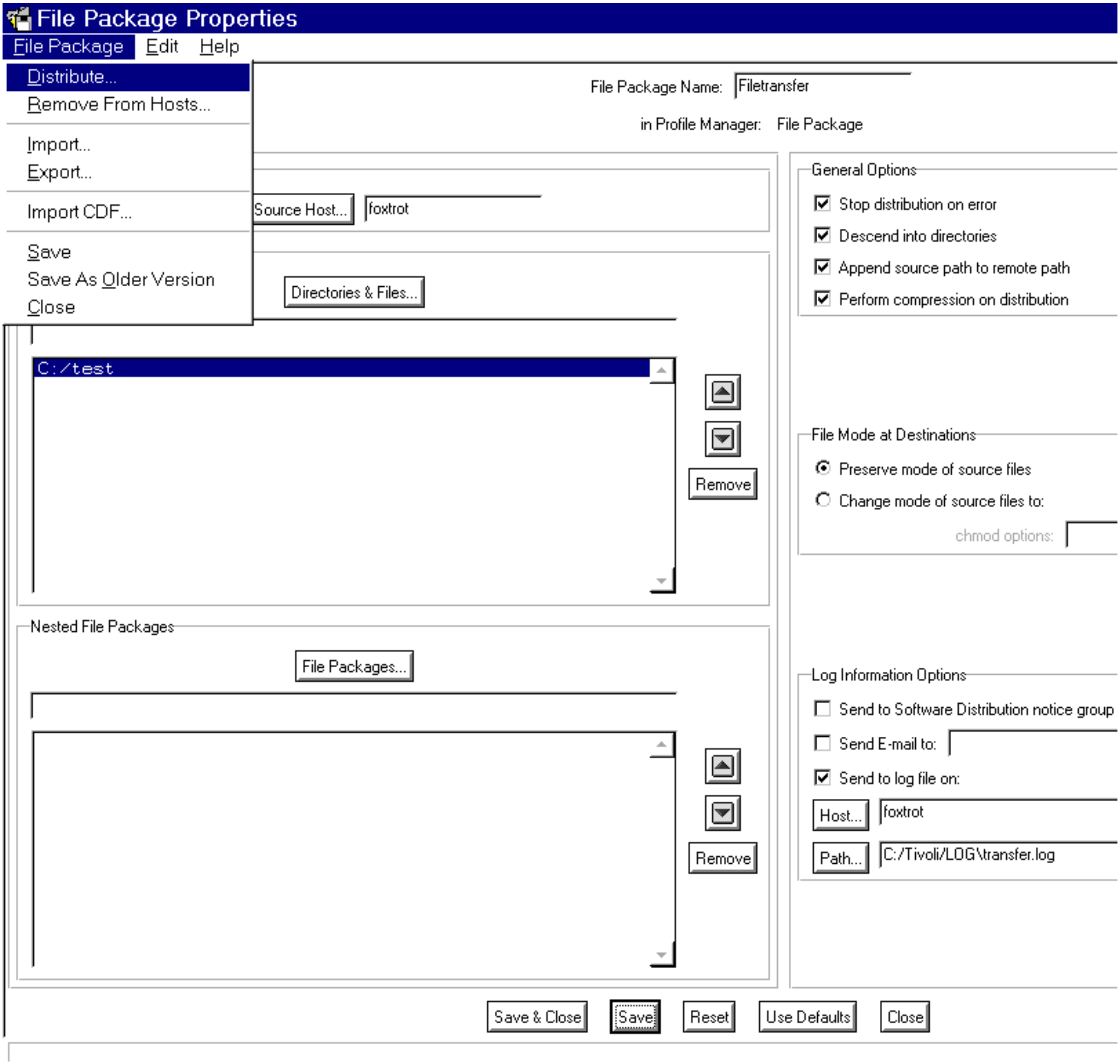
□ Send E-mail to:

☑ Send to log file on:

Host: foxtrot

Path: C:/Tivoli/LOG\transfer.log

Figure 441



File Package Name: Filetransfer

in Profile Manager: File Package

Source Host: foxtrot

C:/test

General Options

☑ Stop distribution on error

☑ Descend into directories

☑ Append source path to remote path

☑ Perform compression on distribution

File Mode at Destinations

● Preserve mode of source files

○ Change mode of source files to:

chmod options:

