

EXHIBIT 4

	<p>See https://www.juniper.net/documentation/en_US/release-independent/sky-atp/topics/reference/general/sky-atp-filescan-overview.html (showing a SHA256 and MD5 hash of a downloadable).</p> <div style="border: 1px solid #ccc; padding: 10px; background-color: #f9f9f9;"> <p>file checksum sha1</p> <p>Syntax</p> <pre>file checksum sha1 path</pre> <p>Release Information Command introduced in Junos OS Release 9.5.</p> <p>Description Calculate the Secure Hash Algorithm (SHA-1) checksum of a file.</p> <p>Options <i>path</i>—(Optional) Path to a filename.</p> <p>Required Privilege Level maintenance</p> <p>List of Sample Output file checksum sha1</p> <p>Output Fields When you enter this command, you are provided feedback on the status of your request.</p> <p>Sample Output file checksum sha1</p> <pre>user@host> file checksum sha1 /var/db/scripts/opscrip... SHA1 (/var/db/scripts/commitscript.slax) = ba9e47120c7ce55cff29afd73eacd370e162c676</pre> </div> <p>See https://www.juniper.net/documentation/en_US/junos/topics/reference/command-summary/security-file-checksum-sha1.html (showing a SHA-1 hash of a downloadable).</p>
<p>Claim 9</p>	
<p>9a. A system for generating a Downloadable ID to identify a Downloadable, comprising:</p>	<p>Sky ATP meets the recited claim language they provide a system for generating a Downloadable ID to identify a Downloadable.</p> <p>Sky ATP meet the recited claim language because Sky ATP is a system which generates a Downloadable ID by creating malware attack profiles which include a hash to identify a Downloadable such as malware. The analysis includes scanning the Downloadables which include references to software components required to be executed by the Downloadable (e.g., suspicious web page content containing HTML, PDFs, JavaScript, drive-by downloads, obfuscated code, or other blended web malware).</p> <p>Sky ATP is a system which obtains a Downloadable then generates a profile that includes generating a Downloadable ID (e.g., the SHA-256 hash) to identify a Downloadable and whether it is malicious and to create a risk score or verdict.</p>

	<p>File submission succeeded. Returns a submission JSON object.</p> <pre> Example for application/json { "last_update": 1464891625, "malware_info": { "ident": "MemScan:Trojan.Pws" }, "scan_complete": true, "score": 10, "sha256": "516f3396086598142db5e242bc2c8f69f4f5058a637cd2f9bf5dcb4619869536" } </pre> <p>ScanResult: object</p> <p>PROPERTIES</p> <p>sha256: <i>string</i> (64 to 64 chars) Sample sha256.</p> <p>score: <i>integer</i> (int64) required Sample malware score in [0..10] range. If the sample processing has not completed, -1 will be returned.</p> <p>threat_level: <i>string</i>, x ∈ { "high", "medium", "low", "clean" } Textual representation of the score.</p> <p>category: <i>string</i> File category.</p> <p>size: <i>integer</i> (int64) Sample file size.</p> <p>malware_info: <i>MalwareInfo</i></p> <p>scan_complete: <i>boolean</i> required Whether sample processing is complete or not.</p> <p>last_update: <i>integer</i> (int64) Timestamp of last successful update in sample processing pipeline.</p> <p>scan_report: <i>DetailedScanReport</i></p> <p>https://www.juniper.net/documentation/en_US/release-independent/sky-atp/information-products/topic-collections/sky-atp-open-apis.html (showing a SHA-256 generated for the downloadable to identify the downloadable).</p>
<p>9b. a communications engine for obtaining a Downloadable that includes one or more references to software components required to be executed by the Downloadable; and</p>	<p>Sky ATP meets the recited claim language because they provide a communications engine for obtaining a Downloadable that includes one or more references to software components required to be executed by the Downloadable.</p> <p>Sky ATP meet the recited claim language because Sky ATP is a system which includes a communications engine (e.g., network interface and corresponding proxy software) which obtains suspicious traffic flows for analysis that include Downloadables such as web page content and/or email attachments. These Downloadables include references to software components required to be executed by the Downloadable (e.g., suspicious web page content containing HTML, PDFs, JavaScript, drive-by downloads, obfuscated code, or other blended web malware).</p> <p>Downloadables that includes one or more references to software components required to be executed by the Downloadable include a web page that includes references to JavaScript, visual basic script, ActiveX, injected iframes; and a PDF that includes references to JavaScript, swf files or other executables. Typically, Juniper characterizes them as drive-by-downloads or droppers as such</p>

Downloadables are usually programmed to take advantage of a browser, application, or OS that is out of date and has a security flaw. The initial downloaded code is often small enough that it wouldn't be noticed, since its job is often simply to contact another computer where it can pull down the rest of the code on to the computer. In particular, such software components are usually programmed to be downloaded and run in the background in a manner that is invisible to the user - and without the user taking any conscious actions as just the act of viewing a web-page that harbors this malicious code is typically enough for the download and execution to occur.

