EXHIBIT M4

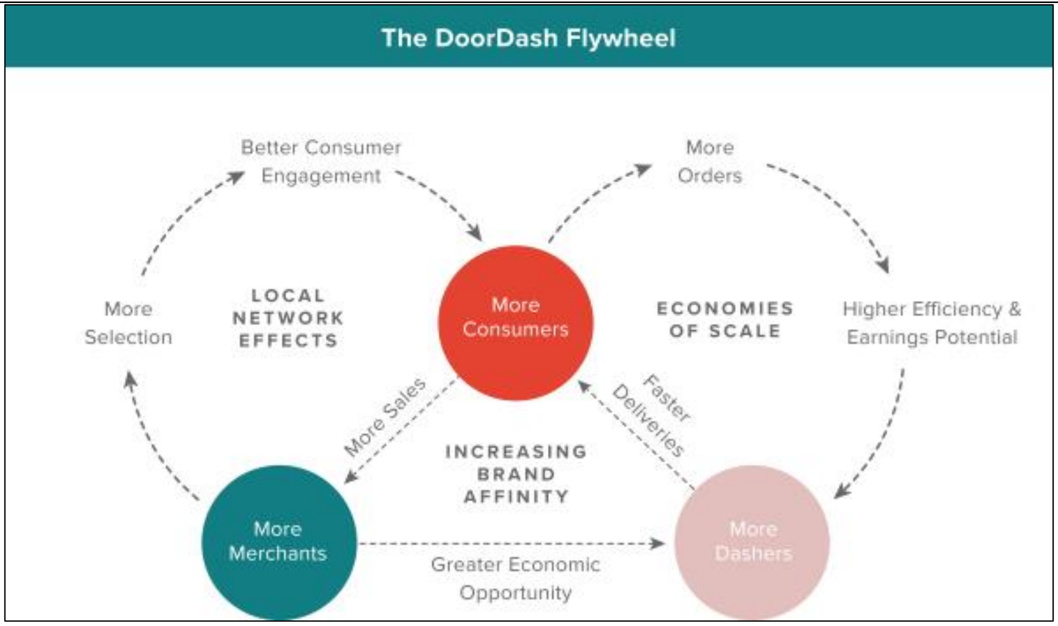
This claim chart is meant to be illustrative for purposes of meeting Plaintiff's pleading obligations and should not be construed as binding or limiting.

Ameranth

U.S. Patent No. 11,847,587

Claim 7 Chart

7. An intelligent backoffice and handheld/mobile distributed computing network with varying, multi-modes of contact, and parallel operational capabilities for use in completing remotely initiated hospitality tasks in the hospitality market comprising	DoorDash has implemented a sophisticated network of interconnected web server computers that showcase intelligent, improved, and parallel operational capabilities tailored for the hospitality market. This network, in line with Claim 7 of the '587 patent, employs multi-modes of contact and supports multiple communication protocols, ensuring robust and flexible interactions among consumers, merchants, and delivery personnel (Dashers). The system's strength lies in its multi-user environment, which is efficiently managed through a centralized data platform or master database. This central data platform is pivotal to DoorDash's operation, as it consolidates data from various sources—consumer interactions, transactional data, and real-time events from DoorDash's suite of applications. By integrating machine learning algorithms, the network can adapt and optimize its operations, enhancing the overall efficiency of the service. This adaptability is evident in the way DoorDash dynamically manages delivery routes, balancing demand from consumers with the supply of Dashers and inventory from merchants. The intelligence of the network allows for predictive modeling, which anticipates order readiness and optimizes delivery routes for efficiency and customer satisfaction. DoorDash's Vice President of Analytics and Data Science's insights reinforce the network's capability to collect comprehensive data, centralize it for accessibility, and utilize it for a 360-degree view of the marketplace—hallmarks of the interconnected web server computers described in Claim 7. This approach not only improves operational performance but also drives better consumer engagement and economic opportunity, thus aligning with the '587 patent's emphasis on an intelligent, data-driven network designed to meet the complex needs of the hospitality market. DoorDash develops, tests, integrates, uses, operates, manages, and maintains a ‘parallel operational’ based network set of interconnected and improved “Intelligent Web Servers with multi modes of contact”, utilizing Machine Learning (ML) with parallel operational capabilities for multi-users, via multi-communications protocols while integrating with its “central data platform” (i.e. “master database”). This system meets all the limitations of the ‘587 claims, as is detailed below, to complete remotely initiated hospitality food and drink delivery and pick-up tasks triggered by and from consumers, produced by merchants (restaurants, etc.), and delivered by Dashers. The DoorDash Flywheel diagram, shown below, makes evident that the DoorDash operates in accordance with its overall series of linked services and via its “360-degree picture” central (“Flywheel") and technology platform framework:

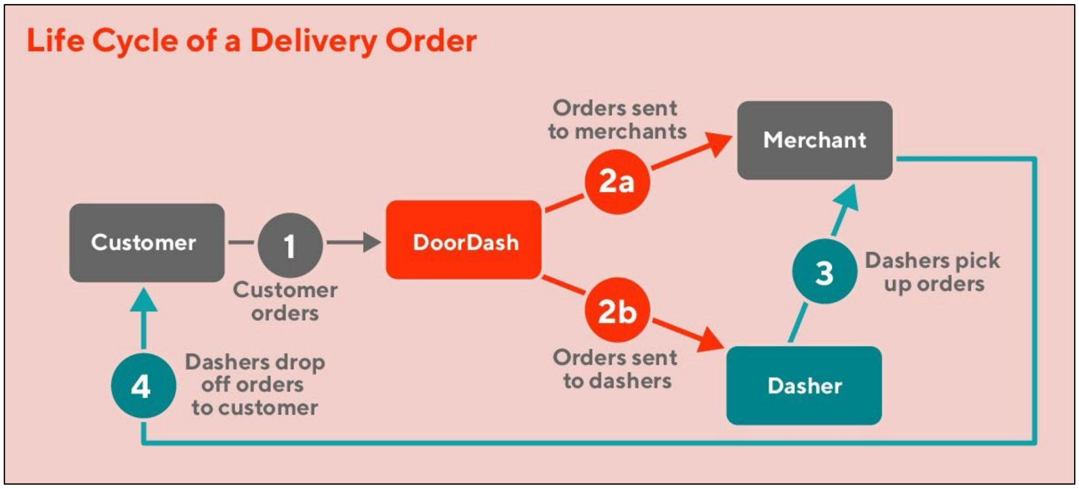


This was confirmed on August 17, 2022, by DoorDash's Vice President of Analytics and Data Science Jessica Lachs in an interview on "Leveraging Data to Delight Customers Despite a Challenging Supply Chain" (see Exh #98) in which she states:

> *"And so for us, it's really about collecting as much information as we can about all sides of the marketplace, bringing all of that data together into a central data platform, where all of that data is accessible no matter the source. Whether it is coming from our production systems, transactional data, whether it is event data in our apps, whether that's the consumer app, the dasher app, the merchant app… whether it is coming from our CRM systems. All of that data needs to come in to one central place so that we can tie it together and use the insights together to create a 360 degree picture of what's happening on our platform and off our platform so that we can use that information not just to provide accurate menus and inventory for consumers but also so we can send the right email communications to consumers, to dashers, so that we really have a full picture of what's happening and can use that for personalization and to help all three sides of our marketplace really optimize that they are at their peak efficiency."*
>
> *"So, for us, we want data to be easily accessible to all the different teams that need access to it. Analytics, being one of the largest customers of data at DoorDash, of course, but the way we think about our data models is really about increasing accessibility and consistency to that data. So, having all of our data in one central place and making sure that it is high in performance and so like query speeds are fast and that data models are thoughtful, so that it makes it a lot easier for data scientists, analysts, operators, product managers to be able to query the data that is needed and use the data in our production, in our production systems as well. So, we try to be thoughtful about how we structure our data models and how we ensure that all of the different production systems tie together into that central, as you mentioned, that central data lake."*

The DoorDash Life Cycle of a Delivery Order

In the blog article from the DoorDash Engineering team titled “Next-Generation Optimization for Dasher Dispatch at DoorDash” (see Exh. 84) they state that the DoorDash platform *“...powers an on-demand marketplace involving real-time order demand and dasher [(drivers)] supply. Consumers ask for goods to be delivered from a merchant to their location. To fulfill this demand, [DoorDash] present dashers with delivery routes, where they move between picking up orders at merchants and delivering them to consumers”*, followed by the diagram below:



Moreover, they assert the intelligence of their platform “Our dispatch system seeks high dasher efficiency and fulfillment quality by considering driving distance, time waiting for an order to be ready, delivery times as seen by the consumer, and more. Given incomplete information about the world, the system generates many predictions, such as when we expect an order to be ready for pickup, to model the real-world scenarios. With this data, the dispatch system generates future states for every possible matching and decides the best action to take, given our objectives of efficiency and quality.” See also Note 1 and Note 2 below.

NOTE 1: To the extent, if any that DoorDash contends that it does not infringe, one or more of the ‘587 claim elements, they infringe under the Doctrine of Equivalents (DOE).

NOTE 2: One or more of the 149 exhibits shown below, are incorporated into the support for their infringement of each of the elements the ‘587 claim elements.

How DoorDash Work for Restaurants

In the DoorDash Blog article “How Does DoorDash Work for Restaurants?” (See Exh 116), DoorDash states:

> *“Restaurants can grow online with DoorDash by driving more sales on the app and through their own website, using Delivery, Pickup, and DashPass to unlock the active (and hungry) customer base.”*

Regarding how customers place DoorDash Orders, the article states:

> *“Restaurants can grow online with DoorDash by driving more sales on the app and through their own website, using Delivery, Pickup, and DashPass to*

> *unlock the active (and hungry) customer base.*
>
> *When customers are ready to place an order on Marketplace, they browse restaurants on the DoorDash app or website. Customers can search for their favorite establishments, or filter restaurants by cuisine, location, promotions and more. They enjoy the ease and convenience of browsing thousands of restaurants in a single app, as well as the ability to track orders and get restaurant-quality food anytime, anywhere.*
>
> *Customers can also place orders through Storefront, an online ordering system that gives restaurants direct, commission-free orders through their website, social media, and Google Search & Maps.*
>
> *Once the customer chooses a restaurant, they place their order, pay for it on the app or online, and receive an estimated delivery time. That's when restaurants receive the order via their chosen order protocol.*

Regarding how restaurants receive DoorDash Orders, the article states:

> *"The order protocol is the way that restaurants receive orders from DoorDash. Restaurants can choose to receive orders on the device of their choice to maximize their off-premise efficiency. Storefront orders are processed in the same way as Marketplace orders. Restaurants have two options for their DoorDash order protocol.*
>
> ***Option 1: Use the POS integration***
>
> *Maximize efficiency by integrating DoorDash with your point of sale (POS) system or aggregator. DoorDash integrates with leading POS and technology systems, including Square, Toast, Deliverect, ItsaCheckmate, Redcat and many more.*
>
> *This allows you to receive DoorDash orders directly to your POS system and then straight to your kitchen, which reduces the risk of human error. DoorDash also has an open API which enables partners to build integrations to manage their menu, store, and order data.*
>
> ***Option 2: Use a tablet***
>
> *You can download the DoorDash Order Manager app, our all-in-one tool for receiving, organizing, and tracking pickup and delivery orders. DoorDash can also provide a tablet for you for a small weekly fee. Just order it by contacting support or choosing the option when signing up for DoorDash.*
>
> *With the Order Manager app, restaurant operators can adjust prices and menu items in real time, including deactivating (and reactivating) specific items that are out of stock. The Order Manager app also helps restaurant managers coordinate with Dashers, prepare for large scheduled orders, pause orders when it gets too busy, and contact both the customer and DoorDash support.*
>
> *When a customer places a DoorDash order, you will receive a notification on the Order Manager app allowing you to quickly and efficiently process*

> *orders. Just be sure your tablet volume is on loud and the device is placed somewhere that is easily accessible by staff."*

The article also discusses using the Business Manager App for iPhone or Android:

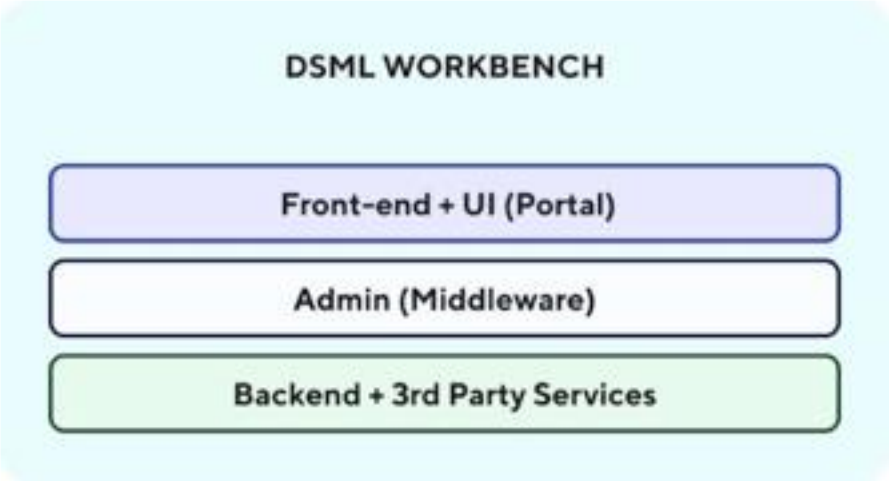
Bonus: Business Manager App

> *"Download the Business Manager App on the App Store or Google Play Store to manage your restaurant on the go. The Business Manager app makes it easy to track orders and review performance, all from your phone. Monitor a Dasher's location, access 24/7 support, mark items out of stock, update store hours, get analytics, and more from the app."*

In the blog article by the DoorDash Engineering team title "Transforming MLOps at DoorDash with Machine Learning Workbench", states how DoorDash has developed an internal Machine Learning (ML) Workbench to enhance data operations and support their data scientists, analysts, and AI/ML engineers. The importance of ML at DoorDash is emphasized, given its applications across the platform's ecosystem involving customers, Dashers, and merchants. The ML Workbench serves as a centralized hub for tasks in the machine learning lifecycle, including building, training, tuning, and deploying machine learning models. (See Exh. 121)

DoorDash's ML Workbench streamlines the machine learning process by providing a space for data collection, organization, and use in ML algorithms. It was designed with user-centered principles, aiming to create a best-in-class internal tool that is functional, usable, aesthetically pleasing, and integrates well with DoorDash's internal tools ecosystem. The development strategy was iterative, focusing on understanding user pain points, designing solutions, running user tests, and optimizing for better velocity and productivity.

Key components of the ML Workbench include front-end UI (Portal), Admin (Middleware), and Backend + 3rd Party Services. Through user research and interviews, DoorDash categorized users into admins, end users, and operators, tailoring the Workbench's features to their needs. Features such as model viewing, testing predictions, and model performance monitoring were added to streamline daily workflows and accelerate model development velocity.



The implementation of the ML Workbench has led to significant improvements in the efficiency and user experience of DoorDash's engineering and data science teams.

	The tool facilitated better observability of features and models, and the future vision includes diversifying adoption, improving feature and model observability, and continuing a user-centric development approach. This ML Workbench and its capabilities align well with Claim 7 of the patent, as it is an embodiment of an interconnected, intelligent web server network with multi-modes of contact, multi-communications protocols, and multi-user and parallel operational capabilities. The master database's role within this framework is also showcased, where it integrates with the network of web servers and is accessible via a database API, which intelligently learns, updates, and stores data. The Workbench's integration with various ML lifecycle stages and its emphasis on efficiency and reliability reflect the innovations described in Claim 7, particularly in the context of improving network efficiency and reliability. The accused instrumentality meets this limitation under the doctrine of equivalents because the accused instrumentality performs substantially the same function, in substantially the same way to achieve substantially the same result. For example, the Doctrine of Equivalents, even if the precise terminology used in the claim does not perfectly match the description provided, elements in DoorDash's network that perform substantially the same function, in substantially the same way, to achieve substantially the same result can be considered equivalent to the claim's elements. This doctrine allows for a broader interpretation, ensuring that innovations that are not identical in terminology but are equivalent in function and purpose are still protected under the claim. Therefore, DoorDash's network may be considered to meet the claim's limitations under the DOE, as it exhibits characteristics and functionalities equivalent to those outlined in the claim, even if the specific wording differs in the description. See Exh 1 - 149
a network of distributed and linked backoffice servers that are continuously synchronized in real time and which are enabled to be remotely accessed and managed by a system administrator via a web based interface;	DoorDash has created a robust distributed computing platform that consists of a network of interconnected and intelligent web servers, which can be accessed and controlled by system administrators through a web-based interface. This network enables multi-user engagement and supports multi-modes of contact through the use of hardware, software, and networking services, to offer an industry leading online hospitality system. The interconnected web server system includes a suite of interfaces such as websites, mobile apps, and APIs, underpinned by a backend-for-frontend architecture that facilitates communication between the client and server. This network harnesses popular technologies like Next.js, Express.js, and Node.js to serve content efficiently to various client devices through the internet, with a focus on performance, flexibility, and user experience. DoorDash's web servers operate on powerful clusters to handle the extensive scale of their operations, ensuring that content is served swiftly and reliably to meet the demands of consumers, merchants, and Dashers. The system's infrastructure is designed to scale dynamically, adjusting to the number of client requests by utilizing server clusters, which are assigned unique IP addresses for seamless communication over the internet. The web-based interface for system administrators is central to DoorDash's

operational model, allowing for the orchestration of data and application processes across the network. This interface is essential for the management of the intricate DoorDash ecosystem, enabling administrators to monitor, control, and optimize the system's performance and reliability.

The interconnectivity of DoorDash's web server network is exemplified by its use of server-side rendering and migration to a microservices architecture, enhancing the system's reliability and scalability. The transition to this architecture involved adopting new programming languages and technologies, such as Kotlin and the Java Virtual Machine, to improve the system's fault tolerance and efficiency.

DoorDash's adoption of a microservices architecture, with a backend-for-frontend layer, reflects the patent claim's emphasis on a networked web server system that can be accessed and controlled via a web-based interface. This architecture has allowed DoorDash to compartmentalize their application into domain-specific services, leading to reduced errors and latency, and enabling the system to deliver a responsive and reliable service to its users.

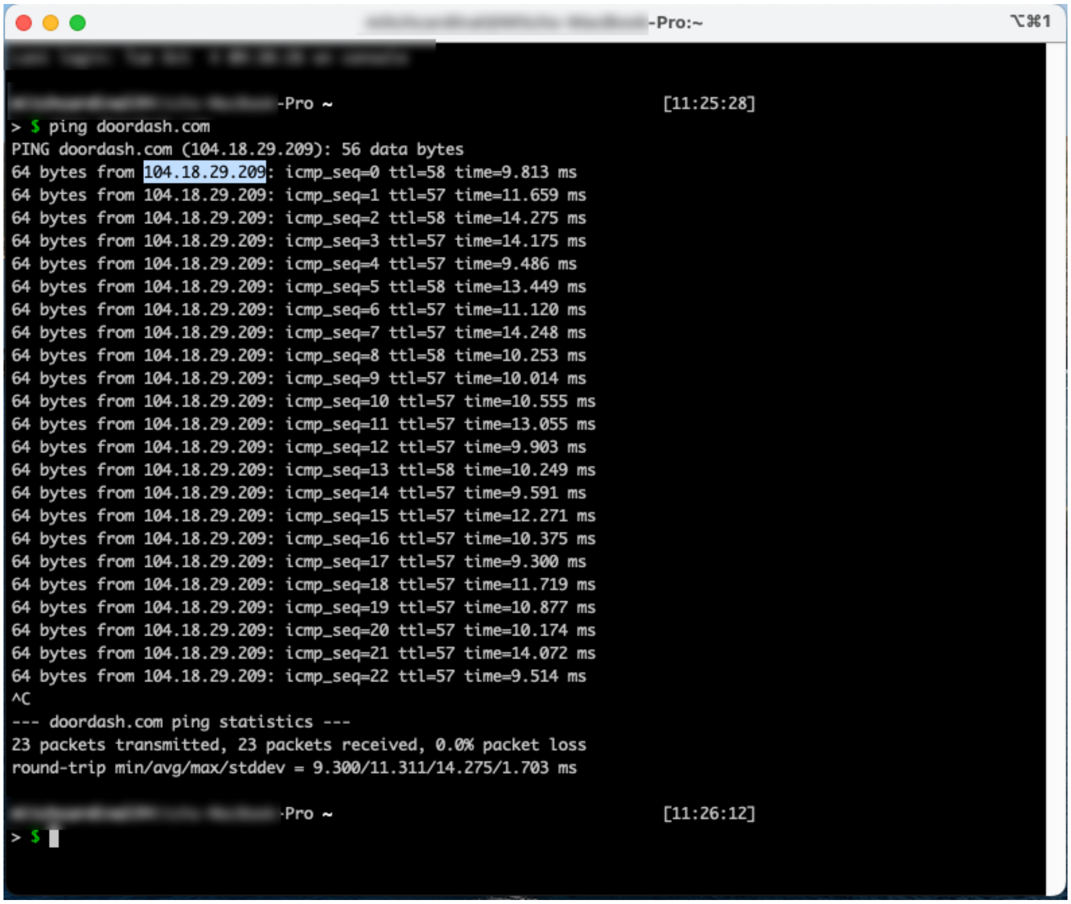
As stated above, as to the ‘one network of said interconnected web server computers’, and confirmed below, DoorDash develops, tests, integrates, uses, operates, manages, and maintains a “distributed computing” platform of clustered set of interconnected and vastly improved “Intelligent Web Servers with multi modes of contact”. DoorDash uses a combination of web server hardware, software, and networking services to create a very powerful and effective online web-based hospitality system, as confirmed below.

The DoorDash web server system includes a website, mobile website, APIs, mobile apps (iOS and Android), and backend-for-frontend (BFF) architecture and functionality. Their interconnected web servers, as is shown herein, is a DoorDash engineered custom developed set of interconnected web servers while including several well-known and widely used web server-based technologies.

A webserver serves content (images, text, menu, video, audio, video stream, etc.) over the internet (or network) to a calling device (client) that runs on computer hardware. There can be one or more calling clients at any given moment. The computer hardware that the webserver runs on can be any device with a network connection (laptop, server computer, mobile device, etc.).

To serve content, a webserver listens on a network port (virtual point where network connections start and end) for a request from a client (browser, mobile app, webapp, desktop app, etc.) sent via a networking communication protocol (i.e., HTTP or HTTPS). The webserver interprets and processes that request and returns a response to the client with the resources requested (text, images, menus, code, etc.). Depending on the scale of the webserver running web application(s), for example the DoorDash system, more powerful linked computer servers or sets/clusters of servers will be used to run a bigger system.

Each web server has an IP address associated with it that allows it to communicate with other computers over the internet. When a user types in a name of a website in the browser, such as DoorDash.com, the Domain Name System (DNS) finds the correct IP Address of that domain name and directs the user accordingly (see Exh. 83). Using the “ping” command from any Windows or MacOS PC on DoorDash.com returns the IP address of **104.18.29.209**, as screen in this screenshot:



```
[redacted]

[redacted]-Pro ~                                         [11:25:28]
> $ ping doordash.com
PING doordash.com (104.18.29.209): 56 data bytes
64 bytes from 104.18.29.209: icmp_seq=0 ttl=58 time=9.813 ms
64 bytes from 104.18.29.209: icmp_seq=1 ttl=57 time=11.659 ms
64 bytes from 104.18.29.209: icmp_seq=2 ttl=58 time=14.275 ms
64 bytes from 104.18.29.209: icmp_seq=3 ttl=57 time=14.175 ms
64 bytes from 104.18.29.209: icmp_seq=4 ttl=57 time=9.486 ms
64 bytes from 104.18.29.209: icmp_seq=5 ttl=58 time=13.449 ms
64 bytes from 104.18.29.209: icmp_seq=6 ttl=57 time=11.120 ms
64 bytes from 104.18.29.209: icmp_seq=7 ttl=57 time=14.248 ms
64 bytes from 104.18.29.209: icmp_seq=8 ttl=58 time=10.253 ms
64 bytes from 104.18.29.209: icmp_seq=9 ttl=57 time=10.014 ms
64 bytes from 104.18.29.209: icmp_seq=10 ttl=57 time=10.555 ms
64 bytes from 104.18.29.209: icmp_seq=11 ttl=57 time=13.055 ms
64 bytes from 104.18.29.209: icmp_seq=12 ttl=57 time=9.903 ms
64 bytes from 104.18.29.209: icmp_seq=13 ttl=58 time=10.249 ms
64 bytes from 104.18.29.209: icmp_seq=14 ttl=57 time=9.591 ms
64 bytes from 104.18.29.209: icmp_seq=15 ttl=57 time=12.271 ms
64 bytes from 104.18.29.209: icmp_seq=16 ttl=57 time=10.375 ms
64 bytes from 104.18.29.209: icmp_seq=17 ttl=57 time=9.300 ms
64 bytes from 104.18.29.209: icmp_seq=18 ttl=57 time=11.719 ms
64 bytes from 104.18.29.209: icmp_seq=19 ttl=57 time=10.877 ms
64 bytes from 104.18.29.209: icmp_seq=20 ttl=57 time=10.174 ms
64 bytes from 104.18.29.209: icmp_seq=21 ttl=57 time=14.072 ms
64 bytes from 104.18.29.209: icmp_seq=22 ttl=57 time=9.514 ms
^C
--- doordash.com ping statistics ---
23 packets transmitted, 23 packets received, 0.0% packet loss
round-trip min/avg/max/stddev = 9.300/11.311/14.275/1.703 ms

[redacted]-Pro ~                                         [11:26:12]
> $ ▌
```

In the blog article "Improving Web Page Performance at DoorDash Through Server-Side Rendering with Next.JS" (see Exh. 1) by the DoorDash Engineering Team, they affirm multiple facts regarding the DoorDash system including the use of a webserver and how it works. Specifically, they state that that they needed to upgrade the user experience for desktop and mobile and employ Google's web metrics as a benchmark for creating a faster web service. Furthermore, they state that they use Next.js, Express.js, Node.js as part of their web server system, technologies which are very popular today with developers and are in fact web server (backend) technologies. Lastly, and more importantly, they state that their system needed more "**flexibility**" from the web server hosting and therefore they decided to build and implement their own custom web server using next.js and express.js. The article states the following:

> *"The DoorDash app was running on a client-side system prone to loading issues, poor SEO, and other issues. By moving to server-side rendering, we hoped that we could upgrade a number of key elements, including:*
>
> *Enhancing the user experience: We wanted to improve the user experience by shortening page-load times. This aligns with the recent introduction of Google's web metrics that favor fast, lightweight pages on modest mobile devices. These metrics have significant influence on the page rank assigned by Google.*
>
> *Enabling Bundle Size Optimization: Our existing client-side rendered single-page app (CSR, SPA) was becoming difficult to optimize because the size of*

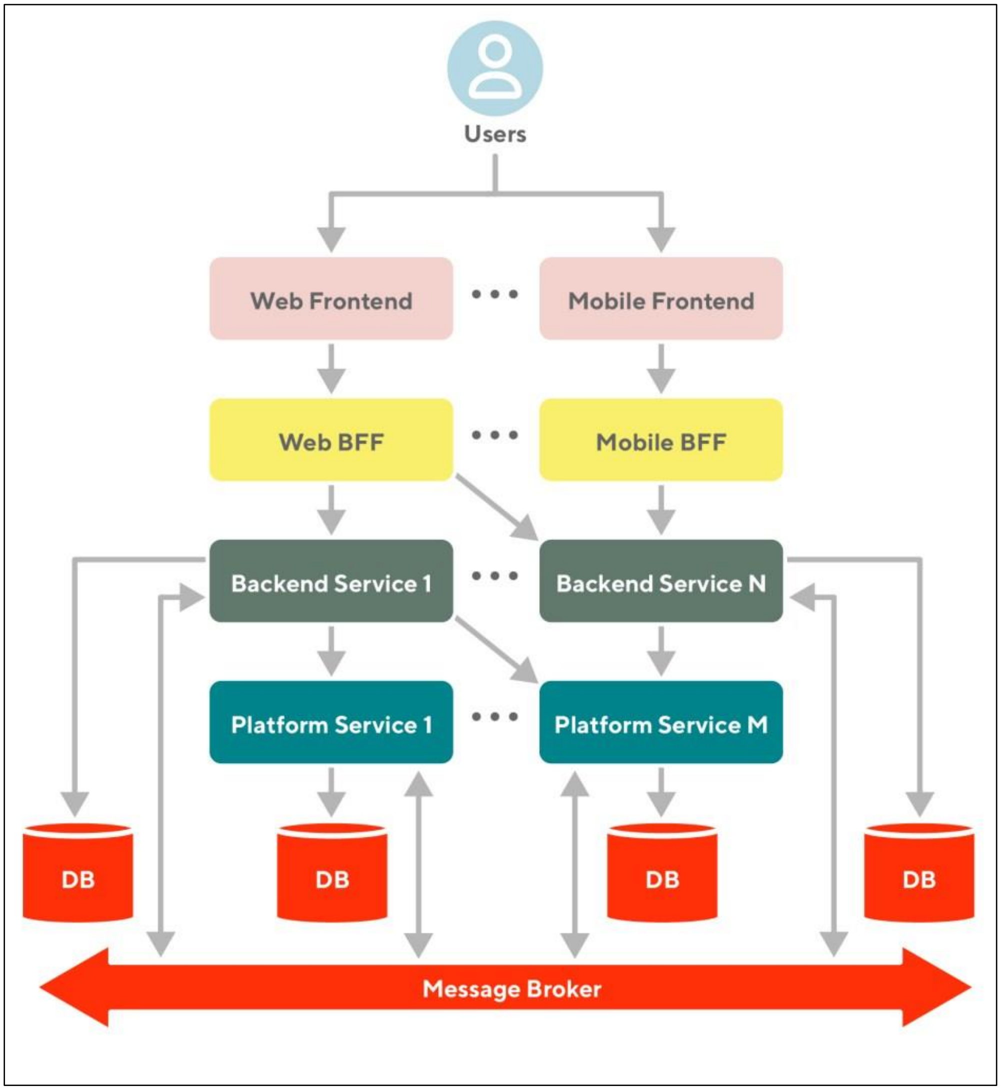
> *the JavaScript and other resource bundles had become bloated.*
>
> *Improving SEO: We set out to deliver optimal SEO metadata using server-side rendered content. Whenever possible, it is better to deliver fully formed web content to search engines rather than waiting for client-side JavaScript to render the content. One approach: Move API calls from the client browser (north-south) to the server-side (east-west), where performance typically is better than on a user's device."*
>
> *"Many engineers at DoorDash are huge fans of the Next.js team and Vercel. Vercel's infrastructure was built for Next.js, providing both an amazing developer experience and a* ***hosting infrastructure*** *that make working with Next.js easy and maximally optimized."*
>
> *"At DoorDash, however, we needed a little more flexibility and customization than Vercel could offer when it comes to how we deploy, build, and host our apps. We opted instead for the* ***custom-server approach to serving pages via Next.js*** *because it provided us more flexibility in how we hosted our app within our existing Kubernetes infrastructure."*
>
> *"****Our custom server is built*** *with Express.js and leverages our in-house JavaScript server toolkit, which provides out-of-the-box functionality like logging and metrics collection."*
>
> *"Before rolling out our new service to production, we needed to know how much traffic it could support and what resources it required… After an initial audit we saw that not all cores were being utilized to spread the processing load. As a result we used Node.js's cluster API to make use of all the pod's cores, which quadrupled the pod's request capacity".*

Node.js **"…**is an open-source, cross-platform runtime environment that allows developers to create all kinds of server-side tools and applications in JavaScript. The runtime is intended for use outside of a browser context i.e., running directly on a computer or server OS (see Ex. 2). (For a simple example of how to create a server to start listening to HTTP requests see Ex. 11).

Express.js "… is a back-end web application framework for Node.js. It is designed for building web applications and APIs. It has been called the de facto standard server framework for Node.js" (see Ex. 3).

Next.js is a server rendered React (JavaScript) framework used to create high performing web applications and has become very popular in the tech world. *"Next.js handles the tooling and configuration needed for React, and provides additional structure, features, and optimizations for your application. Next.js is a JavaScript framework that enables you to build superfast and extremely user-friendly static websites, as well as web applications using React. This feature allows Next.js to build hybrid applications that contain both server-side rendered and statically generated pages"* (see Ex. 4.).

Furthermore, in 2019, DoorDash rebuilt their web UI using the React and Next.js frameworks. At that time, they also implemented server-side rendering (a method of rendering web applications on the server and serving a static HTML page loaded with data specific to the requested page to the user). This helped to improve the

	performance of the overall web application by shortening page-load times, improve bundle size optimizations, and improving SEO (see Exh. 27). The original DoorDash platform was originally a monolithic application written in Python using the Django web framework with a PostgreSQL database. As the platform grew, they started to have problems with reliability and scaling. Around 2018 they instituted a code freeze and began migrating to microservices. At this time, they also migrated to the Kotlin language, and their services now run on the java virtual machine (JVM) (see Exh 20, 21, 22, 40). DoorDash was able to improve the efficiency and reliability of their platform using a microservices architecture. By breaking up their application into domain-specific parts they were able to reduce errors and latency. They state in the article "Future-proofing: How DoorDash Transitioned from a Code Monolith to a Microservice Architecture" (see Exh. 20) that *"... final design for our new microservice architecture consisted of five different layers, ranging from the user experience to the core infrastructure. Each layer provides functionality to the upper layer and leverages the functionality exposed by the lower layer [as shown below]":*  Users Web Frontend • • • Mobile Frontend Web BFF • • • Mobile BFF Backend Service 1 • • • Backend Service N Platform Service 1 • • • Platform Service M DB DB DB DB Message Broker

These layers include (see Exh 20):

> *“Frontend layer: Provides frontend systems (like the DoorDash mobile app, Dasher web app, etc.) for the interaction with consumers, merchants, and Dashers that are built on top of different frontend platforms.*
>
> *BFF layer: The frontend layer is decoupled from the backend layer via BFFs. The BFF layer provides functionality to the frontend by orchestrating the interaction with multiple backend services while hiding the underlying backend architecture.*
>
> *Backend Layer: Provides the core functionality that powers the business logic (order cart service, feed service, delivery service, etc.).*
>
> *Platform layer: Provides common functionality that is leveraged by other backend services (identity service, communication service, etc.).*
>
> *Infrastructure layer: Provides the infrastructural components that are required to build the site (databases, message brokers, etc.) and lays the foundation to abstract the system from the underlying environment (cloud service provider).”*

In this, DoorDash’s new architecture they introduced the backend-for-frontend (BFF) “…an application connecting the consumer-facing client and the services providing general purpose APIs. Client requests go to the BFF, which then orchestrates the aggregation of information needed by the client”. The BFF is a software architecture pattern (see Exh 40) used by microservices which “…shifted from thick-client applications to **interfaces delivered via the web, a trend that has also enabled the growth of SAAS-based solutions in general**”. As such BFF can be considered as “…the user-facing application as being two components - a client-side application living outside your perimeter, and **a server-side component (the BFF**) inside your perimeter”. The perimeter of the BFF is the webserver.

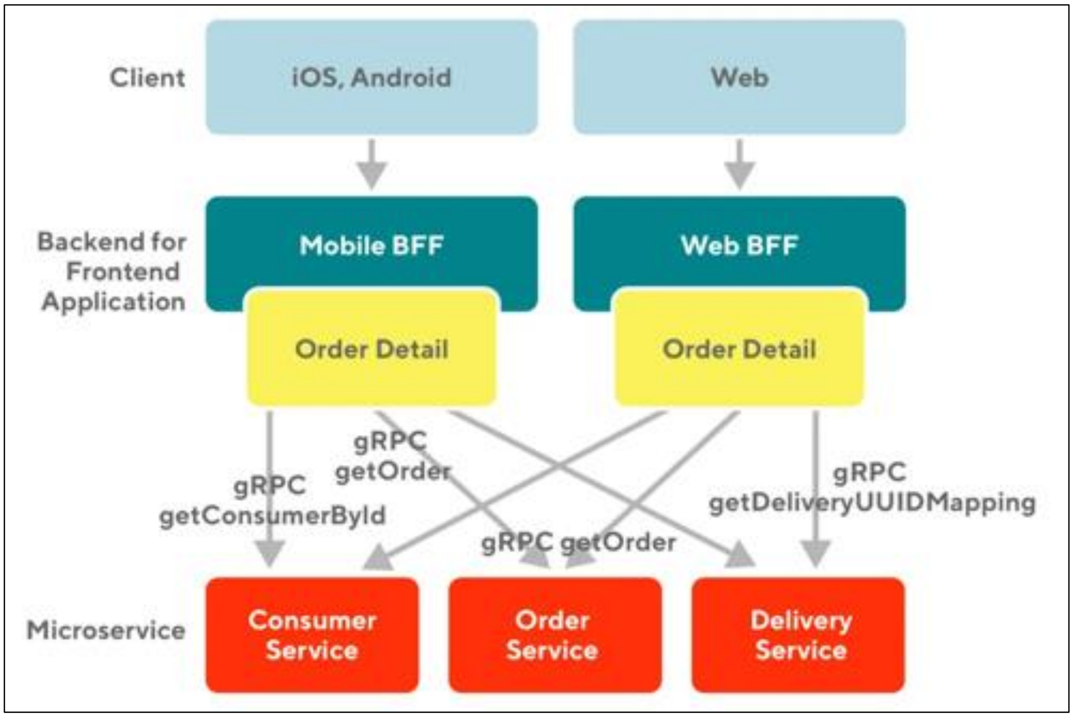
In the blog article by the DoorDash engineering team Platform Optimization Through Better API Design (see Exh. 22) they state in the introduction:

> *“As DoorDash migrated from a monolithic codebase to a microservices architecture, we found an opportunity to refine our API design. Beyond simple functionality, we determined best practices in making APIs that help our applications load quickly, use minimal storage, and, most importantly, avoid failures.”*
>
> *“APIs, the connective tissue of a software platform, can offer performance improvements when properly designed. At DoorDash, the APIs relay frontend client requests to backend services and provide the information that users see in our apps, such as the estimated time when a food order will be delivered. If the APIs perform at maximum efficiency, client requests and responses all process more quickly” (see Exh 20, 21, 40).*

In their new architecture they introduced the backend-for-frontend (BFF) “… an application connecting the consumer-facing client and the services providing general purpose APIs. Client requests go to the BFF, which then orchestrates the aggregation of information needed by the client”. The BFF is a software architecture pattern (see

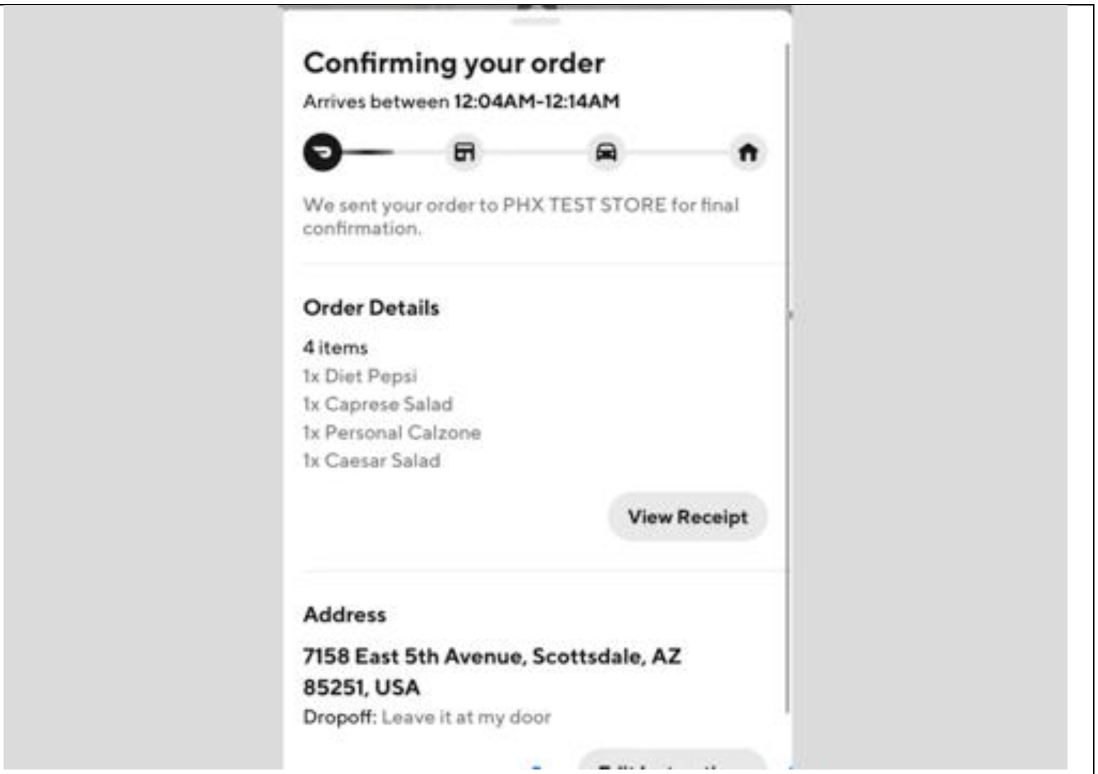
Exh 40) used by microservices which "…shifted from thick-client applications to interfaces delivered via the web, a trend that has also enabled the growth of SAAS-based solutions in general". As such BFF can be considered as "…the user-facing application as being two components – a client-side application living outside your perimeter, and **a server-side component (the BFF)** inside your perimeter". The perimeter of the BFF is the webserver.

As shown "…in the diagram below …when the BFF receives the order details request, it orchestrates the calls to the consumer service, order service, and delivery service, **ultimately assembling the response details into a consolidated order detail response**. Building APIs using domain-specific services, orchestrated by the BFF, makes it easier to understand which RPCs are called and how they are executed" (see Exh. 41).



BFF is the core service that permits their large system to be pieced into various backend sub-systems (microservices) for performance improvements and easier maintainability. They go on to state that:

> *"At DoorDash, our APIs primarily support information on food orders, whether that's an order placed by a consumer and sent to a restaurant, a delivery request sent to a Dasher, or a Dasher's progress in bringing a food order to a consumer. For example, two main endpoints, order detail and order delivery status, populate our order tracking page, [as] shown in [the figure below]"*



Confirming your order

Arrives between 12:04AM-12:14AM

We sent your order to PHX TEST STORE for final confirmation.

Order Details

4 items

1x Diet Pepsi

1x Caprese Salad

1x Personal Calzone

1x Caesar Salad

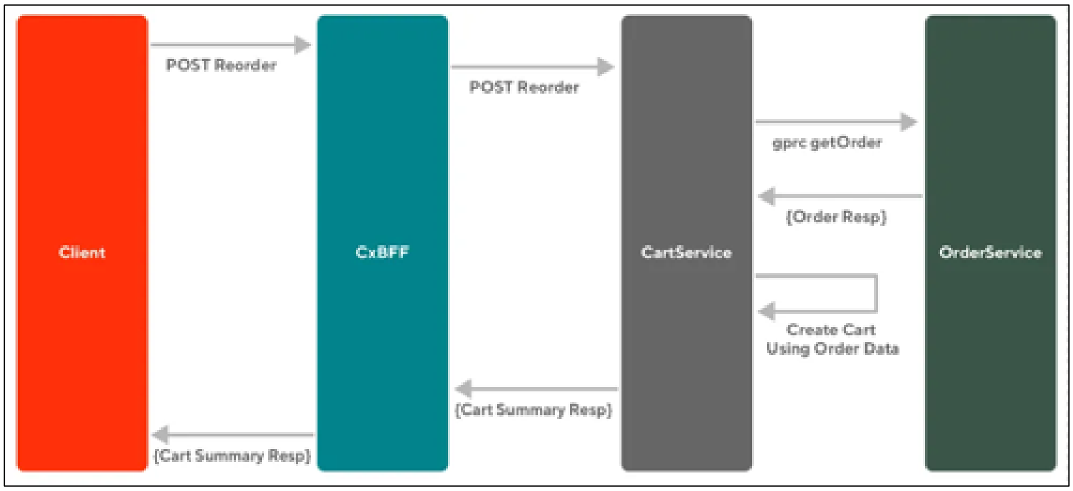
View Receipt

Address

7158 East 5th Avenue, Scottsdale, AZ 85251, USA

Dropoff: Leave it at my door

> *"When we redesigned the Reorder endpoint, we wrote the Reorder API so it would read the order information it needs to create the new cart instead of passing the large order data over the network to create the new cart, as shown [below]…[here] in our redesigned order flow, we reduce network traffic by writing the Reorder API so that it reads the order detail and creates the new cart, simplifying its role…. The client only needs metadata for the new cart from the Reorder endpoint, so we only return a cart summary response to the client instead of the whole cart. Compared to the previous flow, shown in Figure 4, we not only eliminate the request to call GET order cart from the client, but also make both the request and response very light."*



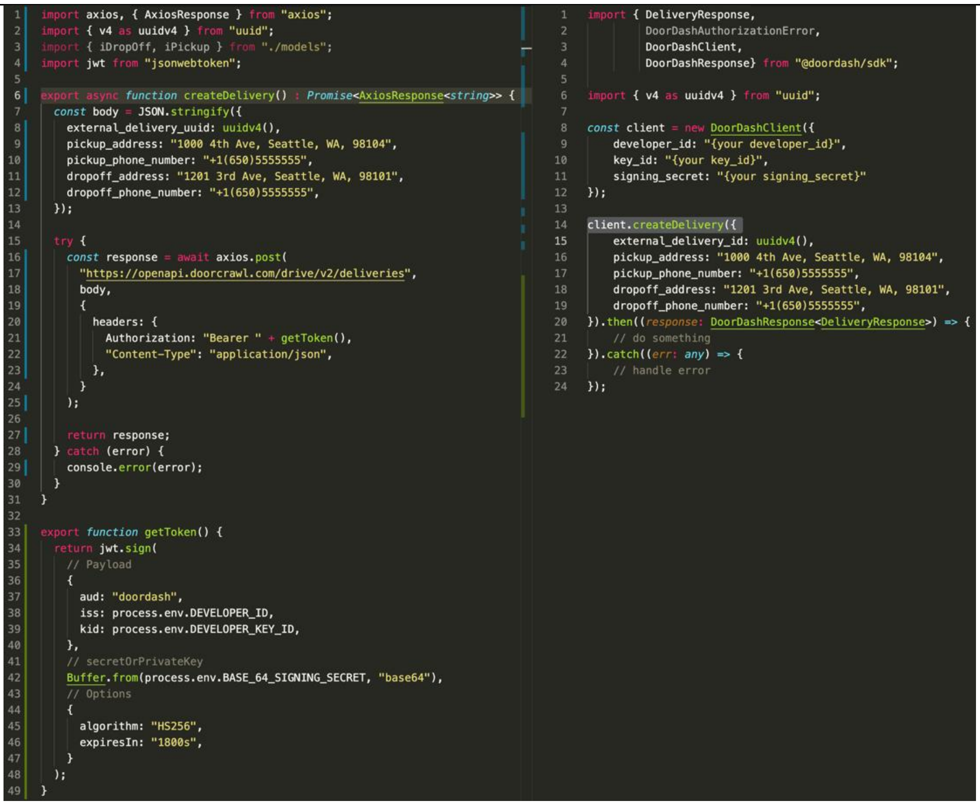
Fault Tolerance with RPC Fallbacks in DoorDash's Microservices

In the blog article "Improving Fault Tolerance with RPC Fallbacks in DoorDash's Microservices" by the DoorDash Engineering team (see Exh 119), they state that:

> *"…the industry today is replacing legacy monolithic architectures with microservices to capitalize on the promise of better scalability and developer productivity. As with anything in distributed systems, this new architecture comes with tradeoffs — most notably complexity. Interservice communication is done through remote procedure calls, or RPCs, which add a whole new set of issues to consider. But designing for fault tolerance from the start can ensure the system continues to operate properly in the event of failures."*
>
> *"DoorDash uses a microservices architecture that employs gRPC to communicate between services. Product microservices return content to clients in the user's preferred language. The translated content is fetched from the platform's translation microservice. A translation client simplifies the interaction with the translation systems, exposing a simplified interface that different teams can use to fetch translated content."*
>
> *"With the myriad strategies described here to mitigate failures, it is possible to keep systems operational despite them. The fallbacks we have deployed to improve our system's fault tolerance is just one of the many initiatives DoorDash undertakes to provide our customers the best service possible."*

Node.js SDK

Recently, DoorDash further customized its webservers (again which runs on node.js) by creating a new API called DoorDash Node.js SDK which *"…care of the boilerplate work of using our API, like setting up the authentication token and making HTTP requests. SDKs generally make it faster to use an API because they take care of this boilerplate work so you can get right to the task you're trying to achieve–say, creating a delivery and requesting a Dasher. In the screenshot below, the code on the left creates a delivery using the Create Delivery API directly; the code on the right, using the DoorDash Node.js SDK."* See Exh 41.



```
import axios, { AxiosResponse } from "axios";
import { v4 as uuidv4 } from "uuid";
import { iDropOff, iPickup } from "./models";
import jwt from "jsonwebtoken";

export async function createDelivery() : Promise<AxiosResponse<string>> {
  const body = JSON.stringify({
    external_delivery_uuid: uuidv4(),
    pickup_address: "1000 4th Ave, Seattle, WA, 98104",
    pickup_phone_number: "+1(650)5555555",
    dropoff_address: "1201 3rd Ave, Seattle, WA, 98101",
    dropoff_phone_number: "+1(650)5555555",
  });

  try {
    const response = await axios.post(
      "https://openapi.doorcrawl.com/drive/v2/deliveries",
      body,
      {
        headers: {
          Authorization: "Bearer " + getToken(),
          "Content-Type": "application/json",
        },
      }
    );

    return response;
  } catch (error) {
    console.error(error);
  }
}

export function getToken() {
  return jwt.sign(
    // Payload
    {
      aud: "doordash",
      iss: process.env.DEVELOPER_ID,
      kid: process.env.DEVELOPER_KEY_ID,
    },
    // secretOrPrivateKey
    Buffer.from(process.env.BASE_64_SIGNING_SECRET, "base64"),
    // Options
    {
      algorithm: "HS256",
      expiresIn: "1800s",
    }
  );
}
```

```
import { DeliveryResponse,
         DoorDashAuthorizationError,
         DoorDashClient,
         DoorDashResponse} from "@doordash/sdk";

import { v4 as uuidv4 } from "uuid";

const client = new DoorDashClient({
    developer_id: "{your developer_id}",
    key_id: "{your key_id}",
    signing_secret: "{your signing_secret}"
});

client.createDelivery({
    external_delivery_id: uuidv4(),
    pickup_address: "1000 4th Ave, Seattle, WA, 98104",
    pickup_phone_number: "+1(650)5555555",
    dropoff_address: "1201 3rd Ave, Seattle, WA, 98101",
    dropoff_phone_number: "+1(650)5555555",
}).then((response: DoorDashResponse<DeliveryResponse>) => {
    // do something
}).catch((err: any) => {
    // handle error
});
```

AWS Web Server Hosting and Location

DoorDash migrated their hosting from Heroku to Amazon Web Services (AWS) sometime in 2015. They built a Docker image of their app to make the transition easier. At that time DoorDash adopted "Amazon RDS Postgres" as primary data store and then in 2018 migrated to "Amazon Aurora Postgres."