Log Information Options

☐ Send to Software Distribution notice group

☐ Send E-mail to:

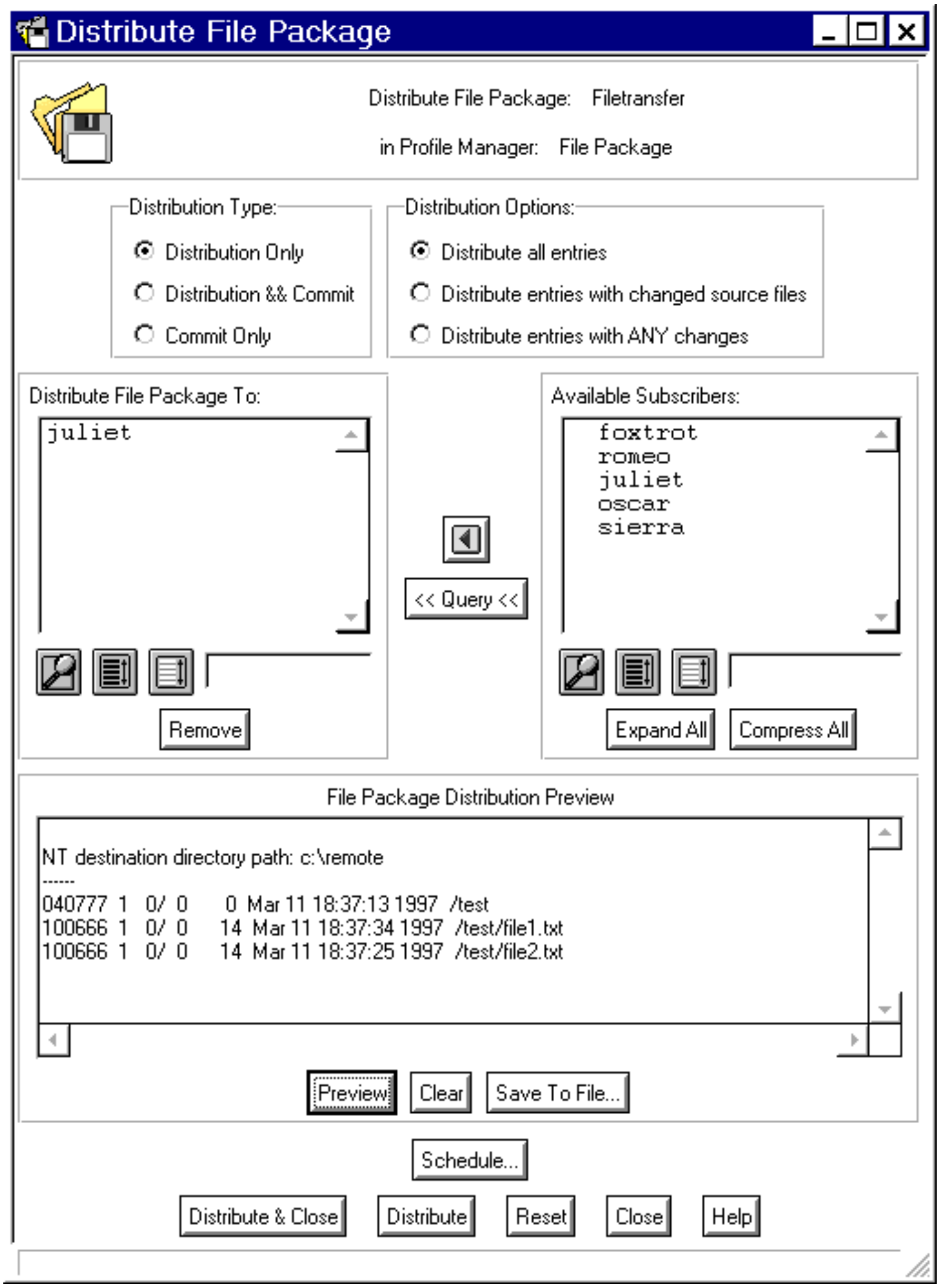
☑ Send to log file on:

Host: foxtrot

Path: C:/Tivoli/LOG\transfer.log

Figure 472

Figure 442



Distribute File Package: Filetransfer

in Profile Manager: File Package

Distribution Type:
- ● Distribution Only
- ○ Distribution && Commit
- ○ Commit Only