Sky ATP include a communications engine (e.g., network interface and corresponding proxy software) to obtain Downloadables for scanning. Sky ATP scans Downloadables that may include malware embedded in images, JavaScript, text and Flash files. As shown below, Sky ATP obtains and conducts analysis on Downloadables such as Executable files (e.g., “.bin, .com, .dat, .exe, .msi, .msm, .mst”), PDF files, Java (e.g., “.class, .ear, .jar, .war”), MS Office file types, Flash and Silverlight applications, Script files, and installer files through an application program interface.

Sky ATP profiles let you define which files to send to the cloud for inspection. You can create Sky ATP profiles only with the cloud graphical interface; you cannot create the profile using CLI commands. You can, however, use CLI commands to view the profile on the SRX Series device to make sure it matches the one in the cloud.

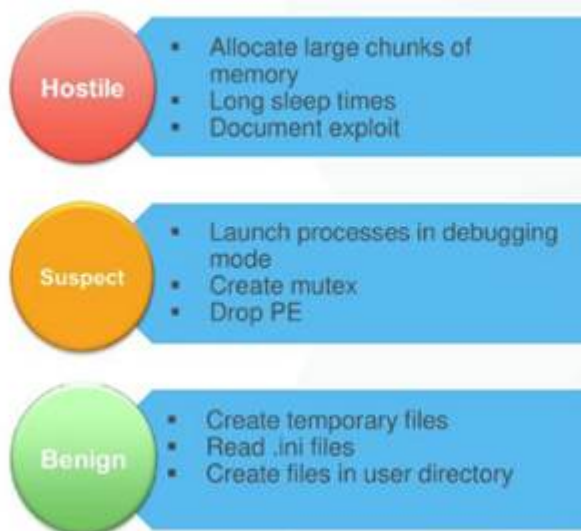
Table 1: File Category Contents

Category	Description	Included File Types
Active media	Flash and Silverlight applications	.swf, .xap, .xbap
Archive	Archive files	.zip, .rar, .tar, .gzip
Code	Source code	.c, .cc, .cpp, .cxx, .h, .htt, .java
Config	Configuration files	.inf, .ini, .lnk, .reg, .plist
Document	All document types except PDFs	.chm, .doc, .docx, .dotx, .hta, .html, .pot, .ppa, .pps, .ppt, .pptsm, .pptx, .ps, .rtf, .rtf, .txt, .xlsx, .xml, .xsl, .xslt
Emerging threat	A special category that includes known threat source file types	
Executable	Executable binaries	.bin, .com, .dat, .exe, .msi, .msm, .mst
Java	Java applications, archives and libraries	.class, .ear, .jar, .war
Library	Dynamic and static libraries and kernel modules	.a, .dll, .kext, .ko, .o, .so, ocx
Mobile	Mobile applications for iOS and Android	.apk, .ipa
OS package	OS specific update applications	.deb, .dmg
Script	Scripting files	.bat, .js, .pl, .ps1, .py, .sct, .sh, .tcl, .vbs, .plsm, .pyc, .pyo
Portable document	PDF, e-mail and MBOX files	.email, .mbox, .pdf, .pdfa

https://www.juniper.net/documentation/en_US/release-independent/sky-atp/topics/reference/general/sky-atp-profile-overview.html.

Sky ATP includes a communications engine (e.g., network interface and corresponding proxy software) to obtain Downloadables for analysis. As shown below, Sky ATP performs behavioral analysis such as potential dropper infection for Downloadables. Potential dropper infections “Drop PE” (e.g., references to software components required to be executed by the Downloadable).

Sandboxing: Behavioral Analysis



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As shown below, Sky ATP a cache lookup of a file and its components using a hash value to prevent rescanning of known files and their components.

Cache Lookup

When a file is analyzed, a file hash is generated, and the results of the analysis are stored in a database. When a file is uploaded to the Sky ATP cloud, the first step is to check whether this file has been looked at before. If it has, the stored verdict is returned to the SRX Series device and there is no need to re-analyze the file. In addition to files scanned by Sky ATP, information about common malware files is also stored to provide faster response.

Cache lookup is performed in real time. All other techniques are done offline. This means that if the cache lookup does not return a verdict, the file is sent to the client system while the Sky ATP cloud continues to examine the file using the remaining pipeline techniques. If a later analysis returns a malware verdict, then the file and host are flagged.

https://www.juniper.net/documentation/en_US/release-independent/sky-atp/topics/concept/sky-atp-malware-analyze.html

9c. an ID generator coupled to the communications engine that fetches at least one software component identified by the one or more references, and for

Sky ATP meets the recited claim language because they provide an ID generator coupled to the communications engine that fetches at least one software component identified by the one or more references, and for performing a hashing function on the Downloadable and the fetched software components to generate a Downloadable ID.

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