Since 2019, they have been using the following AWS services: Amazon ElastiCache (in-memory caching service), Amazon Relational Database Service (aka RDS is a collection of database services), Amazon Aurora (scalable MySQL and PostgreSQL database service), Amazon CloudWatch (monitoring and observability service), Amazon DynamoDB (NoSQL database service), Amazon Kinesis (real time video process and analyzing service), and Amazon Redshift (data warehouse service). DoorDash also uses Amazon EC2 compute resources. This is likely how they host their Kotlin/Java application (see Exh. 23, 24, 25, 26).

Web Technology Surveys

W3Techs, World Wide Web Technology Surveys (See Ex. 8) identifies DoorDash as using multiple server, client, and programming technologies to operate their system (see Ex 13). These include but not limited to the following:

Content Management System*: Salesforce Customer 360 (used on a subdomain)*

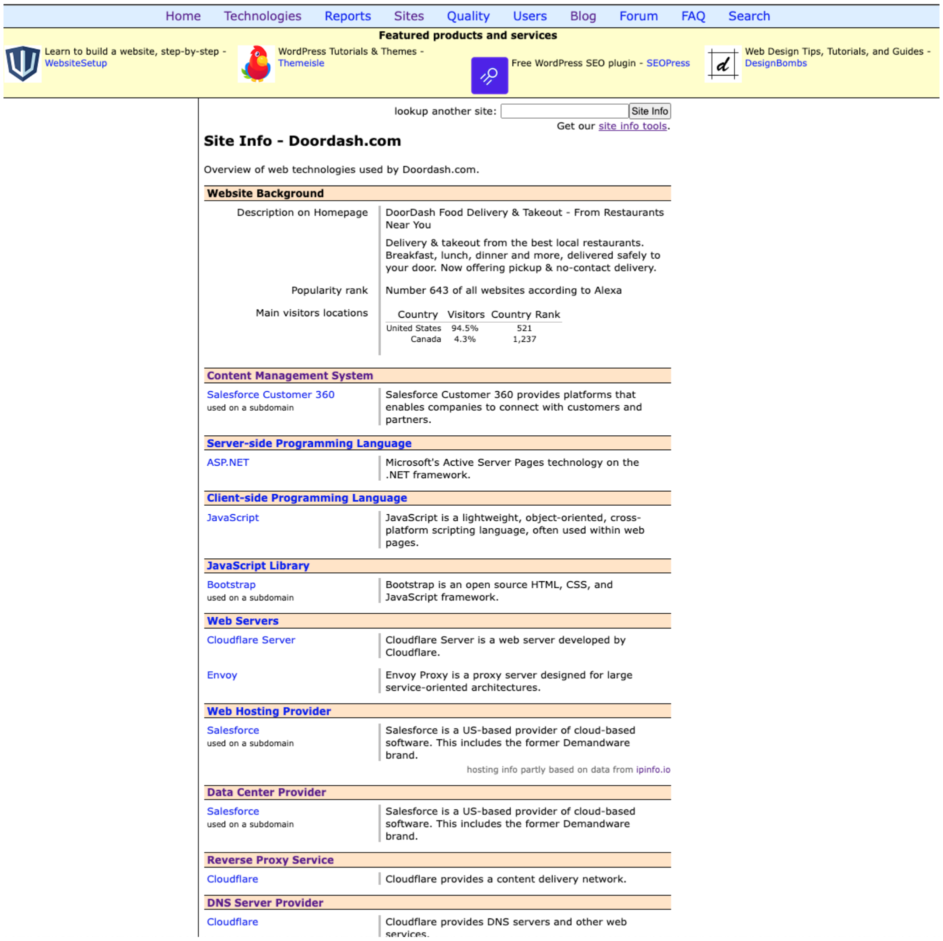
Server-side Programming Language*: ASP.NET Microsoft's Active Server Pages technology on the .NET framework.*

Client-side Programming Language*: JavaScript, Bootstrap is an HTML, CSS.*

Web Servers*: Cloudflare Server and Envoy. Cloudflare Server is a web server* *developed by Cloudflare. Envoy Proxy is a proxy server designed for large service-oriented architectures.*

***Reverse Proxy Service**: Cloudflare provides a content delivery network.*

***DNS Server Provider** through Cloudflare. DNS allows websites to found by name such as DoorDash.com on webservers.*



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lookup another site: [ ] Site Info

Get our site info tools.

Site Info - Doordash.com

Overview of web technologies used by Doordash.com.

Website Background	
Description on Homepage	DoorDash Food Delivery & Takeout - From Restaurants Near You Delivery & takeout from the best local restaurants. Breakfast, lunch, dinner and more, delivered safely to your door. Now offering pickup & no-contact delivery.
Popularity rank	Number 643 of all websites according to Alexa
Main visitors locations	

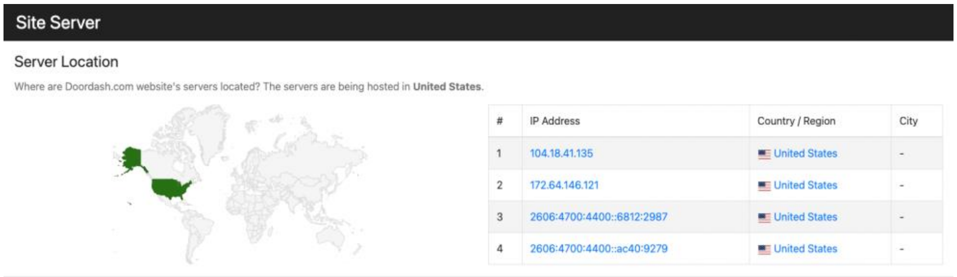
Country	Visitors	Country Rank
United States	94.5%	521
Canada	4.3%	1,237

Content Management System	
Salesforce Customer 360 used on a subdomain	Salesforce Customer 360 provides platforms that enables companies to connect with customers and partners.
Server-side Programming Language	
ASP.NET	Microsoft's Active Server Pages technology on the .NET framework.
Client-side Programming Language	
JavaScript	JavaScript is a lightweight, object-oriented, cross-platform scripting language, often used within web pages.
JavaScript Library	
Bootstrap used on a subdomain	Bootstrap is an open source HTML, CSS, and JavaScript framework.
Web Servers	
Cloudflare Server	Cloudflare Server is a web server developed by Cloudflare.
Envoy	Envoy Proxy is a proxy server designed for large service-oriented architectures.
Web Hosting Provider	
Salesforce used on a subdomain	Salesforce is a US-based provider of cloud-based software. This includes the former Demandware brand.
	hosting info partly based on data from ipinfo.io
Data Center Provider	
Salesforce used on a subdomain	Salesforce is a US-based provider of cloud-based software. This includes the former Demandware brand.
Reverse Proxy Service	
Cloudflare	Cloudflare provides a content delivery network.
DNS Server Provider	
Cloudflare	Cloudflare provides DNS servers and other web services.

StatsCrop

StatsCrop.com is a free online website analyzer. Using this service, the following website information for DoorDash.com is generated including the location of their servers, name server info, DNS information and whois profile (see Ex. 10):

Server Location



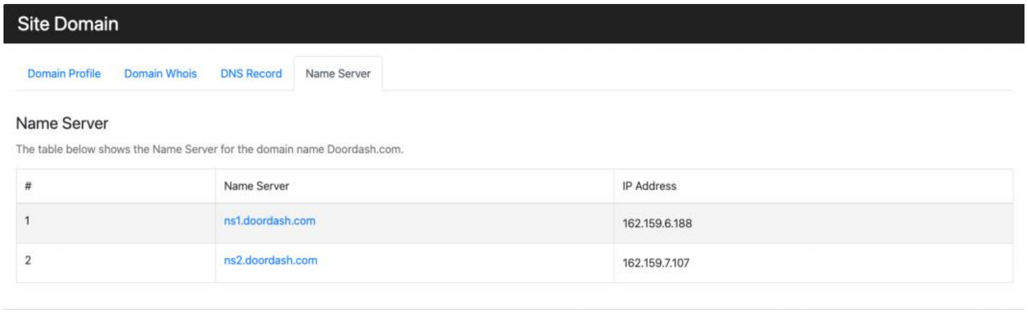
Site Server

Server Location

Where are Doordash.com website's servers located? The servers are being hosted in **United States**.

#	IP Address	Country / Region	City
1	104.18.41.135	United States	-
2	172.64.146.121	United States	-
3	2606:4700:4400::6812:2987	United States	-
4	2606:4700:4400::ac40:9279	United States	-

Name Servers

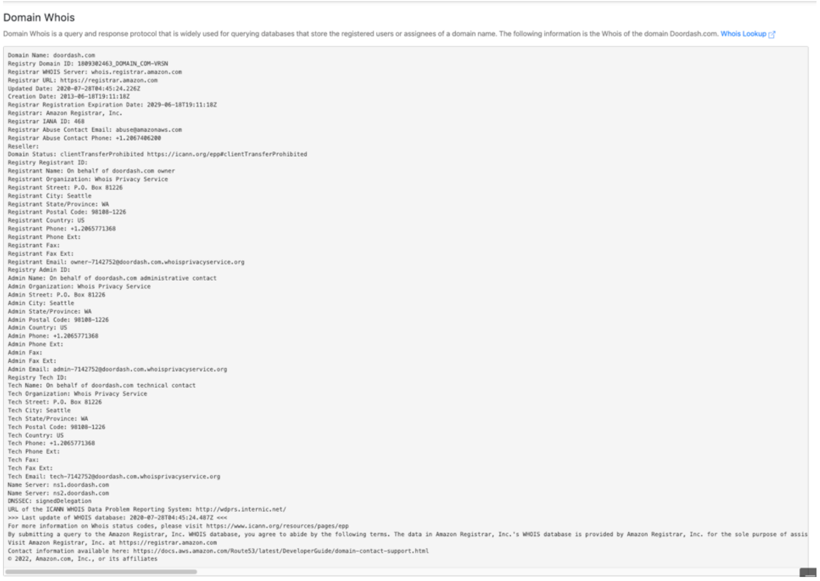


Name Server

The table below shows the Name Server for the domain name Doordash.com.

#	Name Server	IP Address
1	ns1.doordash.com	162.159.6.188
2	ns2.doordash.com	162.159.7.107

Domain WhoIs



Domain Whois

Domain Whois is a query and response protocol that is widely used for querying databases that store the registered users or assignees of a domain name. The following information is the Whois of the domain Doordash.com. Whois Lookup

```
Domain Name: doordash.com
Registry Domain ID: 1809302463_DOMAIN_COM-VRSN
Registrar WHOIS Server: whois.registrar.amazon.com
Registrar URL: https://registrar.amazon.com
Updated Date: 2020-07-28T04:45:24.226Z
Creation Date: 2013-06-18T19:11:18Z
Registrar Registration Expiration Date: 2029-06-18T19:11:18Z
Registrar: Amazon Registrar, Inc.
Registrar IANA ID: 468
Registrar Abuse Contact Email: abuse@amazonaws.com
Registrar Abuse Contact Phone: +1.2067406200
Reseller:
Domain Status: clientTransferProhibited https://icann.org/epp#clientTransferProhibited
Registry Registrant ID:
Registrant Name: On behalf of doordash.com owner
Registrant Organization: Whois Privacy Service
Registrant Street: P.O. Box 81226
Registrant City: Seattle
Registrant State/Province: WA
Registrant Postal Code: 98108-1226
Registrant Country: US
Registrant Phone: +1.2065771368
Registrant Phone Ext:
Registrant Fax:
Registrant Fax Ext:
Registrant Email: owner-7142752@doordash.com.whoisprivacyservice.org
Registry Admin ID:
Admin Name: On behalf of doordash.com administrative contact
Admin Organization: Whois Privacy Service
Admin Street: P.O. Box 81226
Admin City: Seattle
Admin State/Province: WA
Admin Postal Code: 98108-1226
Admin Country: US
Admin Phone: +1.2065771368
Admin Phone Ext:
Admin Fax:
Admin Fax Ext:
Admin Email: admin-7142752@doordash.com.whoisprivacyservice.org
Registry Tech ID:
Tech Name: On behalf of doordash.com technical contact
Tech Organization: Whois Privacy Service
Tech Street: P.O. Box 81226
Tech City: Seattle
Tech State/Province: WA
Tech Postal Code: 98108-1226
Tech Country: US
Tech Phone: +1.2065771368
Tech Phone Ext:
Tech Fax:
Tech Fax Ext:
Tech Email: tech-7142752@doordash.com.whoisprivacyservice.org
Name Server: ns1.doordash.com
Name Server: ns2.doordash.com
DNSSEC: signedDelegation
URL of the ICANN WHOIS Data Problem Reporting System: http://wdprs.internic.net/
>>> Last update of WHOIS database: 2020-07-28T04:45:24.487Z <<<
For more information on Whois status codes, please visit https://www.icann.org/resources/pages/epp
By submitting a query to the Amazon Registrar, Inc. WHOIS database, you agree to abide by the following terms. The data in Amazon Registrar, Inc.'s WHOIS database is provided by Amazon Registrar, Inc. for the sole purpose of assis
Visit Amazon Registrar, Inc. at https://registrar.amazon.com
Contact information available here: https://docs.aws.amazon.com/Route53/latest/DeveloperGuide/domain-contact-support.html
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```
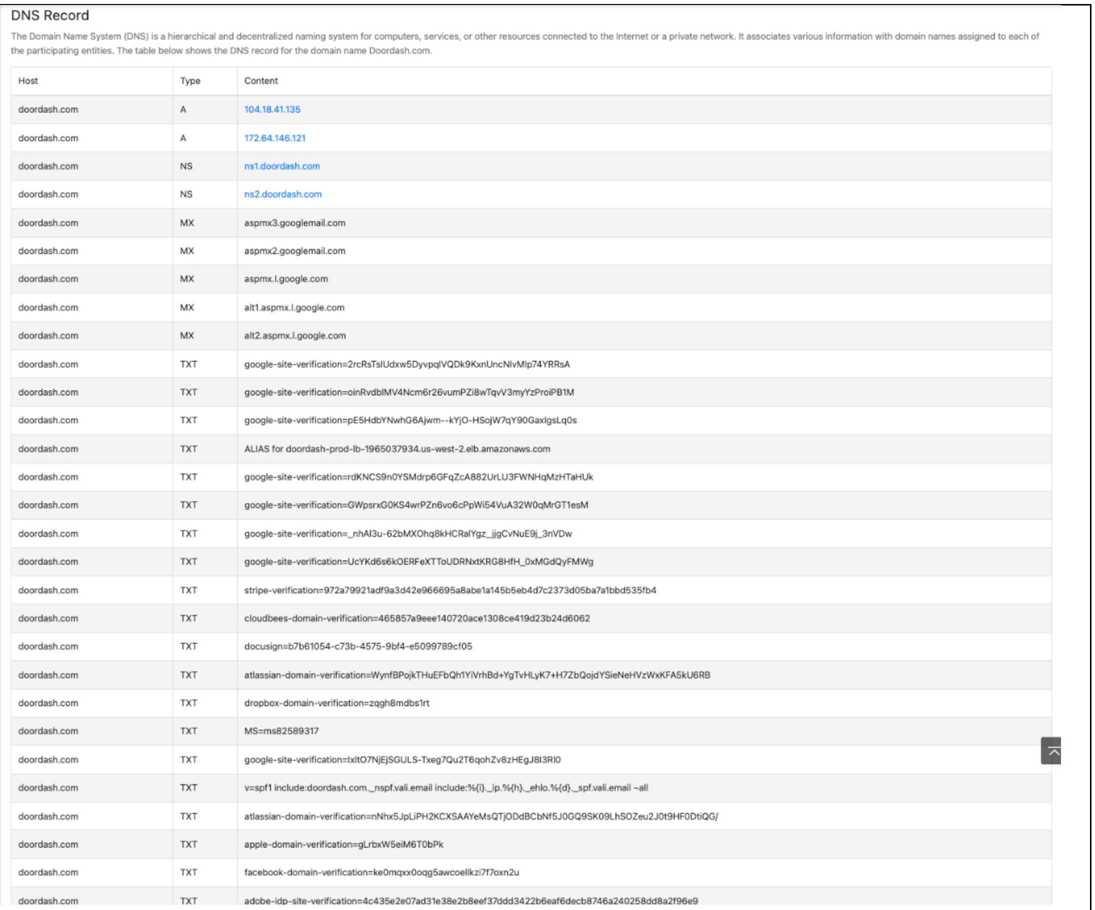

More importantly, StatsCrop.com shows the following webserver DNS records for DoorDash.com (see Exh. 10).

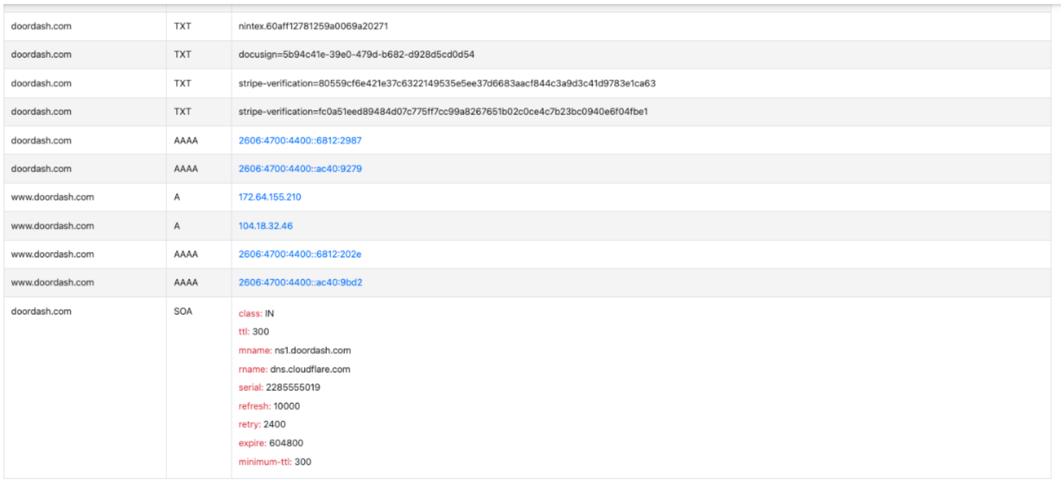
Note: DNS is "…a hierarchical and decentralized naming system for computers, services, or other resources connected to the Internet or a private network. It associates various information with domain names assigned to each of the participating entities. The table below shows the DNS record for the domain name DoorDash.com" (see Exh. 83).



DNS Record

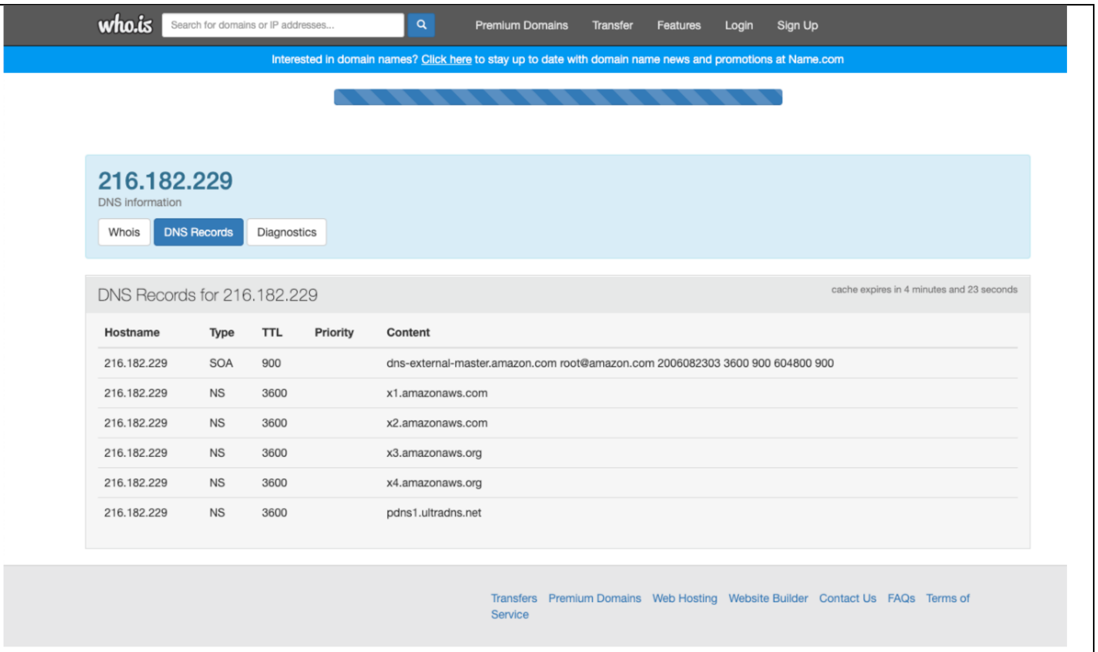
The Domain Name System (DNS) is a hierarchical and decentralized naming system for computers, services, or other resources connected to the Internet or a private network. It associates various information with domain names assigned to each of the participating entities. The table below shows the DNS record for the domain name Doordash.com.

Host	Type	Content
doordash.com	A	104.18.41.135
doordash.com	A	172.64.146.121
doordash.com	NS	ns1.doordash.com
doordash.com	NS	ns2.doordash.com
doordash.com	MX	aspmx3.googlemail.com
doordash.com	MX	aspmx2.googlemail.com
doordash.com	MX	aspmx.l.google.com
doordash.com	MX	alt1.aspmx.l.google.com
doordash.com	MX	alt2.aspmx.l.google.com
doordash.com	TXT	google-site-verification=2rcRsTslUdxw5DyvpqlVQDk9KxnUncNlvMlp74YRRsA
doordash.com	TXT	google-site-verification=oinRvdblMV4Ncm6r26vumPZi8wTqvV3myYzProiPB1M
doordash.com	TXT	google-site-verification=pE5HdbYNwhG6Ajwm--kYjO-HSojW7qY90GaxlgsLq0s
doordash.com	TXT	ALIAS for doordash-prod-lb-1965037934.us-west-2.elb.amazonaws.com
doordash.com	TXT	google-site-verification=rdKNCS9n0YSMdrp6GFqZcA882UrLU3FWNHqMzHTaHUk
doordash.com	TXT	google-site-verification=GWpsrxG0KS4wrPZn6vo6cPpWi54VuA32W0qMrGT1esM
doordash.com	TXT	google-site-verification=_nhAl3u-62bMXOhq8kHCRalYgz_jjgCvNuE9j_3nVDw
doordash.com	TXT	google-site-verification=UcYKd6s6kOERFeXTToUDRNxtKRG8HfH_0xMGdQyFMWg
doordash.com	TXT	stripe-verification=972a79921adf9a3d42e966695a8abe1a145b5eb4d7c2373d05ba7a1bbd535fb4
doordash.com	TXT	cloudbees-domain-verification=465857a9eee140720ace1308ce419d23b24d6062
doordash.com	TXT	docusign=b7b61054-c73b-4575-9bf4-e5099789cf05
doordash.com	TXT	atlassian-domain-verification=WynfBPojkTHuEFbQh1YiVrhBd+YgTvHLyK7+H7ZbQojdYSieNeHVzWxKFA5kU6RB
doordash.com	TXT	dropbox-domain-verification=zqgh8mdbs1rt
doordash.com	TXT	MS=ms82589317
doordash.com	TXT	google-site-verification=IxltO7NjEjSGULS-Txeg7Qu2T6qohZv8zHEgJ8I3RI0
doordash.com	TXT	v=spf1 include:doordash.com._nspf.vali.email include:%{i}._ip.%{h}._ehlo.%{d}._spf.vali.email ~all
doordash.com	TXT	atlassian-domain-verification=nNhx5JpLiPH2KCXSAAYeMsQTjODdBCbNf5J0GQ9SK09LhSOZeu2J0t9HF0DtiQG/
doordash.com	TXT	apple-domain-verification=gLrbxW5eiM6T0bPk
doordash.com	TXT	facebook-domain-verification=ke0mqxx0oqg5awcoellkzi7f7oxn2u
doordash.com	TXT	adobe-idp-site-verification=4c435e2e07ad31e38e2b8eef37ddd3422b6eaf6decb8746a240258dd8a2f96e9



doordash.com	TXT	nintex.60aff12781259a0069a20271
doordash.com	TXT	docusign=5b94c41e-39e0-479d-b682-d928d5cd0d54
doordash.com	TXT	stripe-verification=80559cf6e421e37c6322149535e5ee37d6683aacf844c3a9d3c41d9783e1ca63
doordash.com	TXT	stripe-verification=fc0a51eed89484d07c775ff7cc99a8267651b02c0ce4c7b23bc0940e6f04fbe1
doordash.com	AAAA	2606:4700:4400::6812:2987
doordash.com	AAAA	2606:4700:4400::ac40:9279
www.doordash.com	A	172.64.155.210
www.doordash.com	A	104.18.32.46
www.doordash.com	AAAA	2606:4700:4400::6812:202e
www.doordash.com	AAAA	2606:4700:4400::ac40:9bd2
doordash.com	SOA	class: IN ttl: 300 mname: ns1.doordash.com rname: dns.cloudflare.com serial: 2285555019 refresh: 10000 retry: 2400 expire: 604800 minimum-ttl: 300

Who.is also reports similar information (see Exh 27). In the trace root, we an IP of 216.182.229.160. A search in who.is for that IP reveals an amazon AWS server:



Interested in domain names? Click here to stay up to date with domain name news and promotions at Name.com

216.182.229

DNS Information

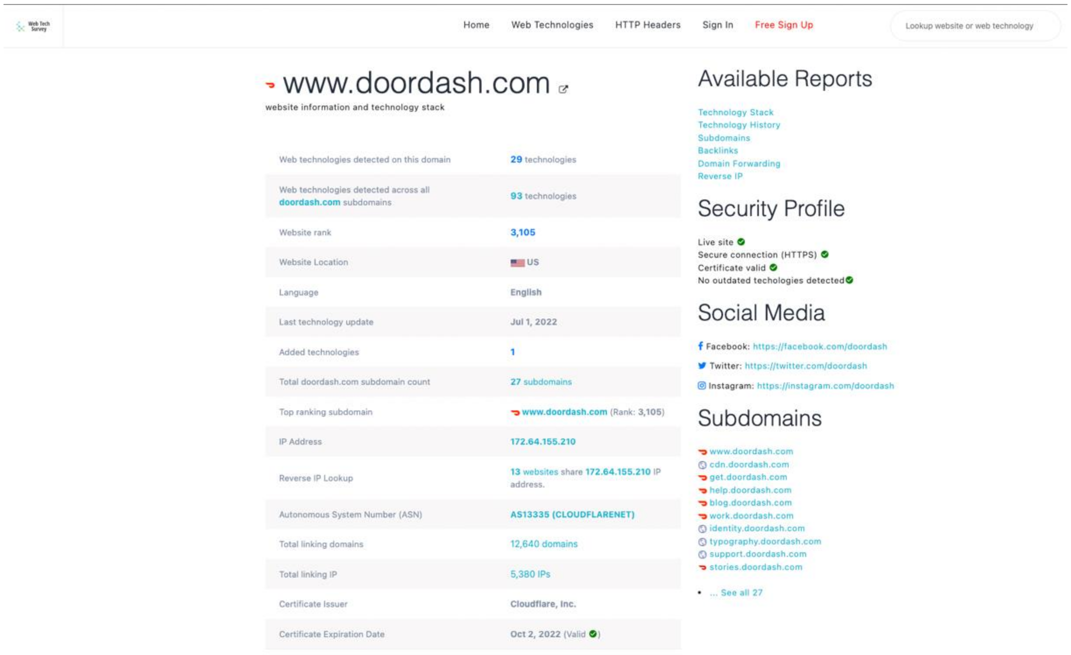
DNS Records for 216.182.229

cache expires in 4 minutes and 23 seconds

Hostname	Type	TTL	Priority	Content
216.182.229	SOA	900		dns-external-master.amazon.com root@amazon.com 2006082303 3600 900 604800 900
216.182.229	NS	3600		x1.amazonaws.com
216.182.229	NS	3600		x2.amazonaws.com
216.182.229	NS	3600		x3.amazonaws.org
216.182.229	NS	3600		x4.amazonaws.org
216.182.229	NS	3600		pdns1.ultradns.net

WebTechSurvey

This site lists the technologies used by a website (called technology stack). In the case of doordsh.com, webtechsurvey.com provides the following high-level summary report (see Exh 44):



www.doordash.com

website information and technology stack

Web technologies detected on this domain	29 technologies
Web technologies detected across all doordash.com subdomains	93 technologies
Website rank	3,105
Website Location	US
Language	English
Last technology update	Jul 1, 2022
Added technologies	1
Total doordash.com subdomain count	27 subdomains
Top ranking subdomain	www.doordash.com (Rank: 3,105)
IP Address	172.64.155.210
Reverse IP Lookup	13 websites share 172.64.155.210 IP address.
Autonomous System Number (ASN)	AS13335 (CLOUDFLARENET)
Total linking domains	12,640 domains
Total linking IP	5,380 IPs
Certificate Issuer	Cloudflare, Inc.
Certificate Expiration Date	Oct 2, 2022 (Valid ✓)

Available Reports

Technology Stack
Technology History
Subdomains
Backlinks
Domain Forwarding
Reverse IP

Security Profile

Live site ✓
Secure connection (HTTPS) ✓
Certificate valid ✓
No outdated techologies detected✓

Social Media

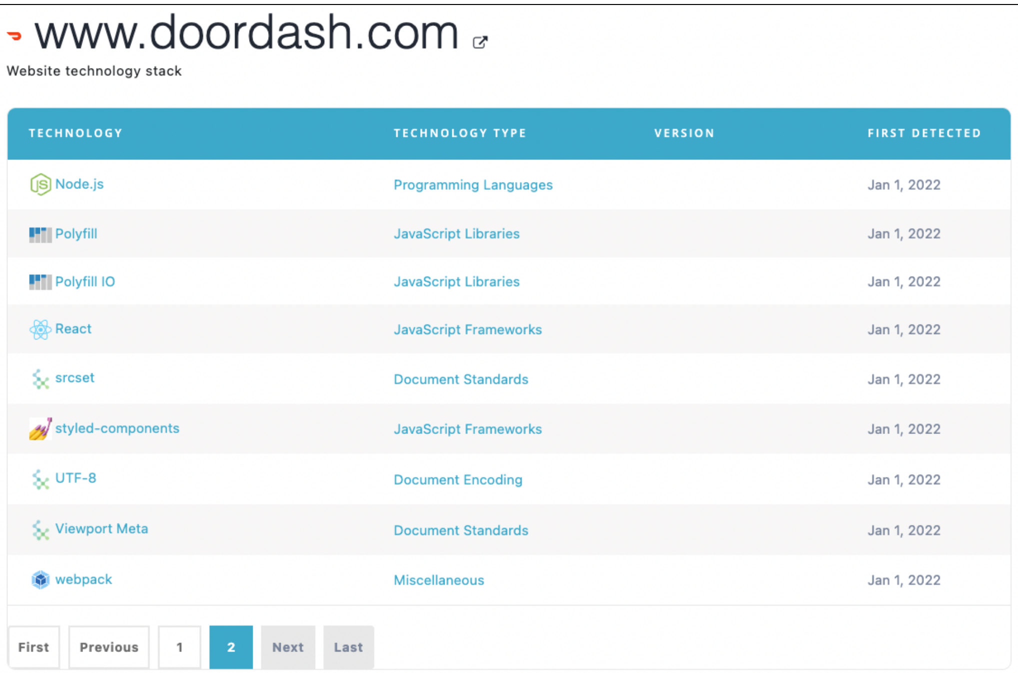
Facebook: https://facebook.com/doordash
Twitter: https://twitter.com/doordash
Instagram: https://instagram.com/doordash

Subdomains

www.doordash.com
cdn.doordash.com
get.doordash.com
help.doordash.com
blog.doordash.com
work.doordash.com
identity.doordash.com
typography.doordash.com
support.doordash.com
stories.doordash.com

- ... See all 27

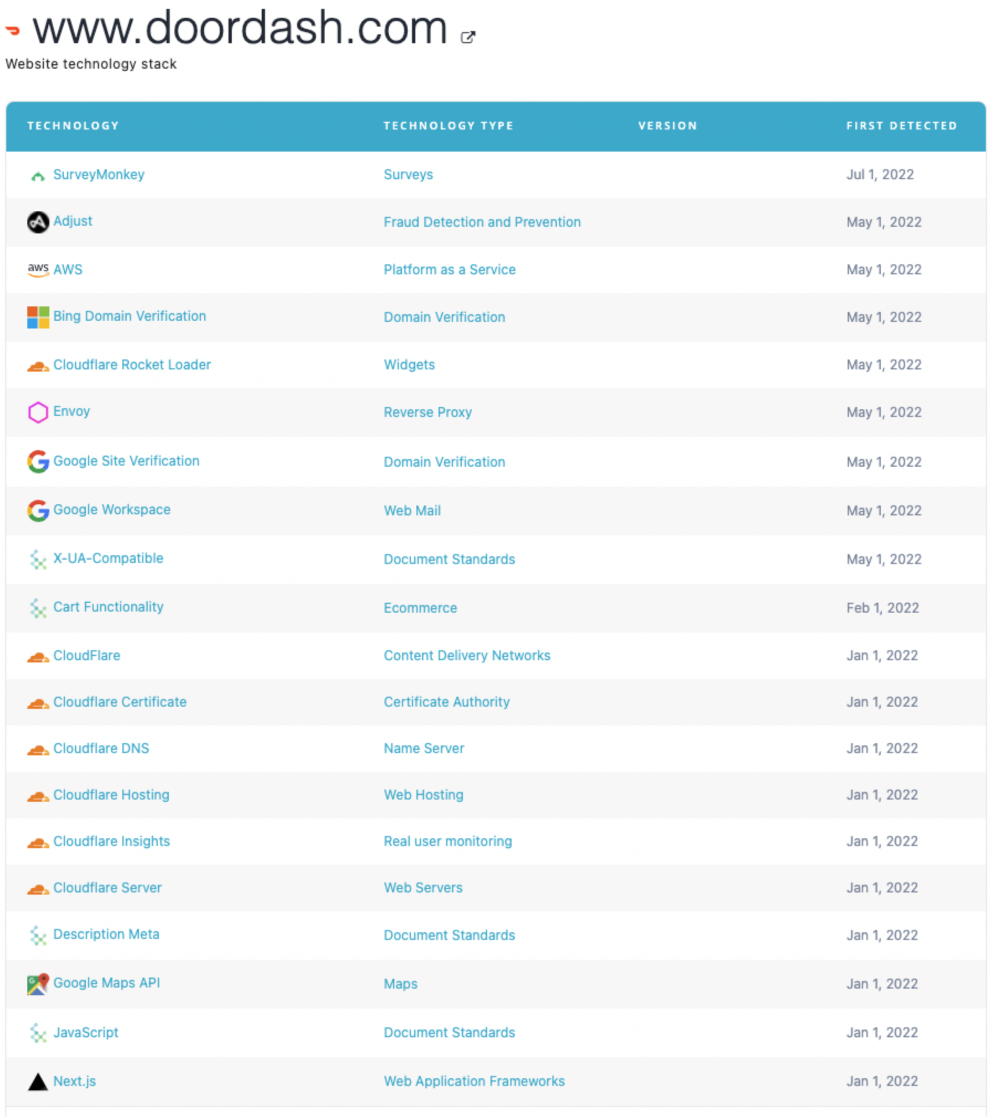
For the technology stack implemented by DoorDash.com for their webserver, webtechsurvey.com reports the following (see Exh 44):



www.doordash.com

Website technology stack

TECHNOLOGY	TECHNOLOGY TYPE	VERSION	FIRST DETECTED
Node.js	Programming Languages		Jan 1, 2022
Polyfill	JavaScript Libraries		Jan 1, 2022
Polyfill IO	JavaScript Libraries		Jan 1, 2022
React	JavaScript Frameworks		Jan 1, 2022
srcset	Document Standards		Jan 1, 2022
styled-components	JavaScript Frameworks		Jan 1, 2022
UTF-8	Document Encoding		Jan 1, 2022
Viewport Meta	Document Standards		Jan 1, 2022
webpack	Miscellaneous		Jan 1, 2022



www.doordash.com

Website technology stack

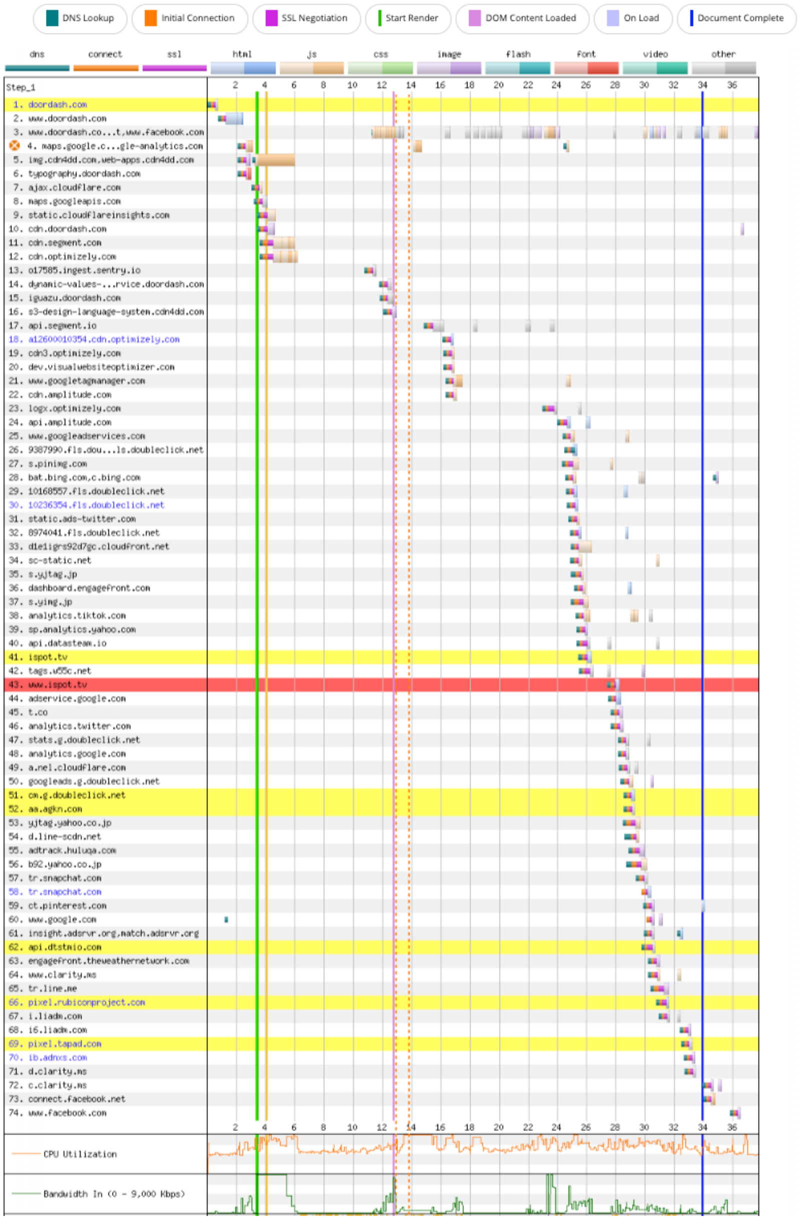
TECHNOLOGY	TECHNOLOGY TYPE	VERSION	FIRST DETECTED
SurveyMonkey	Surveys		Jul 1, 2022
Adjust	Fraud Detection and Prevention		May 1, 2022
AWS	Platform as a Service		May 1, 2022
Bing Domain Verification	Domain Verification		May 1, 2022
Cloudflare Rocket Loader	Widgets		May 1, 2022
Envoy	Reverse Proxy		May 1, 2022
Google Site Verification	Domain Verification		May 1, 2022
Google Workspace	Web Mail		May 1, 2022
X-UA-Compatible	Document Standards		May 1, 2022
Cart Functionality	Ecommerce		Feb 1, 2022
CloudFlare	Content Delivery Networks		Jan 1, 2022
Cloudflare Certificate	Certificate Authority		Jan 1, 2022
Cloudflare DNS	Name Server		Jan 1, 2022
Cloudflare Hosting	Web Hosting		Jan 1, 2022
Cloudflare Insights	Real user monitoring		Jan 1, 2022
Cloudflare Server	Web Servers		Jan 1, 2022
Description Meta	Document Standards		Jan 1, 2022
Google Maps API	Maps		Jan 1, 2022
JavaScript	Document Standards		Jan 1, 2022
Next.js	Web Application Frameworks		Jan 1, 2022

WebPageTest.org

WebpageTest.org is a free internet service to test the performance of the websites, web server and web services. It's used primarily to identify bottlenecks in a website and web server performance so developers can optimize accordingly. Similar services include GTMetrix and Lighthouse by Google.

Running a test of https://DoorDash.com/ on WebpageTest returned detailed tests results of the network connections, servers, and resources that DoorDash.com encompasses further evidencing DoorDash's use of a webserver (see Ex 16). The test results show that door dash implements a content delivery network (CDN) for resource caching and website performance. They also show DoorDash's integration with Google Maps Facebook, CloudFlare, Bing, Pinterest, Amazon Web Services (S3), SnapChat, and connections to and from APIs as seen in this screen shot.

Connection View



Step_1

1. doordash.com
2. www.doordash.com
3. www.doordash.co...t,www.facebook.com
4. maps.google.c...gle-analytics.com
5. img.cdn4dd.com,web-apps.cdn4dd.com
6. typography.doordash.com
7. ajax.cloudflare.com
8. maps.googleapis.com
9. static.cloudflareinsights.com
10. cdn.doordash.com
11. cdn.segment.com
12. cdn.optimizely.com
13. o17585.ingest.sentry.io
14. dynamic-values-...rvice.doordash.com
15. iguazu.doordash.com
16. s3-design-language-system.cdn4dd.com
17. api.segment.io
18. a12600010354.cdn.optimizely.com
19. cdn3.optimizely.com
20. dev.visualwebsiteoptimizer.com
21. www.googletagmanager.com
22. cdn.amplitude.com
23. logx.optimizely.com
24. api.amplitude.com
25. www.googleadservices.com
26. 9387990.fls.dou...ls.doubleclick.net
27. s.pinimg.com
28. bat.bing.com,c.bing.com
29. 10168557.fls.doubleclick.net
30. 10236354.fls.doubleclick.net
31. static.ads-twitter.com
32. 8974041.fls.doubleclick.net
33. d1e1igrs92d7gc.cloudfront.net
34. sc-static.net
35. s.yjtag.jp
36. dashboard.engagefront.com
37. s.yimg.jp
38. analytics.tiktok.com
39. sp.analytics.yahoo.com
40. api.datasteam.io
41. ispot.tv
42. tags.w55c.net
43. www.ispot.tv
44. adservice.google.com
45. t.co
46. analytics.twitter.com
47. stats.g.doubleclick.net
48. analytics.google.com
49. a.nel.cloudflare.com
50. googleads.g.doubleclick.net
51. cm.g.doubleclick.net
52. aa.agkn.com
53. yjtag.yahoo.co.jp
54. d.line-scdn.net
55. adtrack.huluqa.com
56. b92.yahoo.co.jp
57. tr.snapchat.com
58. tr.snapchat.com
59. ct.pinterest.com
60. www.google.com
61. insight.adsrvr.org,match.adsrvr.org
62. api.dtstmio.com
63. engagefront.theweathernetwork.com
64. www.clarity.ms
65. tr.line.me
66. pixel.rubiconproject.com
67. i.liadm.com
68. i6.liadm.com
69. pixel.tapad.com
70. ib.adnxs.com
71. d.clarity.ms
72. c.clarity.ms
73. connect.facebook.net
74. www.facebook.com

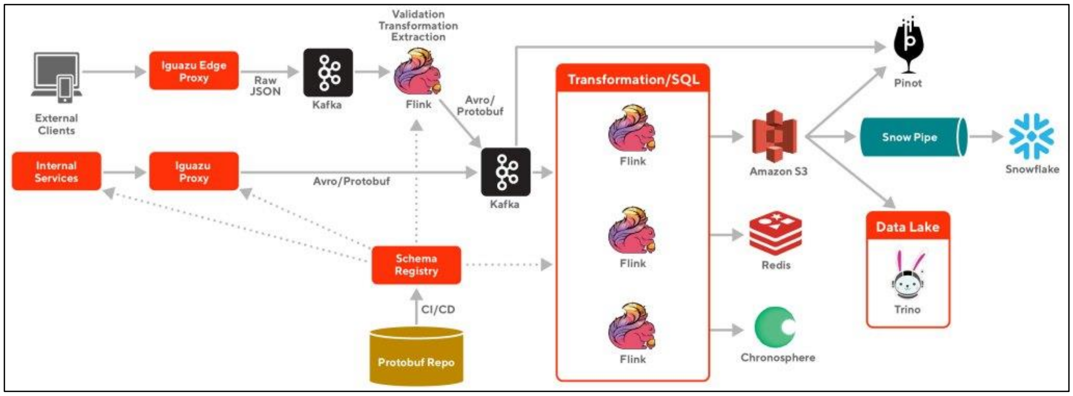
For a full detail of the test results in JSON format see Exh. 16.

DoorDash Website

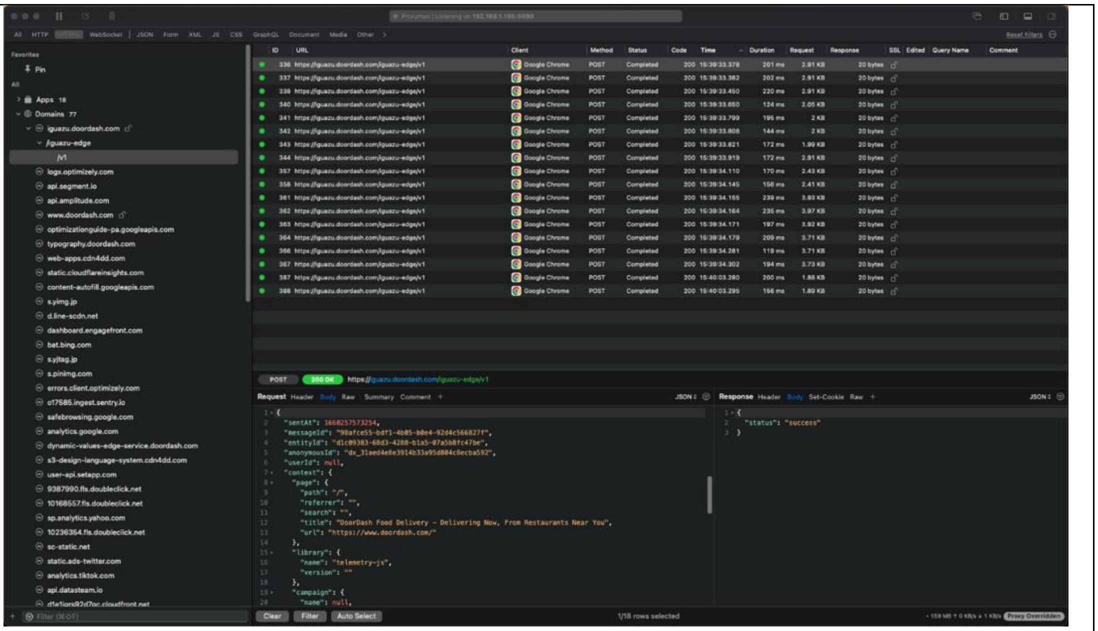
A Web Debugging Proxy tool captures request/response, messaging data and information about the connection to the server between a calling device and the DoorDash System.

Displayed are a series of "messages" or request/response being communicated between server and client from the address Igazu.DoorDash.com which is the address to their custom built DoorDash Event engine (called Iguazu). The diagram below depicts the inner functioning of Iguazu taking from the DoorDash technical video presentation "Scaling our Data Platform" (see Exh 47) and the DoorDash engineering blog article "Building Scalable Real Time Event Processing with Kafka and Flink" (see Exh 53). In this blog article they state the following:

> *"…[in] the past two years, we built the real time events processing system and scaled it to process hundreds of billions of events per day with a 99.99% delivery rate. The overall architecture of the system is depicted in [tnhe figure below]" (see Exh. 53):*



Each message is a dataset containing various parameters used by the DoorDash system (client, server, etc.). Each message contains header information that details facts about the connection as should below:



All HTTP HTTPS WebSocket JSON Form XML JS CSS GraphQL Document Media Other
Reset Filters
Favorites
Pin
All
Apps 18
Domains 77

- iguazu.doordash.com
  - /iguazu-edge
    - /v1
- logx.optimizely.com
- api.segment.io
- api.amplitude.com
- www.doordash.com
- optimizationguide-pa.googleapis.com
- typography.doordash.com
- web-apps.cdn4dd.com
- static.cloudflareinsights.com
- content-autofill.googleapis.com
- s.yimg.jp
- d.line-scdn.net
- dashboard.engagefront.com
- bat.bing.com
- s.yjtag.jp
- s.pinimg.com
- errors.client.optimizely.com
- o17585.ingest.sentry.io
- safebrowsing.google.com
- analytics.google.com
- dynamic-values-edge-service.doordash.com
- s3-design-language-system.cdn4dd.com
- user-api.setapp.com
- 9387990.fls.doubleclick.net
- 10168557.fls.doubleclick.net
- sp.analytics.yahoo.com
- 10236354.fls.doubleclick.net
- sc-static.net
- static.ads-twitter.com
- analytics.tiktok.com
- api.datasteam.io
- d1e1igrs92d7gc.cloudfront.net

ID	URL	Client	Method	Status	Code	Time	Duration	Request	Response	SSL	Edited	Query Name	Comment
336	https://iguazu.doordash.com/iguazu-edge/v1	Google Chrome	POST	Completed	200	15:39:33.378	201 ms	2.91 KB	20 bytes				
337	https://iguazu.doordash.com/iguazu-edge/v1	Google Chrome	POST	Completed	200	15:39:33.382	202 ms	2.91 KB	20 bytes				
338	https://iguazu.doordash.com/iguazu-edge/v1	Google Chrome	POST	Completed	200	15:39:33.450	220 ms	2.91 KB	20 bytes				
340	https://iguazu.doordash.com/iguazu-edge/v1	Google Chrome	POST	Completed	200	15:39:33.650	124 ms	2.05 KB	20 bytes				
341	https://iguazu.doordash.com/iguazu-edge/v1	Google Chrome	POST	Completed	200	15:39:33.799	195 ms	2 KB	20 bytes				
342	https://iguazu.doordash.com/iguazu-edge/v1	Google Chrome	POST	Completed	200	15:39:33.808	144 ms	2 KB	20 bytes				
343	https://iguazu.doordash.com/iguazu-edge/v1	Google Chrome	POST	Completed	200	15:39:33.821	172 ms	1.99 KB	20 bytes				
344	https://iguazu.doordash.com/iguazu-edge/v1	Google Chrome	POST	Completed	200	15:39:33.919	172 ms	2.91 KB	20 bytes				
357	https://iguazu.doordash.com/iguazu-edge/v1	Google Chrome	POST	Completed	200	15:39:34.110	170 ms	2.43 KB	20 bytes				
358	https://iguazu.doordash.com/iguazu-edge/v1	Google Chrome	POST	Completed	200	15:39:34.145	156 ms	2.41 KB	20 bytes				
361	https://iguazu.doordash.com/iguazu-edge/v1	Google Chrome	POST	Completed	200	15:39:34.155	239 ms	3.93 KB	20 bytes				
362	https://iguazu.doordash.com/iguazu-edge/v1	Google Chrome	POST	Completed	200	15:39:34.164	235 ms	3.97 KB	20 bytes				
363	https://iguazu.doordash.com/iguazu-edge/v1	Google Chrome	POST	Completed	200	15:39:34.171	197 ms	3.92 KB	20 bytes				
364	https://iguazu.doordash.com/iguazu-edge/v1	Google Chrome	POST	Completed	200	15:39:34.179	209 ms	3.71 KB	20 bytes				
366	https://iguazu.doordash.com/iguazu-edge/v1	Google Chrome	POST	Completed	200	15:39:34.281	119 ms	3.71 KB	20 bytes				
367	https://iguazu.doordash.com/iguazu-edge/v1	Google Chrome	POST	Completed	200	15:39:34.302	194 ms	3.73 KB	20 bytes				
387	https://iguazu.doordash.com/iguazu-edge/v1	Google Chrome	POST	Completed	200	15:40:03.280	200 ms	1.88 KB	20 bytes				
388	https://iguazu.doordash.com/iguazu-edge/v1	Google Chrome	POST	Completed	200	15:40:03.295	156 ms	1.89 KB	20 bytes				

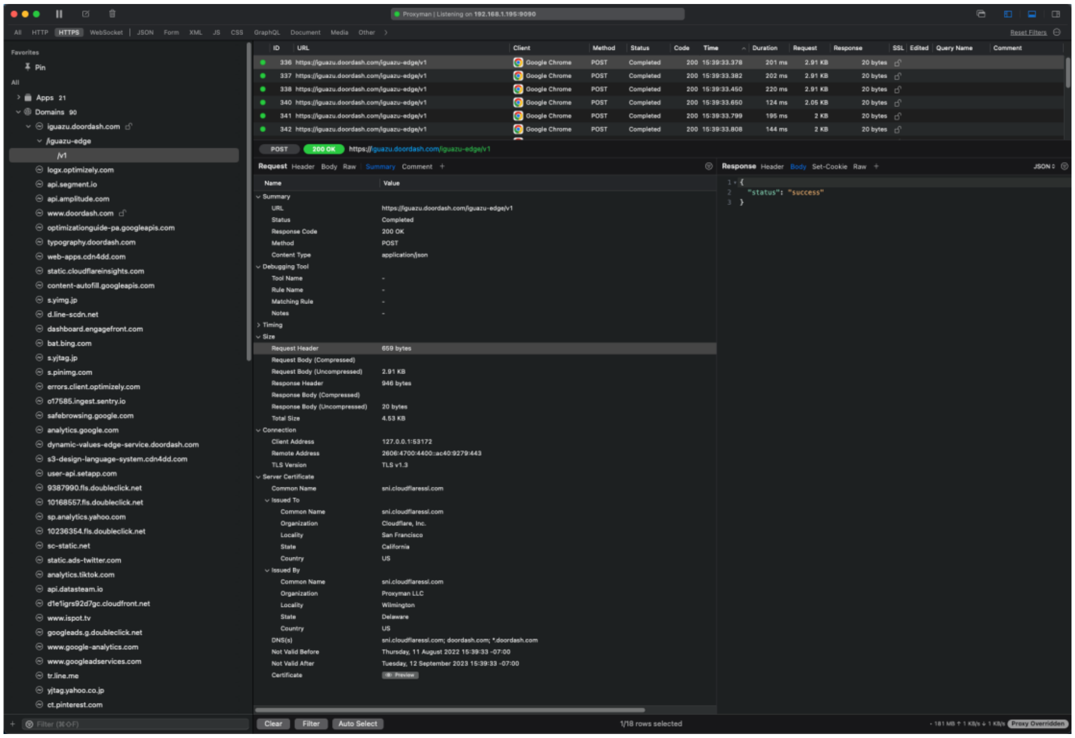
POST 200 OK https://iguazu.doordash.com/iguazu-edge/v1

Request Header Body Raw Summary Comment +
JSON
Response Header Body Set-Cookie Raw +
JSON