Distribution Options:
- ● Distribute all entries
- ○ Distribute entries with changed source files
- ○ Distribute entries with ANY changes

Distribute File Package To:

```
juliet
```

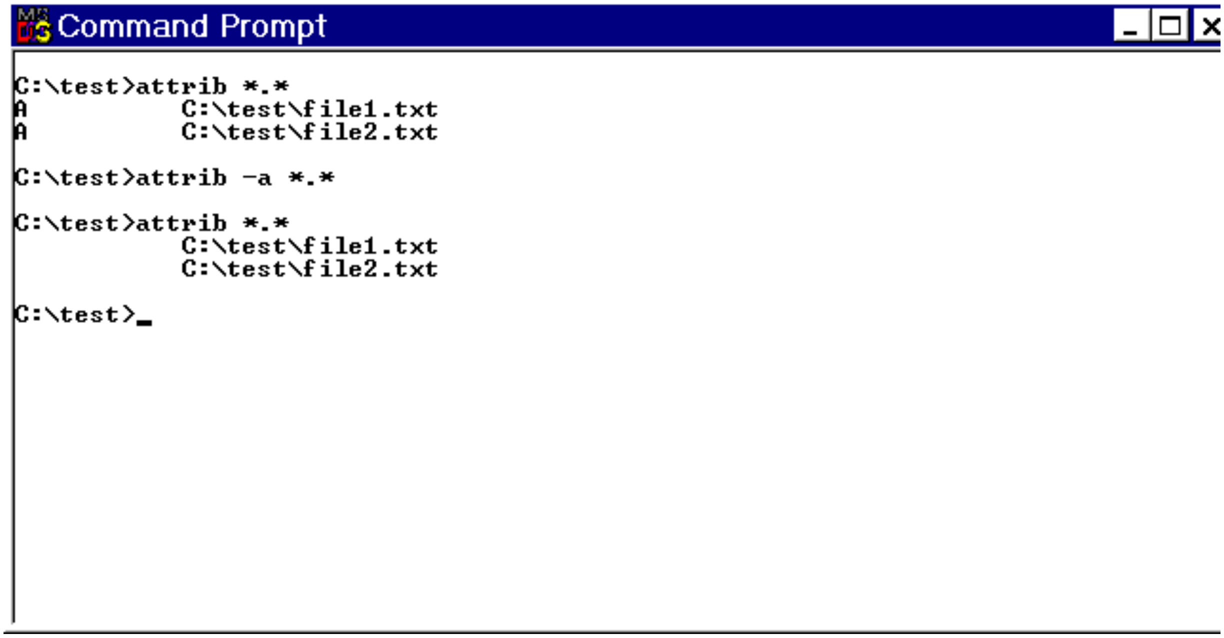
Available Subscribers:

```
foxtrot
romeo
juliet
oscar
sierra
```

File Package Distribution Preview

```
NT destination directory path: c:\remote
------
040777  1   0/  0      0  Mar 11 18:37:13 1997  /test
100666  1   0/  0     14  Mar 11 18:37:34 1997  /test/file1.txt
100666  1   0/  0     14  Mar 11 18:37:25 1997  /test/file2.txt
```