```
{
  "sentAt": 1660257573254,
  "messageId": "98afce55-bdf1-4b05-b0e4-92d4c566827f",
  "entityId": "d1c09383-68d3-4288-b1a5-07a5b8fc47be",
  "anonymousId": "dx_31aed4e8e3914b33a95d804c8ecba592",
  "userId": null,
  "context": {
    "page": {
      "path": "/",
      "referrer": "",
      "search": "",
      "title": "DoorDash Food Delivery - Delivering Now, From Restaurants Near You",
      "url": "https://www.doordash.com/"
    },
    "library": {
      "name": "telemetry-js",
      "version": ""
    },
    "campaign": {
      "name": null,
```

```
{
  "status": "success"
}
```

The summary tab provides the web server certificate authenticating the HTTPS connection, in this case as sni.cloudflaressl.com. This indicates that DoorDash has integrated CloudFlare's SNI (Server Name Indication) into its custom webserver. According to CloudFlare *"…SNI is an extension for the TLS protocol (formerly known as the SSL protocol), which is used in HTTPS. It's included in the TLS/SSL handshake process in order to ensure that client devices are able to see the correct SSL certificate for the website they are trying to reach"* (see Ex 7). We also see that the DNS lists CloudFlare and DoorDash.com.



All HTTP HTTPS WebSocket JSON Form XML JS CSS GraphQL Document Media Other
Reset Filters
Favorites
Pin
All
Apps 21
Domains 90

- iguazu.doordash.com
  - /iguazu-edge
    - /v1
- logx.optimizely.com
- api.segment.io
- api.amplitude.com
- www.doordash.com
- optimizationguide-pa.googleapis.com
- typography.doordash.com
- web-apps.cdn4dd.com
- static.cloudflareinsights.com
- content-autofill.googleapis.com
- s.yimg.jp
- d.line-scdn.net
- dashboard.engagefront.com
- bat.bing.com
- s.yjtag.jp
- s.pinimg.com
- errors.client.optimizely.com
- o17585.ingest.sentry.io
- safebrowsing.google.com
- analytics.google.com
- dynamic-values-edge-service.doordash.com
- s3-design-language-system.cdn4dd.com
- user-api.setapp.com
- 9387990.fls.doubleclick.net
- 10168557.fls.doubleclick.net
- sp.analytics.yahoo.com
- 10236354.fls.doubleclick.net
- sc-static.net
- static.ads-twitter.com
- analytics.tiktok.com
- api.datasteam.io
- d1e1igrs92d7gc.cloudfront.net
- www.ispot.tv
- googleads.g.doubleclick.net
- www.google-analytics.com
- www.googleadservices.com
- tr.line.me
- yjtag.yahoo.co.jp
- ct.pinterest.com

ID	URL	Client	Method	Status	Code	Time	Duration	Request	Response	SSL	Edited	Query Name	Comment
336	https://iguazu.doordash.com/iguazu-edge/v1	Google Chrome	POST	Completed	200	15:39:33.378	201 ms	2.91 KB	20 bytes				
337	https://iguazu.doordash.com/iguazu-edge/v1	Google Chrome	POST	Completed	200	15:39:33.382	202 ms	2.91 KB	20 bytes				
338	https://iguazu.doordash.com/iguazu-edge/v1	Google Chrome	POST	Completed	200	15:39:33.450	220 ms	2.91 KB	20 bytes				
340	https://iguazu.doordash.com/iguazu-edge/v1	Google Chrome	POST	Completed	200	15:39:33.650	124 ms	2.05 KB	20 bytes				
341	https://iguazu.doordash.com/iguazu-edge/v1	Google Chrome	POST	Completed	200	15:39:33.799	195 ms	2 KB	20 bytes				
342	https://iguazu.doordash.com/iguazu-edge/v1	Google Chrome	POST	Completed	200	15:39:33.808	144 ms	2 KB	20 bytes				

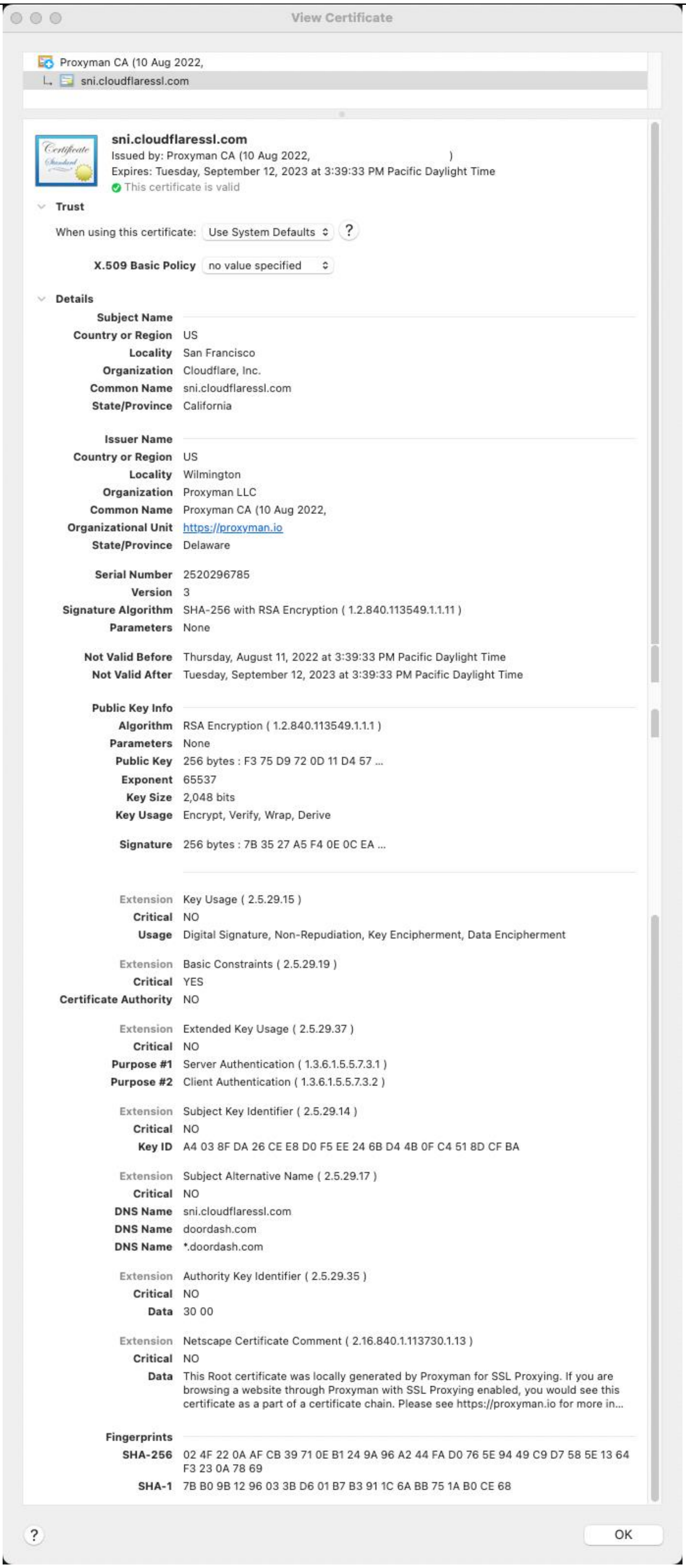
POST 200 OK https://iguazu.doordash.com/iguazu-edge/v1

Request Header Body Raw Summary Comment +
Response Header Body Set-Cookie Raw +
JSON

Name	Value
Summary	
URL	https://iguazu.doordash.com/iguazu-edge/v1
Status	Completed
Response Code	200 OK
Method	POST
Content Type	application/json
Debugging Tool	
Tool Name	-
Rule Name	-
Matching Rule	-
Notes	-
Timing	
Size	
Request Header	659 bytes
Request Body (Compressed)	
Request Body (Uncompressed)	2.91 KB
Response Header	946 bytes
Response Body (Compressed)	
Response Body (Uncompressed)	20 bytes
Total Size	4.53 KB
Connection	
Client Address	127.0.0.1:53172
Remote Address	2606:4700:4400::ac40:9279:443
TLS Version	TLS v1.3
Server Certificate	
Common Name	sni.cloudflaressl.com
Issued To	
Common Name	sni.cloudflaressl.com
Organization	Cloudflare, Inc.
Locality	San Francisco
State	California
Country	US
Issued By	
Common Name	sni.cloudflaressl.com
Organization	Proxyman LLC
Locality	Wilmington
State	Delaware
Country	US
DNS(s)	sni.cloudflaressl.com; doordash.com; *.doordash.com
Not Valid Before	Thursday, 11 August 2022 15:39:33 -07:00
Not Valid After	Tuesday, 12 September 2023 15:39:33 -07:00
Certificate	Preview