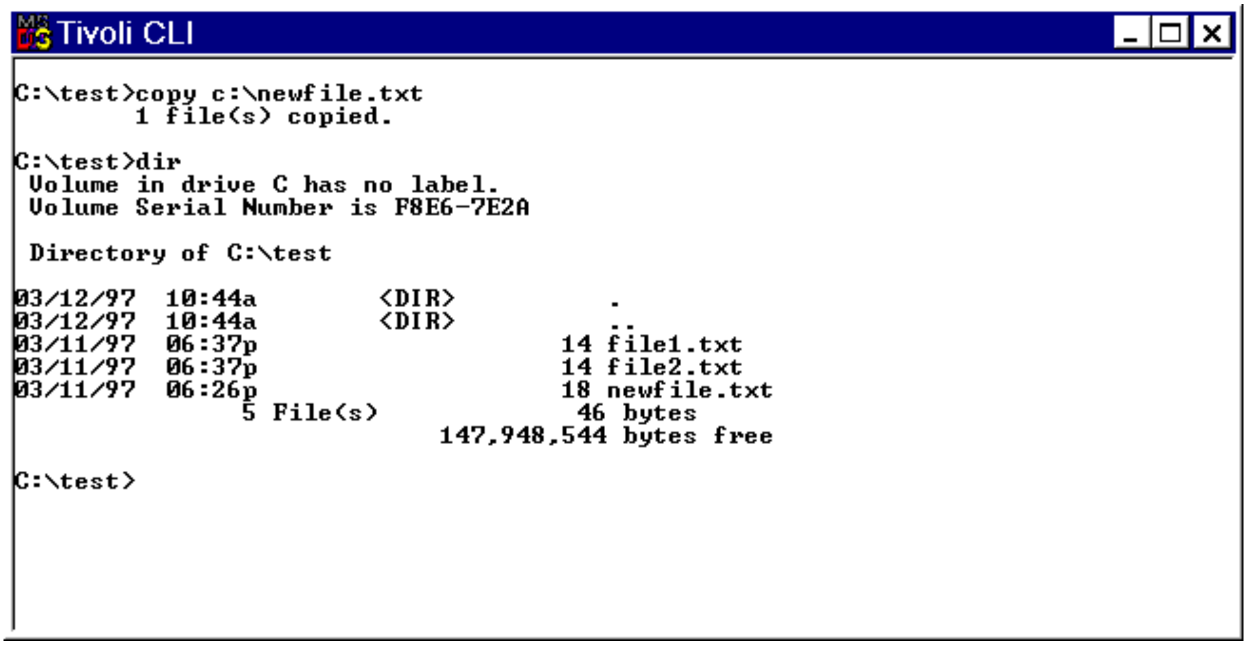
Figure 443



```
C:\test>attrib *.*
A          C:\test\file1.txt
A          C:\test\file2.txt

C:\test>attrib -a *.*

C:\test>attrib *.*
           C:\test\file1.txt
           C:\test\file2.txt

C:\test>_
```

Figure 444

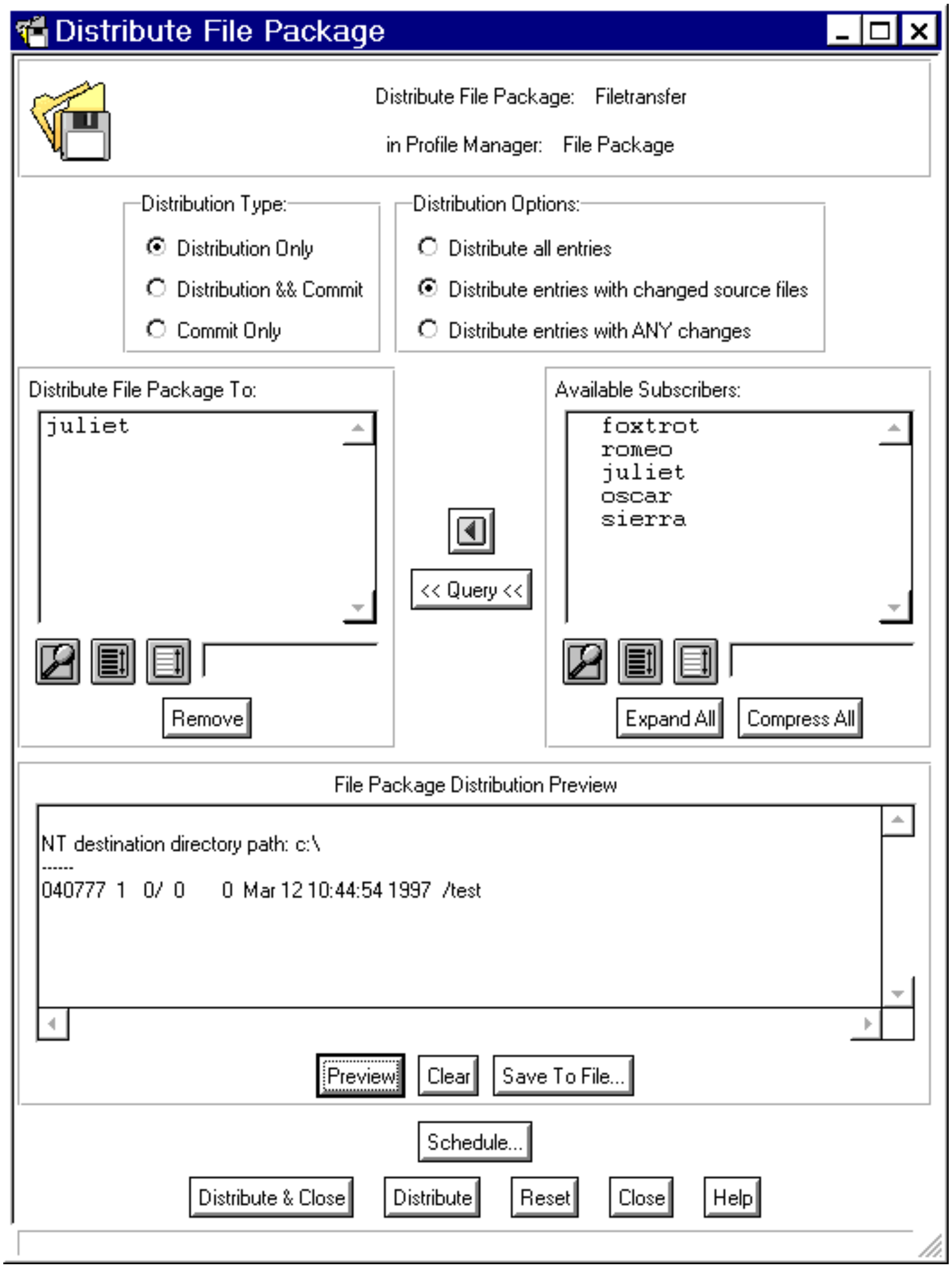
Figure 4-4.



```
C:\test>copy c:\newfile.txt
        1 file(s) copied.

C:\test>dir
 Volume in drive C has no label.
 Volume Serial Number is F8E6-7E2A

 Directory of C:\test

03/12/97  10:44a        <DIR>          .
03/12/97  10:44a        <DIR>          ..
03/11/97  06:37p                    14 file1.txt
03/11/97  06:37p                    14 file2.txt
03/11/97  06:26p                    18 newfile.txt
               5 File(s)             46 bytes
                            147,948,544 bytes free

C:\test>
```