```
{
  "status": "success"
}
```

Further, one can view the certificate authorizing the DoorDash web server as valid as seen below:



Proxyman CA (10 Aug 2022,

sni.cloudflaressl.com

sni.cloudflaressl.com

Issued by: Proxyman CA (10 Aug 2022,)

Expires: Tuesday, September 12, 2023 at 3:39:33 PM Pacific Daylight Time

✓ This certificate is valid

Trust

When using this certificate: Use System Defaults

X.509 Basic Policy no value specified

Details

Subject Name

Country or Region US

Locality San Francisco

Organization Cloudflare, Inc.

Common Name sni.cloudflaressl.com

State/Province California

Issuer Name

Country or Region US

Locality Wilmington

Organization Proxyman LLC

Common Name Proxyman CA (10 Aug 2022,

Organizational Unit https://proxyman.io

State/Province Delaware

Serial Number 2520296785

Version 3

Signature Algorithm SHA-256 with RSA Encryption (1.2.840.113549.1.1.11)

Parameters None

Not Valid Before Thursday, August 11, 2022 at 3:39:33 PM Pacific Daylight Time

Not Valid After Tuesday, September 12, 2023 at 3:39:33 PM Pacific Daylight Time

Public Key Info

Algorithm RSA Encryption (1.2.840.113549.1.1.1)

Parameters None

Public Key 256 bytes : F3 75 D9 72 0D 11 D4 57 ...

Exponent 65537

Key Size 2,048 bits

Key Usage Encrypt, Verify, Wrap, Derive

Signature 256 bytes : 7B 35 27 A5 F4 0E 0C EA ...

Extension Key Usage (2.5.29.15)

Critical NO

Usage Digital Signature, Non-Repudiation, Key Encipherment, Data Encipherment

Extension Basic Constraints (2.5.29.19)

Critical YES

Certificate Authority NO

Extension Extended Key Usage (2.5.29.37)

Critical NO

Purpose #1 Server Authentication (1.3.6.1.5.5.7.3.1)

Purpose #2 Client Authentication (1.3.6.1.5.5.7.3.2)

Extension Subject Key Identifier (2.5.29.14)

Critical NO

Key ID A4 03 8F DA 26 CE E8 D0 F5 EE 24 6B D4 4B 0F C4 51 8D CF BA

Extension Subject Alternative Name (2.5.29.17)

Critical NO

DNS Name sni.cloudflaressl.com

DNS Name doordash.com

DNS Name *.doordash.com

Extension Authority Key Identifier (2.5.29.35)

Critical NO

Data 30 00

Extension Netscape Certificate Comment (2.16.840.1.113730.1.13)

Critical NO

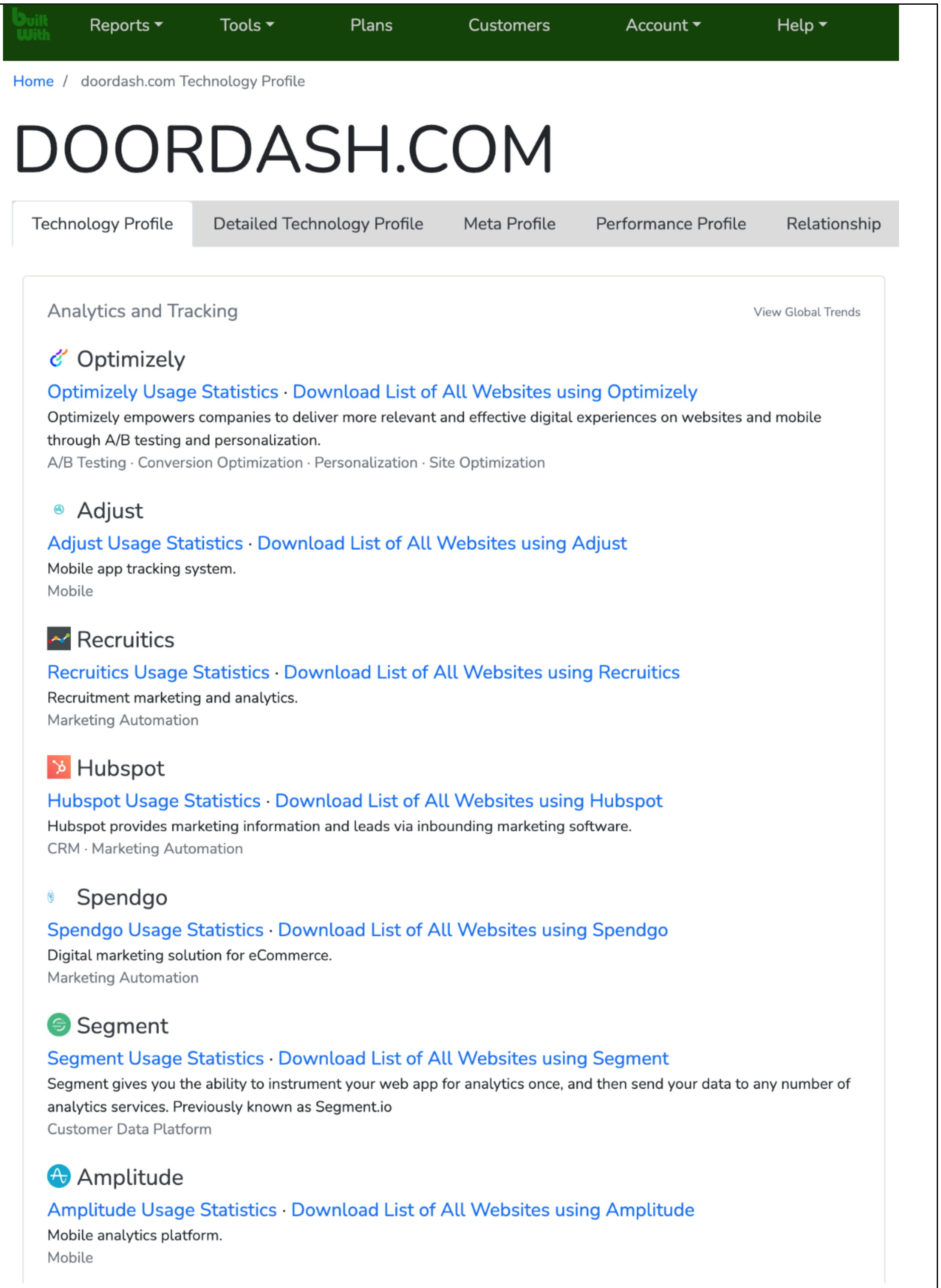
Data This Root certificate was locally generated by Proxyman for SSL Proxying. If you are browsing a website through Proxyman with SSL Proxying enabled, you would see this certificate as a part of a certificate chain. Please see https://proxyman.io for more in...

Fingerprints

SHA-256 02 4F 22 0A AF CB 39 71 0E B1 24 9A 96 A2 44 FA D0 76 5E 94 49 C9 D7 58 5E 13 64 F3 23 0A 78 69

SHA-1 7B B0 9B 12 96 03 3B D6 01 B7 B3 91 1C 6A BB 75 1A B0 CE 68

	BuiltWith BuiltWith is a tool that provides insights into the technologies used on websites. It can be especially helpful for understanding the tech stack of a particular company by analyzing the various web technologies and tools they utilize for their online presence. For DoorDash, analytics and tracking technologies are a crucial part of their operation. According to the data from BuiltWith, some of the top analytics technologies used in the top 1 million sites include Google Analytics, Global Site Tag, Facebook Pixel, Facebook Signal, and Google Conversion Linker, among others . These tools are essential for administrators and executives as they provide real-time data and metrics which are vital for decision-making. The ability to track user behavior, conversion rates, and other key performance indicators (KPIs) helps in making informed strategic decisions, optimizing user experience, and improving service delivery. (See Exh. 122) Developers integrate analytics tools with a website and its server by inserting specific code snippets provided by the analytics service into the site's pages. These code snippets, often referred to as tracking codes or tags, are designed to capture and send data to the analytics platform each time a user interacts with the website. This can include page views, clicks, form submissions, and more. The data collected is then processed and presented in the analytics dashboard. For more sophisticated tracking, developers may use tag management systems to deploy and manage multiple analytics and marketing tags to streamline integration and data collection processes.



DOORDASH.COM

Analytics and Tracking

Optimizely

Optimizely Usage Statistics · Download List of All Websites using Optimizely

Optimizely empowers companies to deliver more relevant and effective digital experiences on websites and mobile through A/B testing and personalization.

A/B Testing · Conversion Optimization · Personalization · Site Optimization

Adjust

Adjust Usage Statistics · Download List of All Websites using Adjust

Mobile app tracking system.

Mobile

Recruitics

Recruitics Usage Statistics · Download List of All Websites using Recruitics

Recruitment marketing and analytics.

Marketing Automation

Hubspot

Hubspot Usage Statistics · Download List of All Websites using Hubspot

Hubspot provides marketing information and leads via inbounding marketing software.

CRM · Marketing Automation

Spendgo

Spendgo Usage Statistics · Download List of All Websites using Spendgo

Digital marketing solution for eCommerce.

Marketing Automation

Segment

Segment Usage Statistics · Download List of All Websites using Segment

Segment gives you the ability to instrument your web app for analytics once, and then send your data to any number of analytics services. Previously known as Segment.io

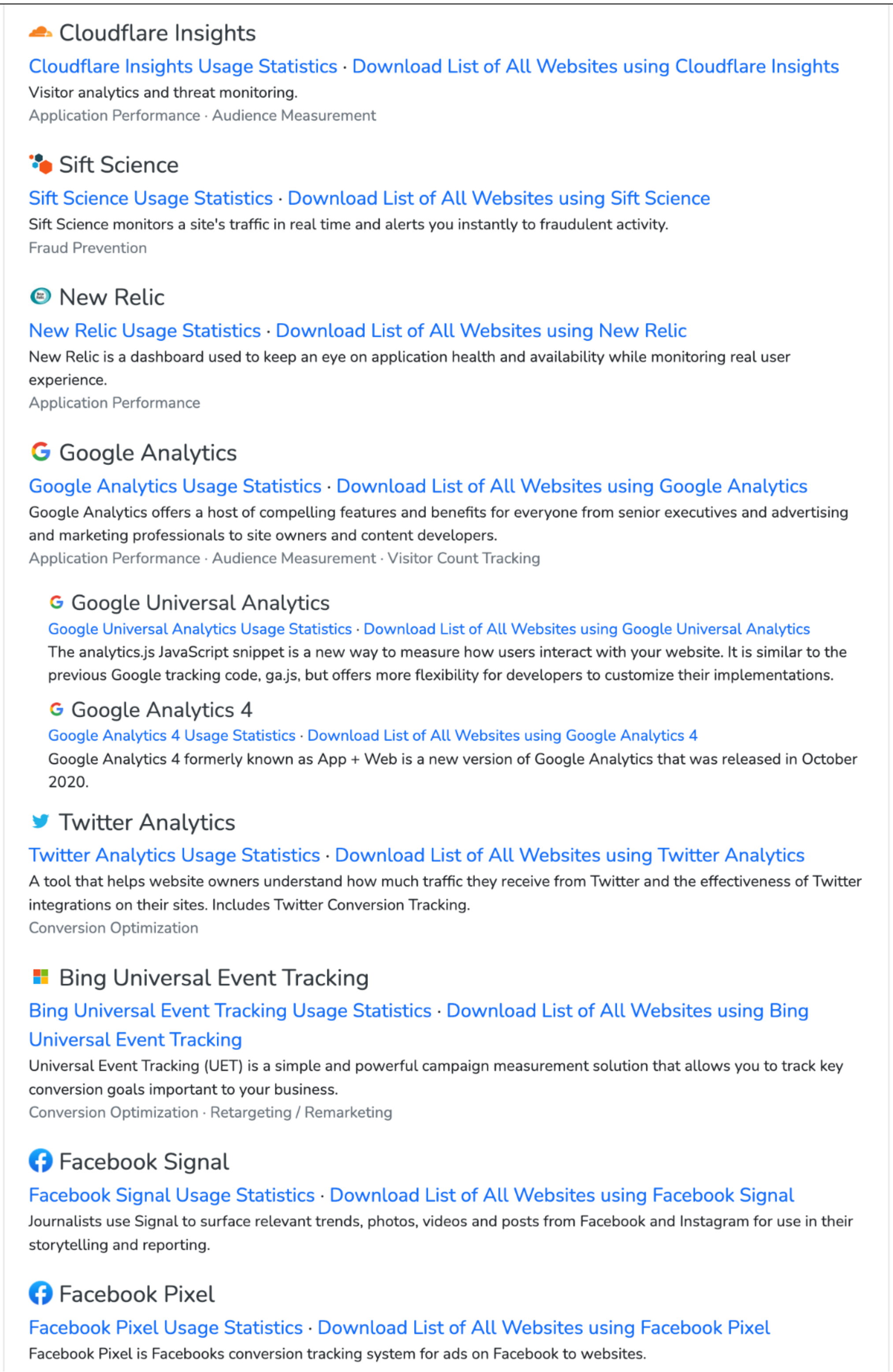
Customer Data Platform

Amplitude

Amplitude Usage Statistics · Download List of All Websites using Amplitude

Mobile analytics platform.

Mobile



Cloudflare Insights

Cloudflare Insights Usage Statistics · Download List of All Websites using Cloudflare Insights

Visitor analytics and threat monitoring.

Application Performance · Audience Measurement

Sift Science

Sift Science Usage Statistics · Download List of All Websites using Sift Science

Sift Science monitors a site's traffic in real time and alerts you instantly to fraudulent activity.

Fraud Prevention

New Relic

New Relic Usage Statistics · Download List of All Websites using New Relic

New Relic is a dashboard used to keep an eye on application health and availability while monitoring real user experience.

Application Performance

Google Analytics

Google Analytics Usage Statistics · Download List of All Websites using Google Analytics

Google Analytics offers a host of compelling features and benefits for everyone from senior executives and advertising and marketing professionals to site owners and content developers.

Application Performance · Audience Measurement · Visitor Count Tracking

Google Universal Analytics

Google Universal Analytics Usage Statistics · Download List of All Websites using Google Universal Analytics

The analytics.js JavaScript snippet is a new way to measure how users interact with your website. It is similar to the previous Google tracking code, ga.js, but offers more flexibility for developers to customize their implementations.

Google Analytics 4

Google Analytics 4 Usage Statistics · Download List of All Websites using Google Analytics 4

Google Analytics 4 formerly known as App + Web is a new version of Google Analytics that was released in October 2020.

Twitter Analytics

Twitter Analytics Usage Statistics · Download List of All Websites using Twitter Analytics

A tool that helps website owners understand how much traffic they receive from Twitter and the effectiveness of Twitter integrations on their sites. Includes Twitter Conversion Tracking.

Conversion Optimization

Bing Universal Event Tracking

Bing Universal Event Tracking Usage Statistics · Download List of All Websites using Bing Universal Event Tracking

Universal Event Tracking (UET) is a simple and powerful campaign measurement solution that allows you to track key conversion goals important to your business.

Conversion Optimization · Retargeting / Remarketing

Facebook Signal

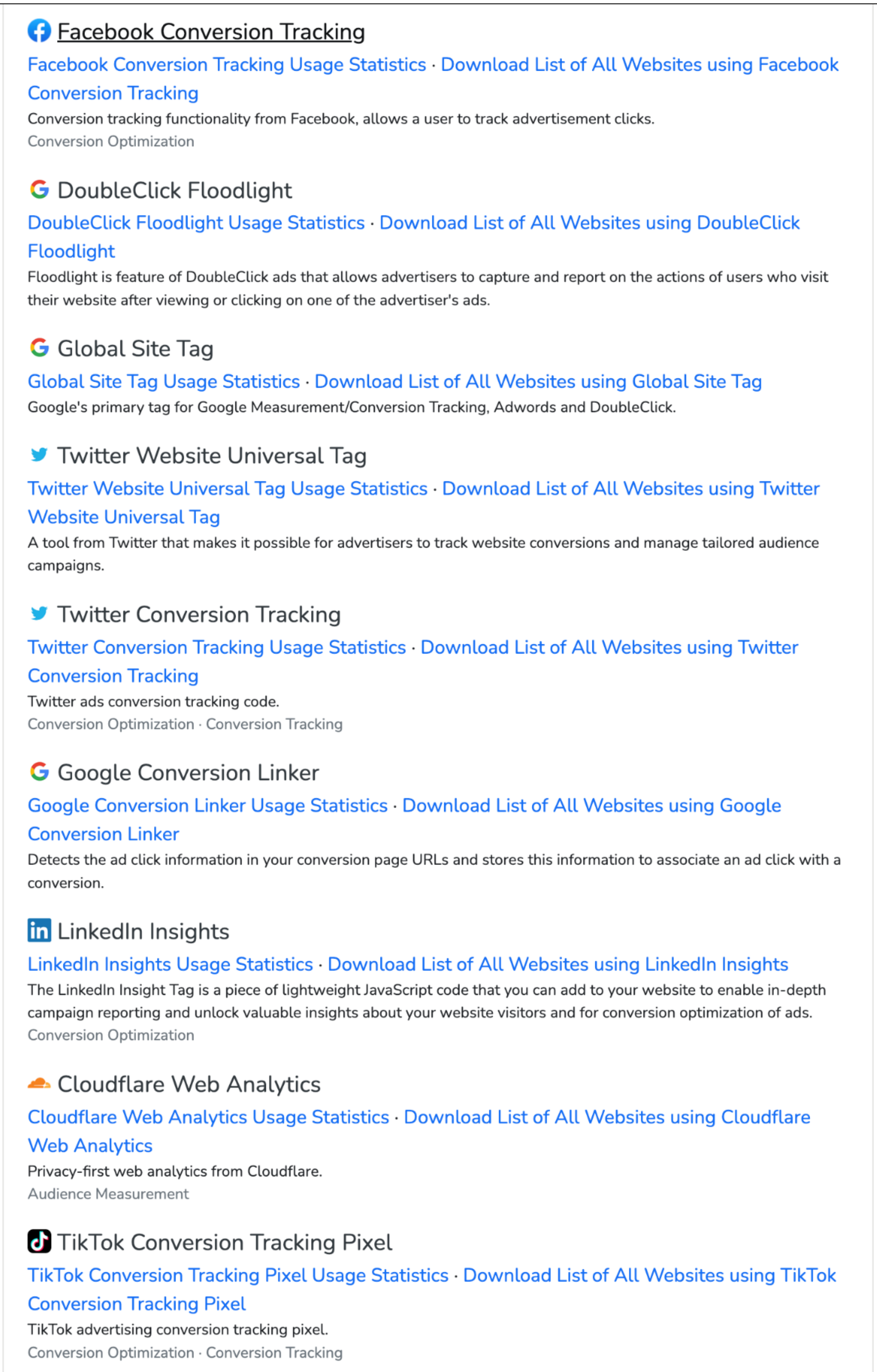
Facebook Signal Usage Statistics · Download List of All Websites using Facebook Signal

Journalists use Signal to surface relevant trends, photos, videos and posts from Facebook and Instagram for use in their storytelling and reporting.

Facebook Pixel

Facebook Pixel Usage Statistics · Download List of All Websites using Facebook Pixel

Facebook Pixel is Facebooks conversion tracking system for ads on Facebook to websites.



Facebook Conversion Tracking

Facebook Conversion Tracking Usage Statistics · Download List of All Websites using Facebook Conversion Tracking

Conversion tracking functionality from Facebook, allows a user to track advertisement clicks.

Conversion Optimization

DoubleClick Floodlight

DoubleClick Floodlight Usage Statistics · Download List of All Websites using DoubleClick Floodlight

Floodlight is feature of DoubleClick ads that allows advertisers to capture and report on the actions of users who visit their website after viewing or clicking on one of the advertiser's ads.

Global Site Tag

Global Site Tag Usage Statistics · Download List of All Websites using Global Site Tag

Google's primary tag for Google Measurement/Conversion Tracking, Adwords and DoubleClick.

Twitter Website Universal Tag

Twitter Website Universal Tag Usage Statistics · Download List of All Websites using Twitter Website Universal Tag

A tool from Twitter that makes it possible for advertisers to track website conversions and manage tailored audience campaigns.

Twitter Conversion Tracking

Twitter Conversion Tracking Usage Statistics · Download List of All Websites using Twitter Conversion Tracking

Twitter ads conversion tracking code.

Conversion Optimization · Conversion Tracking

Google Conversion Linker

Google Conversion Linker Usage Statistics · Download List of All Websites using Google Conversion Linker

Detects the ad click information in your conversion page URLs and stores this information to associate an ad click with a conversion.

LinkedIn Insights

LinkedIn Insights Usage Statistics · Download List of All Websites using LinkedIn Insights

The LinkedIn Insight Tag is a piece of lightweight JavaScript code that you can add to your website to enable in-depth campaign reporting and unlock valuable insights about your website visitors and for conversion optimization of ads.

Conversion Optimization

Cloudflare Web Analytics

Cloudflare Web Analytics Usage Statistics · Download List of All Websites using Cloudflare Web Analytics

Privacy-first web analytics from Cloudflare.

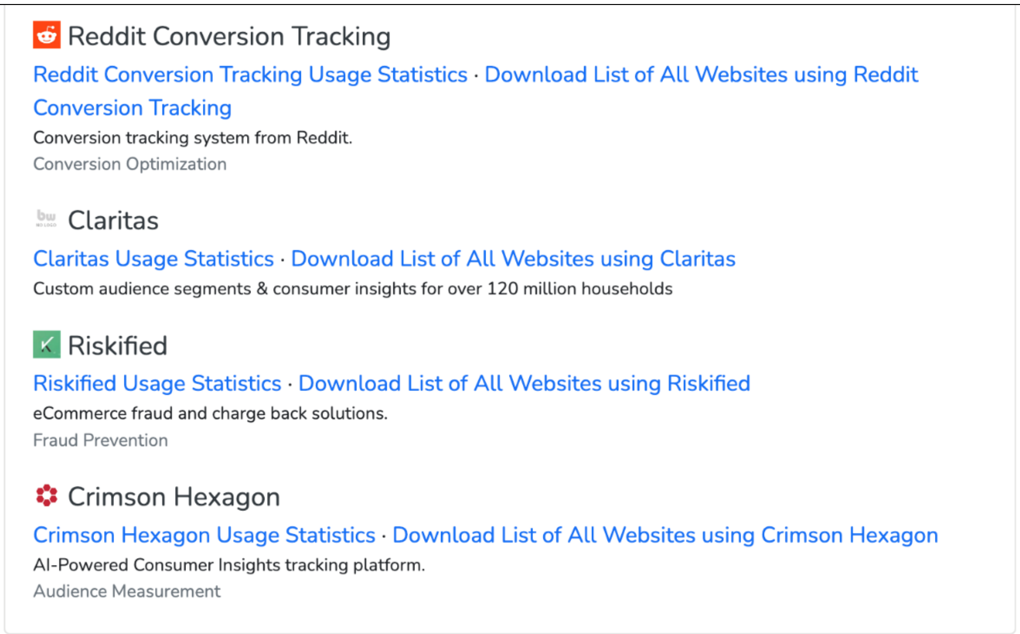
Audience Measurement

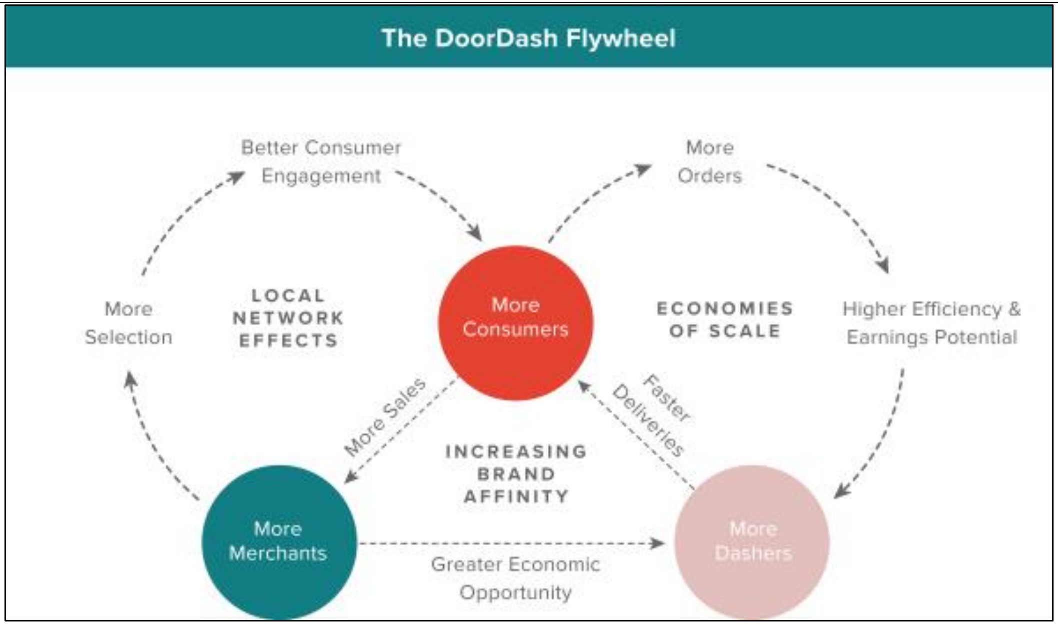
TikTok Conversion Tracking Pixel

TikTok Conversion Tracking Pixel Usage Statistics · Download List of All Websites using TikTok Conversion Tracking Pixel

TikTok advertising conversion tracking pixel.

Conversion Optimization · Conversion Tracking

	 Reddit Conversion Tracking Reddit Conversion Tracking Usage Statistics · Download List of All Websites using Reddit Conversion Tracking Conversion tracking system from Reddit. Conversion Optimization Claritas Claritas Usage Statistics · Download List of All Websites using Claritas Custom audience segments & consumer insights for over 120 million households Riskified Riskified Usage Statistics · Download List of All Websites using Riskified eCommerce fraud and charge back solutions. Fraud Prevention Crimson Hexagon Crimson Hexagon Usage Statistics · Download List of All Websites using Crimson Hexagon AI-Powered Consumer Insights tracking platform. Audience Measurement The accused instrumentality meets this limitation under the doctrine of equivalents because the accused instrumentality performs substantially the same function, in substantially the same way to achieve substantially the same result. For example, the system's multi-user engagement and support of multi-modes of contact through various technologies reflect the functionalities of an industry-leading online hospitality system as outlined in the claim. Even if DoorDash's network does not replicate the patent claim's network in exact terms, the servers' operation on powerful clusters and dynamic scaling to handle extensive operations is equivalent in function, way, and result to the claimed network. The backend-for-frontend architecture that orchestrates communication between client and server devices mirrors the patent's emphasis on an accessible, controlled network, thereby meeting the equivalency in performance and user experience. This equivalency holds even when considering DoorDash's adaptation to new technologies and architectures, which maintains the core principle of a robust web server system facilitating reliable and responsive service to users.
one or more hospitality software applications linked with the backoffice servers and with handheld/mobile compatible versions available to be remotely accessed and used by handheld/mobile equipped users and including two or more different handheld/mobile computers with their respective and different mobile operating system;	DoorDash has developed an integrated suite of hospitality software applications that are seamlessly woven into its web server network. These applications, utilized by consumers, Dashers, and merchants, are at the heart of DoorDash's food and drink delivery and pickup services. The applications are central to the Flywheel model, see diagram below, which illustrates DoorDash's holistic approach to service delivery, where data from all marketplace sides are amalgamated into a centralized data platform and makes evident that the DoorDash operates in accordance with its overall series of linked services and via its "360-degree picture" central ("Flywheel") and technology platform framework.



This centralization of data, as emphasized by DoorDash’s Vice President of Analytics and Data Science, Jessica Lachs, allows for a unified view of the marketplace, contributing to a comprehensive service that optimizes efficiency for all participants. It ensures that menus, inventory information, and communications are accurate and personalized, thereby enhancing the user experience for consumers, Dashers, and merchants alike.

DoorDash’s platform operates on a real-time basis, with intelligent dispatch systems that manage order demands and Dasher supply, optimizing routes and delivery times. The integration of predictive analytics furthers the efficiency of the system, enabling it to anticipate and adapt to various operational scenarios.

Both the DoorDash website and its mobile applications for iOS and Android are integral components of this network, providing users with a consistent and intuitive interface for placing orders. These platforms maintain user sessions for ease of use, and the Android APK files reveal a complex structure of source codes, configurations, and dependencies that enable seamless app functionality. DoorDash’s suite of applications demonstrates a sophisticated integration with its web server network, fulfilling the element of Claim 7 that requires at least one hospitality software application to be integrated with the server network. This integration is pivotal to the company's operational success, providing a seamless, data-driven, and user-centric experience across its digital ecosystem.

This was confirmed on August 17, 2022, by DoorDash’s Vice President of Analytics and Data Science Jessica Lachs in an interview on “Leveraging Data to Delight Customers Despite a Challenging Supply Chain’ (see Exh #98) in which she states:

> *“And so for us, it’s really about collecting as much information as we can about all sides of the marketplace, bringing all of that data together into a central data platform, where all of that data is accessible no matter the source. Whether it is coming from our production systems, transactional data, whether it is event data in our apps, whether that’s the consumer app, the dasher app, the merchant app… whether it is coming from our CRM systems. All of that data needs to come in to one central place so that we can tie it*

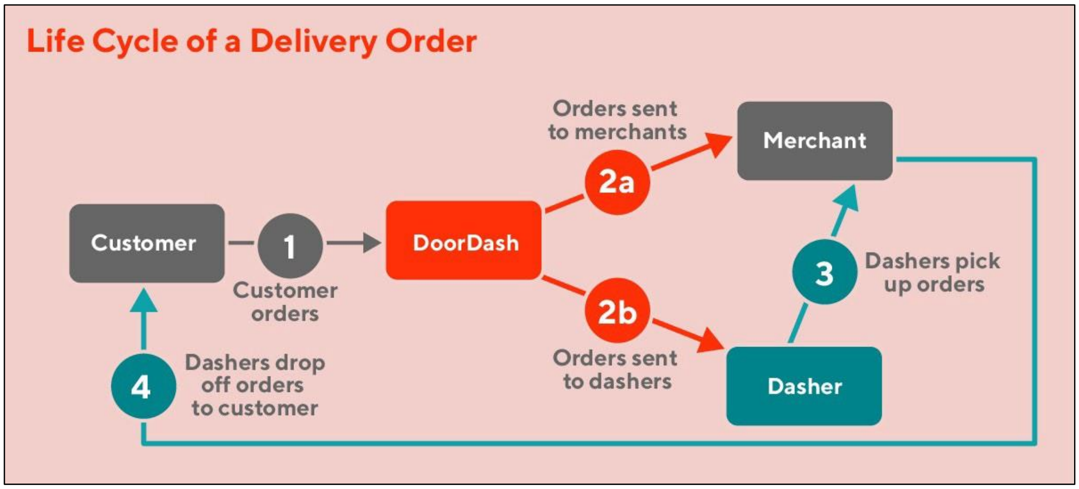
> *together and use the insights together to create a 360 degree picture of what's happening on our platform and off our platform so that we can use that information not just to provide accurate menus and inventory for consumers but also so we can send the right email communications to consumers, to dashers, so that we really have a full picture of what's happening and can use that for personalization and to help all three sides of our marketplace really optimize that they are at their peak efficiency."*

> *"So, for us, we want data to be easily accessible to all the different teams that need access to it. Analytics, being one of the largest customers of data at DoorDash, of course, but the way we think about our data models is really about increasing accessibility and consistency to that data. So, having all of our data in one central place and making sure that it is high in performance and so like query speeds are fast and that data models are thoughtful, so that it makes it a lot easier for data scientists, analysts, operators, product managers to be able to query the data that is needed and use the data in our production, in our production systems as well. So, we try to be thoughtful about how we structure our data models and how we ensure that all of the different production systems tie together into that central, as you mentioned, that central data lake".*

The DoorDash Life Cycle of a Delivery Order

In the blog article from the DoorDash Engineering team "Next-Generation Optimization for Dasher Dispatch at DoorDash" (see Exh. 84) they state that the DoorDash platform:

> *"...powers an on-demand marketplace involving real-time order demand and dasher [(drivers)] supply. Consumers ask for goods to be delivered from a merchant to their location. To fulfill this demand, [DoorDash] present dashers with delivery routes, where they move between picking up orders at merchants and delivering them to consumers"* and present the following diagram:



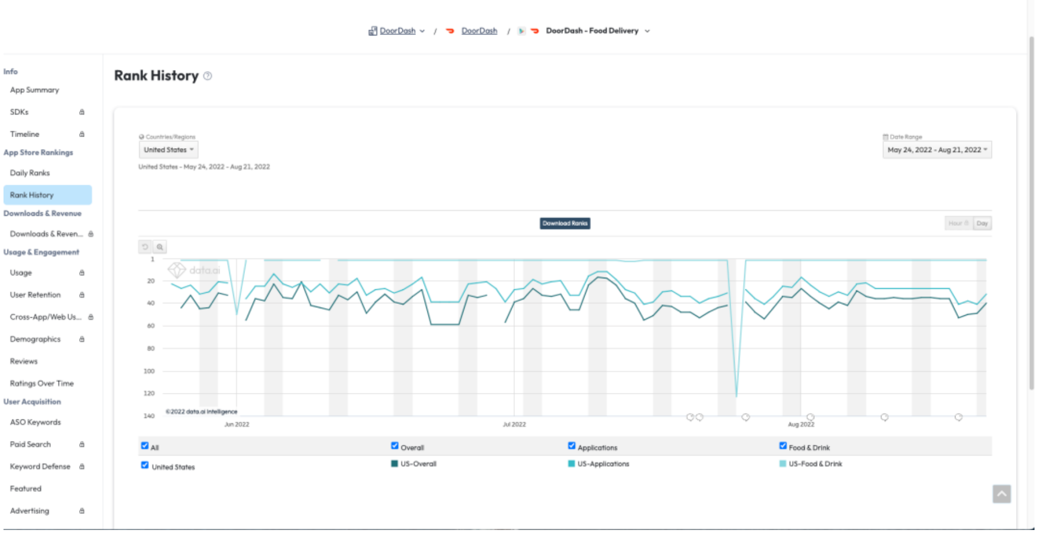
Moreover, in this article they assert the intelligence of their platform:

> *"Our dispatch system seeks high dasher efficiency and fulfillment quality by considering driving distance, time waiting for an order to be ready, delivery*

> *times as seen by the consumer, and more. Given incomplete information about the world, the system generates many predictions, such as when we expect an order to be ready for pickup, to model the real-world scenarios. With this data, the dispatch system generates future states for every possible matching and decides the best action to take, given our objectives of efficiency and quality".*

Website and Mobile Apps

Users can order food, drinks, and other items, from DoorDash using the website at www.DoorDash.com or their mobile apps. DoorDash has an app for both iPhone and Android, that operate nearly identically, for ordering on your mobile device. In fact, data.ai ranks the DoorDash iOS app with as #2 in food and ordering popularity, #27 overall as of August 1, 2022 (see Exh. 33).



DoorDash / DoorDash / DoorDash - Food Delivery

Rank History

Countries/Regions: United States

United States - May 24, 2022 - Aug 21, 2022

Date Range: May 24, 2022 - Aug 21, 2022

☑ All ☑ Overall ☑ Applications ☑ Food & Drink

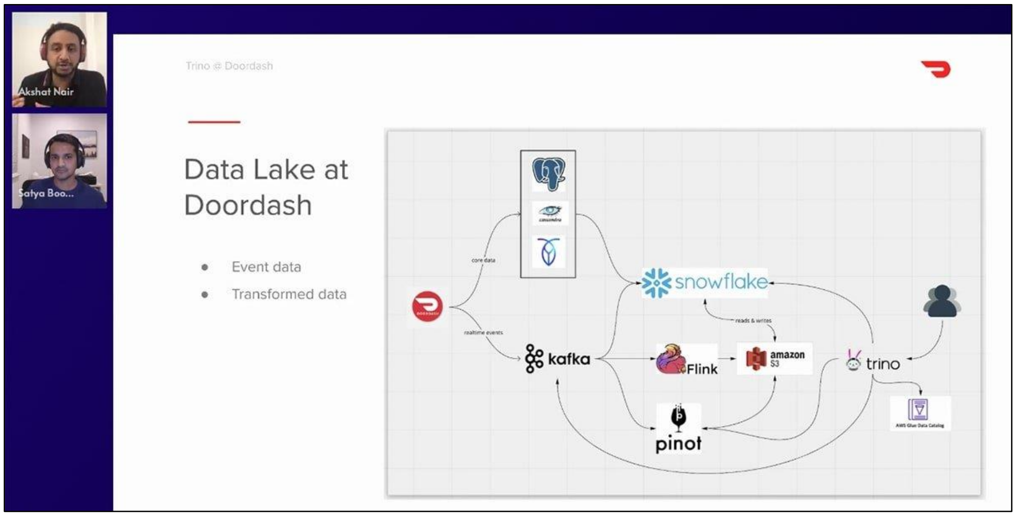
☑ United States

The website (webapp) and mobile apps provide the same search results (based on the user's location and preferences), restaurant, restaurant menus and ordering options regardless of the app used by the user.

Users are encouraged to create an account with DoorDash either through the website or the mobile apps. Any user using the iOS or Android app is automatically logged in once they launch the DoorDash application after they have created an account and logged-in the first time, and do not specifically log out.

Android apps installed on users mobile android devices are called APK files. "APK" stands for Android Package (sometimes Android Package Kit or Android Application Package). It's the file format that Android uses to distribute and install apps. As a result, an APK contains all the elements that an app needs to install correctly on [a] device. An APK is an archive file, meaning that it contains multiple files, plus … metadata about them... Generally, archive files (like ZIP) are used to combine multiple files into one, in order to make them more portable or compress them to save space. When an archive is used to distribute software, it's then called a software package.". In the DoorDash android APK file we find source code files, configuration files, third party library links, etc. (See Exh 34 - 35)

The accused instrumentality meets this limitation under the doctrine of equivalents because the accused instrumentality performs substantially the same function, in

	substantially the same way to achieve substantially the same result. For example, DoorDash's suite of hospitality software applications, as integrated into its web server network, demonstrates equivalent functionality to the claimed network-integrated hospitality software application. The Flywheel model of DoorDash, which amalgamates data across all sides of the marketplace into a centralized platform, operates in an equivalent manner to the patent claim, emphasizing a unified data-driven approach. This integration supports real-time, efficient operations across the DoorDash ecosystem, embodying the claimed software application's role within the server network. DoorDash's intelligent dispatch system and its predictive analytics further mirror the functionalities outlined in the patent, fulfilling the requirements under the Doctrine of Equivalents.