Figure 4-86

Figure 445



Distribute File Package

Distribute File Package: Filetransfer

in Profile Manager: File Package

Distribution Type:

● Distribution Only
○ Distribution && Commit
○ Commit Only

Distribution Options:

○ Distribute all entries
● Distribute entries with changed source files
○ Distribute entries with ANY changes

Distribute File Package To:

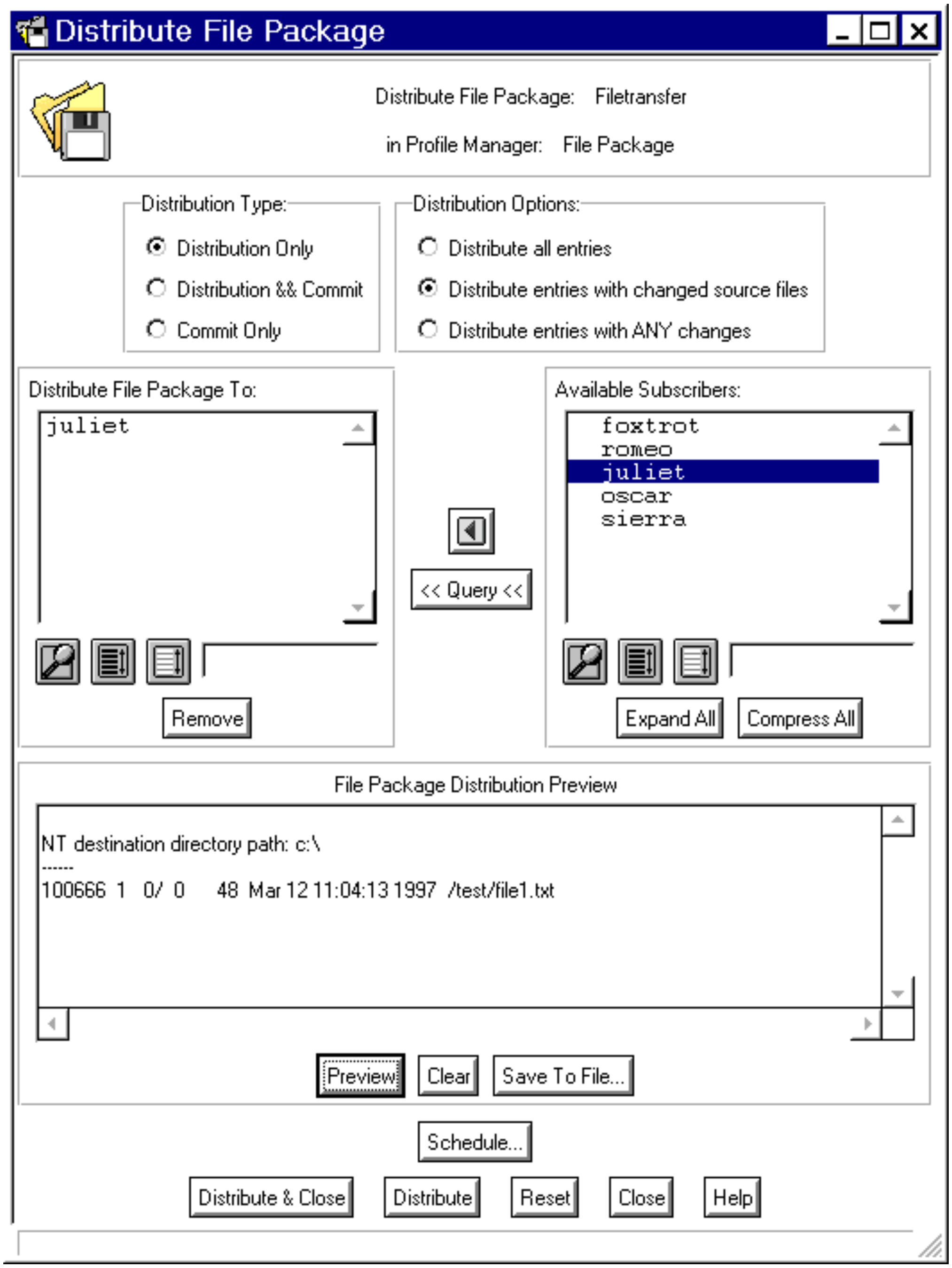
```
juliet
```

Available Subscribers:

```
foxtrot
romeo
juliet
oscar
sierra
```

File Package Distribution Preview

```
NT destination directory path: c:\
------
040777  1   0/  0      0  Mar 12 10:44:54 1997  /test
```



Distribute File Package

Distribute File Package: Filetransfer

in Profile Manager: File Package

Distribution Type:

● Distribution Only

○ Distribution && Commit

○ Commit Only

Distribution Options:

○ Distribute all entries

● Distribute entries with changed source files

○ Distribute entries with ANY changes

Distribute File Package To:

juliet

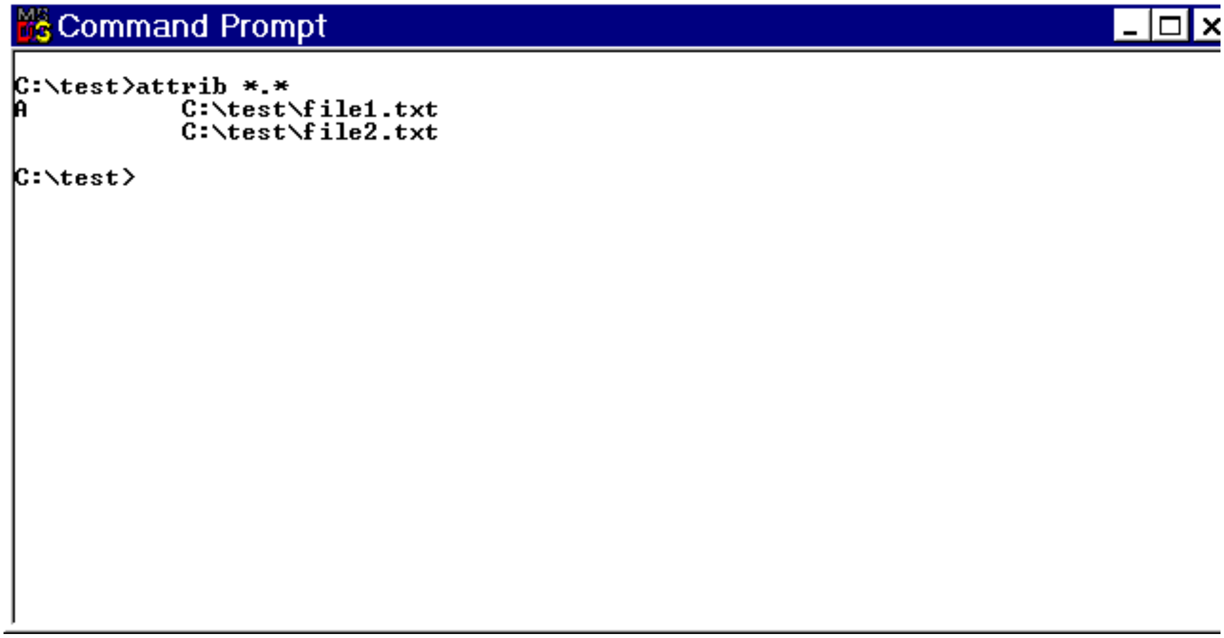
Available Subscribers:

foxtrot
romeo
juliet
oscar
sierra

File Package Distribution Preview

```
NT destination directory path: c:\
------
100666  1   0/  0     48  Mar 12 11:04:13 1997  /test/file1.txt
```

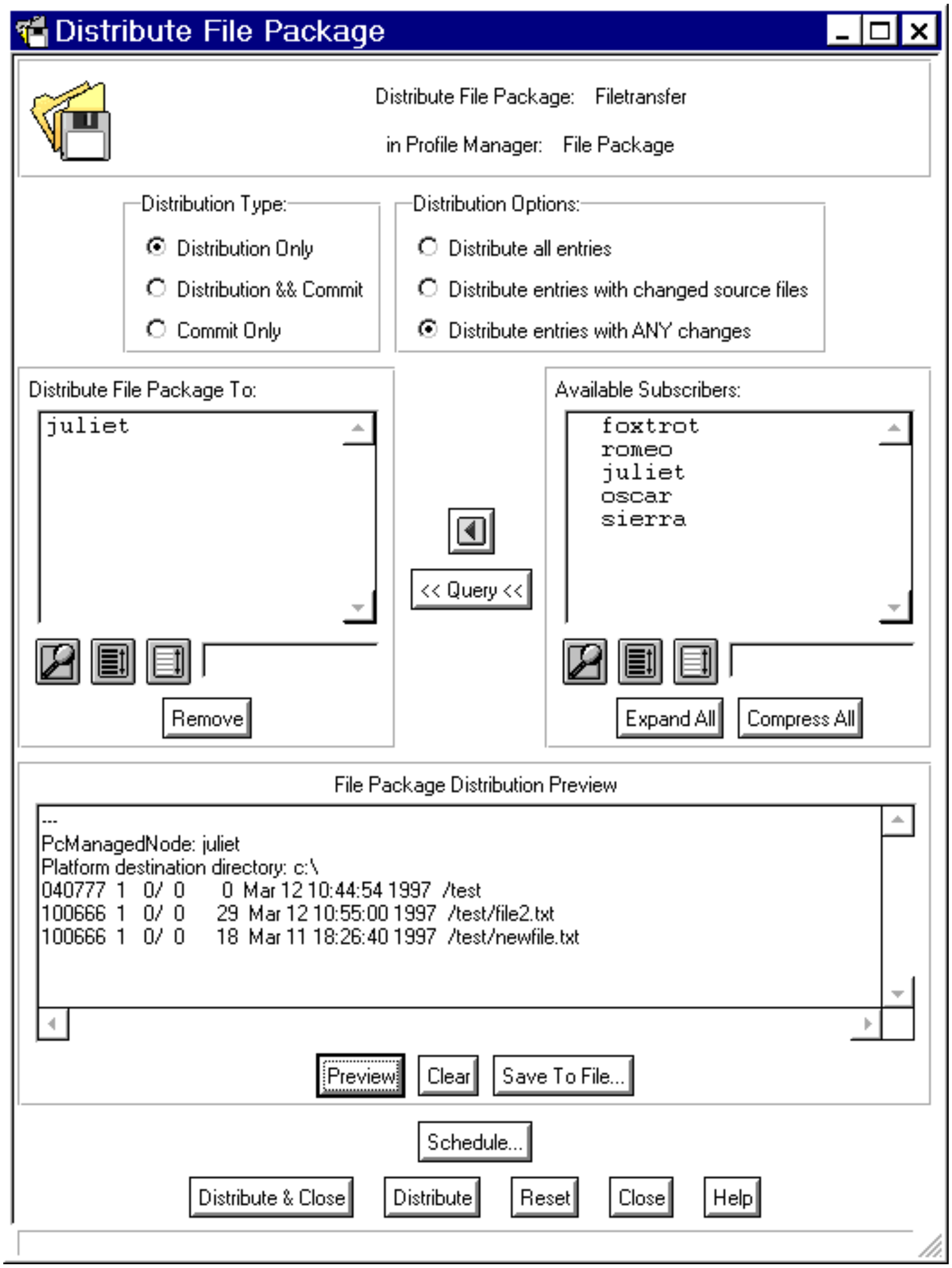
Figure 447



```
C:\test>attrib *.*
A           C:\test\file1.txt
            C:\test\file2.txt

C:\test>
```