a master database comprising multiple linked and continuously synchronized in realtime databases throughout the network and with data and parameters of the one or more hospitality software applications integrated with the said network and with predefined formats, the master database comprising a usable file structure dictated prior to execution, thus improving efficiency and reliability, wherein the one or more hospitality software applications learn, update, store and intelligently apply varying modes of contact with the handheld/mobile equipped hospitality users and in accordance with their preferences, if any;	DoorDash designs, tests, deploys, integrates and maintains the claimed 'master database' (it's 'central data platform' and/or its 'central data lake' and/or its 'core data platform') as is detailed below, including a recently confirmed addition on August 17, 2022 by the Jessica Lachs, DoorDash Vice President of Analytics and Data Science, and in a recent job posting for a Director of DoorDash's Core Data Platform. DoorDash's "master database" has its own API and operates "intelligently" via "learning" (DoorDash's platform features extensive "machine learning" technology), while integrating with the claimed "web servers" and storing and utilizing "data and parameters" of the said hospitality applications with a usable menu structure (and with imported merchant data via the external API as shown further below) and using at least one predetermined format that is dictated prior to task execution and which enables the intelligent application of multiple modes of contact and related operational parameters for hospitality entities and remote hospitality users (consumers/dashers).  Trino @ Doordash Data Lake at Doordash - Event data - Transformed data Akshat Nair Satya Boo... core data realtime events snowflake reads & writes kafka Flink amazon S3 trino pinot AWS Glue Data Catalog DoorDash's Vice President of Analytics & Data Science, Jessica Lachs, in a August 17, 2022 video interview titled "Leveraging Data to Delight Customers Despite a Challenging Supply Chain", stated the following (See Exh. 98): "And so for us, it's really about collecting as much information as we can about all sides of the marketplace, bringing all of that data together into a central data platform, where all of that data is accessible no matter the source. Whether it is

> coming from our production systems, transactional data, whether it is event data in our apps, whether that's the consumer app, the dasher app, the merchant app… whether it is coming from our CRM systems. All of that data needs to come in to one central place so that we can tie it together and use the insights together to create a 360 degree picture of what's happening on our platform and off our platform so that we can use that information not just to provide accurate menus and inventory for consumers but also so we can send the right email communications to consumers, to dashers, so that we really have a full picture of what's happening and can use that for personalization and to help all three sides of our marketplace really optimize that they are at their peak efficiency."

> "So, for us, we want data to be easily accessible to all the different teams that need access to it. Analytics, being one of the largest customers of data at DoorDash, of course, but the way we think about our data models is really about increasing accessibility and consistency to that data. So, having all of our data in one central place and making sure that it is high in performance and so like query speeds are fast and that data models are thoughtful, so that it makes it a lot easier for data scientists, analysts, operators, product managers to be able to query the data that is needed and use the data in our production, in our production systems as well. So, we try to be thoughtful about how we structure our data models and how we ensure that all of the different production systems tie together into that central, as you mentioned, that central data lake."

Director of Engineering, Core Data Platform

In a recent job posting for a Director of Engineering for DoorDash's Core Data Platform in San Francisco, CA (See Exh. 43), it describes the purpose of the Core Data Platform as follows:

> "…DoorDash is a data driven organization and relies on timely, accurate and reliable data to drive many business and product decisions. The Core Data Platform owns all the infrastructure necessary to run an operationally efficient analytical data stack. This will include data ingestion (batch and real time), data compute & transformation, data storage (warehouse, data lake, OLAP etc.), querying infrastructure as well as data compliance, quality and governance."

Further See Exhibit #45:

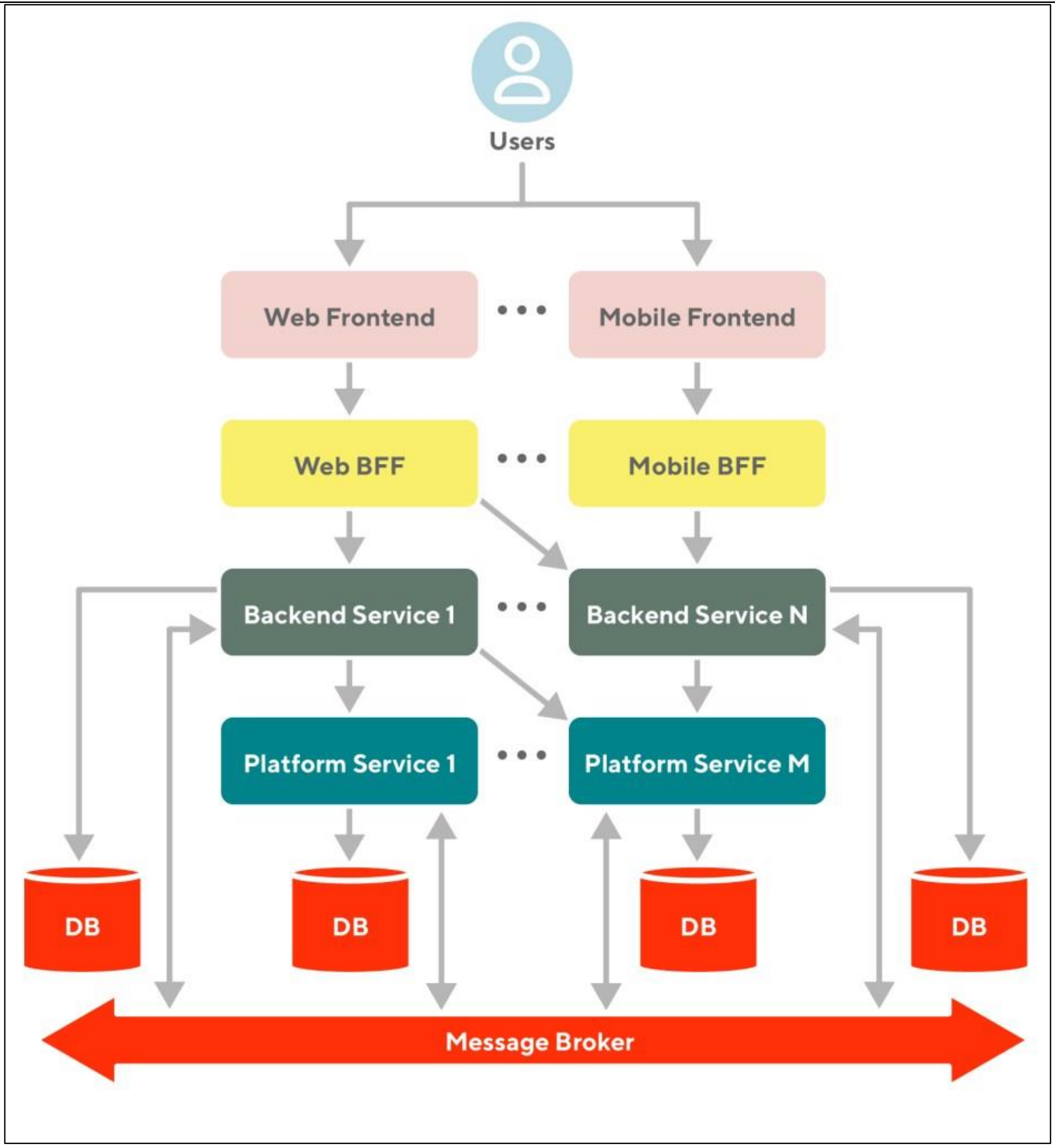
In the customer case study published by Snowflake (See Exh. 45) they state that DoorDash serves "…more than 4,000 cities" and "…ingests and analyzes large amounts of operational data and data from its web and mobile app." They go on to state that "...DoorDash's legacy data architecture could not keep pace with its data-driven culture. Consumer, merchant, and Dasher data were spread across data silos, creating challenges for operational reporting and business decision-making. Resource contention caused by 70,000 dashboard queries and 3,000 ad hoc queries per day led to missed SLAs and stale data." Therefore, Snowflake, provided the ideal solution to DoorDash that being "…[a] platform for scalable delivery insights". This solution according to Snowflake (See Exh. 45):

> "Realizing the need for a modern data infrastructure, DoorDash turned to Snowflake's platform. Snowflake's multi-cluster shared data architecture scaled to handle all of DoorDash's data, users, and workloads with speeds twice as fast as before. Snowflake's network of connectors, drivers, and programming languages accelerated the migration of 600 ETL jobs.

> ETL jobs finished 23% faster, enabling the BI team to meet its reporting SLAs 99.7% of the time. Snowflake's fully managed infrastructure with near-infinite scalability kept the team focused on data analytics and modeling. "Snowflake's elasticity keeps us on track no matter what life brings," DoorDash's Director of Business Intelligence Marta Vovchenko said.
>
> Ingesting all of DoorDash's consumer, merchant, and Dasher data into Snowflake provides market managers across the globe with the latest supply and demand insights by 7 a.m. daily.
>
> Architecting DoorDash's merchant portal on Snowflake provides merchants with data-driven reports for managing orders, inventory, and staffing. "Offering our data as a product for end users is a big differentiator," Vovchenko said. Snowflake's instant scalability enables the BI team to quickly spin up separate data warehouses and develop data models that measure new business-line performance. DoorDash's marketing attribution model powered by Snowflake analyzes advertising data from Facebook, Google, and other platforms to optimize campaigns and budgets. Machine learning algorithms use data stored in Snowflake to make personalized product recommendations to customers at scale."

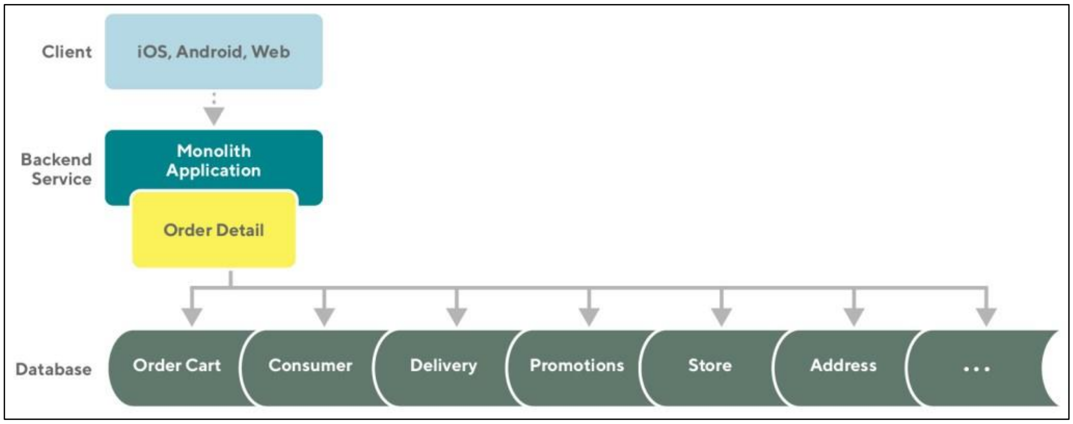
DoorDash's intricate architecture includes the 'master database'. DoorDash was able to improve the efficiency and reliability of their data platform using a microservices architecture. By breaking up their application into domain-specific parts they were able to reduce errors and latency. They state in the article "Future-proofing: How DoorDash Transitioned from a Code Monolith to a Microservice Architecture" (see Exh. 20) that

> "… [the] final design for our new microservice architecture consisted of five different layers, ranging from the user experience to the core infrastructure. Each layer provides functionality to the upper layer and leverages the functionality exposed by the lower layer [as shown below]":

	 Users Web Frontend Mobile Frontend Web BFF Mobile BFF Backend Service 1 Backend Service N Platform Service 1 Platform Service M DB DB DB DB Message Broker As the above diagram depicts, the four DB (or database) icons represent linked database all managed through the Message Broker, which is their database API. Also in this diagram, the Backend microservice and Platform microservice connect to and interact with linked database. As describe in “How DoorDash transitioned from a code monolith to microservices” (See Exh. 20) by the DoorDash engineering team, their microservices architecture depicted in this diagram provided the following: “Frontend layer: Provides frontend systems (like the DoorDash mobile app, Dasher web app, etc.) for the interaction with consumers, merchants, and Dashers that are built on top of different frontend platforms. BFF layer: The frontend layer is decoupled from the backend layer via BFFs. The BFF layer provides functionality to the frontend by orchestrating the interaction with multiple backend services while hiding the underlying backend architecture. Backend Layer: Provides the core functionality that powers the business logic (order cart service, feed service, delivery service, etc.).

> Platform layer: Provides common functionality that is leveraged by other backend services (identity service, communication service, etc.).
>
> Infrastructure layer: Provides the infrastructural components that are required to build the site (databases, message brokers, etc.) and lays the foundation to abstract the system from the underlying environment (cloud service provider)."

As depicted by the diagram below, DoorDash states "… our microservices architecture, APIs orchestrated by a BFF are targeted towards specific services, making it easier to design precise calls and appropriate execution."



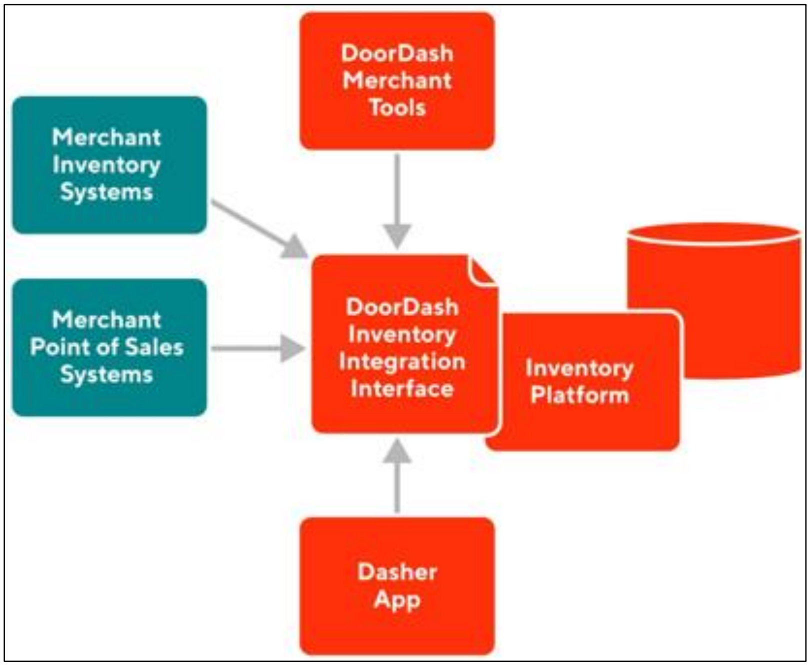
> "From database infrastructure to app programming, there are many ways technology companies can improve the customer experience. Good, targeted API design might be one that falls under the radar, yet can deliver significant improvements. In our case, we were given the opportunity to redesign our APIs during a migration from a monolithic codebase to a microservices architecture. However, any technology company, especially those with a great amount of legacy code in their platform, might find it useful to assess their APIs. There might be opportunities to reposition the APIs, removing overly large requests and reducing load on networks, while making clients run more quickly and becoming less error-prone, ultimately delivering a better customer experience." See Exhibit 41.

Data Warehousing

In a customer case study published by Starburst, which promotes itself as the fastest query engine for data warehouse, analytics, etc., it states that "DoorDash connects customers and businesses in more than 4,000 cities. Its network of merchants and local drivers, known as "Dashers," enables on-demand delivery of takeout food, groceries, and household essentials. To provide insights to internal stakeholders and merchants, DoorDash ingests and analyzes large amounts of operational data and data from its web and mobile apps" (see Exh. 45). Also, the Director of Business Intelligence at DoorDash goes on to state "[m]igrating to Snowflake has been fundamental to the growth of BI and the expansion of data's impact at DoorDash". Lastly, in a case study published by Starburst (See Exh. 54), an engineering manager for DoorDash is quoted as saying "With Starburst, the future of data analytics looks bright. We hope to achieve our vision of a unified query engine and a secure, single point of access to all of our data with Starburst Enterprise".

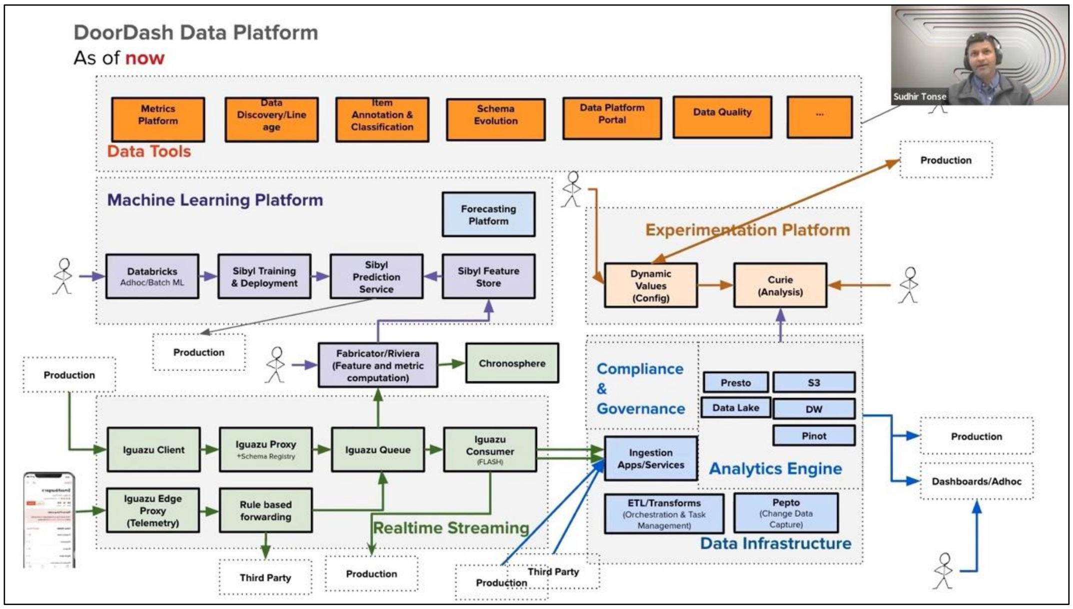
In the DoorDash engineering article "Building a Source of Truth for an Inventory with Disparate Data Sources" (See Exh. 55), they state that they have faced serious challenges managing data inventory and admit to the use of a master database. As such they state:

> "…[they] must ensure that all merchant processes are recorded electronically, including receiving inventory, putting inventory on shelves, and removing items from shelves. But this is not feasible in light of the large operational and capital investments that would be required. Instead, we must optimize use of the data that we can collect and extrapolate inventory states from that... [as shown in figure below] …[by] collecting partial or incomplete data from across multiple sources and then reconciling that input within a comprehensive inventory dataset, we unlock the ability to crowdsource inventory data for a physical store. Already, we are collecting hundreds of millions of inventory data points from these disparate sources."

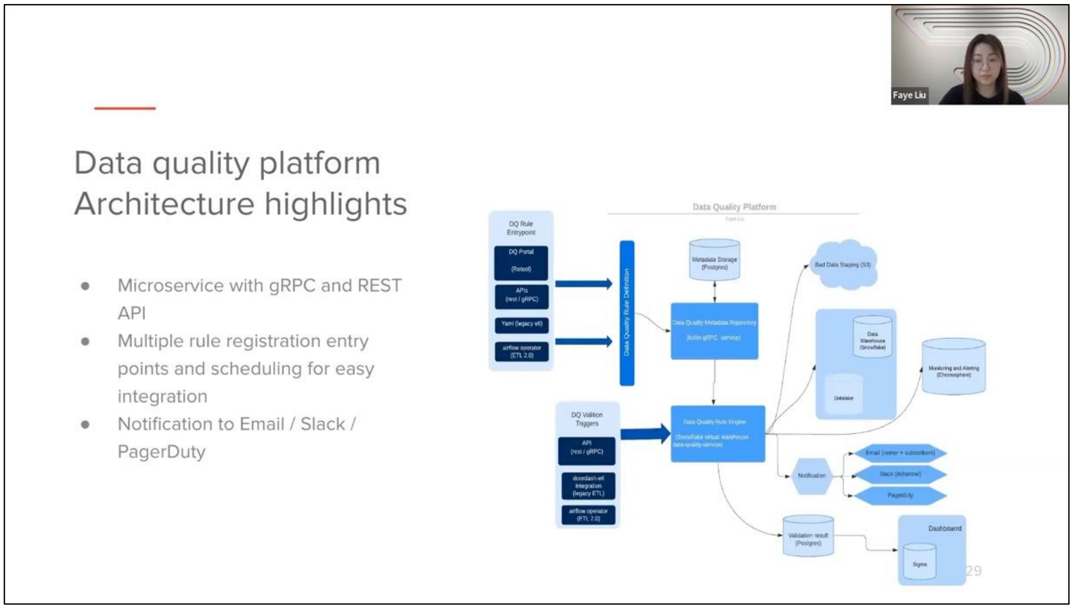

DoorDash Merchant Tools
Merchant Inventory Systems
Merchant Point of Sales Systems
DoorDash Inventory Integration Interface
Inventory Platform
Dasher App

In the video DoorDash Technical meetup event: **Scaling our Data Platform** by the DoorDash engineering team (See Exh. 47), they clearly demonstrate how they use a of collecting master database in the DoorDash Data Platform. Below are several screenshots from this video highlighting the integration of a master database, sectioned into several microservices. For example, the two charts below, taken from this video (timestamp 00:06:43 and 00:21:42) illustrates the development that DoorDash has undertaken "over the last three years" on their Data Platform gathering, analyzing, retrieving, updating and storing massive amounts of data. They added services like real-time streaming and machine learning (i.e., artificial intelligence system processes), all integrated with the data warehousing master database located on Amazon's S3 cloud servers.

The second chart "Data quality platform Architecture highlights" (See Exh. 56) illustrates DoorDash's microservice for data quality using a RESTful API (note: RESTful API is an interface that two computer systems use to exchange information securely over the internet) shows the integration of several data stores for data warehousing, dashboard, monitoring and alerts, all of which culminate into a database operating as one master database.



DoorDash Data Platform
As of now

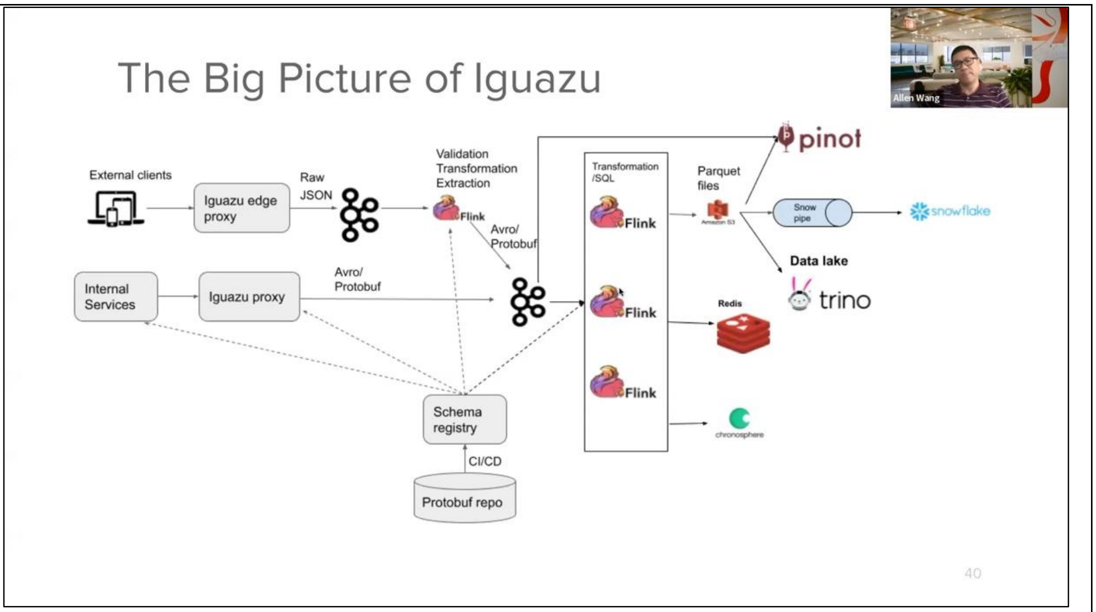


Data quality platform
Architecture highlights

- Microservice with gRPC and REST API
- Multiple rule registration entry points and scheduling for easy integration
- Notification to Email / Slack / PagerDuty

Faye Liu
Data Quality Platform
DQ Rule Entrypoint
DQ Portal (Retool)
APIs (rest / gRPC)
Yaml (legacy etl)
airflow operator (ETL 2.0)
Data Quality Rule Definition
Metadata Storage (Postgres)
Data Quality Metadata Repository (kotlin gRPC service)
Bad Data Staging (S3)
Data Warehouse (Snowflake)
Datalake
Monitoring and Alerting (Chronosphere)
DQ Valition Triggers
API (rest / gRPC)
doordash-etl integration (legacy ETL)
airflow operator (ETL 2.0)
Data Quality Rule Engine (Snowflake virtual warehouse data-quality-service)
Notification
Email (owner + subscribers)
Slack (#channel)
PagerDuty
Validation result (Postgres)
Dashboard
Sigma
29

The video goes on to describe how Iguaza works (timestamp 00:29:42) and is integrated into the data platform, DoorDash's ideal workflow that includes a "single entry point" (timestamp 00:39:40) in which data is being "served" into their 'master database', and their development of Fabricator for a unified execution environment with an "online storage".



The Big Picture of Iguazu

External clients

Iguazu edge proxy

Raw JSON

Validation Transformation Extraction

Flink

Avro/ Protobuf

Internal Services

Iguazu proxy

Avro/ Protobuf

Schema registry

CI/CD

Protobuf repo

Transformation /SQL

Flink

Flink

Flink

Parquet files

Amazon S3

Snow pipe

snowflake

pinot

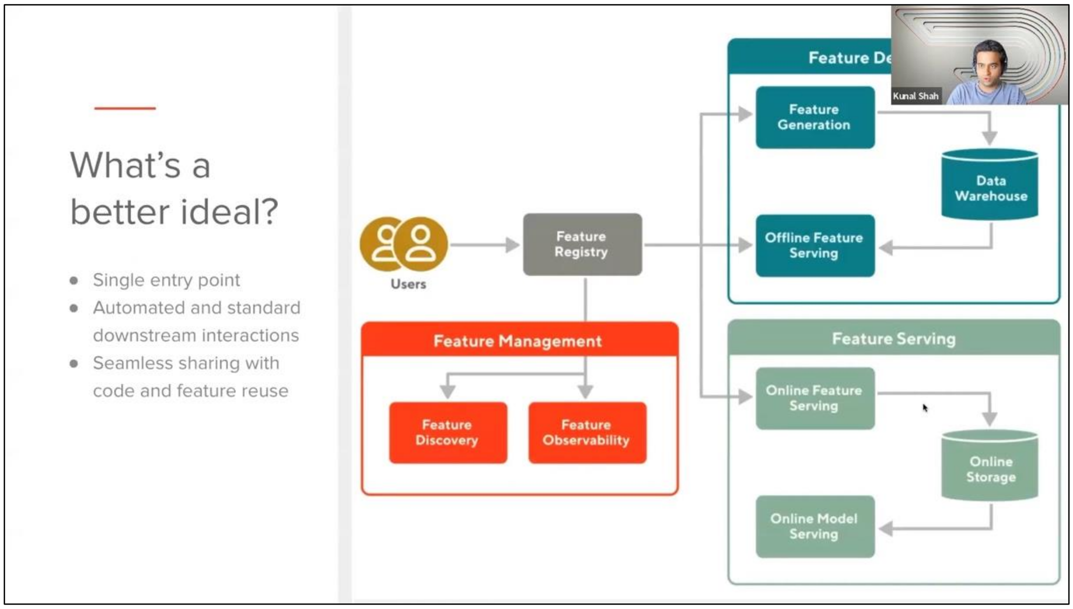
Data lake

trino

Redis

chronosphere

40



What's a better ideal?

- Single entry point
- Automated and standard downstream interactions
- Seamless sharing with code and feature reuse

Users

Feature Registry

Feature De

Feature Generation

Data Warehouse

Offline Feature Serving

Feature Management

Feature Discovery

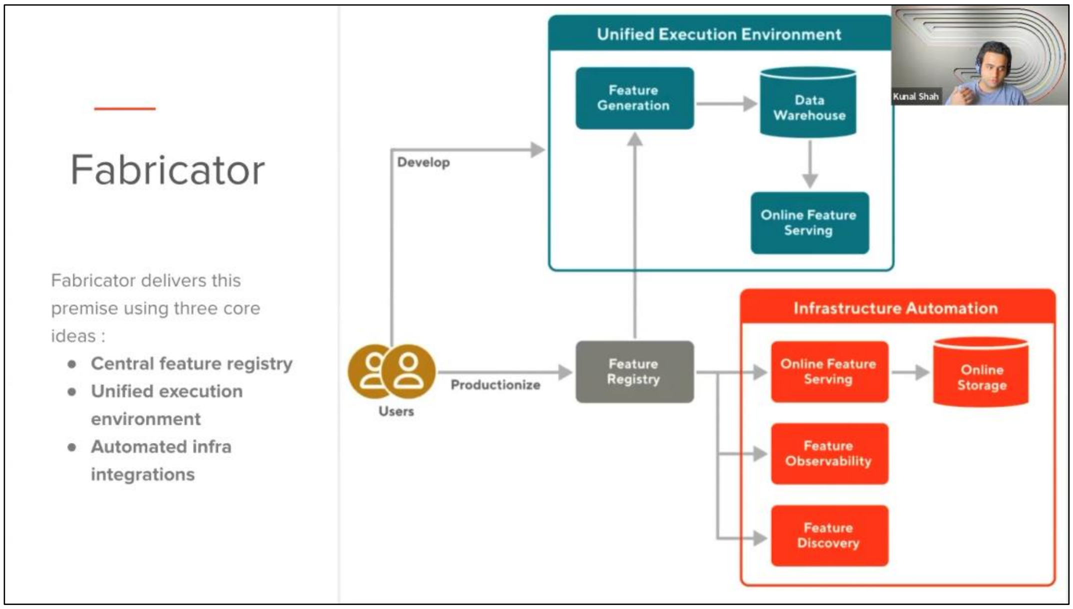
Feature Observability

Feature Serving

Online Feature Serving

Online Storage

Online Model Serving



Fabricator

Fabricator delivers this premise using three core ideas :

- **Central feature registry**
- **Unified execution environment**
- **Automated infra integrations**

Unified Execution Environment

Feature Generation

Data Warehouse

Online Feature Serving

Develop

Users

Productionize

Feature Registry

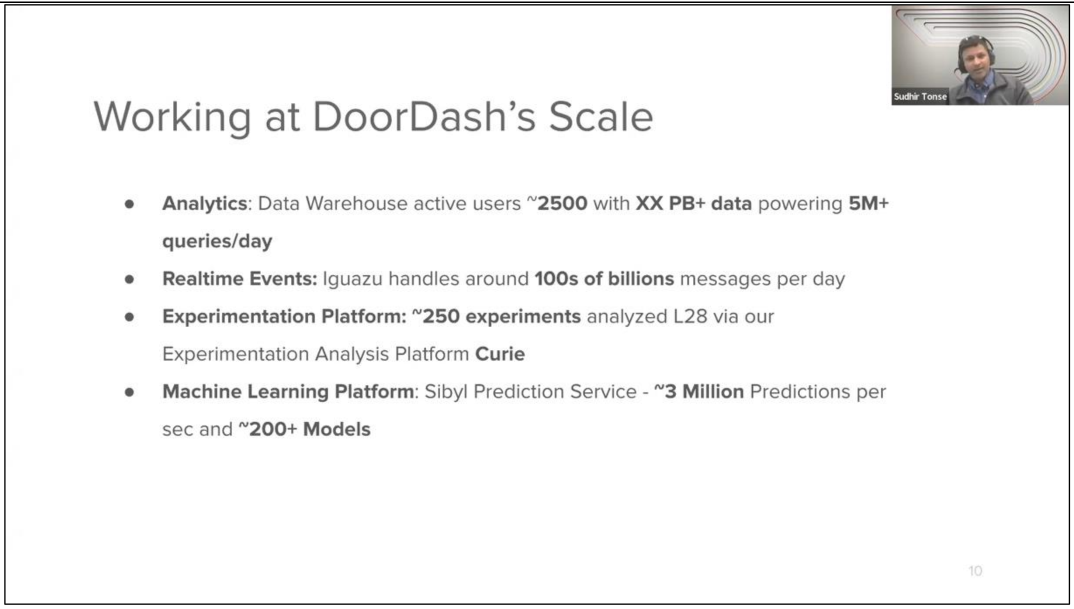
Infrastructure Automation

Online Feature Serving

Online Storage

Feature Observability

Feature Discovery



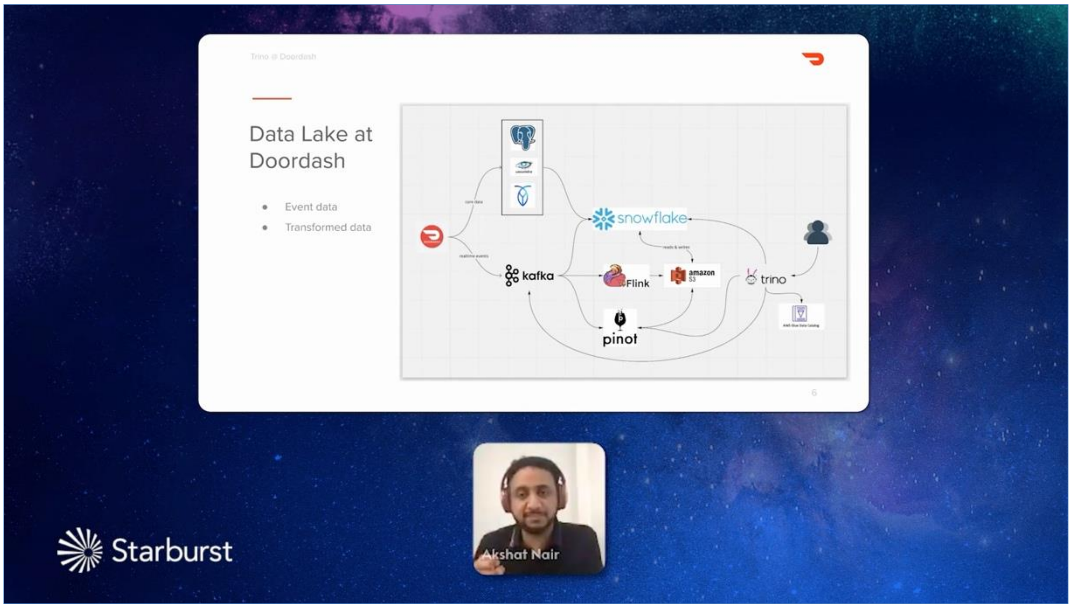
Working at DoorDash's Scale

- **Analytics**: Data Warehouse active users ~**2500** with **XX PB+ data** powering **5M+ queries/day**
- **Realtime Events:** Iguazu handles around **100s of billions** messages per day
- **Experimentation Platform: ~250 experiments** analyzed L28 via our Experimentation Analysis Platform **Curie**
- **Machine Learning Platform**: Sibyl Prediction Service - **~3 Million** Predictions per sec and **~200+ Models**

10

Trino Query Engine Integration

In the video "How DoorDash processes petabytes of data by utilizing Trino" the DoorDash engineering team (see Exh. 48) presents how data flows and queried in their current setup. They state that users can query data from "…snowflake, and data from S3 and data from Pinot using Trino". Trino is described as a system that "…is a distributed SQL query engine designed to query large data sets distributed over one or more heterogeneous data sources" (See Exh. 57-58), in other words, gather data from multiple internal sources through one interface, a master database.



Trino @ Doordash

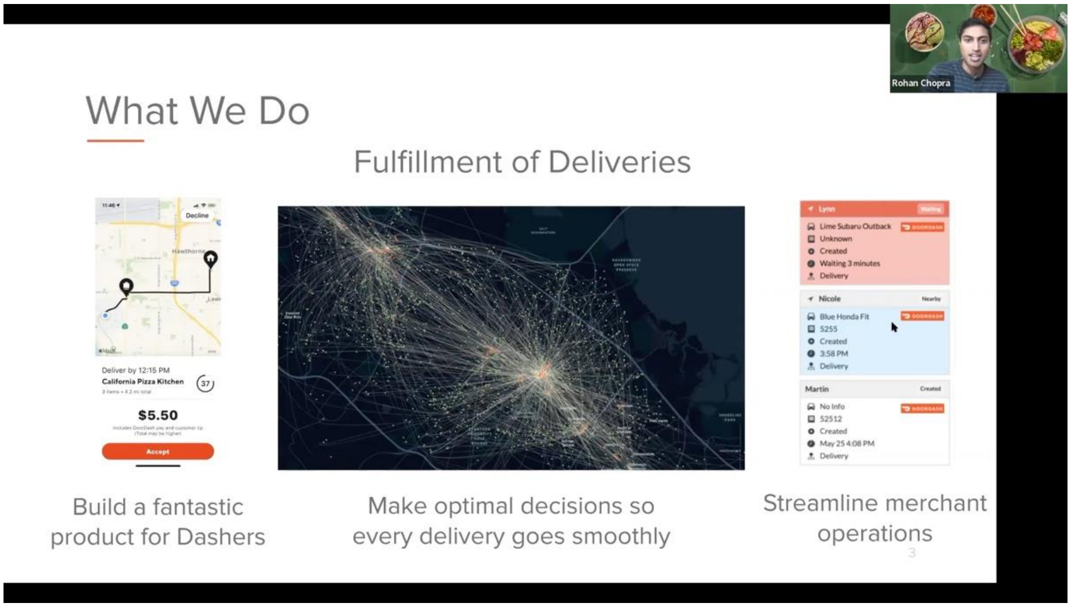
Data Lake at Doordash

- Event data
- Transformed data

DoorDash's Intelligent Machine Learning

The DoorDash system intelligently learns, updates, and stores multiple communication modes of contact and related operational parameters for hospitality entities and for remote hospitality users along with their prior attributes or preferences, if any and then intelligently applies them, as the systems maintains an account for each user this account is accessible and updateable through the webapp, the iOS app and the Android App Any change to the account made by the user through one app, is automatically reflected in the other apps. In other words, a change the user makes through the iOS app of their account, will be reflected when they login texting/chatting between the dasher and user, and to their account through the web browser.

In the video "DoorDash Technical Showcase Event- Logistics team" (See Exh. 49), the engineering logistics team uses Machine Learning (known as ML) to power their Dispatch engine so that Dashers and orders are matched in real time, and that the deliveries are completed as "effective as possible" for the merchant, dashers, and customers. Screenshots from this video is as follows:



What We Do

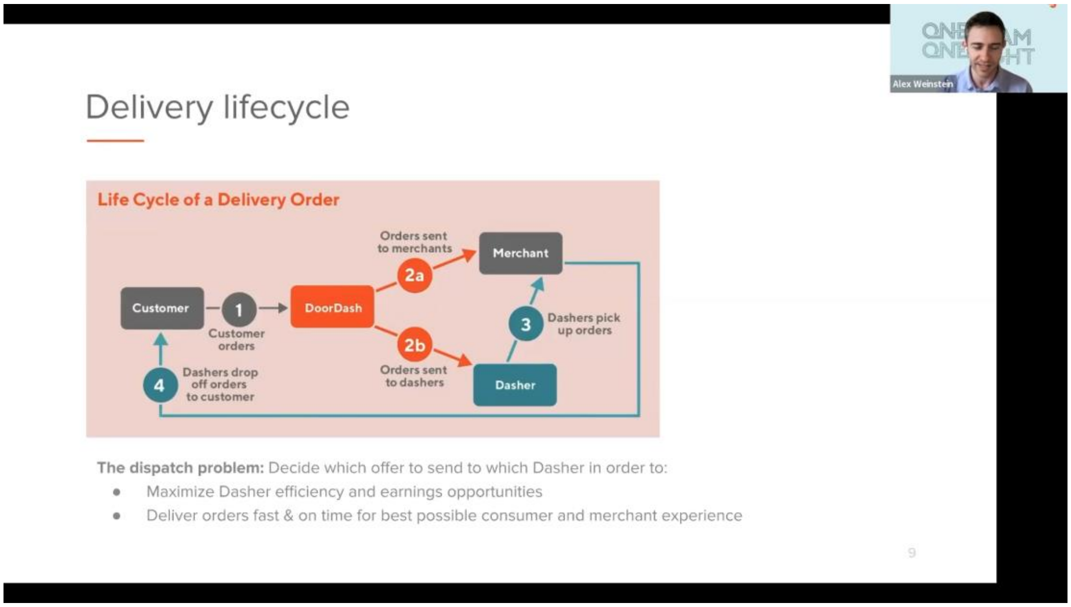
Fulfillment of Deliveries

Build a fantastic product for Dashers

Make optimal decisions so every delivery goes smoothly

Streamline merchant operations

The lifecycle of an order starts at the merchant (i.e., restaurant), to the dasher (delivery driver), and onto the customer.



Delivery lifecycle

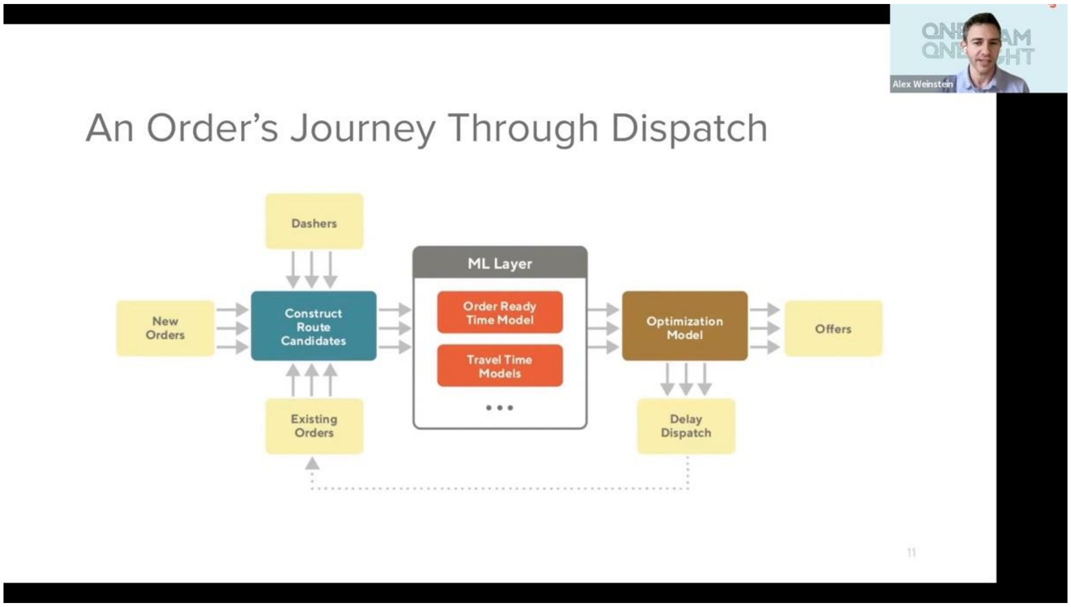
Life Cycle of a Delivery Order

The dispatch problem: Decide which offer to send to which Dasher in order to:

- Maximize Dasher efficiency and earnings opportunities
- Deliver orders fast & on time for best possible consumer and merchant experience

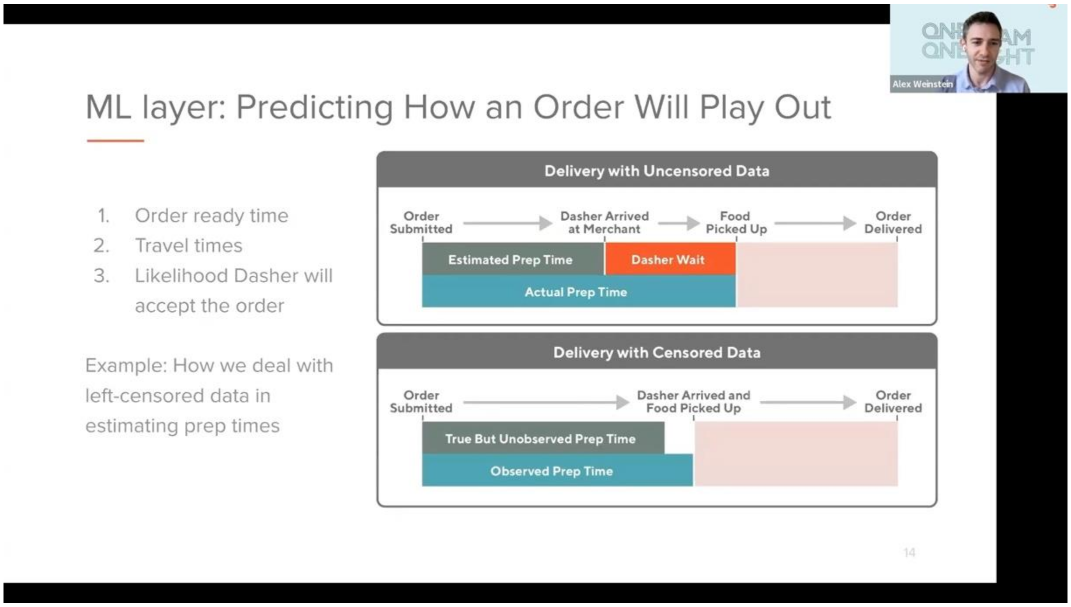
An order goes through an extensive journey. As an order flows through the

Dispatch, it goes through several stages making intelligent decisions based on the data available.



An Order's Journey Through Dispatch

The Dispatcher system figures out which dasher to send the order to, how long the merchant will take to prepare the order, when to send the dasher to pick up the order, how long the travel time will be, and when the customer can anticipate the delivery time. The Dispatcher system makes these intelligent decisions in real time for each order.

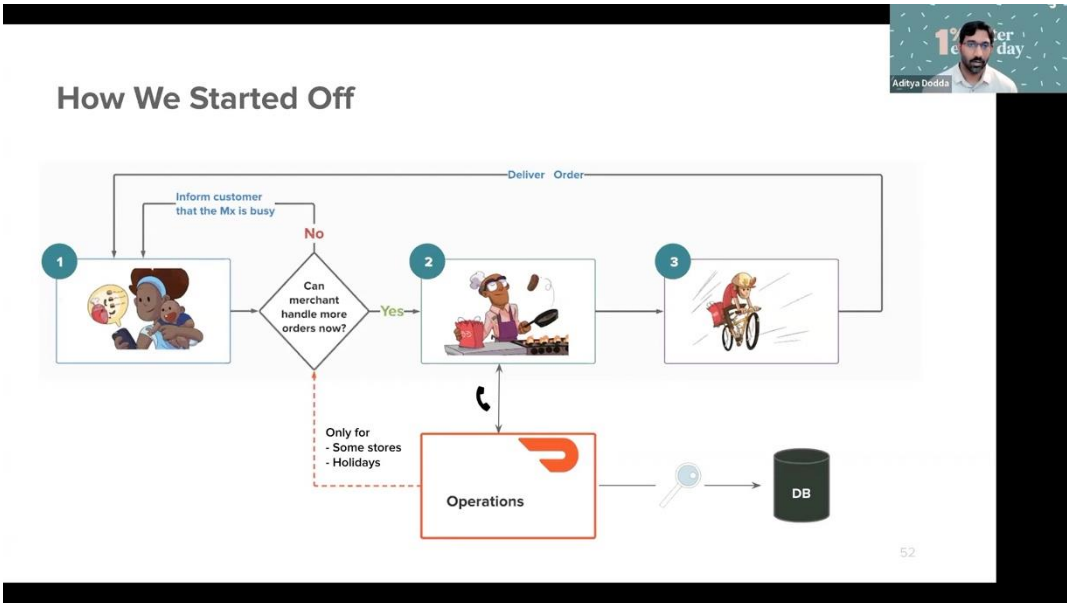


ML layer: Predicting How an Order Will Play Out

1. Order ready time
2. Travel times
3. Likelihood Dasher will accept the order

Example: How we deal with left-censored data in estimating prep times

Here is an illustration of an orders flow:



How We Started Off

Deliver Order

Inform customer that the Mx is busy

No

1

Can merchant handle more orders now?

Yes

2

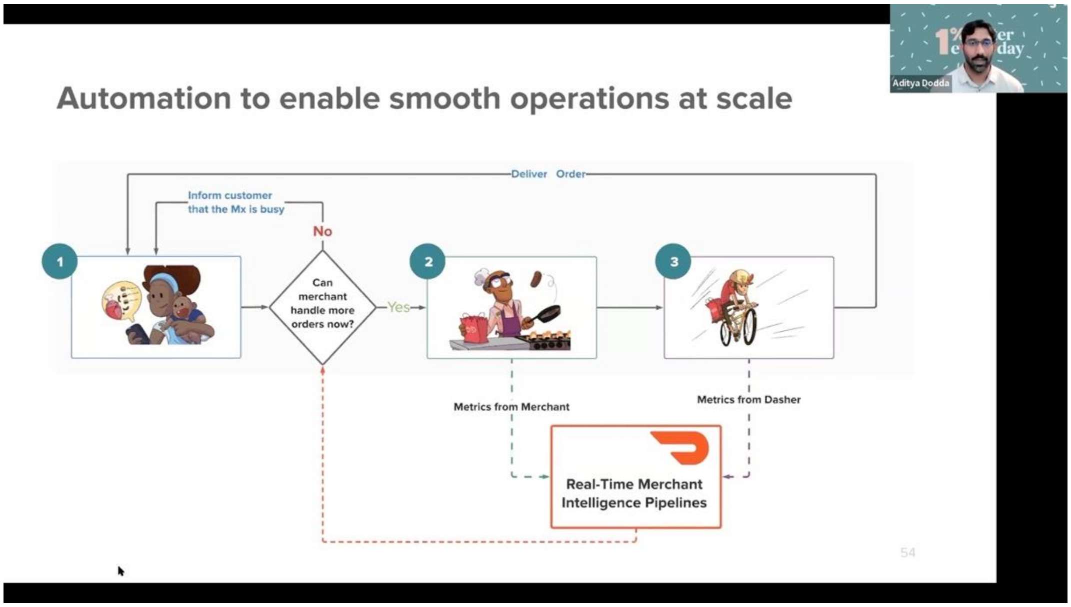
3

Only for
- Some stores
- Holidays

Operations

DB

DoorDash implemented the real-time merchant intelligent pipelines to enable the smooth automation of the ordering and delivery process.



Automation to enable smooth operations at scale

Deliver Order

Inform customer that the Mx is busy

No

1

Can merchant handle more orders now?

Yes

2

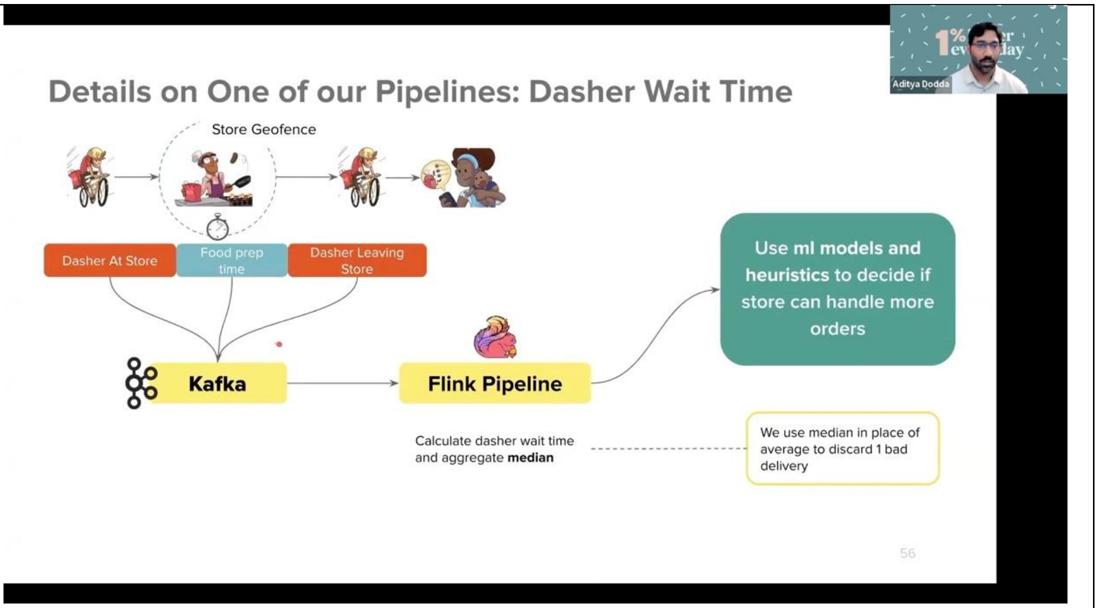
3

Metrics from Merchant

Metrics from Dasher

Real-Time Merchant Intelligence Pipelines

Dasher Wait Times in a machine learning model, depicted below, to intelligently calculate dasher wait times, and other factors.



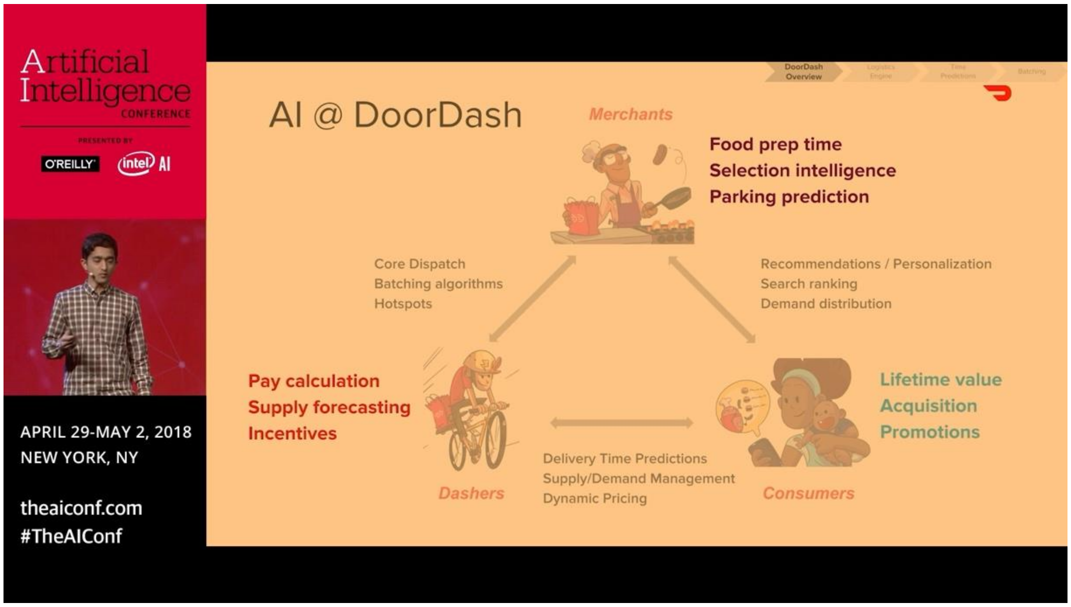
Details on One of our Pipelines: Dasher Wait Time

Use ml models and heuristics to decide if store can handle more orders

Calculate dasher wait time and aggregate **median**

We use median in place of average to discard 1 bad delivery

The technical video "How DoorDash Leverages AI In Its Logistics Engine" presented by the DoorDash engineering team describes how DoorDash is using Artificial Intelligence (AI) to create automated intelligent decisions regarding dasher wait time, delivery time, prep time, dynamic pricing, merchant availability, etc. (See Exh. 50).



Artificial Intelligence CONFERENCE

PRESENTED BY O'REILLY intel AI

APRIL 29-MAY 2, 2018
NEW YORK, NY

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AI @ DoorDash

Merchants

Food prep time
Selection intelligence
Parking prediction

Core Dispatch
Batching algorithms
Hotspots

Recommendations / Personalization
Search ranking
Demand distribution

Pay calculation
Supply forecasting
Incentives

Dashers

Delivery Time Predictions
Supply/Demand Management
Dynamic Pricing

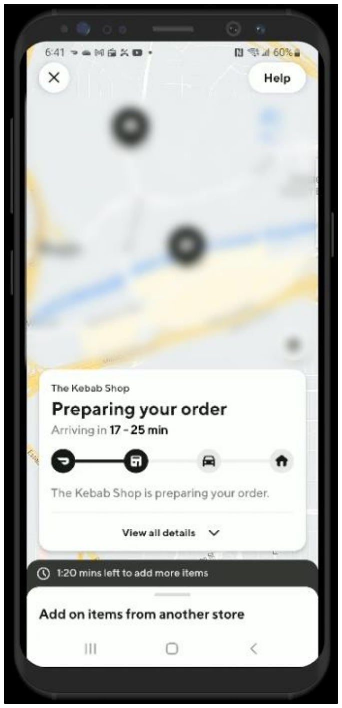
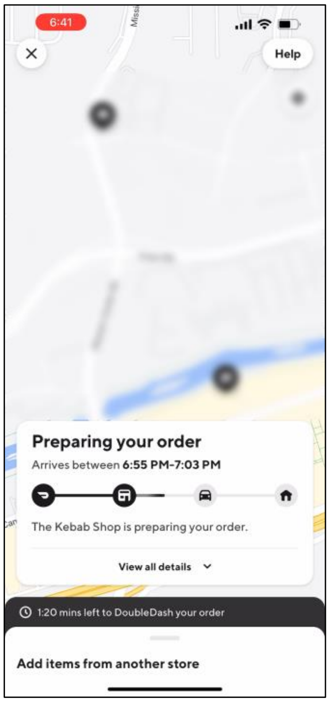
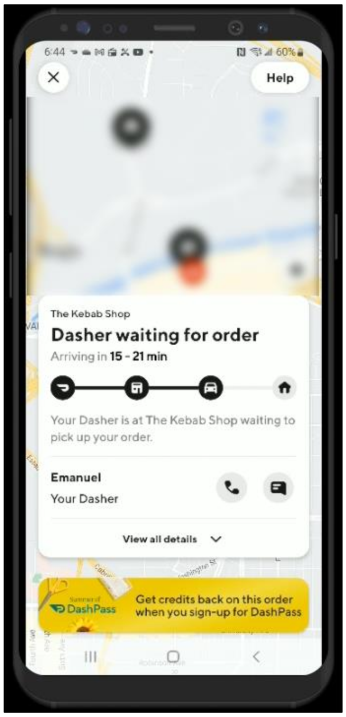
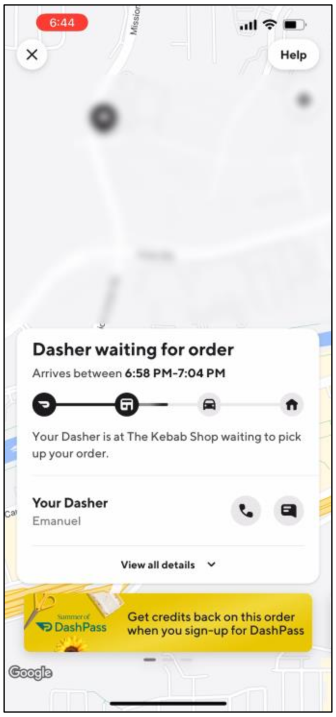
Lifetime value
Acquisition
Promotions

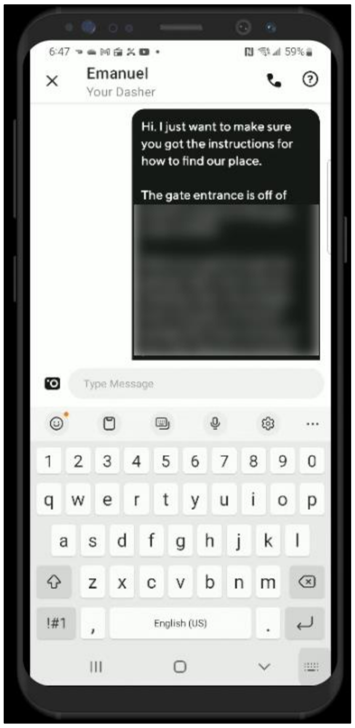
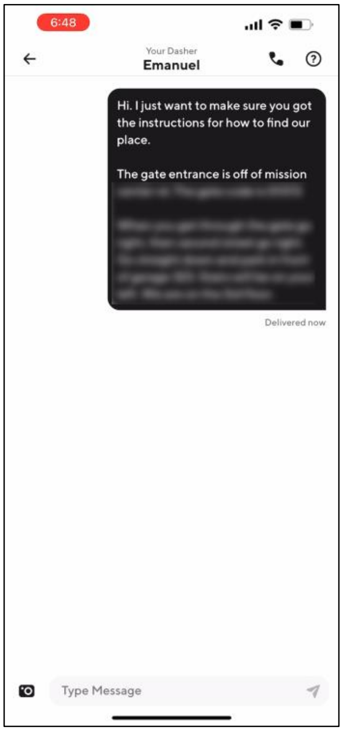
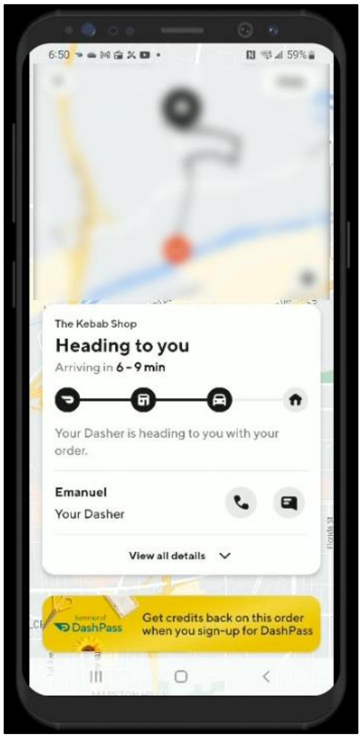
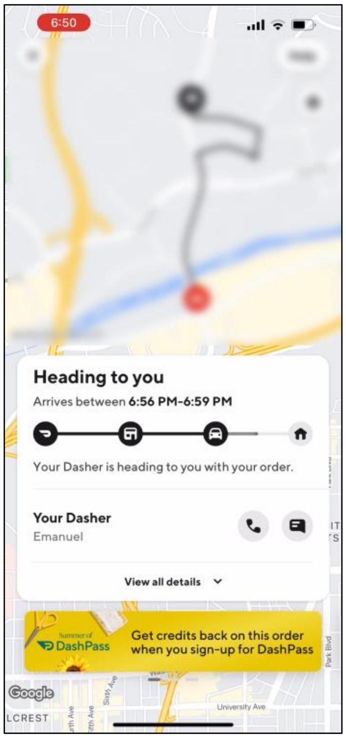
Consumers

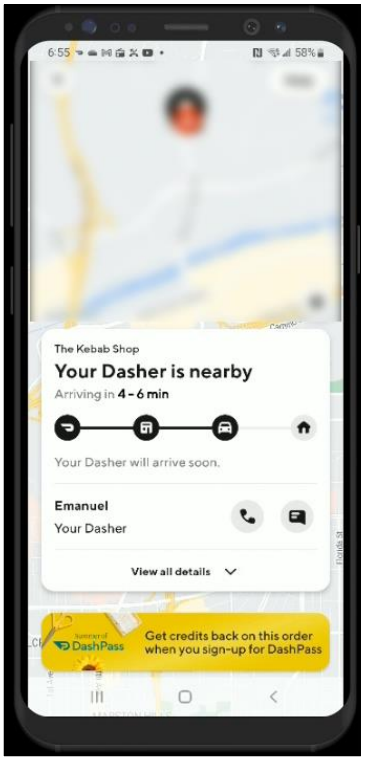
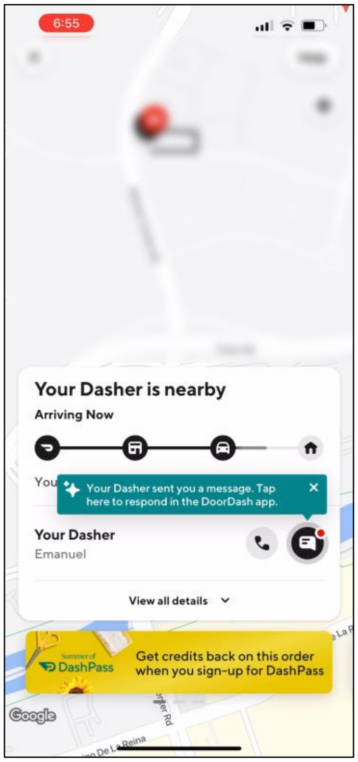
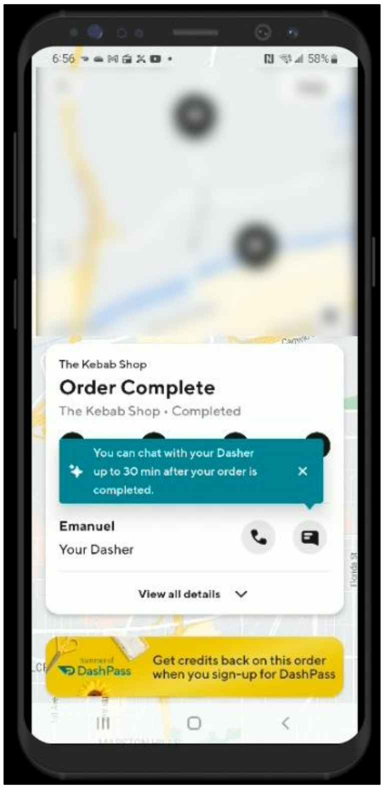
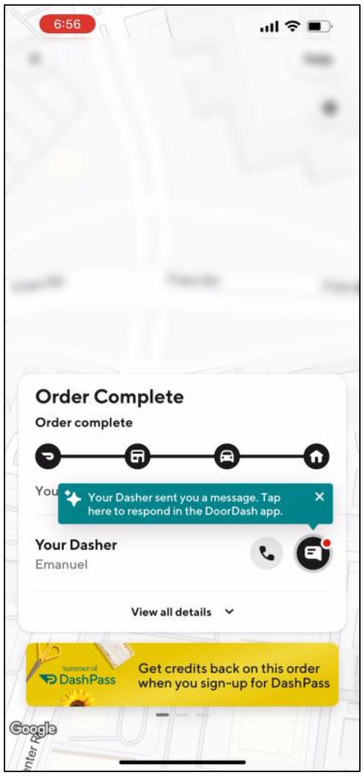
Order Tracking and Notification

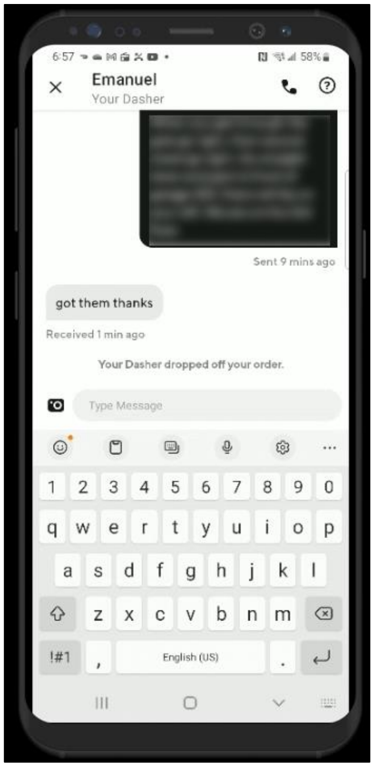
The same holds true for order notifications, order tracking and texting/chatting between the dasher and user. Below are a series of screenshots taken from one iPhone and one Android smartphone each tracking the same DoorDash order placed by a user in the DoorDash Android app (running on the android phone). They depict the order notifications and order updates in the app for the user to be able to track their order and delivery.

In this case, we have one iPhone and one Android device tracking the same order, we can see the intelligent decisions being made by the Dispatcher regarding estimated time of delivery, and the dasher time and distance from fulfilling the order. We also see text messages placed and sent by the user to the Dasher on the android app, being reflected in the iOS app on the iPhone that is tracking the order. When the Dasher responds to the chat from the user, the user is notified on the android phone and iOS phone.

Android DoorDash App	iOS DoorDash App
 6:41 60% Help The Kebab Shop Preparing your order Arriving in 17 - 25 min The Kebab Shop is preparing your order. View all details 1:20 mins left to add more items Add on items from another store	 6:41 Help Preparing your order Arrives between 6:55 PM-7:03 PM The Kebab Shop is preparing your order. View all details 1:20 mins left to DoubleDash your order Add items from another store
 6:44 60% Help The Kebab Shop Dasher waiting for order Arriving in 15 - 21 min Your Dasher is at The Kebab Shop waiting to pick up your order. Emanuel Your Dasher View all details Summer of DashPass Get credits back on this order when you sign-up for DashPass	 6:44 Help Dasher waiting for order Arrives between 6:58 PM-7:04 PM Your Dasher is at The Kebab Shop waiting to pick up your order. Your Dasher Emanuel View all details Summer of DashPass Get credits back on this order when you sign-up for DashPass Google

	 6:47 59% Emanuel Your Dasher Hi, I just want to make sure you got the instructions for how to find our place. The gate entrance is off of [redacted] Type Message English (US)	 6:48 Your Dasher Emanuel Hi. I just want to make sure you got the instructions for how to find our place. The gate entrance is off of mission [redacted] Delivered now Type Message
	 6:50 59% The Kebab Shop **Heading to you** Arriving in **6 - 9 min** Your Dasher is heading to you with your order. **Emanuel** Your Dasher View all details Summer of DashPass Get credits back on this order when you sign-up for DashPass	 6:50 **Heading to you** Arrives between **6:56 PM-6:59 PM** Your Dasher is heading to you with your order. **Your Dasher** Emanuel View all details Summer of DashPass Get credits back on this order when you sign-up for DashPass

	 6:55 58% The Kebab Shop Your Dasher is nearby Arriving in 4 - 6 min Your Dasher will arrive soon. Emanuel Your Dasher View all details Summer of DashPass Get credits back on this order when you sign-up for DashPass	 6:55 Your Dasher is nearby Arriving Now You Your Dasher sent you a message. Tap here to respond in the DoorDash app. Your Dasher Emanuel View all details Summer of DashPass Get credits back on this order when you sign-up for DashPass Google
	 6:56 58% The Kebab Shop Order Complete The Kebab Shop · Completed You can chat with your Dasher up to 30 min after your order is completed. Emanuel Your Dasher View all details Summer of DashPass Get credits back on this order when you sign-up for DashPass	 6:56 Order Complete Order complete You Your Dasher sent you a message. Tap here to respond in the DoorDash app. Your Dasher Emanuel View all details Summer of DashPass Get credits back on this order when you sign-up for DashPass Google



6:57 58%

Emanuel

Your Dasher

[redacted]

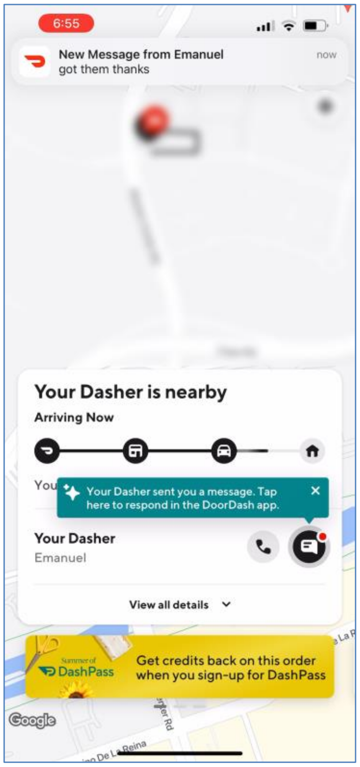
Sent 9 mins ago

got them thanks

Received 1 min ago

Your Dasher dropped off your order.

Type Message



6:55

New Message from Emanuel
got them thanks
now

Your Dasher is nearby

Arriving Now

You

Your Dasher sent you a message. Tap here to respond in the DoorDash app.

Your Dasher
Emanuel

View all details

Summer of DashPass

Get credits back on this order when you sign-up for DashPass

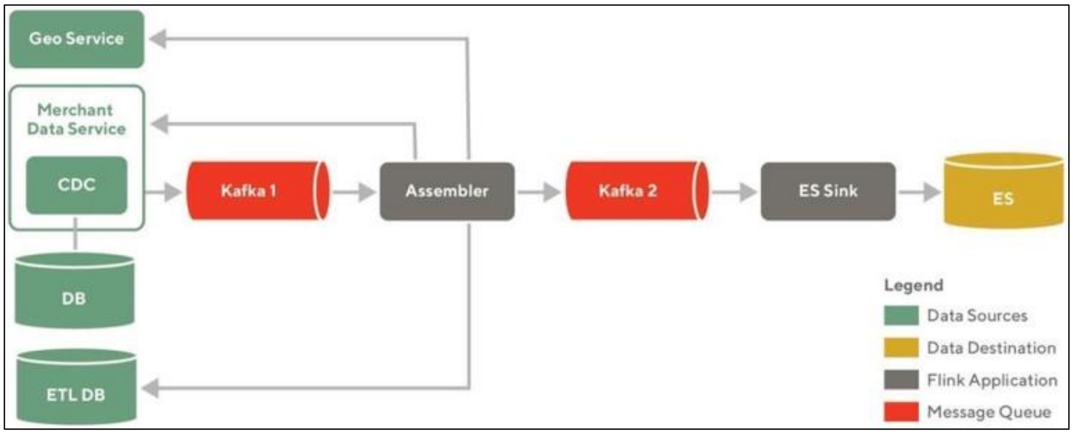
Furthermore, in the engineering article "Building a More Reliable Checkout Service at Scale with Kotlin" (See Exh. 78) they state that integration of another large enterprise database called Casandra into their overall system. Thus, their databases and data warehousing are integrated into their master database managed by the various microservices as stated below:

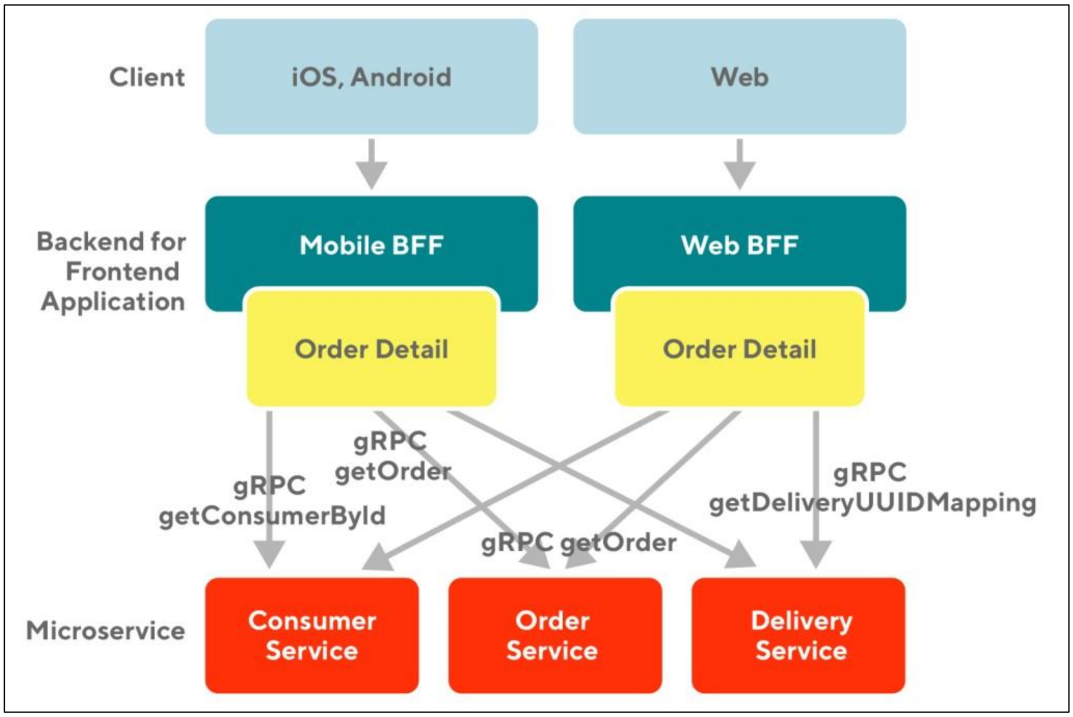
> "The technologies we used to ensure reliability. We want to avoid losing orders or leaving them in a limbo state during the checkout process and we consider this as the most important reliability feature, we need to support in the consumer checkout flow. This essentially requires us to be able to:
>
> Cassandra: We use Cassandra as our primary data storage to persist order-related data. To maintain backward compatibility, data is also written back to the Postgres database. Cassandra's high availability, scalability, and multiple-AZ replication empower us to scale horizontally. The support of the KV model allows persisting order data in a more efficient and flexible way.
>
> Conclusion: To summarize, a Kotlin and gRPC microservice architecture with a tech **stack** consisting of Cassandra, Kafka, and Cadence can help improve the reliability, performance, and scalability of the checkout flow.
>
> Any company growing out of their monolith and facing similar problems with checkout or similar flows should consider the results shown by our migration."

In the article "How does DoorDash build faster indexes using Apache Kafka and elasticsearch?" that DoorDash's old database indexing system was neither reliable nor scalable. In fact, it was very slow. To fix this problem, DoorDash developers built an event driven architecture for fast indexing. As they state (see Exh. 80):

> "…we solve[d] these problems by building a new search index platform. The platform provides fast and reliable indexes to support different vertical

industries. It also improves search performance and the productivity of search teams. It uses Kafka as a message queue and data store …Flink Perform data conversion and send data to Elasticsearch" as depicted by the diagram below ."

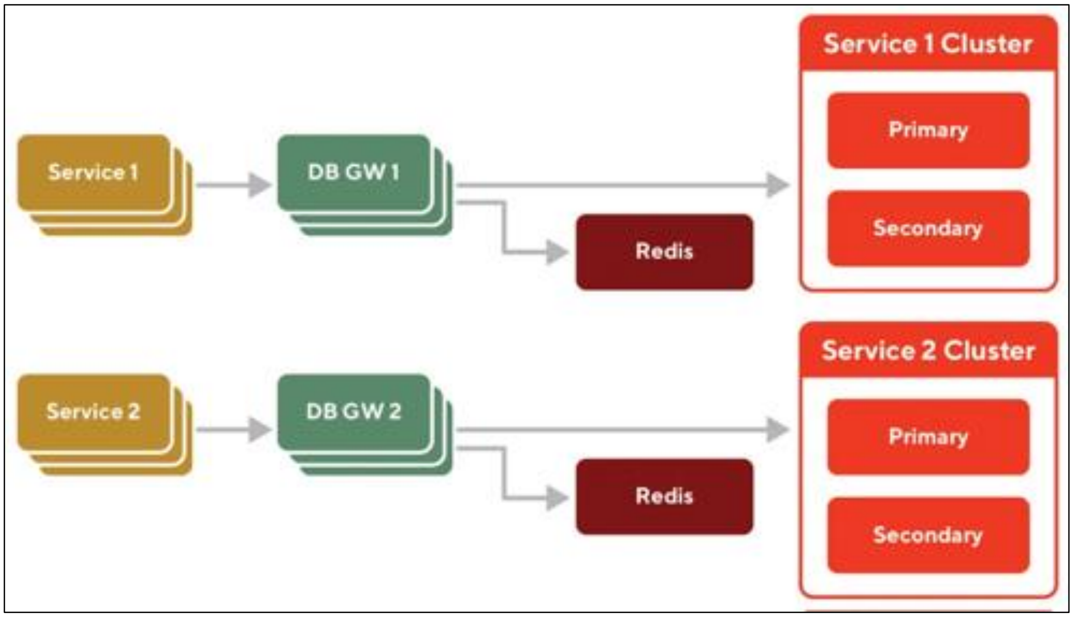




In the article "From Monolith to Microservices: Reducing the Migration's Pain Points" from the DoorDash Engineering team (See Exh. 79), they further affirm that

> "…one of the advantages of moving to a microservice architecture is the ability to experiment with new database technologies that might fit a specific use case better than others. But, at the end of the day, there's a chance that most services in an engineering organization are using homogeneous DB types". The article continues with "…DoorDash's Core Platform and Storage teams have recently invested in a centralized data access layer in the form of a DB gateway, which is deployed in isolation for each DB cluster and replaces the SQL interface for microservices with an abstract API served by a gRPC gateway. Such a gateway needs many precautions, such as isolated deployments, versioning, and configuration, to make sure it doesn't become a single point of failure. [The

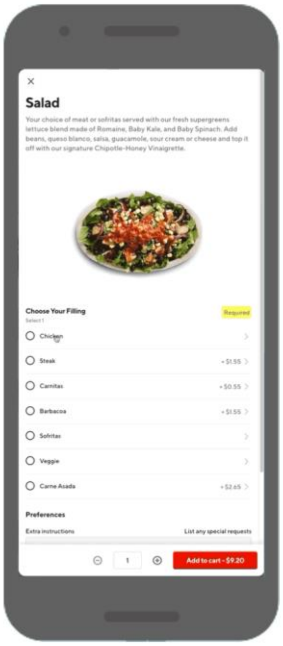
> figure] … below, shows at a high level what this data gateway looks like.” It shows that “…[t]he data access layer becomes the point-of-contact between services and their storage, hiding complexity such as caching or routing [within the DoorDash microservices architecture”.



Ameranth has tested the DoorDash system by placing actual food/drink delivery orders through completion (as is shown below). We confirm that the information, data and operational parameters Ameranth entered into the DoorDash hospitality mobile applications (both Android and IOS based), mimicking typical consumer users, is updated and stored in DoorDash’s “master database”. This includes “multiple modes of communications” such as “adding the text messaging communication mode option” was intelligently applied and used. Moreover, we confirm this feature to be part of DoorDash’s merchant mobile application, and that it enables the optional ‘text messaging communication mode’, as is shown and confirmed further below.

In the blog article “Managing React State on DoorDash’s Item Modal Using the Class Pattern” by the DoorDash Engineering team, further confirms the use of “menu tree structures” and “predetermined formats” (See Exh. 27). The article states that:

> “[The figure below shows the] Item Modal is a dynamic form in which we display item data to our users, take and validate user inputs based on boundary rules set by the item data, dynamically calculate item prices based on these user inputs, and submit valid user-modified items to a persistent data store.”



×

Salad

Your choice of meat or sofritas served with our fresh supergreens lettuce blend made of Romaine, Baby Kale, and Baby Spinach. Add beans, queso blanco, salsa, guacamole, sour cream or cheese and top it off with our signature Chipotle-Honey Vinaigrette.

Choose Your Filling — Required

Select 1

○ Chicken

○ Steak + $1.55

○ Carnitas + $0.55

○ Barbacoa + $1.55

○ Sofritas

○ Veggie

○ Carne Asada + $2.65

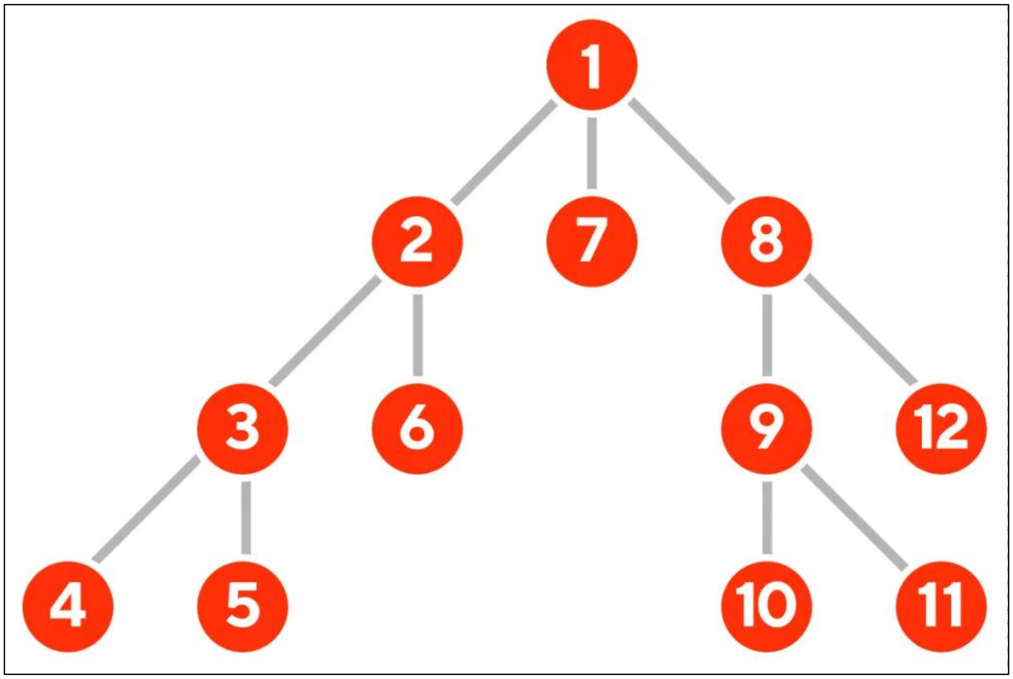
Preferences

Extra instructions — List any special requests

⊖ 1 ⊕ Add to cart - $9.20

It further describes the TreeState as:

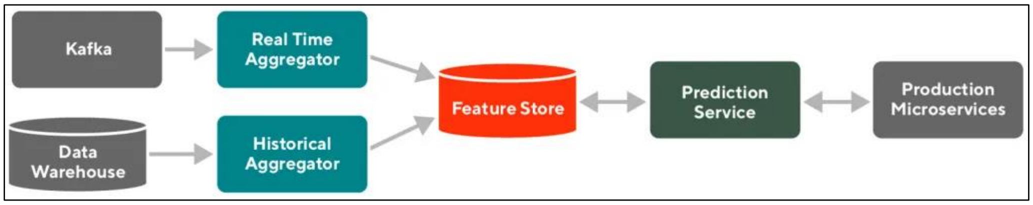
> "The most important characteristic of the Item Modal rebuild is that it is a TreeState, which is represented as an N-ary tree, as shown in [the figure below]:"



> "[This figure shows that the] … TreeState used in our Item Modal is represented as an N-ary tree. In this usage, every item, has an ItemNode, and this ItemNode can have any number of OptionListNode. Each OptionListNode can have any number of OptionNodes, and these OptionNodes can have any number of OptionListNodes, and so on."

In the blog article "Building Riviera: A Declarative Real-Time Feature Engineering Framework" by the DoorDash Engineering Team (See Exh. 105) they further assert their database APIs and layered architectural approaches. Furthermore, they state:

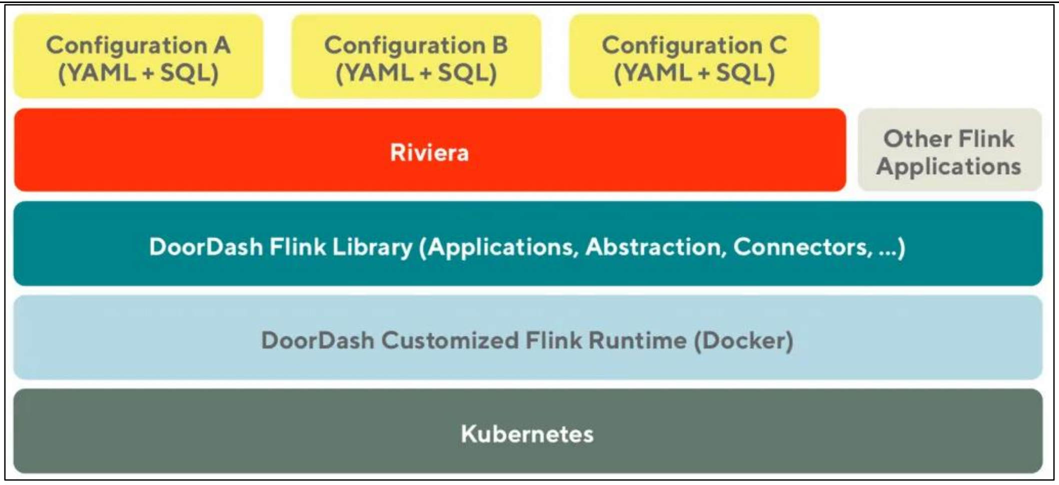
> "Leveraging the Apache Flink stream processing platform, we built an internal framework, which we call Riviera, that allows users to declaratively specify their feature transformation from source(s) to features stores through a simple configuration.
>
> Within DoorDash's ML Platform, we have worked on establishing an effective online prediction ecosystem. Figure 1, below, gives a high-level overview of our ML Infrastructure in production. We serve traffic on a large number of ML Models, including ensemble models, through our SibylPrediction Service. Because the foremost requirement of our prediction service is to provide a high degree of reliability and low latency (<100 ms), we built an efficient feature store to serve aggregated features. We use Redis to power our gigascale feature store to provide high throughput and availability for our features."



> "[The above figure shows] …our ML Platform architecture, we serve ML models through a prediction service which relies on a Feature Store to provide aggregate features in production."

The article then provides an overview of the Flink-as-a-service platform:

> "To help build sophisticated stream processing applications like Riviera, it is critical to have a high-quality and high-leverage platform to increase developer velocity. We created such a platform at DoorDash to achieve the following goals:
>
> - Streamline the development and deployment process
> - Abstract away the complexities of the infrastructure so that the application's users can focus on implementing their business logic
> - Provide reusable building blocks for applications to leverage
>
> The following diagram shows the building blocks of our Flink-as-a-service platform together with applications, including Riviera, on top of it."
>
> "…Flink-as-a-service provides multiple levels of abstractions to make application development easier."


Configuration A (YAML + SQL)
Configuration B (YAML + SQL)
Configuration C (YAML + SQL)
Riviera
Other Flink Applications
DoorDash Flink Library (Applications, Abstraction, Connectors, ...)
DoorDash Customized Flink Runtime (Docker)
Kubernetes

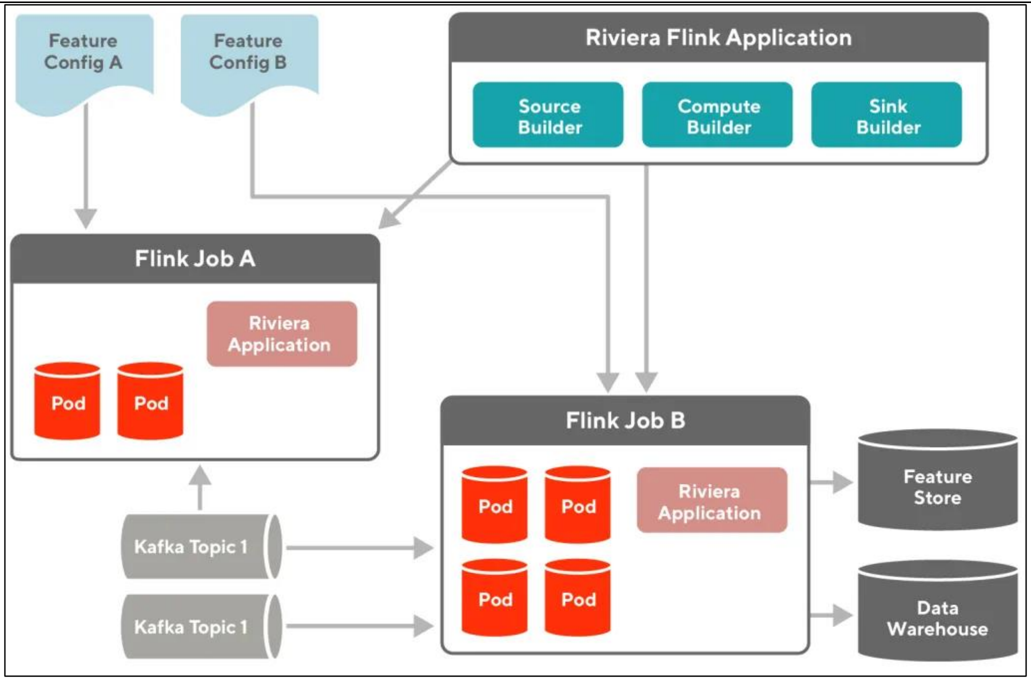
“Most of DoorDash’s infrastructure is built on top of Kubernetes. In order to adopt Flink internally, we created a base Flink runtime docker image from the open-source version. The docker image contains entry point scripts and customized Flink configurations (flink-conf.yaml) that integrate with DoorDash’s core infrastructure, providing integrations for metric reporting and logging.”

Creating a generic Flink application in Riviera

“Building on issues with Flink that needed to be addressed and the existing state of our infrastructure, we designed Riviera as an application to generate, deploy, and manage Flink jobs for feature generation from lean YAML configurations.

The core design principle for Riviera was to construct a generified Flink application JAR which could be instantiated with different configurations for each feature engineering use case. These JARs would be hosted asst and alone Flink jobs on our Kubernetes clusters, which would be wired to all our Kafka topics, feature store clusters, and data warehouses. Figure 3captures the high-level architecture of Riviera.”

"[The figure below shows] …A Riviera Flink application constructs sources, transformation operator graphs and sinks in Flink from their YAML configurations and then runs them on the Flink-as-a-service platform.”

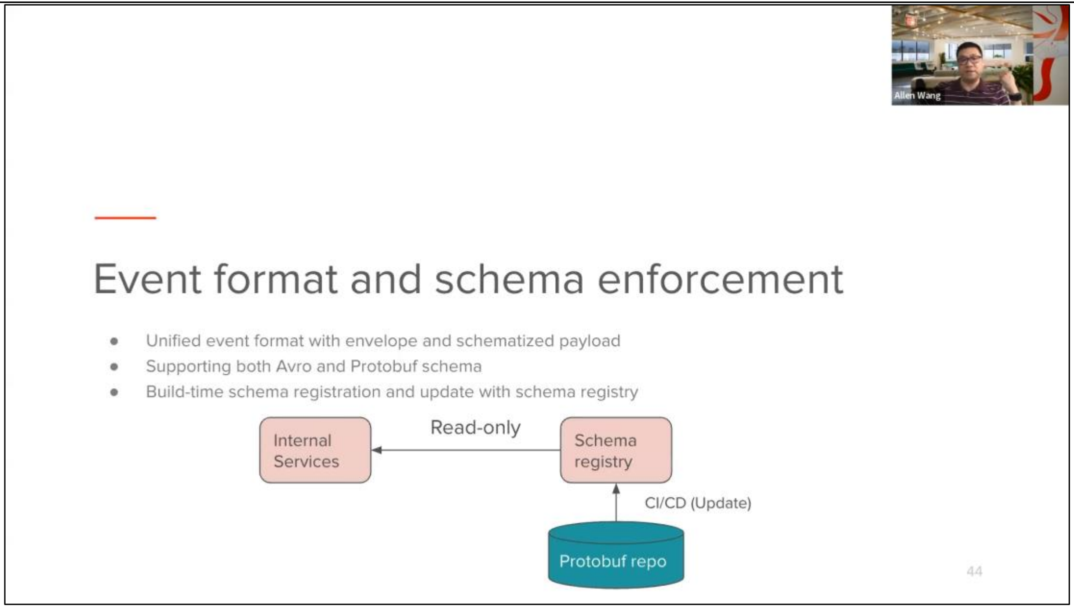


> "The launch of Riviera enabled feature development to become more self-serve and has improved iteration life cycles from a few weeks to a fewhours. The plug-and-play architecture for the DSL also allows adapting tonew sources and sinks within a few days.
>
> The integration with the Flink-as-a-service platform has enabled us to automate our infrastructure by standardizing observability, optimization, and cost management behind the Flink applications as well, allowing us to bring up a large number of jobs in isolation with ease.
>
> The library utilities we built around Flink's API and state management have reduced codebase size by over 70%."

In the video interview "SFBigAnalytics_20220920: DoorDash: Building Scalable Real Time Event Processing with Kafka and Flink" by Allen Wang "[the] lead engineer at Doordash working on real-time data infrastructure" (See Exh. 120), he admits the following:

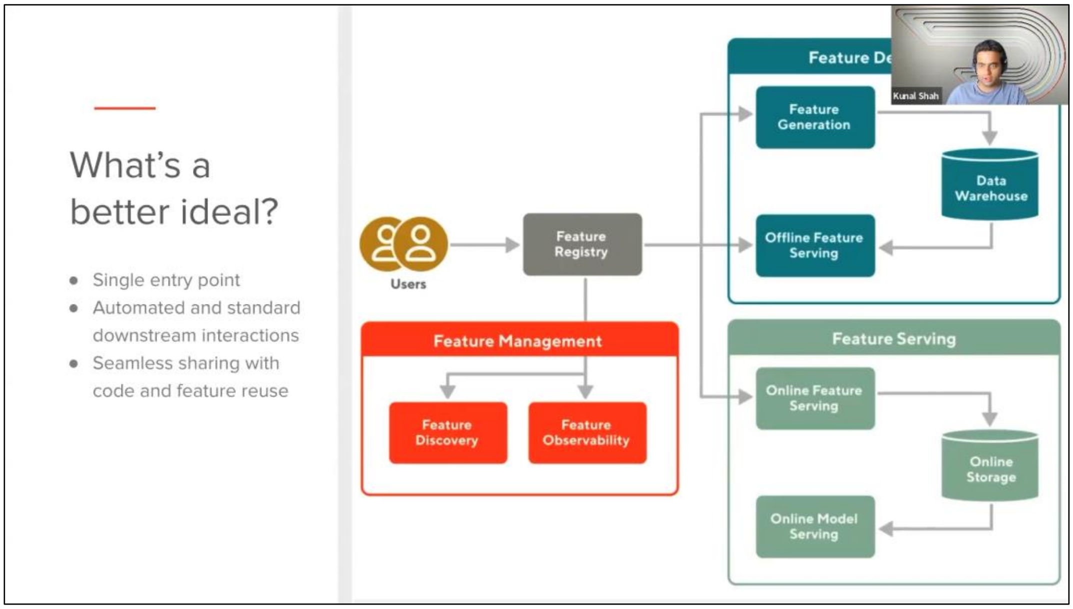
> "…as mentioned in the beginning one important objective for Iguazu is to create a platform for easy data processing Apache flinks layered API architecture fits perfectly with this objective."
>
> "…to support SQL based applications we created a framework called Vdara where all where all the necessary processing logic and wiring are captured in the yaml file which is simple enough for everyone to read or Auto the yaml file captures a lot of a high level abstractions for example connecting to Kafka sources and different things and the processing logic is expressed as a SQL statement and currently Riviera's primary use cases are real-time feature engineering and real-time monitoring of mobile application metrics."
>
> "…so the same person ozone as when you say framework should be created how do you design a framework please elaborate it's like a pretty general question um yeah I think um as I mentioned before um you're keeping your customers in mind uh creating different kind of abstractions make sure that um that whenever you see opportunities uh try to um put all the common

	functionalities in in your platform and so that you can reduce the you know the necessary workload from on other applications uh and really just to make sure that um that as a as a platform you will capture uh all the all the necessary interactions with the infrastructure and then that the application uh to worry you know only about its things logic but not you know at the infrastructure level." See Exh. 120. In a video by DoorDash's engineering team title "Databases at DoorDash | How DoorDash manages 1.9 PB of data & 1.2M QPS on CockroachDB", DoorDash showcases their utilization of Cockroach DB as the "master database" for managing massive amounts of data, demonstrating their implementation of a master database. The video begins with Mike Czabator, an engineer with both DoorDash and Cockroach Labs experience, providing insights into DoorDash's database practices. DoorDash's core infrastructure team is responsible for a range of databases, including CockroachDB, showcasing a dedicated approach to database management. (See Exh. 122 – 123) DoorDash's deployment strategy spans a single AWS region, supported by multiple Availability Zones (AZs), highlighting their scalability. The substantial growth metrics, including a 55% node increase and nearly doubling data size to two petabytes (PBs), highlight the extensive scope of their data management. Furthermore, DoorDash promotes a self-service model, allowing users to create applications and users for their clusters. They emphasize automation and feedback-driven improvement, enhancing the efficiency and reliability of their database operations. DoorDash's commitment to performance optimization and continuous enhancement aligns with the concept of a master database, reinforcing their capability in handling vast amounts of data. In another video by the DoorDash Engineering team titled "DoorDash's Journey from Aurora Postgres to CockroachDB", they shared insights into their data management practices, particularly their utilization of CockroachDB for handling extensive data volumes with the "master database". DoorDash's primary challenge was managing high traffic loads, which often led to database crashes during peak usage. To address this, the team recognized the need for a database solution that could provide horizontal scalability through multiple writers. (See Exh. 124 - 125) During the COVID-19 lockdown, DoorDash faced a pivotal moment when their main database cluster experienced a peak query per second (QPS) load of 1.6 million, resulting in system downtime. To tackle this issue, they opted to migrate to CockroachDB, a distributed database system known for its scalability and fault tolerance. Their migration strategy involved the extraction of 54 tables to seven new database clusters, significantly reducing the QPS load on the main database cluster. To facilitate this migration, DoorDash developed a versatile data migration tool. This tool was designed to minimize manual intervention, support schema transformations, and streamline data synchronization. Key features of the tool included the ability to customize runtime behavior, accommodate schema changes, and perform data chunking for parallel processing. DoorDash also leveraged foreign data wrappers, intelligent traffic routing, and data chunking to optimize the migration process. In the Jul 28, 2022, technical video presentation "DoorDash Technical meetup event: Scaling our Data Platform", the admit 'predefined formats' at 33:45 to 34:44 and at 39:45 (See Exh. 47), as shown by the following screenshots:



Event format and schema enforcement

- Unified event format with envelope and schematized payload
- Supporting both Avro and Protobuf schema
- Build-time schema registration and update with schema registry



What's a better ideal?

- Single entry point
- Automated and standard downstream interactions
- Seamless sharing with code and feature reuse

In the video interview "SFBigAnalytics_20220920: DoorDash: Building Scalable Real Time Event Processing with Kafka and Flink" by Allen Wang "[the] lead engineer at Doordash working on real-time data infrastructure" (See Exh. 120), he admits the following:

> "…two years ago, we started to rethink this approach and decide to build a new system to replace those Legacy pipelines and address the future event processing needs they'll be anticipated so first uh you should support heterogeneous data sources including microservices and mobile or web applications and be able to deliver the events to different destinations. Secondly it should be easily accessible for data consumers to tap into streams of data and build their own processing logic to improve data quality we want to have end-to-end schema reinforcement and schema evolution".

> "…however without a unified event format it's still difficult for producers and consumers to understand each other so in the next section we will discuss the

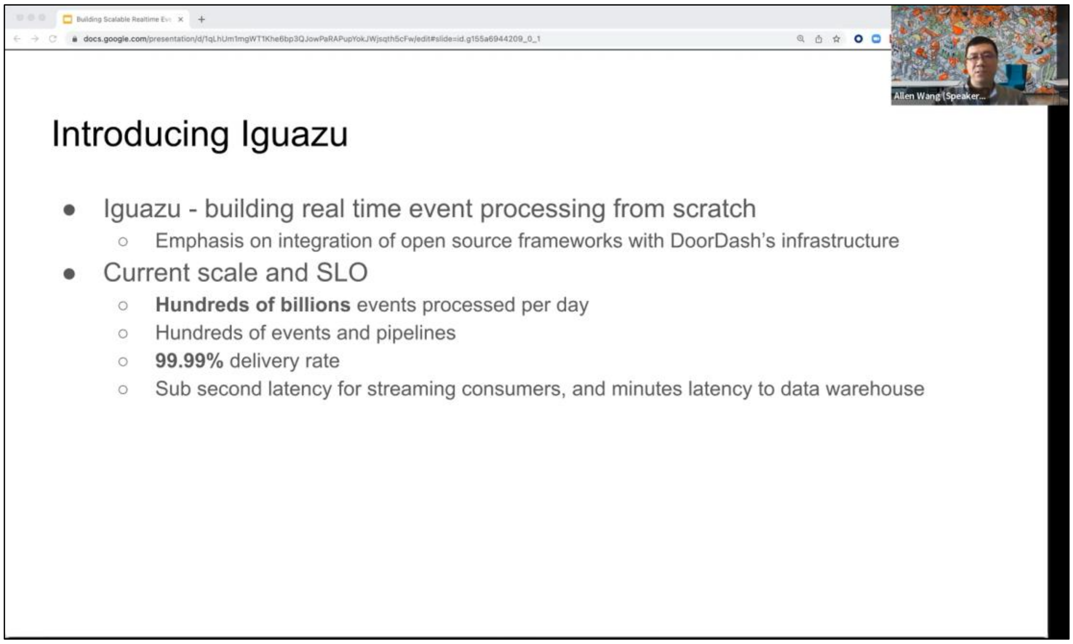
	event format and schemas which serve as a protocol between producers and consumers so from the very beginning we Define a unified format for events produced and processed in Iguazu the unified event format greatly reduced the barrier in consuming events and reduce the frequency between the event producers and consumers so instead we concluded that it will be ideal for uh to register and update this schema at build time to reduce the update API call volume to schema registry and to catch incompatible schema changes early in the development cycle.” “…well one challenge we faced is how we can essentially automate the schema update at build time and the solution we created is to leverage the fact that all of our approach above schemas are managed in a single Repository and integrate the schema registry update as part of the CI CD process when the protobot definition is updated.” “…as I mentioned in the beginning of the talk data warehouse integration is one of the key goals of Iguazu snowflake is our main data warehouse solution we expect events to be delivered to snowflake with a strong consistency and low latency the data warehouse integration in Brazil is implemented as a two-step process secondly I'm picking the right framework and creating the right building blocks is crucial to ensure success researching and leveraging The Sweet Spot of those Frameworks dramatically reduces the time needed to develop and operate these large-scale event.” (See Exh. 120.) The accused instrumentality meets this limitation under the doctrine of equivalents because the accused instrumentality performs substantially the same function, in substantially the same way to achieve substantially the same result. For example, DoorDash's 'master database,' operating as a 'central data platform' or 'central data lake,' embodies the core essence of the '587 patent's master database claim element. It serves as a structured repository that enables efficient data management, integrates machine learning to intelligently handle communication modes and operational parameters, and is accessible through an API for various users. The database's design for learning, updating, and storing information aligns closely with the patent claim's emphasis on a master database that not only stores but also intelligently processes data to enhance efficiency and reliability, particularly within the realm of hospitality software applications. DoorDash's implementation of modern data warehousing techniques and microservices architecture further mirrors the '587 patent's vision for an adaptable and efficient data infrastructure. The integration with analytics and machine learning tools for real-time communication modes and operational adjustments demonstrates functional equivalency, as endorsed by the Doctrine of Equivalents."