Figure 448

Figure 448



Distribute File Package: Filetransfer

in Profile Manager: File Package

Distribution Type:

● Distribution Only

○ Distribution && Commit

○ Commit Only

Distribution Options:

○ Distribute all entries

○ Distribute entries with changed source files

● Distribute entries with ANY changes

Distribute File Package To:

```
juliet
```

Available Subscribers:

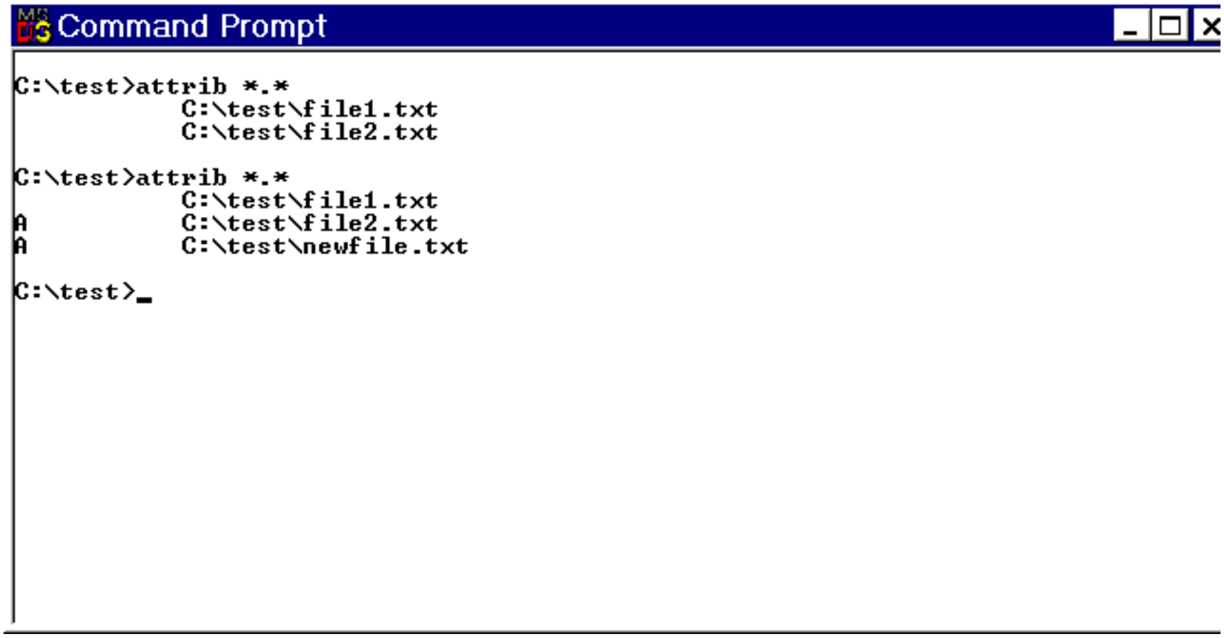
```
foxtrot
romeo
juliet
oscar
sierra
```

File Package Distribution Preview

```
---
PcManagedNode: juliet
Platform destination directory: c:\
040777  1   0/  0      0  Mar 12 10:44:54 1997  /test
100666  1   0/  0     29  Mar 12 10:55:00 1997  /test/file2.txt
100666  1   0/  0     18  Mar 11 18:26:40 1997  /test/newfile.txt
```

Figure 449

Figure 449



```
C:\test>attrib *.*
           C:\test\file1.txt
           C:\test\file2.txt

C:\test>attrib *.*
           C:\test\file1.txt
A          C:\test\file2.txt
A          C:\test\newfile.txt

C:\test>_
```

Figure 450