Middleware/Framework Communications Control Software (MFCCS) which enables via its centralized system layer architecture the network to communicate with said two or more different wireless handheld computers, each with	DoorDash's implementation of Middleware/Framework Communications Control Software (MFCCS) is evident in their centralized system layer architecture, which facilitates communication between web server networks and various wireless handheld devices. This system, as described by Jessica Lachs, encompasses DoorDash's event processing system named Iguazu, developed with Apache Flink and Kafka, underscoring the platform's scalability and real-time processing capabilities.

different mobile operating systems and with mobile compatible versions of the said hospitality application accessible from the back office servers;	**Central System Layer Architecture** The central system layered architecture of Iguazu demonstrates DoorDash’s commitment to a design that enables seamless interaction with multiple mobile operating systems and GUI screens. This allows for the initiation of user actions and subsequent selection of choices directly from handheld devices, aligning with the claim’s requirement for MFCCS. Furthermore, DoorDash’s transition from a monolithic to a microservices architecture has bolstered their platform’s efficiency and reliability, according to the DoorDash engineering team. Breaking up their application into domain-specific services reduced errors and latency, with the microservices structure providing separate layers for front-end systems, backend-for-frontend (BFF) services, backend logic, platform services, and foundational infrastructure. The DoorDash engineering blog and various technical presentations provide insights into their advanced master database integration and the hospitality applications, confirming the existence of a multi-layered communication framework. This framework supports a variety of tasks for consumers, Dashers, and merchants, proving the platform's ability to handle multiple communication modes and protocols. In practice, the MFCCS is manifested through the order tracking, notification systems, and in-app chat functionalities of DoorDash's consumer and Dasher applications across iOS and Android devices. This allows for real-time decision-making by the Dispatcher and seamless interaction between users and Dashers, showcasing the intelligent use of multiple modes of communication. DoorDash's engineering articles and support documents further demonstrate the company's use of a unified chat experience, multi-modal communication, and a comprehensive approach to menu management through their Merchant Portal. This includes the ability for merchants to integrate with various POS systems and the provision of a Business Manager app, which allows for real-time operational management. The integration of open-source frameworks, the application of machine learning for real-time event processing, and the orchestration of complex data flows through a centralized API are all indicative of a sophisticated MFCCS as described in the patent claim. DoorDash's system exemplifies a robust, intelligent, and adaptive communication control software that is integral to the modern hospitality market. **DoorDash Iguazu Event Processing System** In the technical presentation video “Building Scalable Real Time Event Processing with Kafka and Flink” by the DoorDash Engineering team (see Exh 91) they present that *“…[t]wo years ago, DoorDash started the journey of creating a real time event processing system to replace the legacy data pipelines and address our event processing needs to scale our business. We created a scalable system that could handle heterogeneous data sources and destinations, was easily accessible with different levels of abstractions and had end to end schema enforcement. We were able to accomplish this by shifting our strategy from*

heavily relying on AWS and third-party data services to leveraging open source frameworks that can be customized and better integrated with our infrastructure.

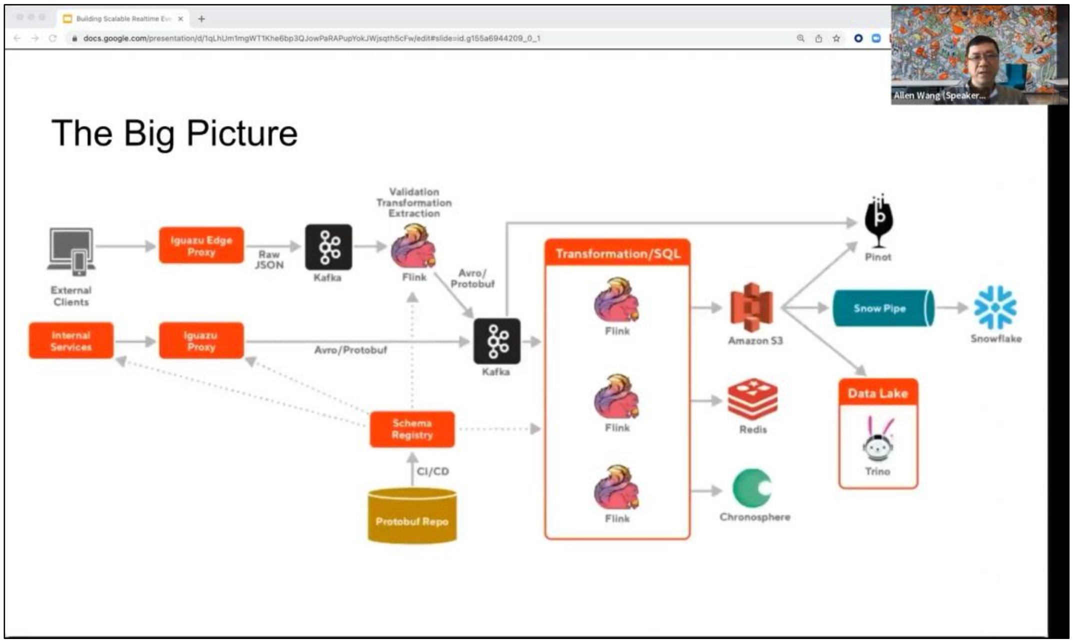
In this session, I will share what we learned and how we put together this system with Apache Flink, Kafka as well as Kubernetes."

They discuss the Iguazu real time event processing system they development from scratch and it's architecture."


Building Scalable Realtime Ev
docs.google.com/presentation/d/1qLhUm1mgWT1Khe6bp3QJowPaRAPupYokJWjsqth5cFw/edit#slide=id.g155a6944209_0_1
Allen Wang (Speaker...

Introducing Iguazu

- Iguazu - building real time event processing from scratch
    - Emphasis on integration of open source frameworks with DoorDash's infrastructure
- Current scale and SLO
    - **Hundreds of billions** events processed per day
    - Hundreds of events and pipelines
    - **99.99%** delivery rate
    - Sub second latency for streaming consumers, and minutes latency to data warehouse


Building Scalable Realtime Ev
docs.google.com/presentation/d/1qLhUm1mgWT1Khe6bp3QJowPaRAPupYokJWjsqth5cFw/edit#slide=id.g155a6944209_0_1
Allen Wang (Speaker...

The Big Picture

External Clients
Iguazu Edge Proxy
Raw JSON
Kafka
Validation Transformation Extraction
Flink
Avro/ Protobuf
Internal Services
Iguazu Proxy
Avro/Protobuf
Kafka
Schema Registry
CI/CD
Protobuf Repo
Transformation/SQL
Flink
Flink
Flink
Amazon S3
Redis
Chronosphere
Pinot
Snow Pipe
Snowflake
Data Lake
Trino

The diagram above depicts the layered system architecture of Iguazu, DoorDash's event processing system. It depicts the inner functioning of Iguazu taking from the DoorDash engineering blog article "Building Scalable Real Time Event Processing with Kafka and Flink" (see Exh 53) and the DoorDash technical video "Scaling our Data Platform" (see Exh 47).

In the DoorDash engineering blog article (see Exh 53) “Building Scalable Real Time Event Processing with Kafka and Flink”, they state that:

> *“…[t]wo years ago, we started the journey of creating a real time event processing system named Iguazu to replace the legacy data pipelines and address the following event processing needs we anticipated as the data volume grows with the business:*
>
> • ***Heterogeneous data sources and destinations:*** *Data ingest from a variety of data sources including the legacy monolithic web application, microservices and mobile/web devices, and delivery to different destinations including third-party data services. Reliable and low latency data ingest into the data warehouse is a high priority.*
>
> • ***Easily accessible:*** *A platform that makes it easy for different teams and services to tap into the streams of the data and build their own data processing logic.*
>
> • ***End-to-end schema enforcement and schema evolution****: Schema only improves data quality, but also facilitates easy integration with data warehouses and SQL processing.*
>
> • ***Scalable, fault-tolerant, and easy to operate for a small team****: We want to build a system that can easily scale to the business need with minimal operational overhead.”*

Kafka is an open-source platform from Apache, excels in stream processing and data management. It adeptly handles the reception, storage, organization, and distribution of voluminous data streams to a diverse array of end-users and applications. However, the influx of substantial data payloads—spanning hundreds to thousands of messages—into Kafka's servers can precipitate challenges such as data overloading and duplication. These issues, in turn, can result in the data within Kafka servers becoming disorganized and obscured, complicating effective data management and utilization.

Apache Kafka's architecture includes a key structural element known as Topics, which serve as the primary unit for organizing events or messages. Essentially, Kafka Topics function as virtual groups or logs, systematically storing messages and events in a sequential manner. This organization facilitates the seamless transmission of data between Kafka servers. Each topic acts as a dynamic repository, where messages sent by producers are chronologically appended, forming an evolving log file.

In practice, producers inject messages into these topics, adding to the tail end of the log, while consumers extract messages from specified topics, ensuring a streamlined flow of data. This methodology enables logical segregation of messages and events, akin to how distinct tables in a database hold varied types of data. In the Kafka ecosystem, the creation of multiple topics is permitted, catering to diverse use cases. Crucially, each topic must bear a unique, identifiable name to maintain clear distinction among various Kafka brokers within a Kafka cluster, thereby ensuring efficient data management and retrieval.

The article from DoorDash Engineering Blog titled "API-First Approach to Kafka Topic Creation" discusses how DoorDash’s Engineering teams have improved their

Kafka Topic creation process. They replaced a Terraform/Atlantis-based approach with an in-house API Infrastructure Service, which has led to a 95% reduction in real-time pipeline onboarding time and has saved numerous developer hours. (See Exh. 126)

DoorDash’s Real-Time Streaming Platform (RTSP) team, part of the Data Platform organization, manages over 2500 Kafka Topics. Kafka functions as the publication-subscription layer of the Iguazu pipeline and processes around six billion messages per day.

The article explains the challenges with the legacy architecture, where provisioning Kafka Topics was slow due to on-call engineer approval and prone to failures, increasing the on-call load. The RTSP team worked with storage and cloud teams to automate Kafka resource creation, which allowed for a more streamlined process and reduced manual intervention.

DoorDash has introduced super-user accounts to resolve merge conflicts that occurred in ACL files for Iguazu users, which has significantly sped up applications by Atlantis. The new architecture integrates with the Storage Self-Serve Platform within Infra Service, which provides an API to perform CRUD operations on infrastructure components. This new approach allows for provisioning approximately 100 new topics every week without manual intervention and significantly faster onboarding times for customers.

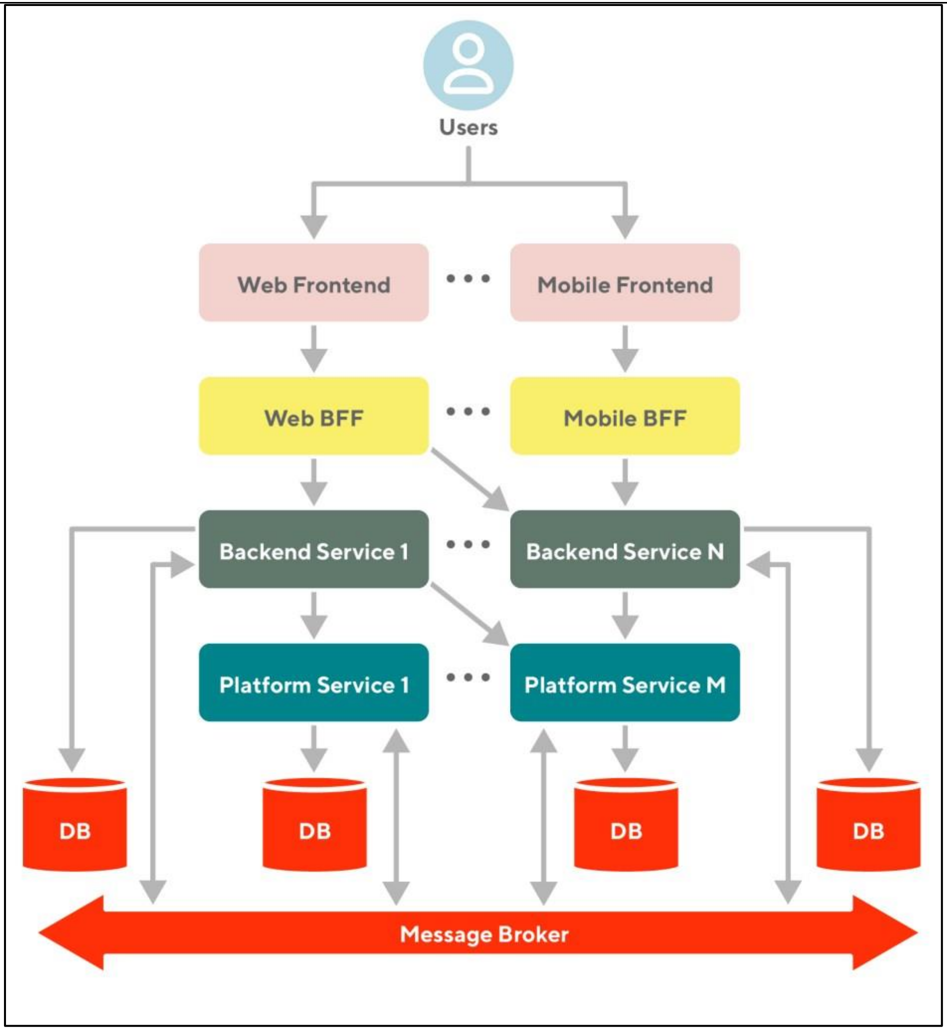
The article concludes by outlining the future direction of Kafka Automation and Storage Self-Serve, aiming to improve guardrails and customer experience. Acknowledgments are given to the various teams and engineers who contributed to this engineering win. This article demonstrates DoorDash's commitment to improving their operational efficiency and infrastructure management, ensuring faster onboarding times, and reducing the need for manual interventions, which contributes to a better overall experience for their customers and partners.

Microservices Layered Architecture

The original DoorDash platform was originally a monolithic application written in Python using the Django web framework with a PostgreSQL database. As the platform grew, they started to have problems with reliability and scaling. Around 2018 they institute a code freeze and began migrating to microservices. At this time, they also migrated to the Kotlin language, and their services now run on the java virtual machine (JVM) (see Exh 20, 21, 22).

DoorDash was able to improve the efficiency and reliability of their platform using a microservices architecture. By breaking up their application into domain-specific parts they were able to reduce errors and latency. They state in the article “Future-proofing: How DoorDash Transitioned from a Code Monolith to a Microservice Architecture” (see Exh. 20) that:

> *“… final design for our new microservice architecture consisted of five different layers, ranging from the user experience to the core infrastructure. Each layer provides functionality to the upper layer and leverages the functionality exposed by the lower layer [as shown below]”:*

	 Users Web Frontend • • • Mobile Frontend Web BFF • • • Mobile BFF Backend Service 1 • • • Backend Service N Platform Service 1 • • • Platform Service M DB DB DB DB Message Broker These layers include: (see Exh 20): *"Frontend layer: Provides frontend systems (like the DoorDash mobile app, Dasher web app, etc.) for the interaction with consumers, merchants, and Dashers that are built on top of different frontend platforms.* *BFF layer: The frontend layer is decoupled from the backend layer via BFFs. The BFF layer provides functionality to the frontend by orchestrating the interaction with multiple backend services while hiding the underlying backend architecture.* *Backend Layer: Provides the core functionality that powers the business logic (order cart service, feed service, delivery service, etc.).* *Platform layer: Provides common functionality that is leveraged by other backend services (identity service, communication service, etc.).* *Infrastructure layer: Provides the infrastructural components that are required to build the site (databases, message brokers, etc.) and lays the foundation to abstract the system from the underlying environment (cloud service provider)."*

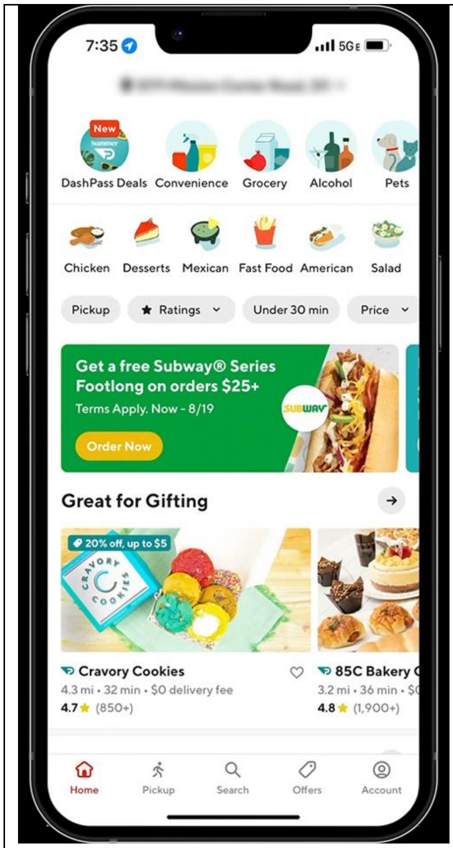
In their new architecture they introduced the backend-for-frontend (BFF) "… an application connecting the consumer-facing client and the services providing general purpose APIs. Client requests go to the BFF, which then orchestrates the aggregation of information needed by the client.". The BFF is a software architecture pattern (see Exh 40) used by microservices which "…shifted from thick-client applications to **interfaces delivered via the web, a trend that has also enabled the growth of SAAS-based solutions in general**". As such BFF can be considered as "…the user-facing application as being two components - a client-side application living outside your perimeter, and **a server-side component (the BFF**) inside your perimeter". The perimeter of the BFF is the webserver.

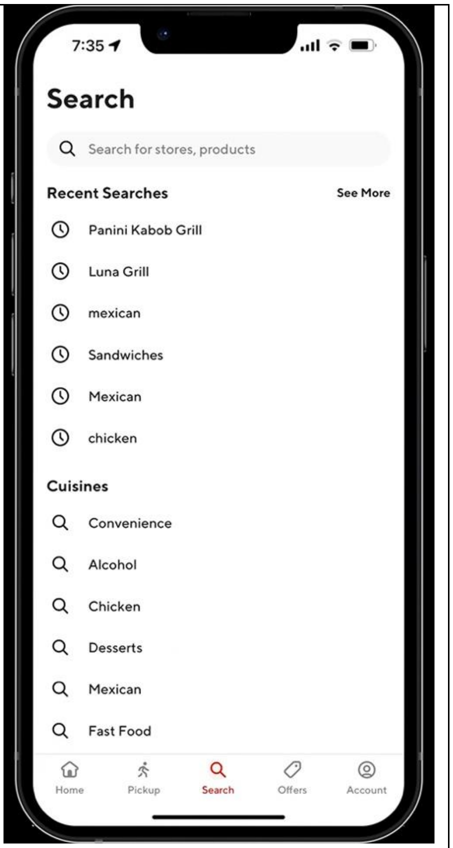
In the blog article "Building a Unified Chat Experience at DoorDash" by the Engineering Team they further admit to their back-end framework and its layered approach as follows (see Exh 102):

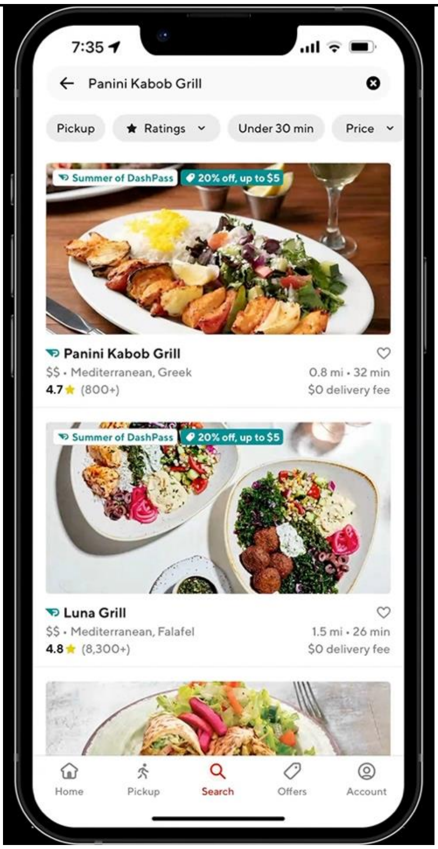
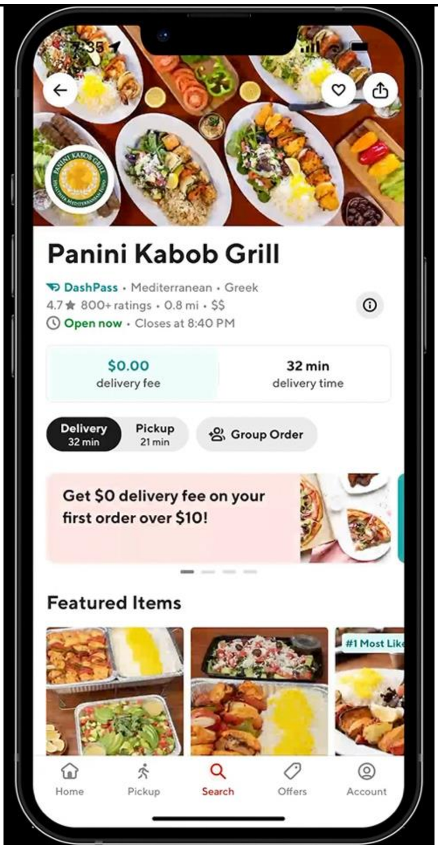
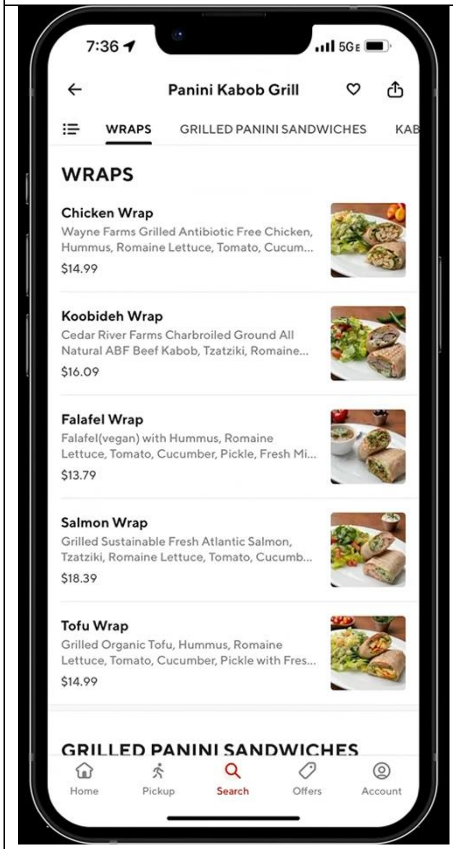
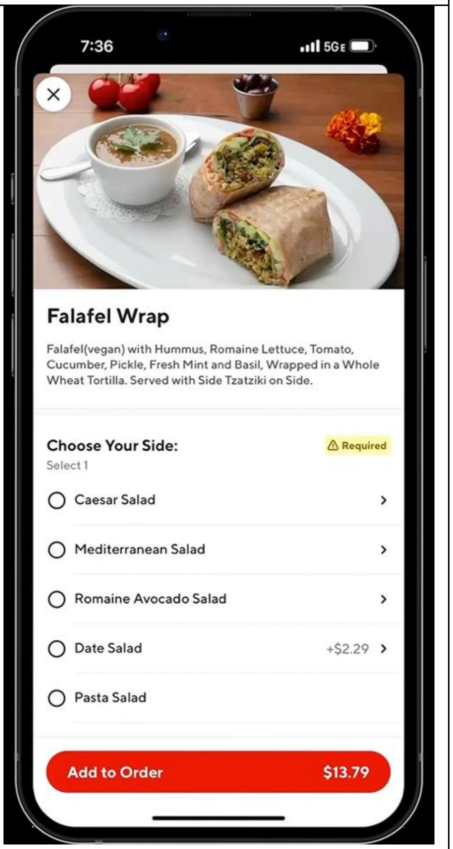
> ***"Building an extensible backend system"***
>
> *"The backend system was built with multiple layers, allowing us to split responsibilities between internal services and third parties. Utilizing third parties for functionality such as chat, natural language processing (NLP), and agent ticket management allowed us to move quicker without having to build functionality that does not differentiate ourselves directly"*

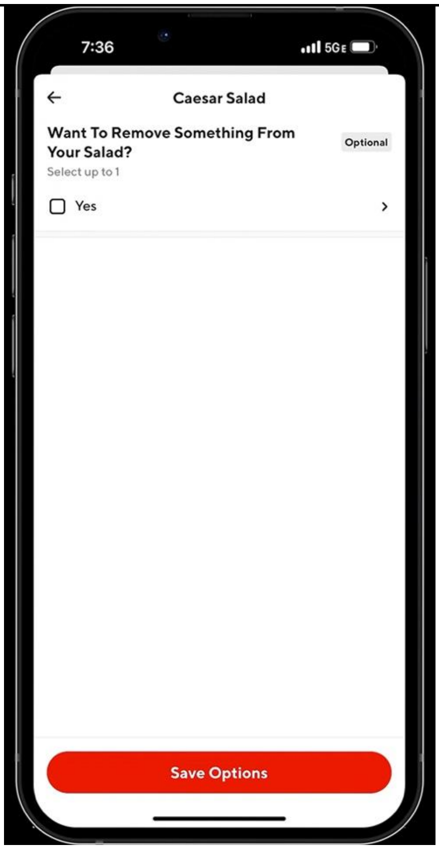
DoorDash Consumer App – iOS

Below are screen shots of the ordering process on an iOS device. This process demonstrates the user launching the DoorDash app.





		 7:35 Panini Kabob Grill Pickup ★ Ratings Under 30 min Price Summer of DashPass 20% off, up to $5 Panini Kabob Grill $$ • Mediterranean, Greek 0.8 mi • 32 min 4.7★ (800+) $0 delivery fee Summer of DashPass 20% off, up to $5 Luna Grill $$ • Mediterranean, Falafel 1.5 mi • 26 min 4.8★ (8,300+) $0 delivery fee Home Pickup Search Offers Account	 7:35 Panini Kabob Grill DashPass • Mediterranean • Greek 4.7★ 800+ ratings • 0.8 mi • $$ Open now • Closes at 8:40 PM $0.00 delivery fee 32 min delivery time Delivery 32 min Pickup 21 min Group Order Get $0 delivery fee on your first order over $10! Featured Items #1 Most Lik Home Pickup Search Offers Account	
		 7:36 5GE Panini Kabob Grill WRAPS GRILLED PANINI SANDWICHES KAB WRAPS Chicken Wrap Wayne Farms Grilled Antibiotic Free Chicken, Hummus, Romaine Lettuce, Tomato, Cucum... $14.99 Koobideh Wrap Cedar River Farms Charbroiled Ground All Natural ABF Beef Kabob, Tzatziki, Romaine... $16.09 Falafel Wrap Falafel(vegan) with Hummus, Romaine Lettuce, Tomato, Cucumber, Pickle, Fresh Mi... $13.79 Salmon Wrap Grilled Sustainable Fresh Atlantic Salmon, Tzatziki, Romaine Lettuce, Tomato, Cucumb... $18.39 Tofu Wrap Grilled Organic Tofu, Hummus, Romaine Lettuce, Tomato, Cucumber, Pickle with Fres... $14.99 GRILLED PANINI SANDWICHES Home Pickup Search Offers Account	 7:36 5GE Falafel Wrap Falafel(vegan) with Hummus, Romaine Lettuce, Tomato, Cucumber, Pickle, Fresh Mint and Basil, Wrapped in a Whole Wheat Tortilla. Served with Side Tzatziki on Side. Choose Your Side: Required Select 1 ○ Caesar Salad ○ Mediterranean Salad ○ Romaine Avocado Salad ○ Date Salad +$2.29 ○ Pasta Salad Add to Order $13.79	

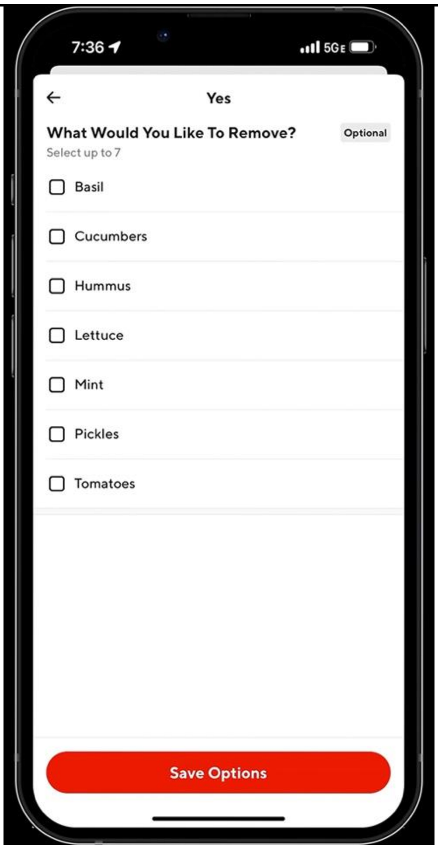


Caesar Salad

Want To Remove Something From Your Salad? Optional

Select up to 1

☐ Yes ›



Yes

What Would You Like To Remove? Optional

Select up to 7

☐ Basil

☐ Cucumbers

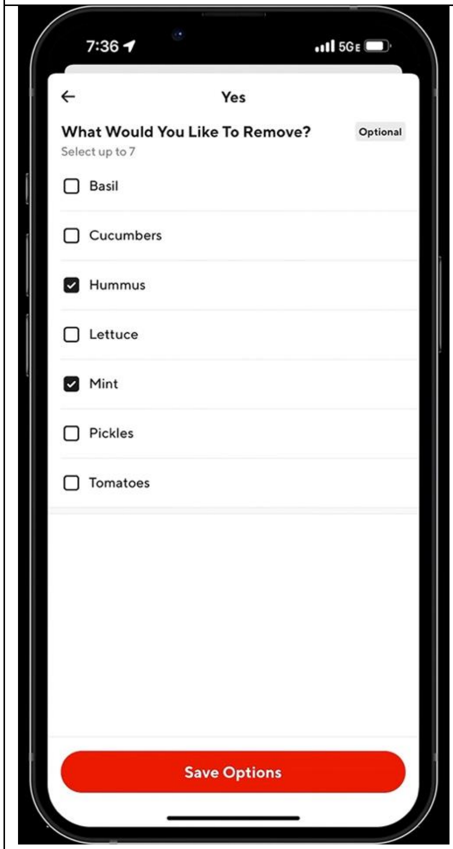
☐ Hummus

☐ Lettuce

☐ Mint

☐ Pickles

☐ Tomatoes



Yes

What Would You Like To Remove? Optional

Select up to 7

☐ Basil

☐ Cucumbers

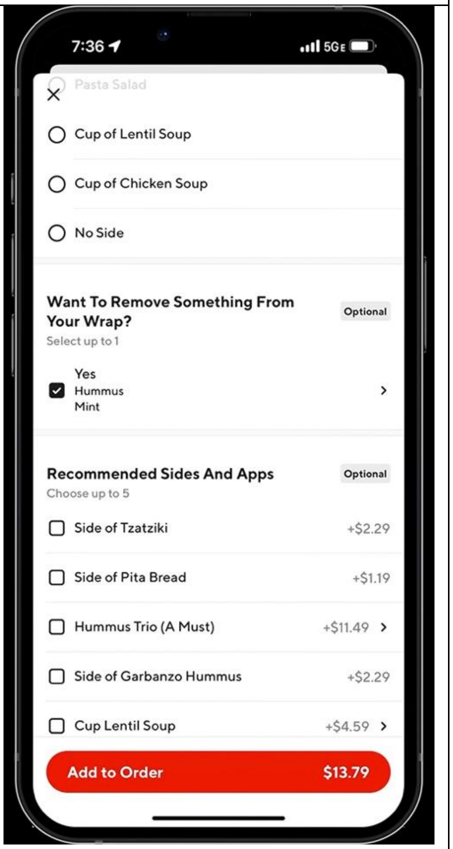
☑ Hummus

☐ Lettuce

☑ Mint

☐ Pickles

☐ Tomatoes



○ Pasta Salad

○ Cup of Lentil Soup

○ Cup of Chicken Soup

○ No Side

Want To Remove Something From Your Wrap? Optional

Select up to 1

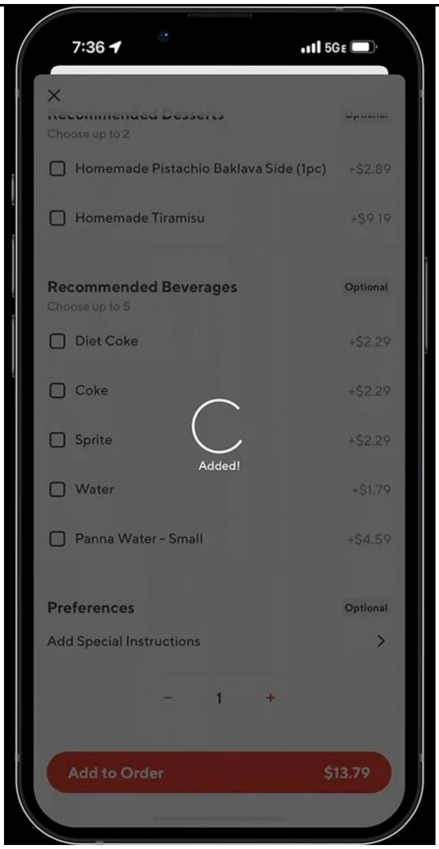
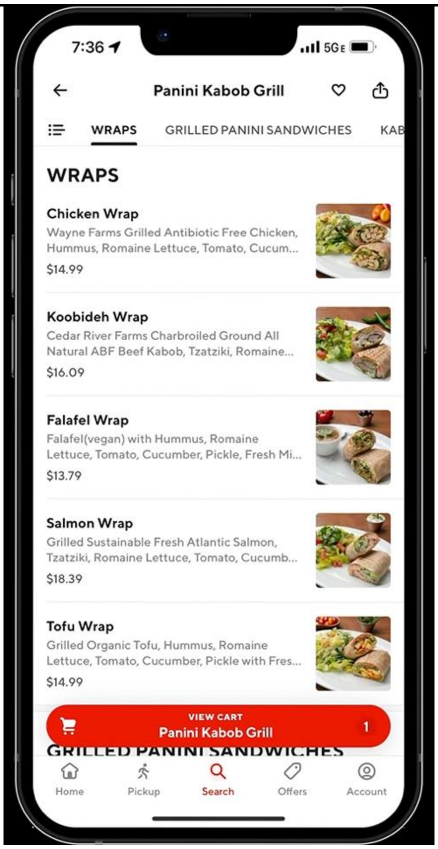
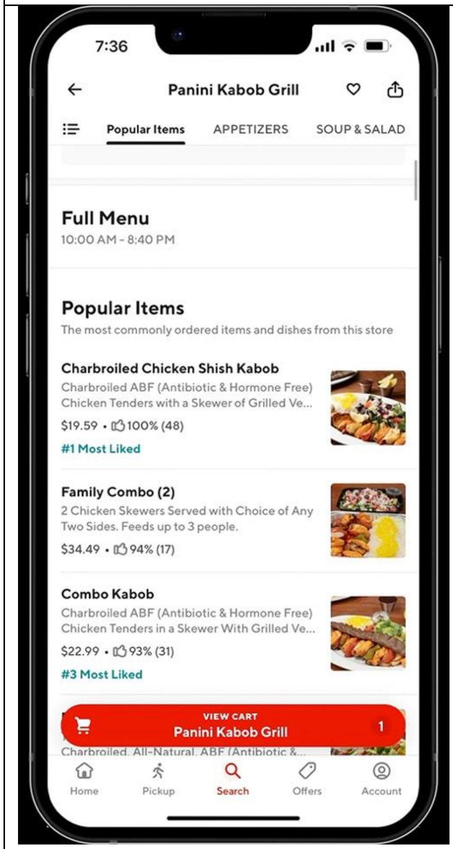
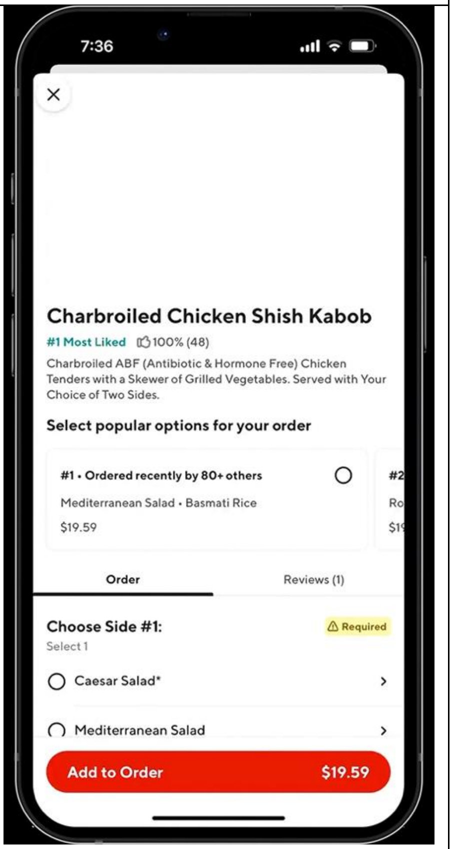
☑ Yes
Hummus
Mint ›

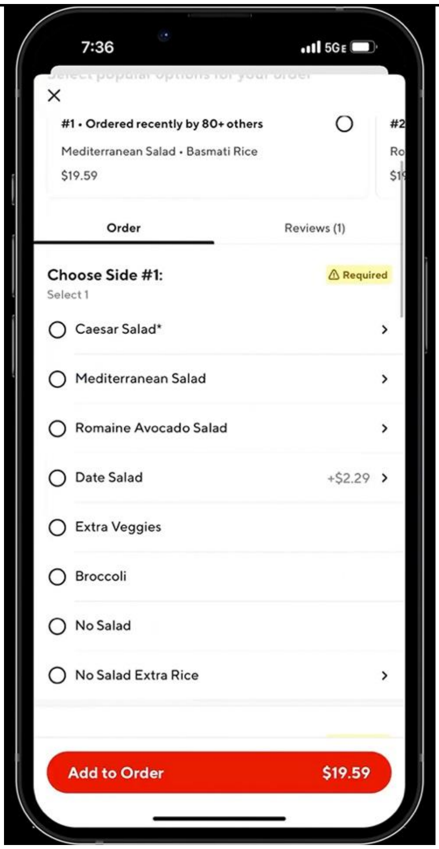
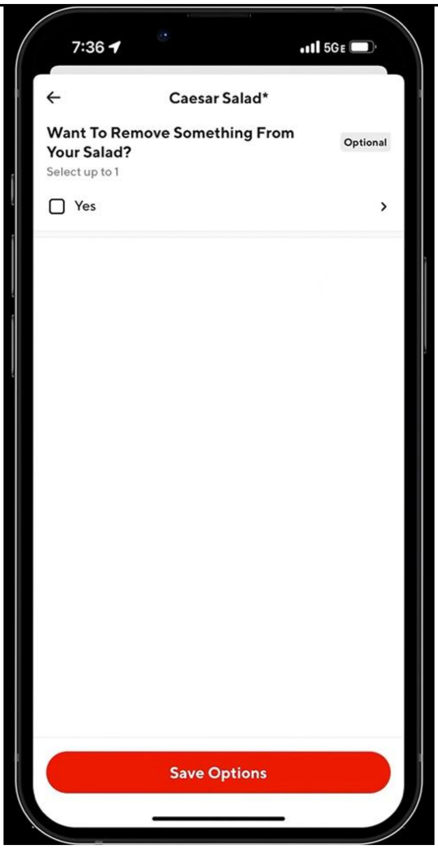
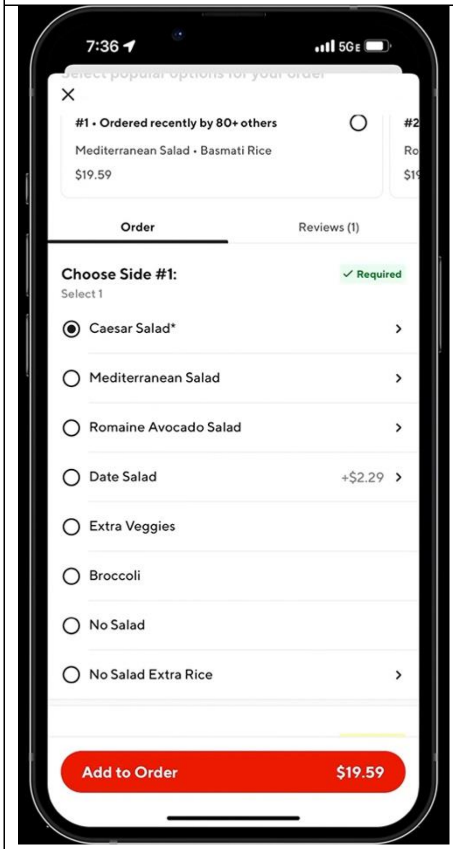
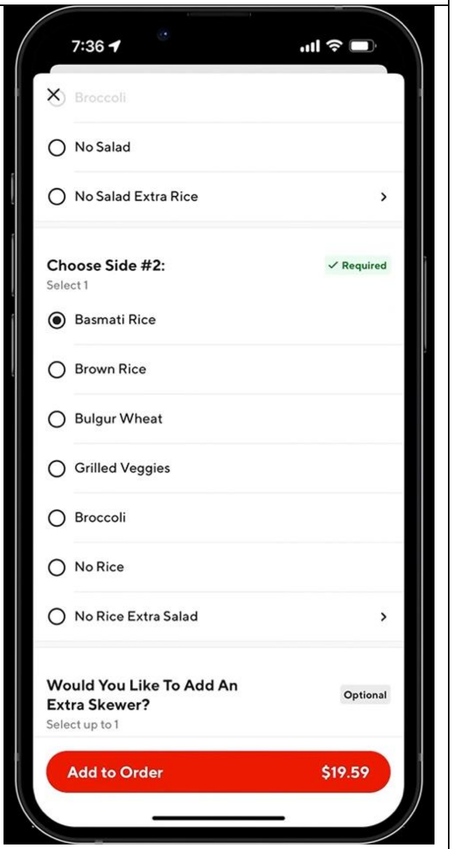
Recommended Sides And Apps Optional

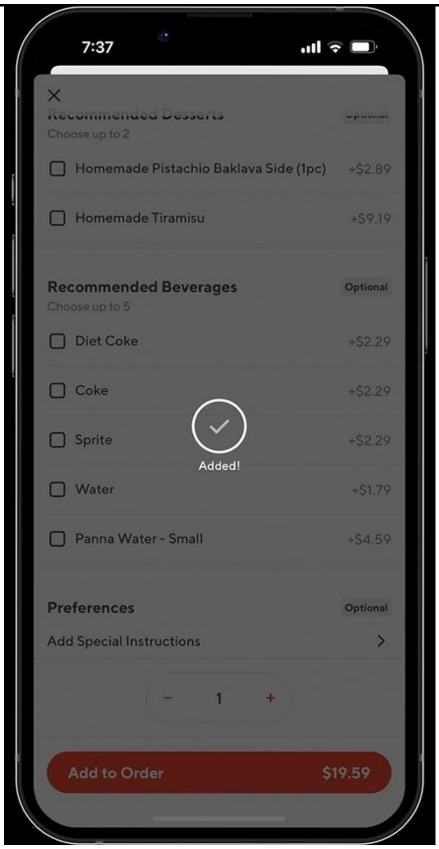
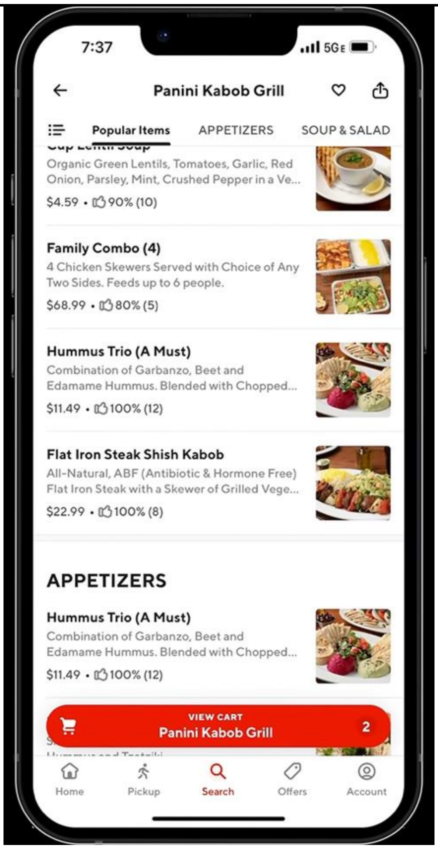
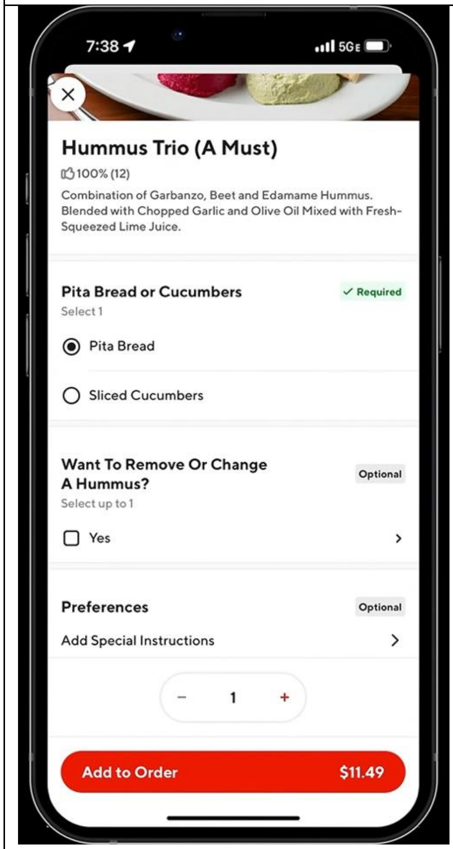
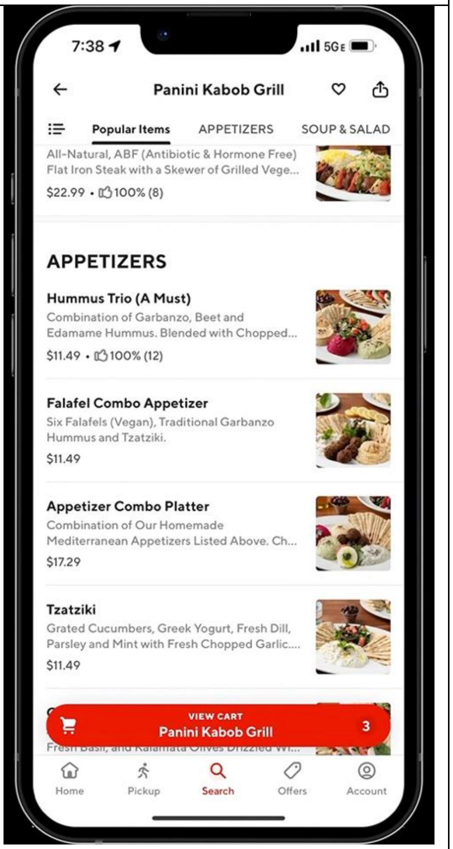
Choose up to 5

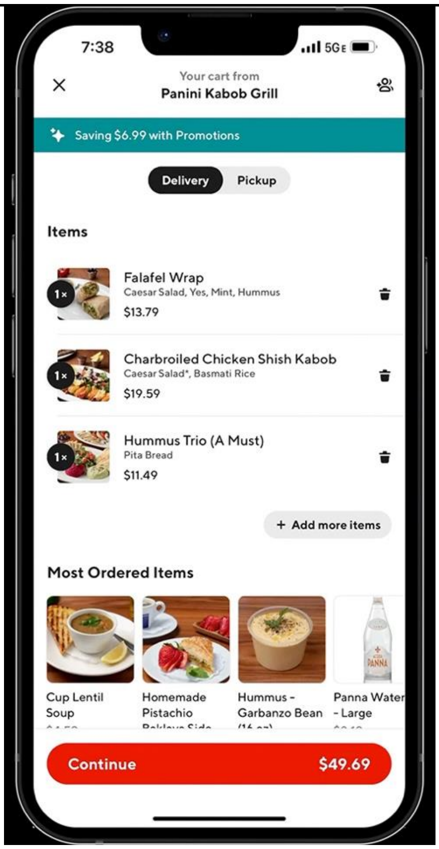
☐ Side of Tzatziki	+$2.29
☐ Side of Pita Bread	+$1.19
☐ Hummus Trio (A Must)	+$11.49 ›
☐ Side of Garbanzo Hummus	+$2.29
☐ Cup Lentil Soup	+$4.59 ›

Add to Order $13.79

		 7:36 5G ✕ Recommended Desserts Optional Choose up to 2 □ Homemade Pistachio Baklava Side (1pc) +$2.89 □ Homemade Tiramisu +$9.19 Recommended Beverages Optional Choose up to 5 □ Diet Coke +$2.29 □ Coke +$2.29 □ Sprite +$2.29 Added! □ Water +$1.79 □ Panna Water - Small +$4.59 Preferences Optional Add Special Instructions › − 1 + Add to Order $13.79	 7:36 5G Panini Kabob Grill WRAPS GRILLED PANINI SANDWICHES KAB WRAPS Chicken Wrap Wayne Farms Grilled Antibiotic Free Chicken, Hummus, Romaine Lettuce, Tomato, Cucum... $14.99 Koobideh Wrap Cedar River Farms Charbroiled Ground All Natural ABF Beef Kabob, Tzatziki, Romaine... $16.09 Falafel Wrap Falafel(vegan) with Hummus, Romaine Lettuce, Tomato, Cucumber, Pickle, Fresh Mi... $13.79 Salmon Wrap Grilled Sustainable Fresh Atlantic Salmon, Tzatziki, Romaine Lettuce, Tomato, Cucumb... $18.39 Tofu Wrap Grilled Organic Tofu, Hummus, Romaine Lettuce, Tomato, Cucumber, Pickle with Fres... $14.99 VIEW CART Panini Kabob Grill 1 GRILLED PANINI SANDWICHES Home Pickup Search Offers Account	
		 7:36 Panini Kabob Grill Popular Items APPETIZERS SOUP & SALAD Full Menu 10:00 AM - 8:40 PM Popular Items The most commonly ordered items and dishes from this store Charbroiled Chicken Shish Kabob Charbroiled ABF (Antibiotic & Hormone Free) Chicken Tenders with a Skewer of Grilled Ve... $19.59 • 100% (48) #1 Most Liked Family Combo (2) 2 Chicken Skewers Served with Choice of Any Two Sides. Feeds up to 3 people. $34.49 • 94% (17) Combo Kabob Charbroiled ABF (Antibiotic & Hormone Free) Chicken Tenders in a Skewer With Grilled Ve... $22.99 • 93% (31) #3 Most Liked VIEW CART Panini Kabob Grill 1 Charbroiled, All-Natural, ABF (Antibiotic &... Home Pickup Search Offers Account	 7:36 ✕ Charbroiled Chicken Shish Kabob #1 Most Liked 100% (48) Charbroiled ABF (Antibiotic & Hormone Free) Chicken Tenders with a Skewer of Grilled Vegetables. Served with Your Choice of Two Sides. Select popular options for your order #1 • Ordered recently by 80+ others ○ Mediterranean Salad • Basmati Rice $19.59 #2 Ro $19 Order Reviews (1) Choose Side #1: ⚠ Required Select 1 ○ Caesar Salad* › ○ Mediterranean Salad › Add to Order $19.59	

		 7:36 Select popular options for your order × #1 • Ordered recently by 80+ others ○ Mediterranean Salad • Basmati Rice $19.59 #2 Ro $19 Order Reviews (1) Choose Side #1: ⚠ Required Select 1 ○ Caesar Salad* › ○ Mediterranean Salad › ○ Romaine Avocado Salad › ○ Date Salad +$2.29 › ○ Extra Veggies ○ Broccoli ○ No Salad ○ No Salad Extra Rice › Add to Order $19.59	 7:36 ← Caesar Salad* Want To Remove Something From Your Salad? Optional Select up to 1 □ Yes › Save Options	
		 7:36 Select popular options for your order × #1 • Ordered recently by 80+ others ○ Mediterranean Salad • Basmati Rice $19.59 #2 Ro $19 Order Reviews (1) Choose Side #1: ✓ Required Select 1 ● Caesar Salad* › ○ Mediterranean Salad › ○ Romaine Avocado Salad › ○ Date Salad +$2.29 › ○ Extra Veggies ○ Broccoli ○ No Salad ○ No Salad Extra Rice › Add to Order $19.59	 7:36 × Broccoli ○ No Salad ○ No Salad Extra Rice › Choose Side #2: ✓ Required Select 1 ● Basmati Rice ○ Brown Rice ○ Bulgur Wheat ○ Grilled Veggies ○ Broccoli ○ No Rice ○ No Rice Extra Salad › Would You Like To Add An Extra Skewer? Optional Select up to 1 Add to Order $19.59	

		 7:37 Recommended Desserts Optional Choose up to 2 □ Homemade Pistachio Baklava Side (1pc) +$2.89 □ Homemade Tiramisu +$9.19 Recommended Beverages Optional Choose up to 5 □ Diet Coke +$2.29 □ Coke +$2.29 □ Sprite +$2.29 □ Water +$1.79 □ Panna Water - Small +$4.59 Added! Preferences Optional Add Special Instructions − 1 + Add to Order $19.59	 7:37 5G Panini Kabob Grill Popular Items APPETIZERS SOUP & SALAD Organic Green Lentils, Tomatoes, Garlic, Red Onion, Parsley, Mint, Crushed Pepper in a Ve... $4.59 • 90% (10) Family Combo (4) 4 Chicken Skewers Served with Choice of Any Two Sides. Feeds up to 6 people. $68.99 • 80% (5) Hummus Trio (A Must) Combination of Garbanzo, Beet and Edamame Hummus. Blended with Chopped... $11.49 • 100% (12) Flat Iron Steak Shish Kabob All-Natural, ABF (Antibiotic & Hormone Free) Flat Iron Steak with a Skewer of Grilled Vege... $22.99 • 100% (8) APPETIZERS Hummus Trio (A Must) Combination of Garbanzo, Beet and Edamame Hummus. Blended with Chopped... $11.49 • 100% (12) VIEW CART Panini Kabob Grill 2 Home Pickup Search Offers Account	
		 7:38 5G Hummus Trio (A Must) 100% (12) Combination of Garbanzo, Beet and Edamame Hummus. Blended with Chopped Garlic and Olive Oil Mixed with Fresh-Squeezed Lime Juice. Pita Bread or Cucumbers ✓ Required Select 1 ● Pita Bread ○ Sliced Cucumbers Want To Remove Or Change A Hummus? Optional Select up to 1 □ Yes Preferences Optional Add Special Instructions − 1 + Add to Order $11.49	 7:38 5G Panini Kabob Grill Popular Items APPETIZERS SOUP & SALAD All-Natural, ABF (Antibiotic & Hormone Free) Flat Iron Steak with a Skewer of Grilled Vege... $22.99 • 100% (8) APPETIZERS Hummus Trio (A Must) Combination of Garbanzo, Beet and Edamame Hummus. Blended with Chopped... $11.49 • 100% (12) Falafel Combo Appetizer Six Falafels (Vegan), Traditional Garbanzo Hummus and Tzatziki. $11.49 Appetizer Combo Platter Combination of Our Homemade Mediterranean Appetizers Listed Above. Ch... $17.29 Tzatziki Grated Cucumbers, Greek Yogurt, Fresh Dill, Parsley and Mint with Fresh Chopped Garlic.... $11.49 VIEW CART Panini Kabob Grill 3 Fresh Basil, and Kalamata Olives Drizzled Wi... Home Pickup Search Offers Account	



7:38

Your cart from
Panini Kabob Grill

Saving $6.99 with Promotions

Delivery | Pickup

Items

1× Falafel Wrap
Caesar Salad, Yes, Mint, Hummus
$13.79

1× Charbroiled Chicken Shish Kabob
Caesar Salad*, Basmati Rice
$19.59

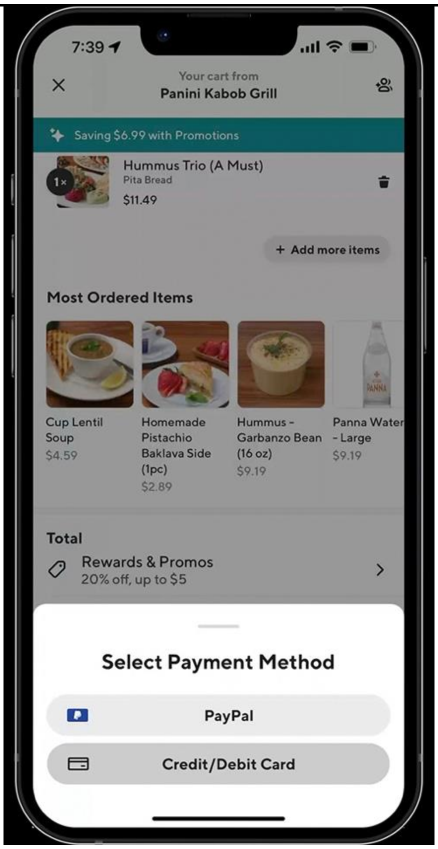
1× Hummus Trio (A Must)
Pita Bread
$11.49

+ Add more items

Most Ordered Items

Cup Lentil Soup	Homemade Pistachio	Hummus - Garbanzo Bean	Panna Water - Large

Continue $49.69



7:39

Your cart from
Panini Kabob Grill

Saving $6.99 with Promotions

1× Hummus Trio (A Must)
Pita Bread
$11.49

+ Add more items

Most Ordered Items

Cup Lentil Soup	Homemade Pistachio Baklava Side (1pc)	Hummus - Garbanzo Bean (16 oz)	Panna Water - Large
$4.59	$2.89	$9.19	$9.19

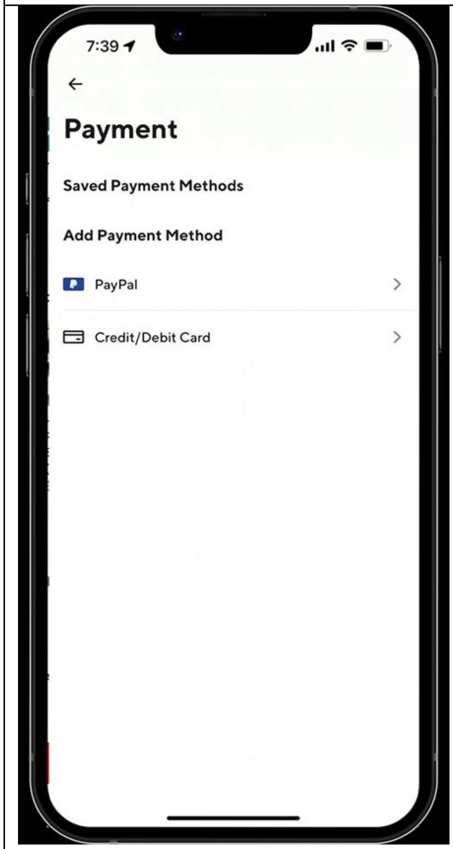
Total

Rewards & Promos
20% off, up to $5

Select Payment Method

PayPal

Credit/Debit Card



7:39

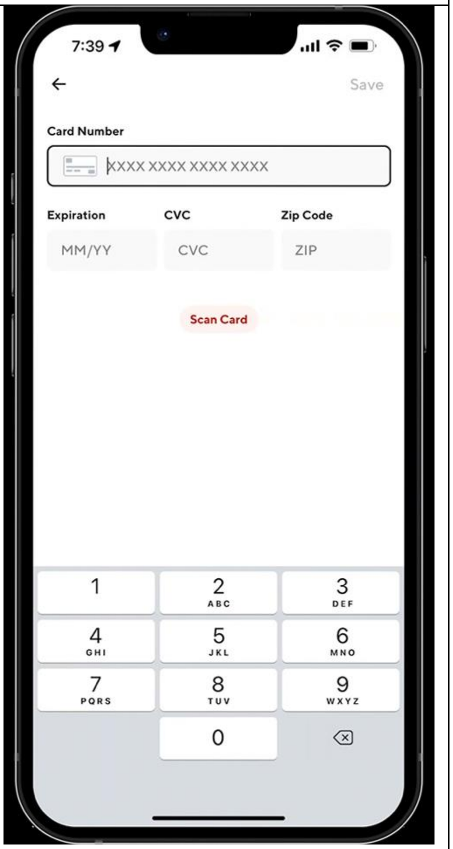
Payment

Saved Payment Methods

Add Payment Method

PayPal

Credit/Debit Card



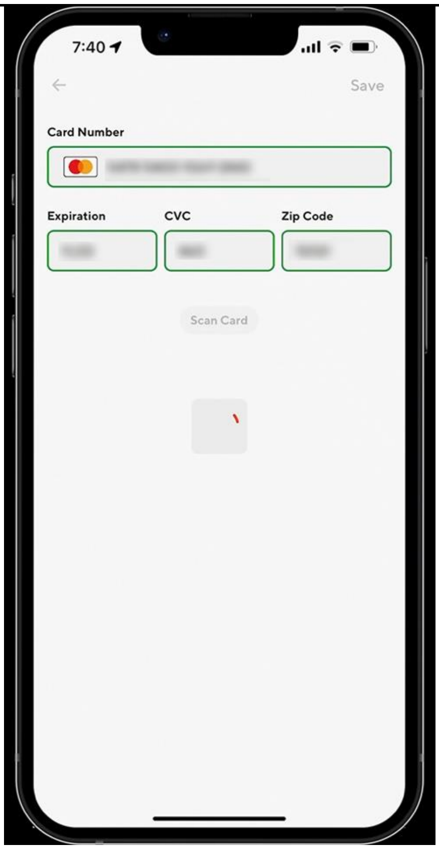
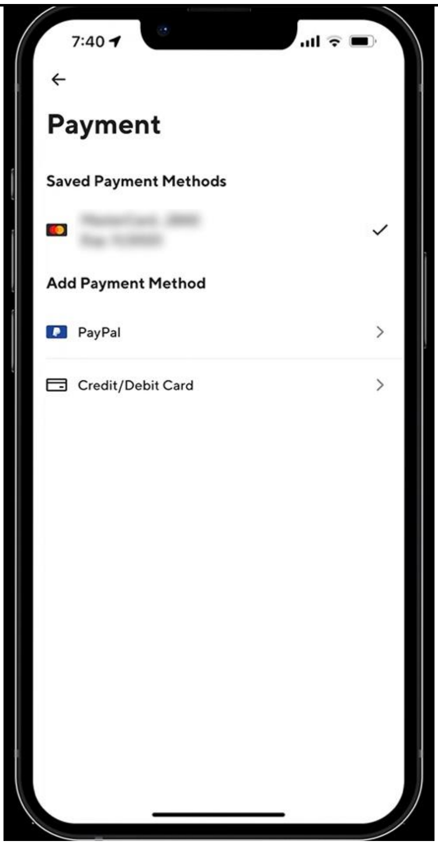
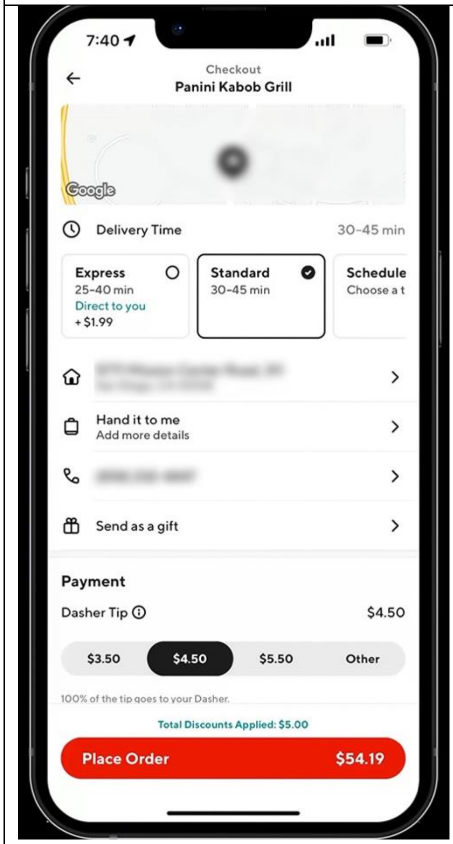
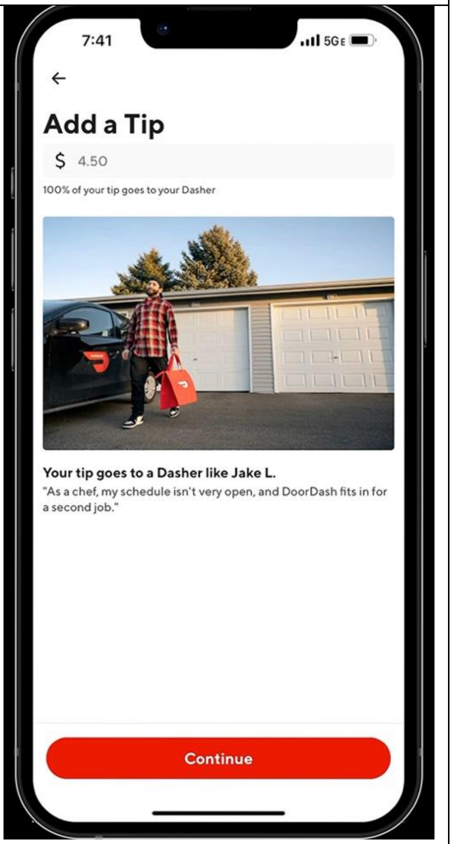
7:39

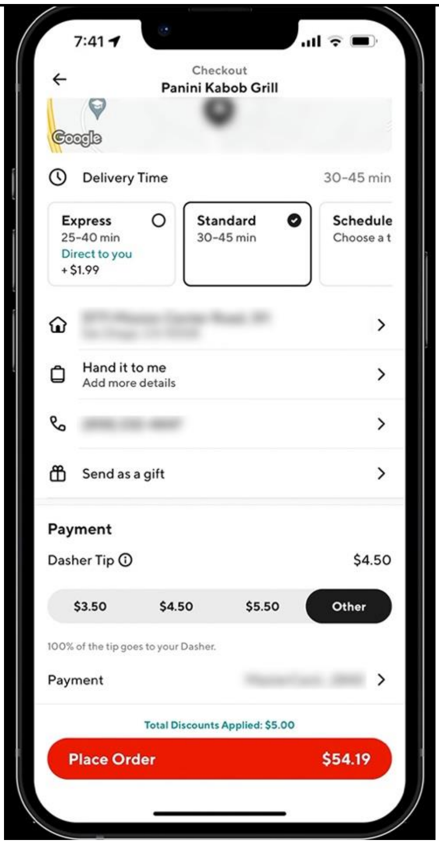
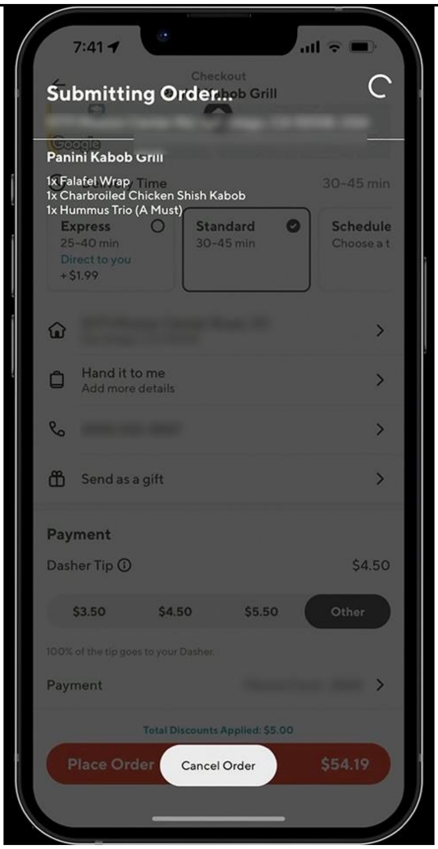
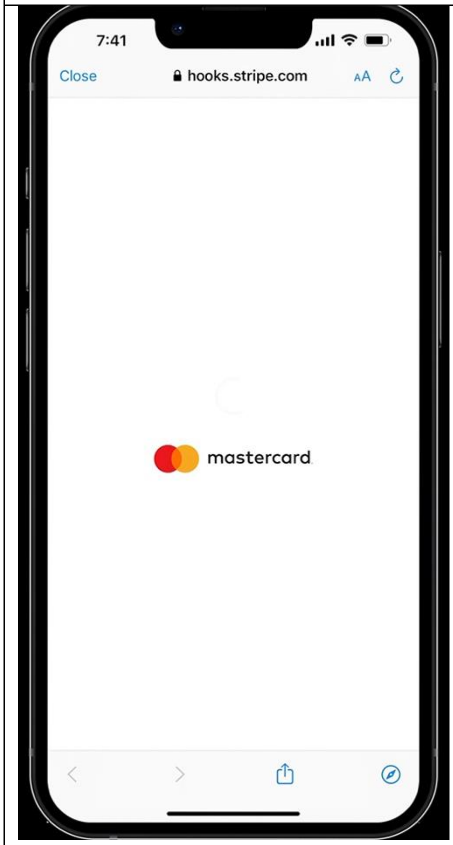
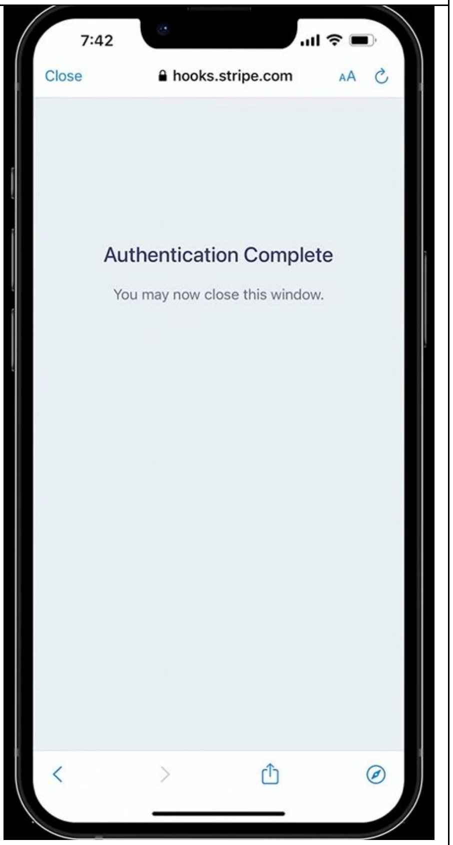
Save

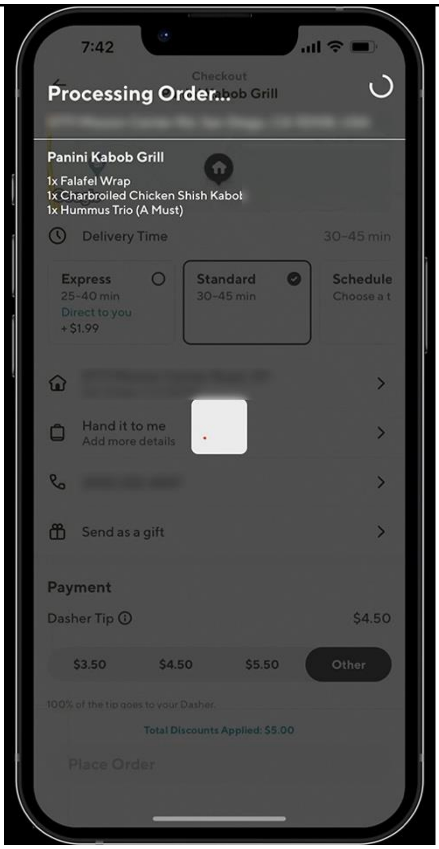
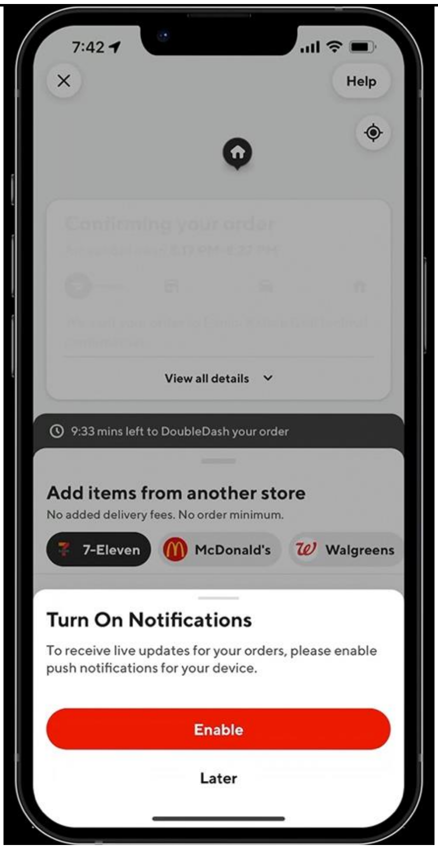
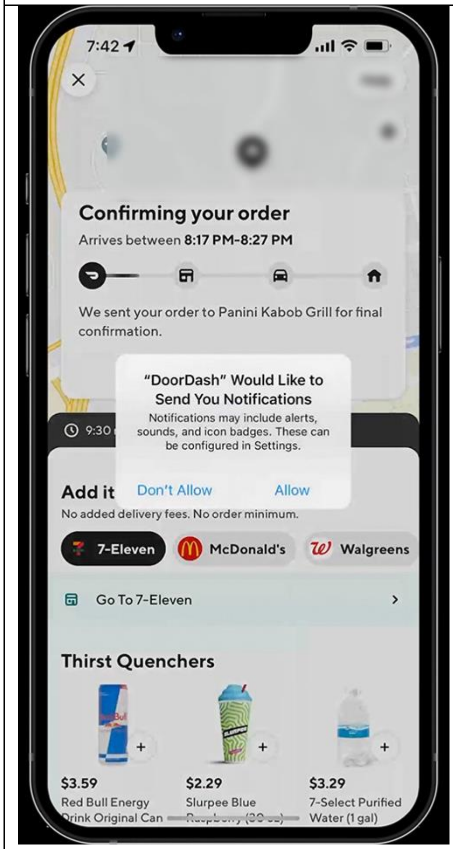
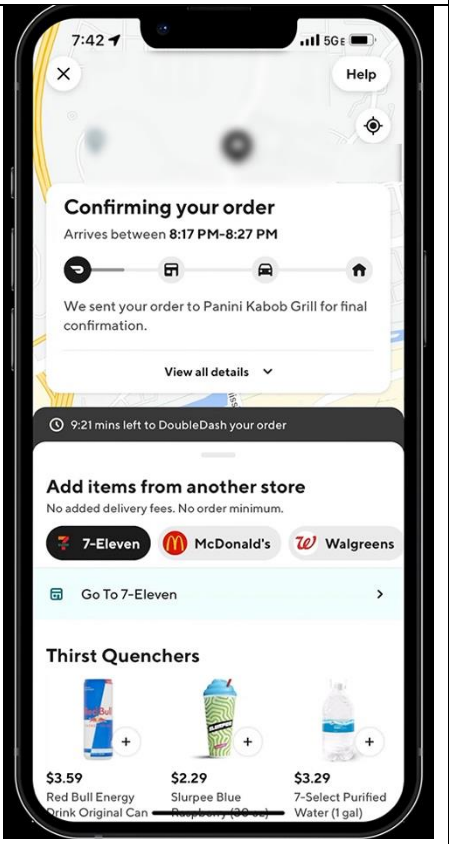
Card Number
XXXX XXXX XXXX XXXX

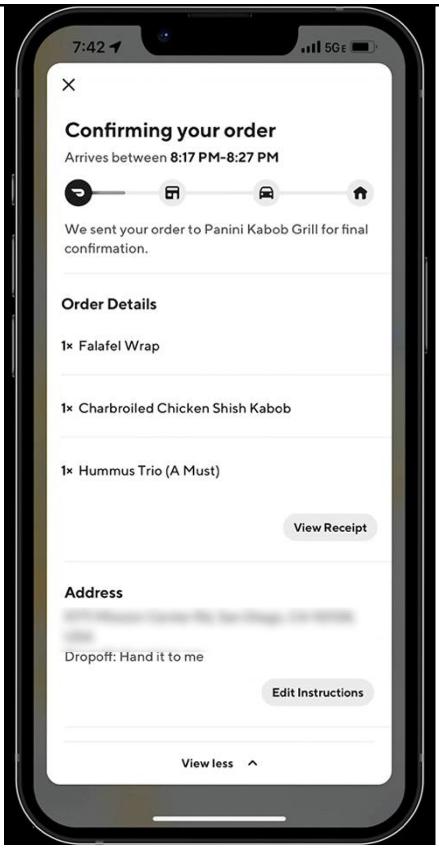
Expiration: MM/YY
CVC: CVC
Zip Code: ZIP

Scan Card

		 7:40 Save Card Number [redacted] Expiration [redacted] CVC [redacted] Zip Code [redacted] Scan Card	 7:40 Payment Saved Payment Methods [redacted] ✓ Add Payment Method PayPal Credit/Debit Card
		 7:40 Checkout Panini Kabob Grill Delivery Time 30–45 min Express 25–40 min Direct to you + $1.99 ○ Standard 30–45 min ● Schedule Choose a t [redacted] Hand it to me Add more details [redacted] Send as a gift Payment Dasher Tip $4.50 $3.50 | $4.50 | $5.50 | Other 100% of the tip goes to your Dasher. Total Discounts Applied: $5.00 Place Order $54.19	 7:41 Add a Tip $ 4.50 100% of your tip goes to your Dasher Your tip goes to a Dasher like Jake L. "As a chef, my schedule isn't very open, and DoorDash fits in for a second job." Continue

		 7:41 Checkout Panini Kabob Grill Google Delivery Time 30-45 min Express 25-40 min Direct to you + $1.99 ○ Standard 30-45 min ● Schedule Choose a t [redacted] Hand it to me Add more details [redacted] Send as a gift Payment Dasher Tip ⓘ $4.50 $3.50 $4.50 $5.50 Other 100% of the tip goes to your Dasher. Payment [redacted] Total Discounts Applied: $5.00 Place Order $54.19	 7:41 Submitting Order... Panini Kabob Grill 1x Falafel Wrap 1x Charbroiled Chicken Shish Kabob 1x Hummus Trio (A Must) Express 25-40 min Direct to you + $1.99 ○ Standard 30-45 min ● Schedule Choose a t [redacted] Hand it to me Add more details [redacted] Send as a gift Payment Dasher Tip ⓘ $4.50 $3.50 $4.50 $5.50 Other 100% of the tip goes to your Dasher. Payment [redacted] Total Discounts Applied: $5.00 Place Order Cancel Order $54.19	
		 7:41 Close hooks.stripe.com AA mastercard	 7:42 Close hooks.stripe.com AA Authentication Complete You may now close this window.	

		 7:42 Checkout Processing Order...bob Grill [redacted] Panini Kabob Grill 1x Falafel Wrap 1x Charbroiled Chicken Shish Kabob 1x Hummus Trio (A Must) Delivery Time 30-45 min Express 25-40 min Direct to you + $1.99 Standard 30-45 min Schedule Choose a t [redacted] Hand it to me Add more details [redacted] Send as a gift Payment Dasher Tip $4.50 $3.50 $4.50 $5.50 Other 100% of the tip goes to your Dasher. Total Discounts Applied: $5.00 Place Order	 7:42 Help Confirming your order Arrives between 8:17 PM-8:27 PM We sent your order to Panini Kabob Grill for final confirmation. View all details 9:33 mins left to DoubleDash your order Add items from another store No added delivery fees. No order minimum. 7-Eleven McDonald's Walgreens Turn On Notifications To receive live updates for your orders, please enable push notifications for your device. Enable Later
		 7:42 Confirming your order Arrives between 8:17 PM-8:27 PM We sent your order to Panini Kabob Grill for final confirmation. "DoorDash" Would Like to Send You Notifications Notifications may include alerts, sounds, and icon badges. These can be configured in Settings. Don't Allow Allow 9:30 Add it No added delivery fees. No order minimum. 7-Eleven McDonald's Walgreens Go To 7-Eleven Thirst Quenchers $3.59 Red Bull Energy Drink Original Can $2.29 Slurpee Blue Raspberry (30 oz) $3.29 7-Select Purified Water (1 gal)	 7:42 5G Help Confirming your order Arrives between 8:17 PM-8:27 PM We sent your order to Panini Kabob Grill for final confirmation. View all details 9:21 mins left to DoubleDash your order Add items from another store No added delivery fees. No order minimum. 7-Eleven McDonald's Walgreens Go To 7-Eleven Thirst Quenchers $3.59 Red Bull Energy Drink Original Can $2.29 Slurpee Blue Raspberry (30 oz) $3.29 7-Select Purified Water (1 gal)



Confirming your order

Arrives between **8:17 PM-8:27 PM**

We sent your order to Panini Kabob Grill for final confirmation.

Order Details

1× Falafel Wrap

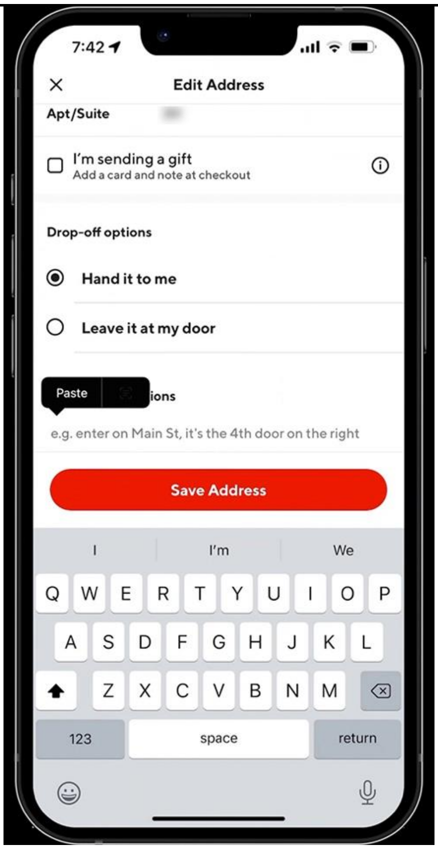
1× Charbroiled Chicken Shish Kabob

1× Hummus Trio (A Must)

Address

[redacted]

Dropoff: Hand it to me



Apt/Suite [redacted]

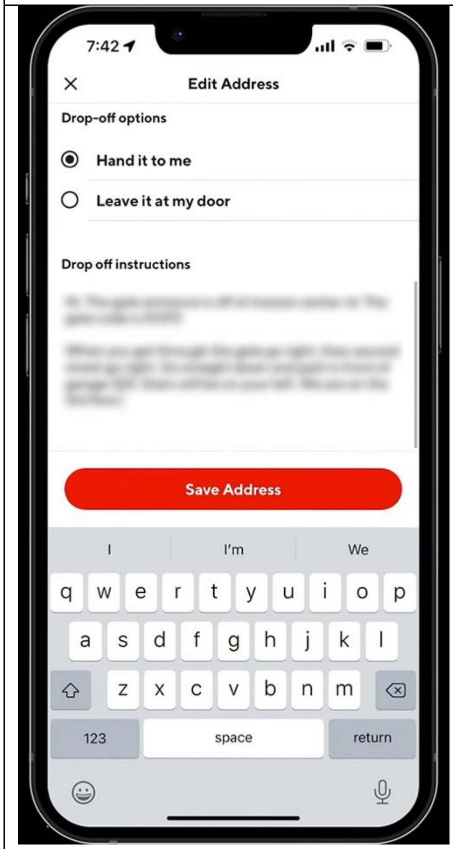
□ I'm sending a gift
Add a card and note at checkout

Drop-off options

● Hand it to me

○ Leave it at my door

e.g. enter on Main St, it's the 4th door on the right



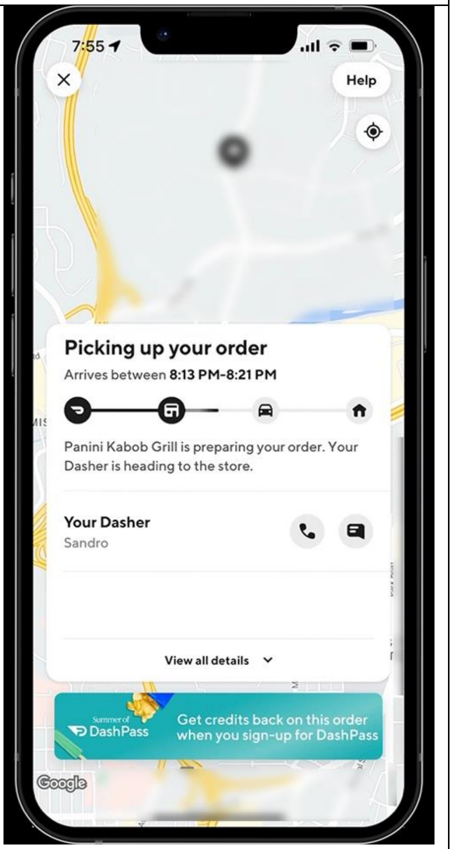
Drop-off options

● Hand it to me

○ Leave it at my door

Drop off instructions

[redacted]



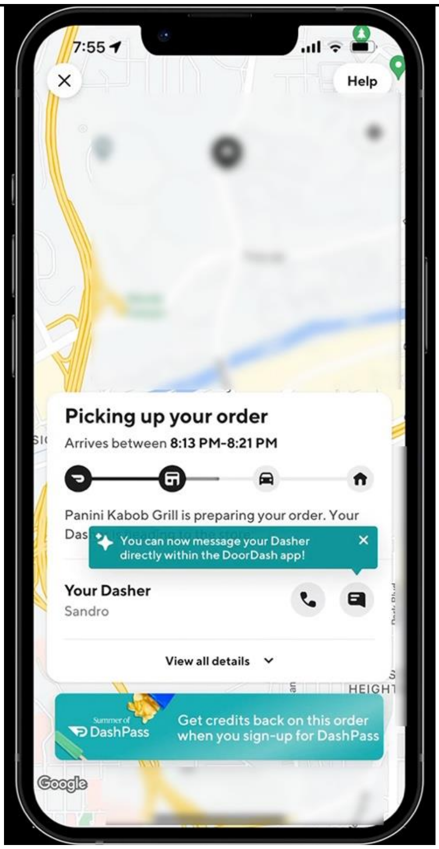
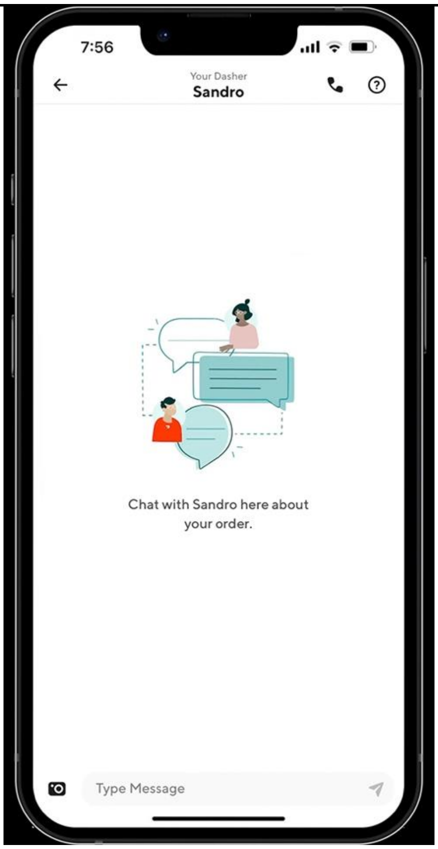
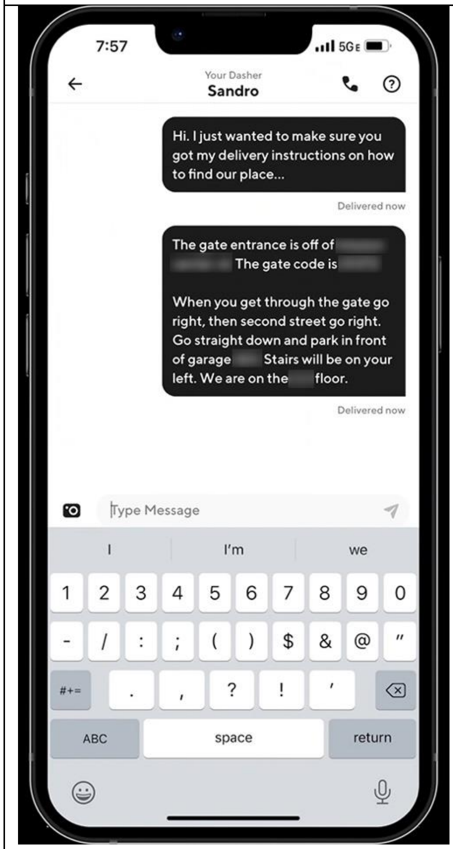
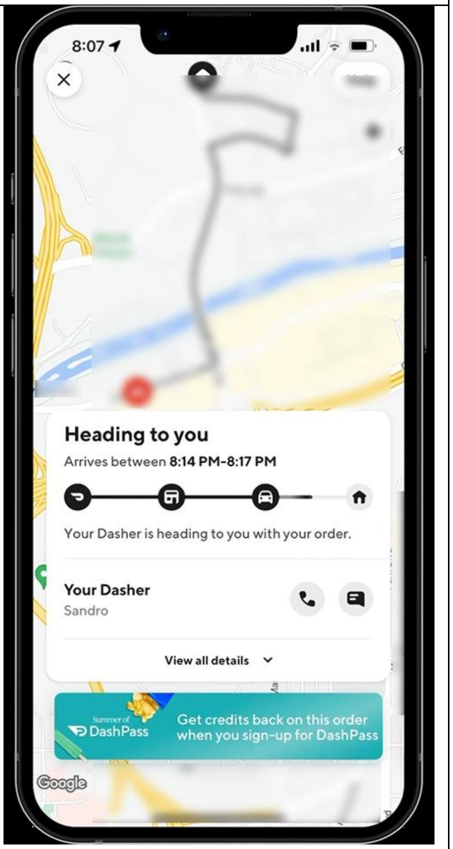
Picking up your order

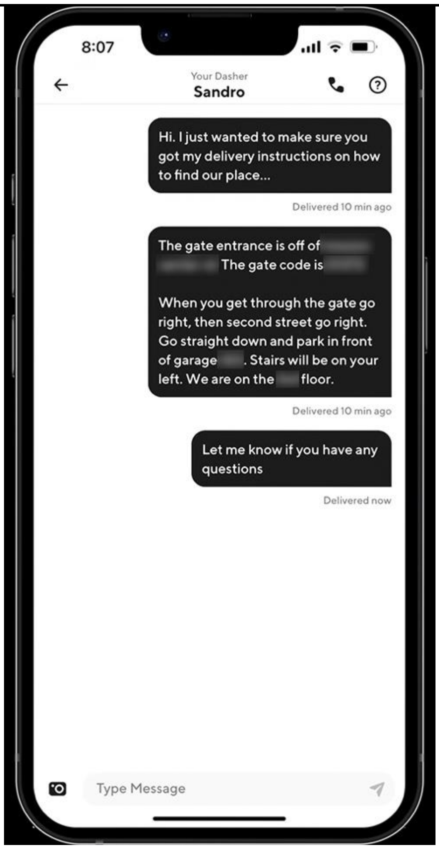
Arrives between **8:13 PM-8:21 PM**

Panini Kabob Grill is preparing your order. Your Dasher is heading to the store.

Your Dasher
Sandro

View all details
Summer of DashPass
Get credits back on this order when you sign-up for DashPass
Google

		 7:55 Help Picking up your order Arrives between 8:13 PM-8:21 PM Panini Kabob Grill is preparing your order. Your Das You can now message your Dasher directly within the DoorDash app! Your Dasher Sandro View all details Summer of DashPass Get credits back on this order when you sign-up for DashPass	 7:56 Your Dasher Sandro Chat with Sandro here about your order. Type Message	
		 7:57 Your Dasher Sandro Hi. I just wanted to make sure you got my delivery instructions on how to find our place... Delivered now The gate entrance is off of [redacted] The gate code is [redacted] When you get through the gate go right, then second street go right. Go straight down and park in front of garage [redacted] Stairs will be on your left. We are on the [redacted] floor. Delivered now Type Message	 8:07 Heading to you Arrives between 8:14 PM-8:17 PM Your Dasher is heading to you with your order. Your Dasher Sandro View all details Summer of DashPass Get credits back on this order when you sign-up for DashPass	



Hi. I just wanted to make sure you got my delivery instructions on how to find our place...

Delivered 10 min ago

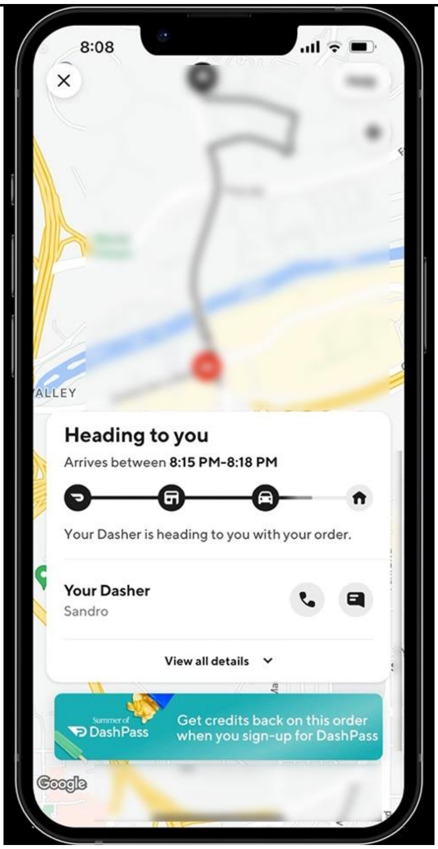
The gate entrance is off of [redacted] The gate code is [redacted]

When you get through the gate go right, then second street go right. Go straight down and park in front of garage [redacted]. Stairs will be on your left. We are on the [redacted] floor.

Delivered 10 min ago

Let me know if you have any questions

Delivered now



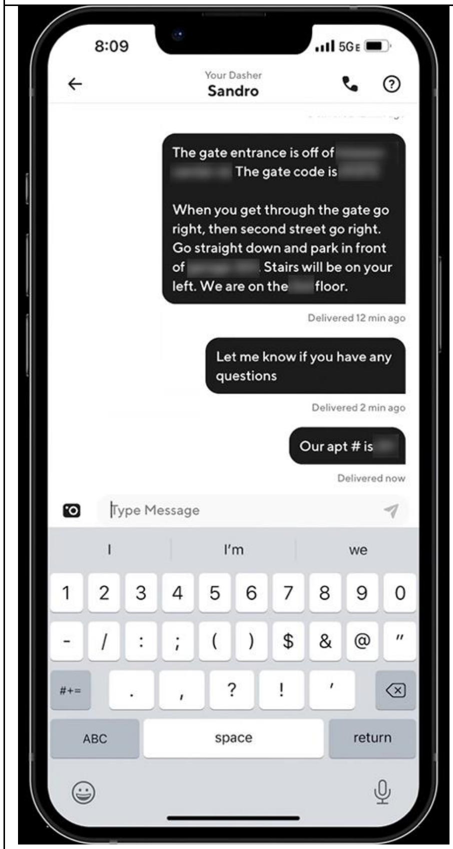
Heading to you

Arrives between 8:15 PM-8:18 PM

Your Dasher is heading to you with your order.

Your Dasher
Sandro

Get credits back on this order when you sign-up for DashPass



The gate entrance is off of [redacted] The gate code is [redacted]

When you get through the gate go right, then second street go right. Go straight down and park in front of [redacted] Stairs will be on your left. We are on the [redacted] floor.

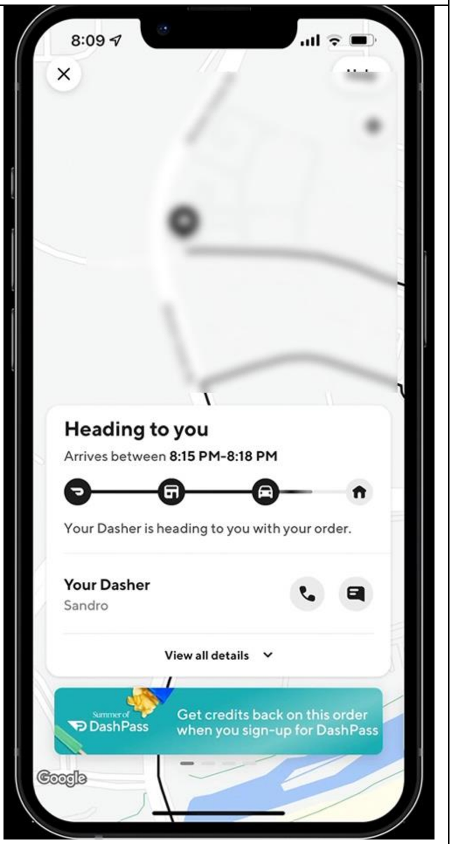
Delivered 12 min ago

Let me know if you have any questions

Delivered 2 min ago

Our apt # is [redacted]

Delivered now



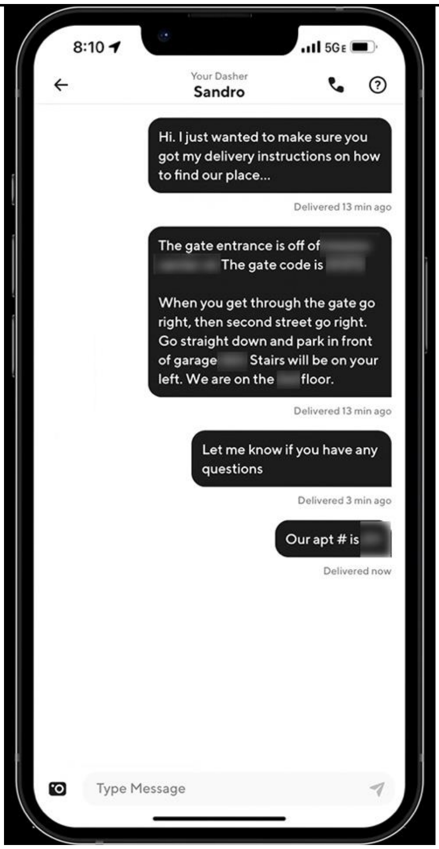
Heading to you

Arrives between 8:15 PM-8:18 PM

Your Dasher is heading to you with your order.

Your Dasher
Sandro

Get credits back on this order when you sign-up for DashPass



8:10

Your Dasher
Sandro

Hi. I just wanted to make sure you got my delivery instructions on how to find our place...

Delivered 13 min ago

The gate entrance is off of [redacted] The gate code is [redacted]

When you get through the gate go right, then second street go right. Go straight down and park in front of garage [redacted] Stairs will be on your left. We are on the [redacted] floor.

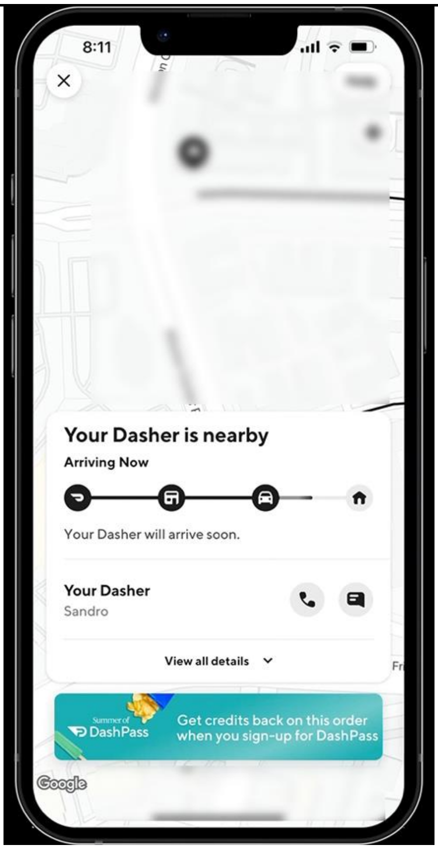
Delivered 13 min ago

Let me know if you have any questions

Delivered 3 min ago

Our apt # is [redacted]

Delivered now



8:11

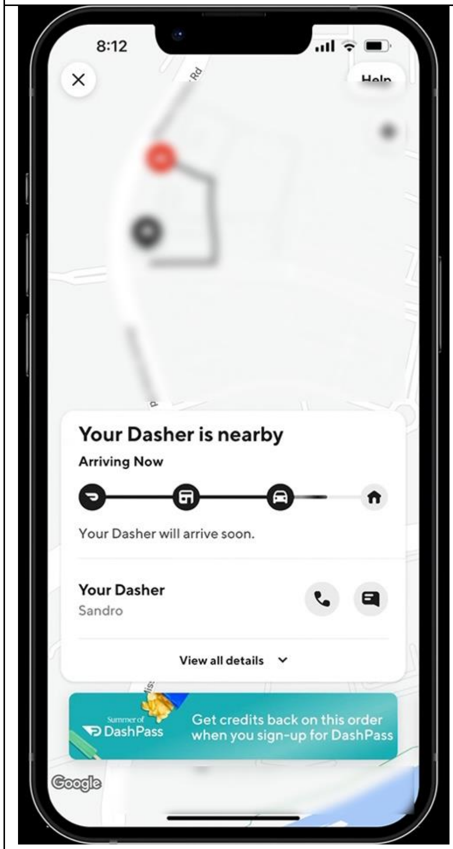
Your Dasher is nearby

Arriving Now

Your Dasher will arrive soon.

Your Dasher
Sandro

View all details
Summer of DashPass
Get credits back on this order when you sign-up for DashPass
Google



8:12

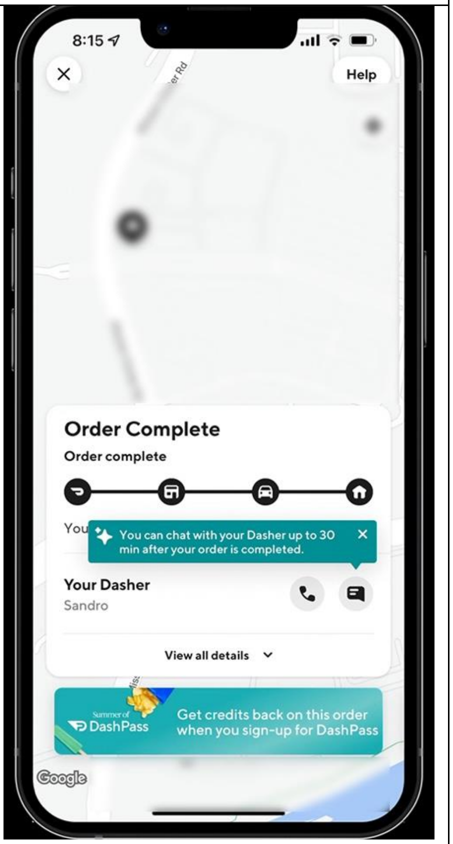
Your Dasher is nearby

Arriving Now

Your Dasher will arrive soon.

Your Dasher
Sandro

Help
View all details
Summer of DashPass
Get credits back on this order when you sign-up for DashPass
Google



8:15

Order Complete

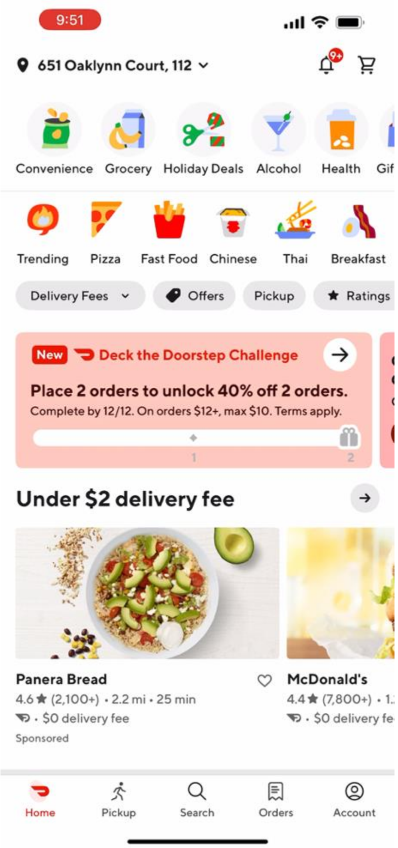
Order complete

You can chat with your Dasher up to 30 min after your order is completed.

Your Dasher
Sandro

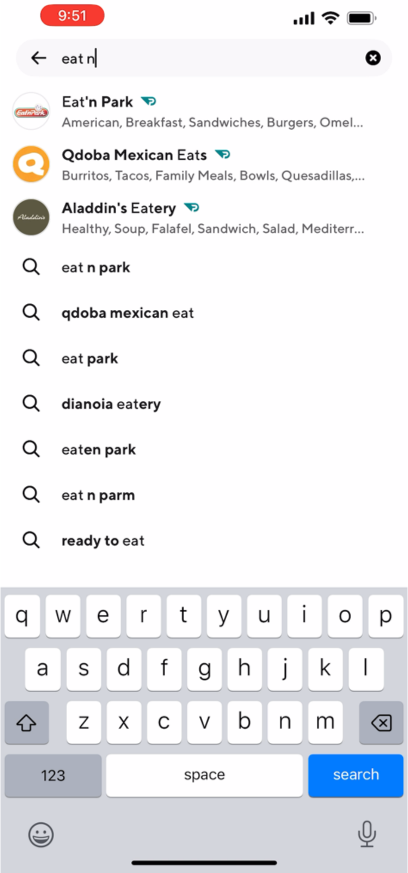
Help
View all details
Summer of DashPass
Get credits back on this order when you sign-up for DashPass
Google

Below are screenshots of an DoorDash order for a customer located in Pittsburgh PA, ordering from Eat ‘N Park on the iOS app.



Place 2 orders to unlock 40% off 2 orders.

Complete by 12/12. On orders $12+, max $10. Terms apply.



eat n

Eat'n Park
American, Breakfast, Sandwiches, Burgers, Omel...

Qdoba Mexican Eats
Burritos, Tacos, Family Meals, Bowls, Quesadillas,...

Aladdin's Eatery
Healthy, Soup, Falafel, Sandwich, Salad, Mediterr...

eat n park

qdoba mexican eat

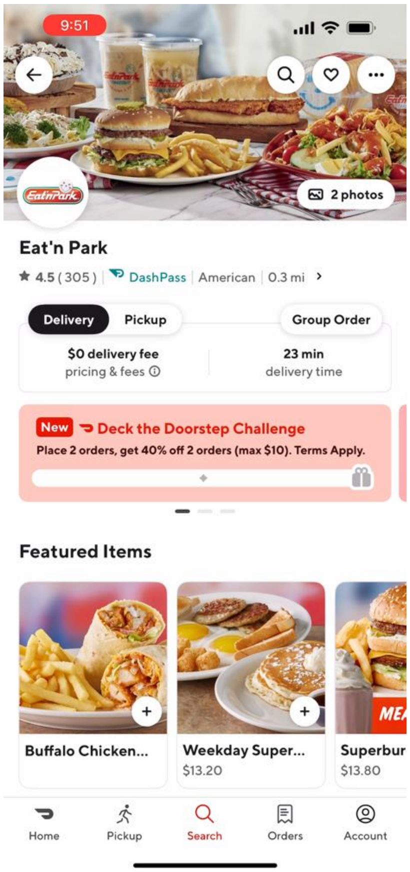
eat park

dianoia eatery

eaten park

eat n parm

ready to eat



Eat'n Park

★ 4.5 (305) | DashPass | American | 0.3 mi ›

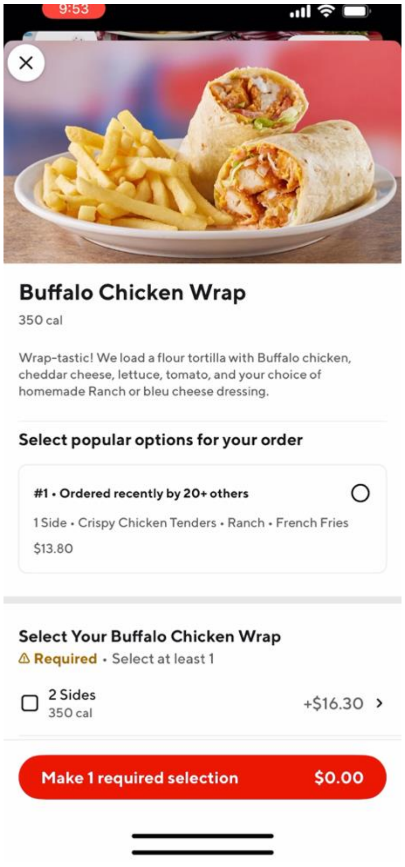
$0 delivery fee
pricing & fees ⓘ

23 min
delivery time

New Deck the Doorstep Challenge
Place 2 orders, get 40% off 2 orders (max $10). Terms Apply.

Featured Items

Buffalo Chicken...	Weekday Super...	Superbur
	$13.20	$13.80



Buffalo Chicken Wrap

350 cal

Wrap-tastic! We load a flour tortilla with Buffalo chicken, cheddar cheese, lettuce, tomato, and your choice of homemade Ranch or bleu cheese dressing.

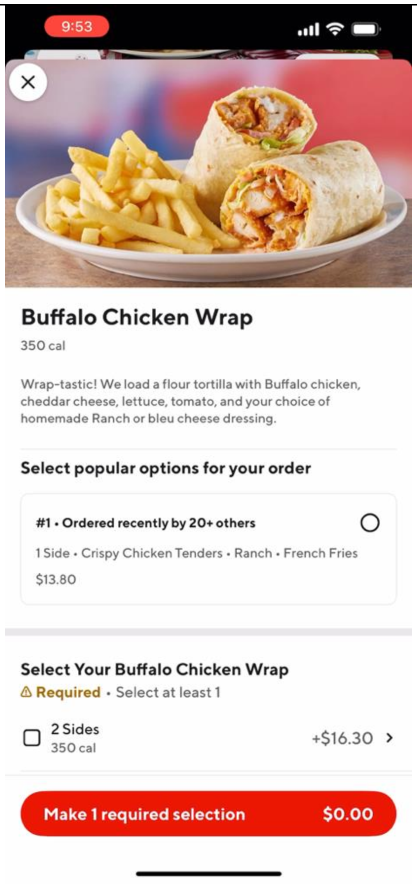
Select popular options for your order

#1 • Ordered recently by 20+ others ○
1 Side • Crispy Chicken Tenders • Ranch • French Fries
$13.80

Select Your Buffalo Chicken Wrap
⚠ Required • Select at least 1

□ 2 Sides
350 cal
+$16.30 ›

Make 1 required selection $0.00



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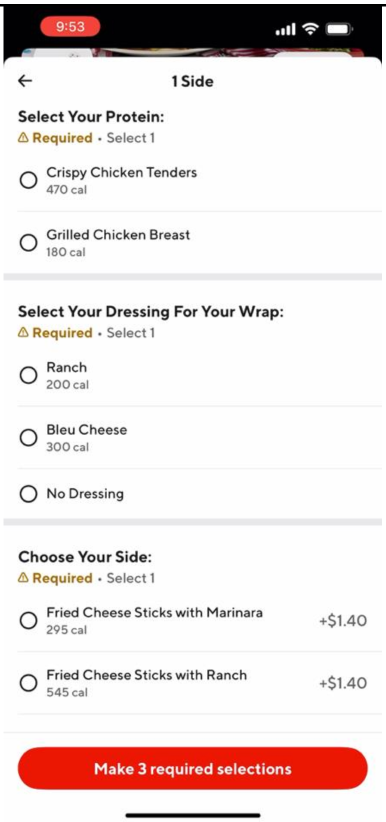
$13.80

Select Your Buffalo Chicken Wrap
⚠ Required • Select at least 1

□ 2 Sides
350 cal
+$16.30 ›

Make 1 required selection $0.00



← 1 Side

Select Your Protein:
⚠ Required • Select 1

○ Crispy Chicken Tenders
470 cal

○ Grilled Chicken Breast
180 cal

Select Your Dressing For Your Wrap:
⚠ Required • Select 1

○ Ranch
200 cal

○ Bleu Cheese
300 cal

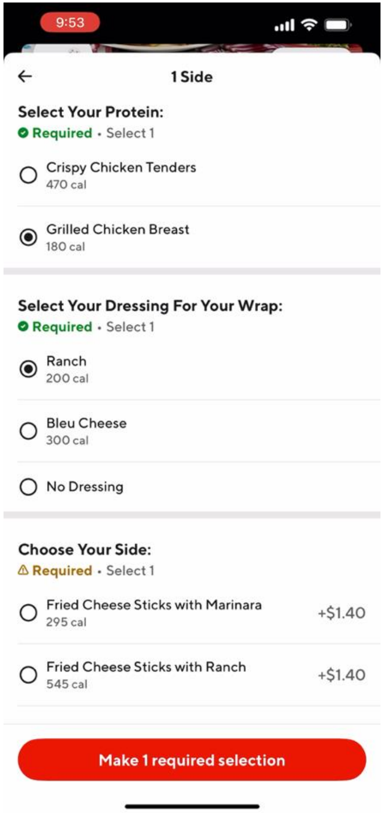
○ No Dressing

Choose Your Side:
⚠ Required • Select 1

○ Fried Cheese Sticks with Marinara +$1.40
295 cal

○ Fried Cheese Sticks with Ranch +$1.40
545 cal

Make 3 required selections



← 1 Side

Select Your Protein:
✓ Required • Select 1

○ Crispy Chicken Tenders
470 cal

● Grilled Chicken Breast
180 cal

Select Your Dressing For Your Wrap:
✓ Required • Select 1

● Ranch
200 cal

○ Bleu Cheese
300 cal

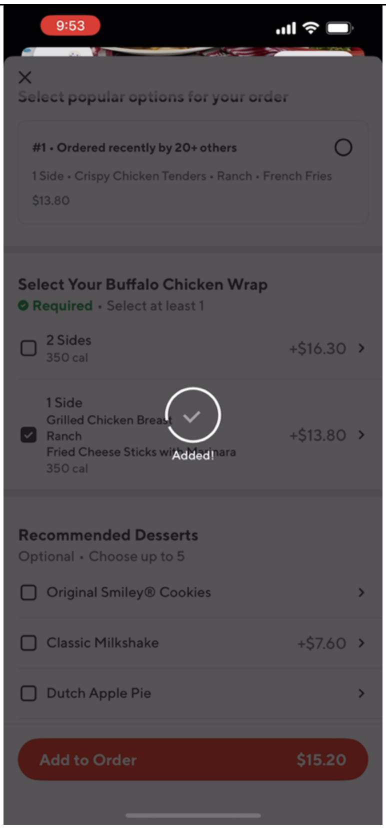
○ No Dressing

Choose Your Side:
⚠ Required • Select 1

○ Fried Cheese Sticks with Marinara +$1.40
295 cal

○ Fried Cheese Sticks with Ranch +$1.40
545 cal

Make 1 required selection



✕
Select popular options for your order

#1 • Ordered recently by 20+ others ○
1 Side • Crispy Chicken Tenders • Ranch • French Fries
$13.80

Select Your Buffalo Chicken Wrap
✓ Required • Select at least 1

□ 2 Sides +$16.30 ›
350 cal

☑ 1 Side +$13.80 ›
Grilled Chicken Brea
Ranch
Fried Cheese Sticks wi nara
350 cal

Added!

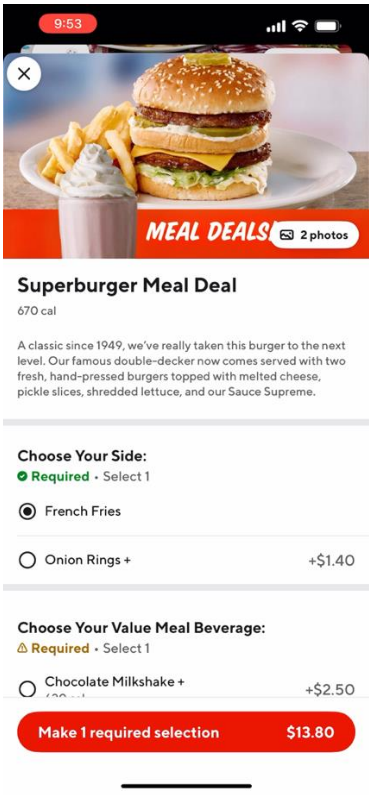
Recommended Desserts
Optional • Choose up to 5

□ Original Smiley® Cookies ›

□ Classic Milkshake +$7.60 ›

□ Dutch Apple Pie ›

Add to Order $15.20



Superburger Meal Deal
670 cal

A classic since 1949, we've really taken this burger to the next level. Our famous double-decker now comes served with two fresh, hand-pressed burgers topped with melted cheese, pickle slices, shredded lettuce, and our Sauce Supreme.

Choose Your Side:
✓ Required • Select 1

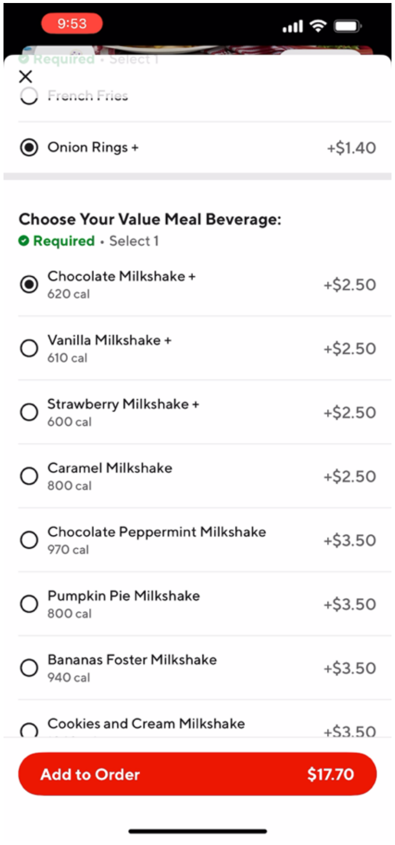
● French Fries

○ Onion Rings + +$1.40

Choose Your Value Meal Beverage:
⚠ Required • Select 1

○ Chocolate Milkshake + +$2.50

Make 1 required selection $13.80



9:53

✕

Required • Select 1

○ French Fries

● Onion Rings + +$1.40

Choose Your Value Meal Beverage:
Required • Select 1

● Chocolate Milkshake + 620 cal +$2.50

○ Vanilla Milkshake + 610 cal +$2.50

○ Strawberry Milkshake + 600 cal +$2.50

○ Caramel Milkshake 800 cal +$2.50

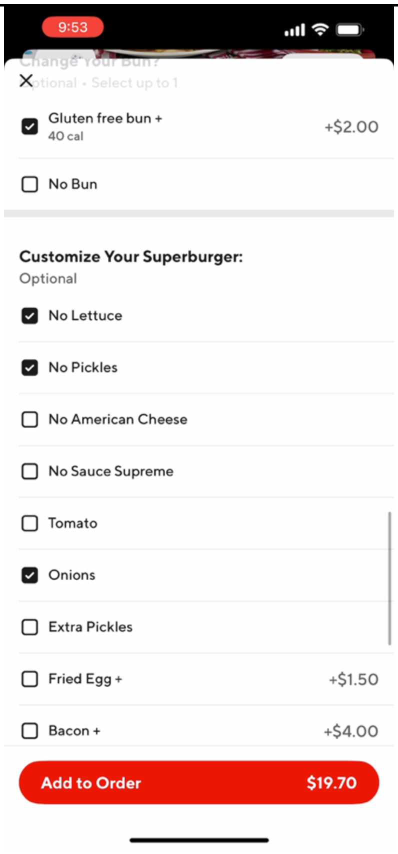
○ Chocolate Peppermint Milkshake 970 cal +$3.50

○ Pumpkin Pie Milkshake 800 cal +$3.50

○ Bananas Foster Milkshake 940 cal +$3.50

○ Cookies and Cream Milkshake +$3.50

Add to Order $17.70



9:53

✕

Change Your Bun?
Optional • Select up to 1

☑ Gluten free bun + 40 cal +$2.00

□ No Bun

Customize Your Superburger:
Optional

☑ No Lettuce

☑ No Pickles

□ No American Cheese

□ No Sauce Supreme

□ Tomato

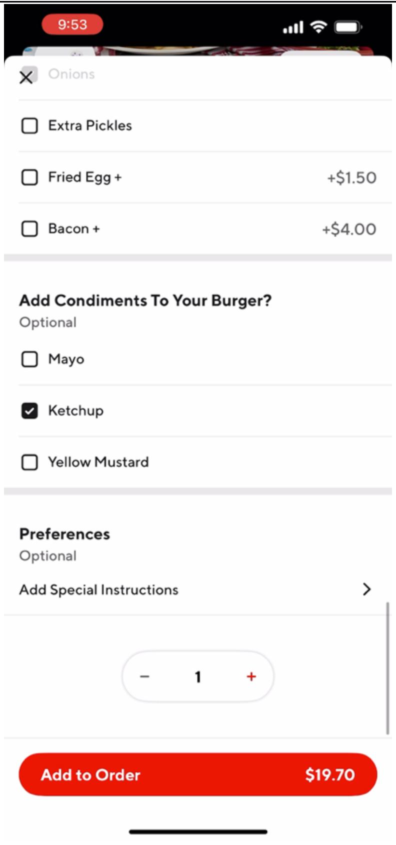
☑ Onions

□ Extra Pickles

□ Fried Egg + +$1.50

□ Bacon + +$4.00

Add to Order $19.70



9:53

✕

☑ Onions

□ Extra Pickles

□ Fried Egg + +$1.50

□ Bacon + +$4.00

Add Condiments To Your Burger?
Optional

□ Mayo

☑ Ketchup

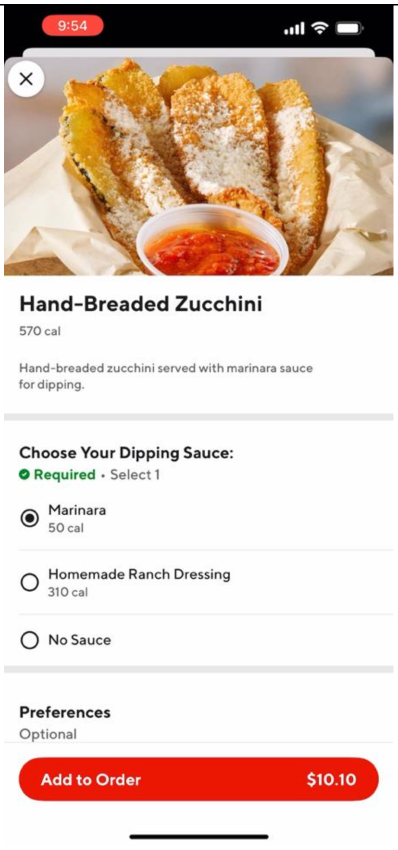
□ Yellow Mustard

Preferences
Optional

Add Special Instructions >

− 1 +

Add to Order $19.70



9:54

✕

Hand-Breaded Zucchini

570 cal

Hand-breaded zucchini served with marinara sauce for dipping.

Choose Your Dipping Sauce:
Required • Select 1

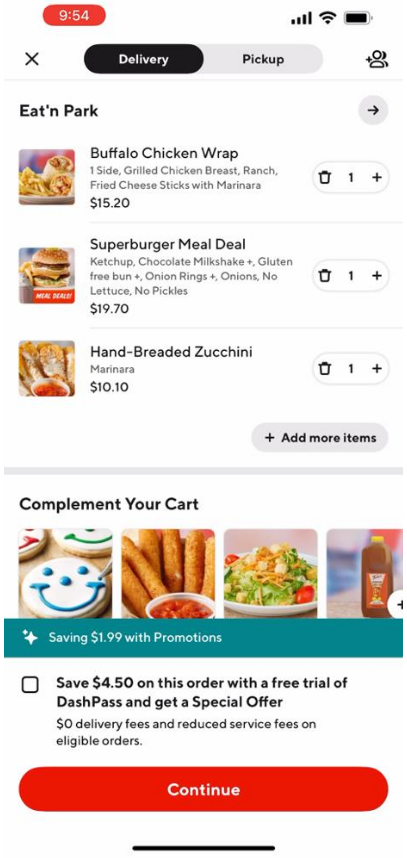
● Marinara 50 cal

○ Homemade Ranch Dressing 310 cal

○ No Sauce

Preferences
Optional

Add to Order $10.10



9:54

Delivery Pickup

Eat'n Park

Buffalo Chicken Wrap
1 Side, Grilled Chicken Breast, Ranch, Fried Cheese Sticks with Marinara
$15.20 — 1

Superburger Meal Deal
Ketchup, Chocolate Milkshake +, Gluten free bun +, Onion Rings +, Onions, No Lettuce, No Pickles
$19.70 — 1

Hand-Breaded Zucchini
Marinara
$10.10 — 1

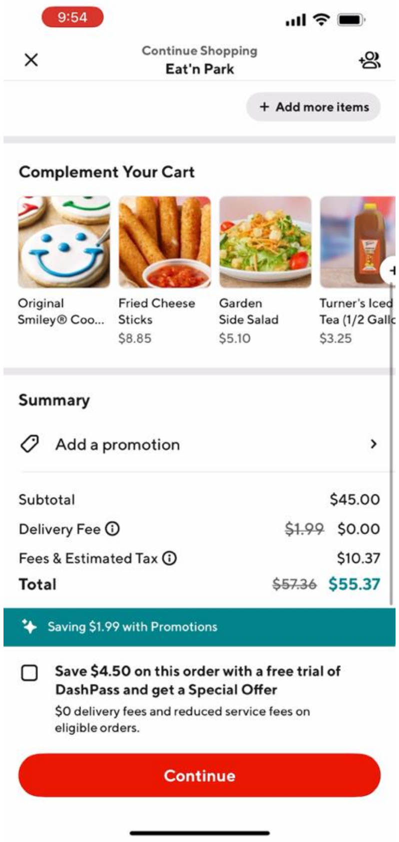
+ Add more items

Complement Your Cart

Saving $1.99 with Promotions

□ Save $4.50 on this order with a free trial of DashPass and get a Special Offer
$0 delivery fees and reduced service fees on eligible orders.

Continue



9:54

Continue Shopping
Eat'n Park

+ Add more items

Complement Your Cart

Original Smiley® Coo...	Fried Cheese Sticks	Garden Side Salad	Turner's Iced Tea (1/2 Gallo
	$8.85	$5.10	$3.25

Summary

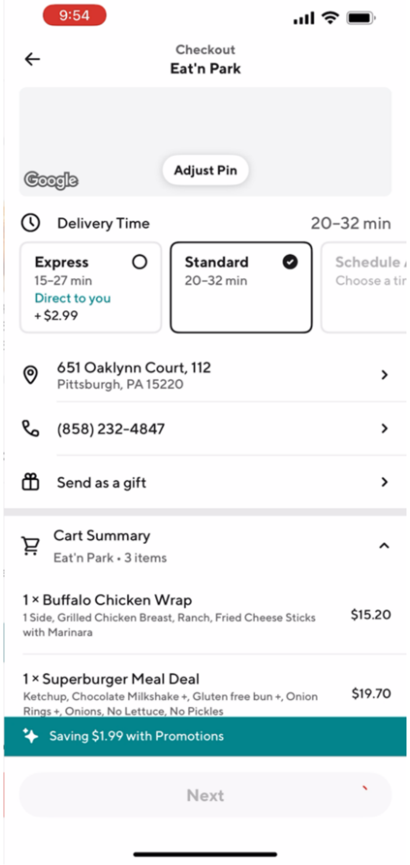
Add a promotion

Subtotal		$45.00
Delivery Fee ⓘ	~~$1.99~~	$0.00
Fees & Estimated Tax ⓘ		$10.37
Total	~~$57.36~~	**$55.37**

Saving $1.99 with Promotions

□ Save $4.50 on this order with a free trial of DashPass and get a Special Offer
$0 delivery fees and reduced service fees on eligible orders.

Continue



9:54

Checkout
Eat'n Park

Adjust Pin

Delivery Time 20-32 min

Express ○	Standard ●	Schedule
15-27 min	20-32 min	Choose a tir
Direct to you		
+ $2.99		

651 Oaklynn Court, 112
Pittsburgh, PA 15220

(858) 232-4847

Send as a gift

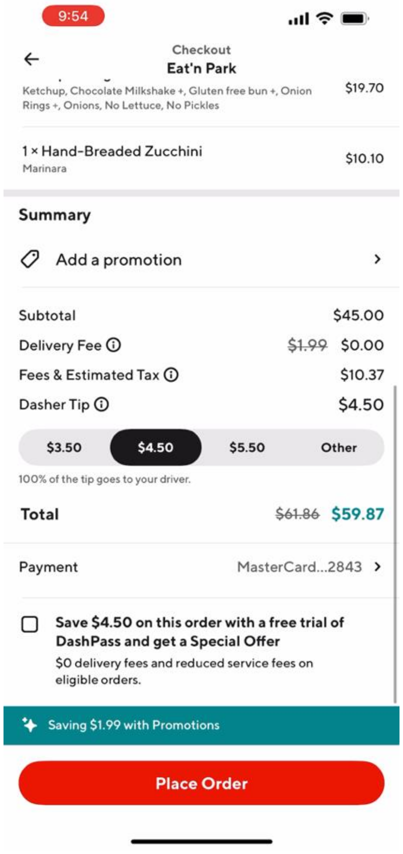
Cart Summary
Eat'n Park • 3 items

1 × Buffalo Chicken Wrap — $15.20
1 Side, Grilled Chicken Breast, Ranch, Fried Cheese Sticks with Marinara

1 × Superburger Meal Deal — $19.70
Ketchup, Chocolate Milkshake +, Gluten free bun +, Onion Rings +, Onions, No Lettuce, No Pickles

Saving $1.99 with Promotions

Next



9:54

Checkout
Eat'n Park

Ketchup, Chocolate Milkshake +, Gluten free bun +, Onion Rings +, Onions, No Lettuce, No Pickles — $19.70

1 × Hand-Breaded Zucchini — $10.10
Marinara

Summary

Add a promotion

Subtotal		$45.00
Delivery Fee ⓘ	~~$1.99~~	$0.00
Fees & Estimated Tax ⓘ		$10.37
Dasher Tip ⓘ		$4.50

$3.50 | **$4.50** | $5.50 | Other

100% of the tip goes to your driver.

Total	~~$61.86~~	**$59.87**

Payment MasterCard...2843

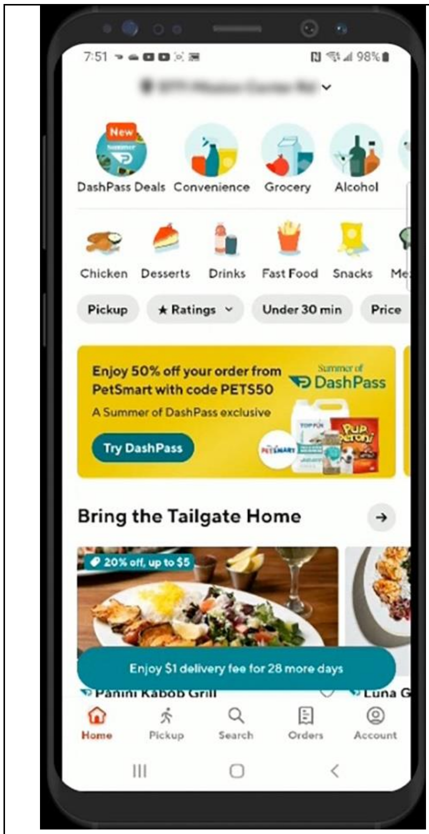
□ Save $4.50 on this order with a free trial of DashPass and get a Special Offer
$0 delivery fees and reduced service fees on eligible orders.

Saving $1.99 with Promotions

Place Order

DoorDash Consumer App - Android

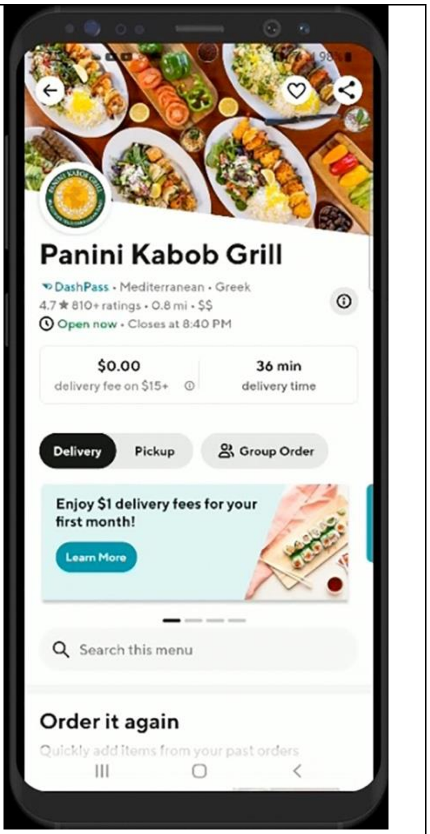
Below are screen shots of the ordering process on an Android device. This process demonstrates the user launching the DoorDash app.



Enjoy 50% off your order from PetSmart with code PETS50

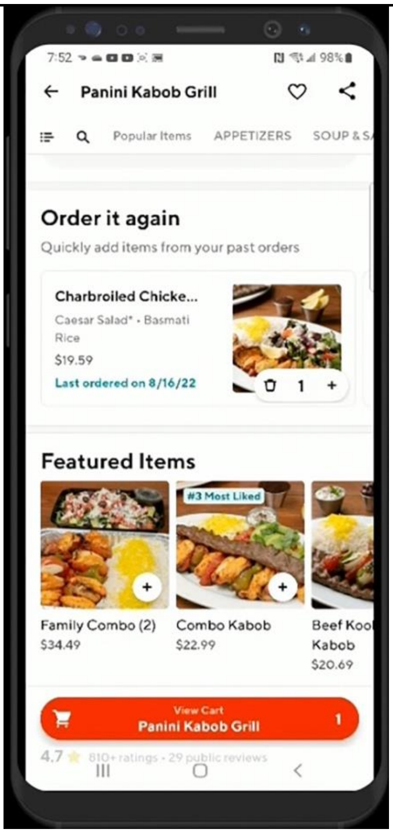
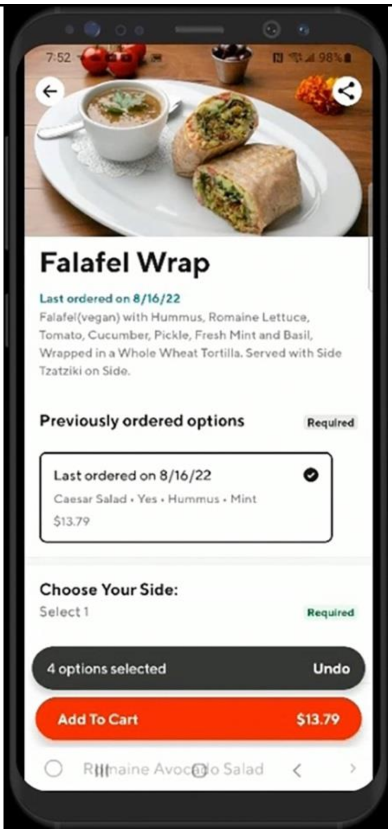
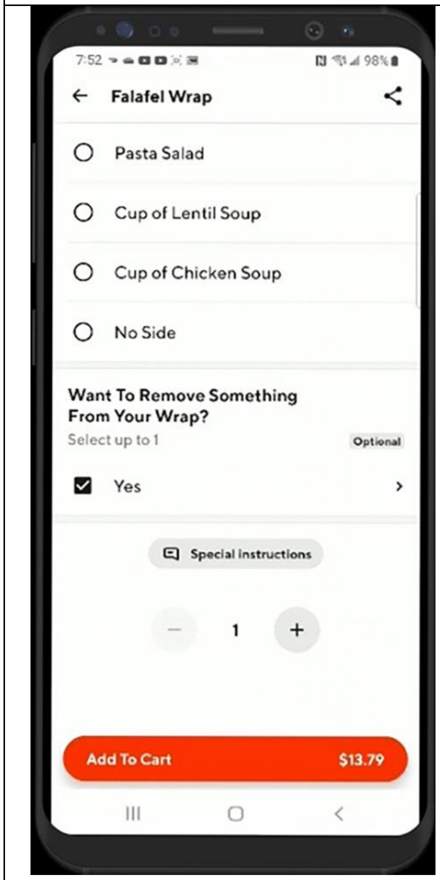
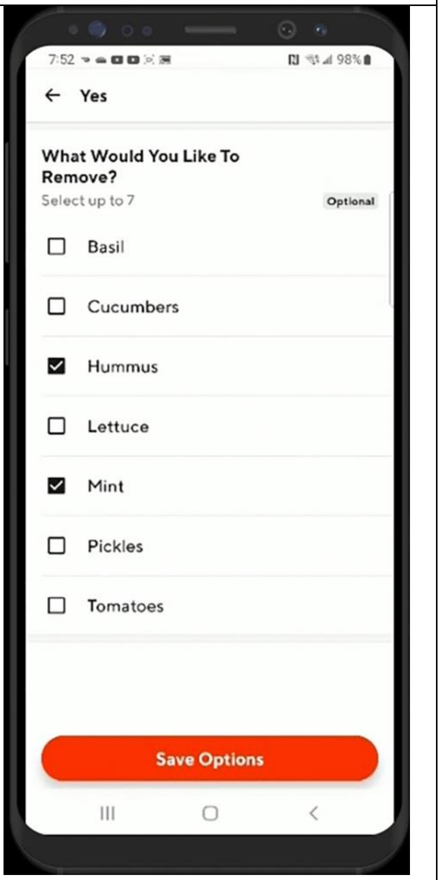
A Summer of DashPass exclusive

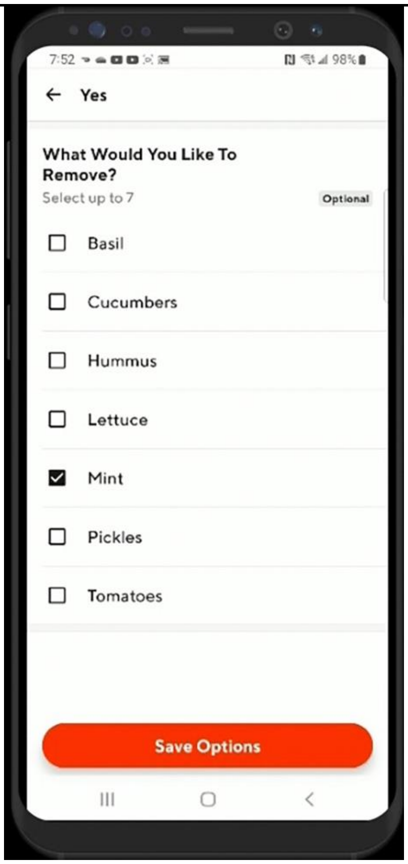
Enjoy $1 delivery fee for 28 more days



Enjoy $1 delivery fees for your first month!

Quickly add items from your past orders

		 7:52 98% Panini Kabob Grill Popular Items APPETIZERS SOUP & S Order it again Quickly add items from your past orders Charbroiled Chicke... Caesar Salad* • Basmati Rice $19.59 Last ordered on 8/16/22 1 + Featured Items #3 Most Liked Family Combo (2) $34.49 Combo Kabob $22.99 Beef Koo Kabob $20.69 View Cart Panini Kabob Grill 1 4.7 ★ 810+ ratings • 29 public reviews	 7:52 98% Falafel Wrap Last ordered on 8/16/22 Falafel(vegan) with Hummus, Romaine Lettuce, Tomato, Cucumber, Pickle, Fresh Mint and Basil, Wrapped in a Whole Wheat Tortilla. Served with Side Tzatziki on Side. Previously ordered options Required Last ordered on 8/16/22 Caesar Salad • Yes • Hummus • Mint $13.79 Choose Your Side: Required Select 1 4 options selected Undo Add To Cart $13.79 ○ Romaine Avocado Salad
		 7:52 98% Falafel Wrap ○ Pasta Salad ○ Cup of Lentil Soup ○ Cup of Chicken Soup ○ No Side Want To Remove Something From Your Wrap? Optional Select up to 1 ☑ Yes › Special instructions − 1 + Add To Cart $13.79	 7:52 98% Yes What Would You Like To Remove? Optional Select up to 7 ☐ Basil ☐ Cucumbers ☑ Hummus ☐ Lettuce ☑ Mint ☐ Pickles ☐ Tomatoes Save Options

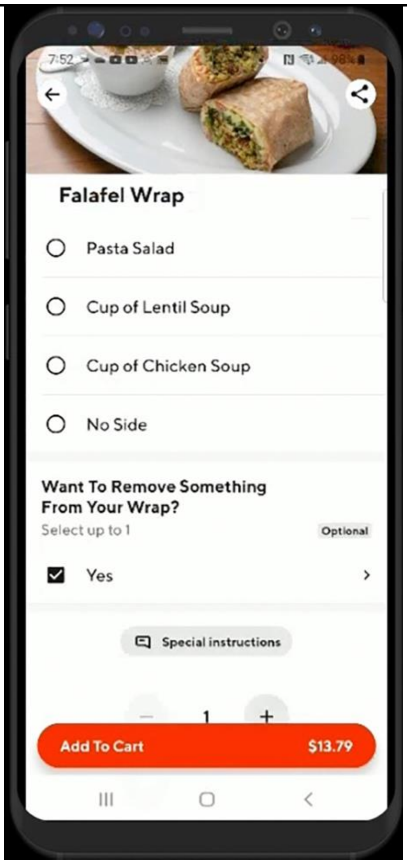

7:52 98%

← Yes

What Would You Like To Remove?
Select up to 7 Optional

- ☐ Basil
- ☐ Cucumbers
- ☐ Hummus
- ☐ Lettuce
- ☑ Mint
- ☐ Pickles
- ☐ Tomatoes

Save Options


7:52 98%

Falafel Wrap

- ○ Pasta Salad
- ○ Cup of Lentil Soup
- ○ Cup of Chicken Soup
- ○ No Side

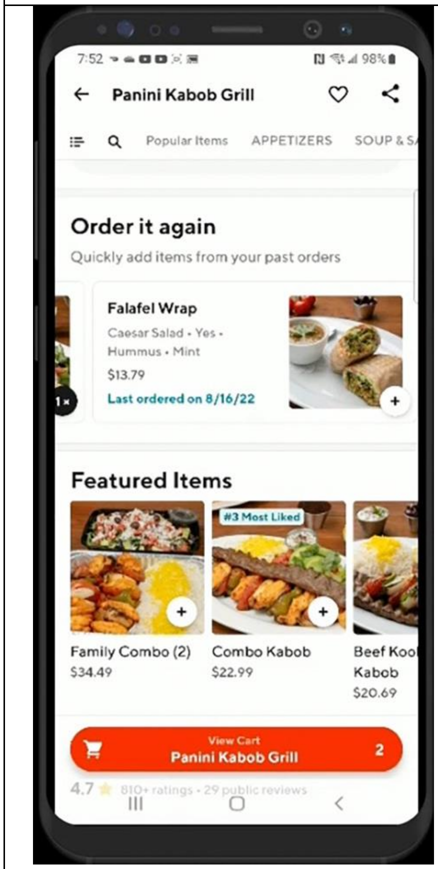
Want To Remove Something From Your Wrap?
Select up to 1 Optional

☑ Yes ›

Special instructions

– 1 +

Add To Cart $13.79


7:52 98%

← Panini Kabob Grill

Popular Items APPETIZERS SOUP & SA

Order it again
Quickly add items from your past orders

Falafel Wrap
Caesar Salad • Yes • Hummus • Mint
$13.79
Last ordered on 8/16/22

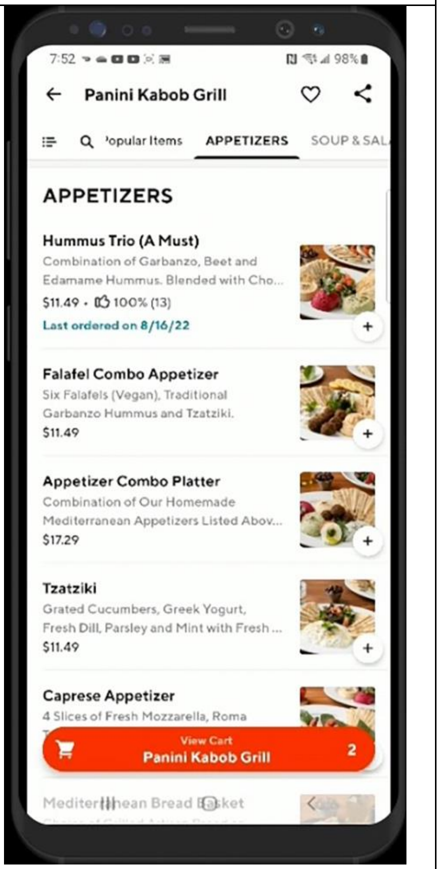
Featured Items

#3 Most Liked

Family Combo (2) $34.49
Combo Kabob $22.99
Beef Koo Kabob $20.69

View Cart
Panini Kabob Grill 2

4.7 ★ 810+ ratings • 29 public reviews


7:52 98%

← Panini Kabob Grill

'opular Items APPETIZERS SOUP & SAL

APPETIZERS

Hummus Trio (A Must)
Combination of Garbanzo, Beet and Edamame Hummus. Blended with Cho...
$11.49 • 100% (13)
Last ordered on 8/16/22

Falafel Combo Appetizer
Six Falafels (Vegan), Traditional Garbanzo Hummus and Tzatziki.
$11.49

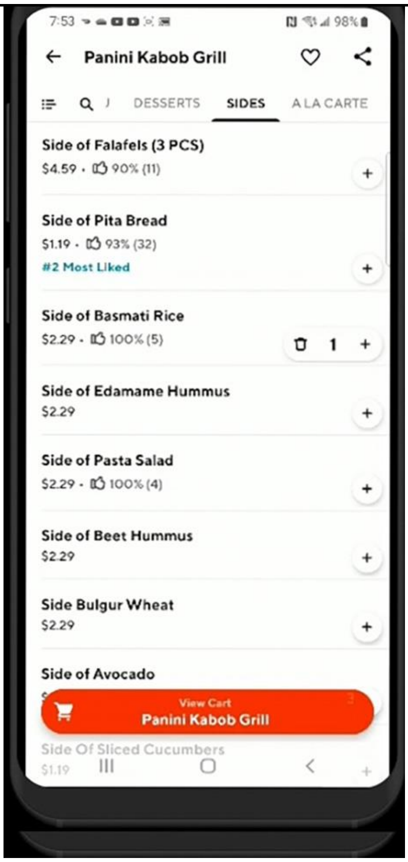
Appetizer Combo Platter
Combination of Our Homemade Mediterranean Appetizers Listed Abov...
$17.29

Tzatziki
Grated Cucumbers, Greek Yogurt, Fresh Dill, Parsley and Mint with Fresh ...
$11.49

Caprese Appetizer
4 Slices of Fresh Mozzarella, Roma

View Cart
Panini Kabob Grill 2

Mediterranean Bread Basket



7:53 98%

Panini Kabob Grill

DESSERTS SIDES A LA CARTE

Side of Falafels (3 PCS)
$4.59 · 90% (11) +

Side of Pita Bread
$1.19 · 93% (32)
#2 Most Liked +

Side of Basmati Rice
$2.29 · 100% (5) 1 +

Side of Edamame Hummus
$2.29 +

Side of Pasta Salad
$2.29 · 100% (4) +

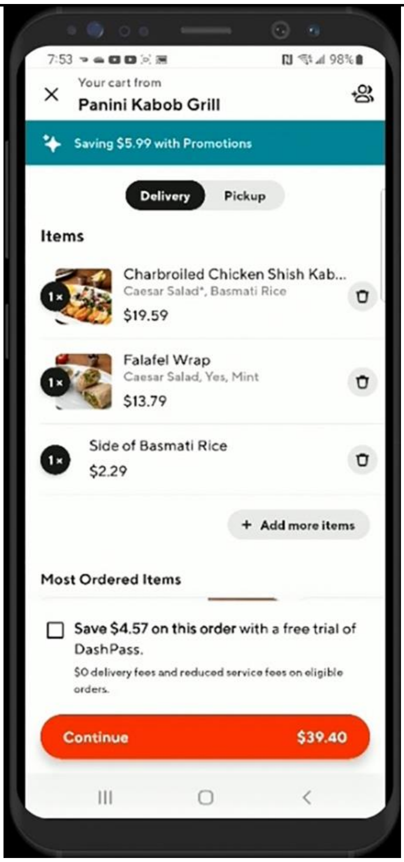
Side of Beet Hummus
$2.29 +

Side Bulgur Wheat
$2.29 +

Side of Avocado

View Cart
Panini Kabob Grill

Side Of Sliced Cucumbers
$1.19 +



7:53 98%

Your cart from
Panini Kabob Grill

Saving $5.99 with Promotions

Delivery Pickup

Items

1× Charbroiled Chicken Shish Kab...
Caesar Salad*, Basmati Rice
$19.59

1× Falafel Wrap
Caesar Salad, Yes, Mint
$13.79

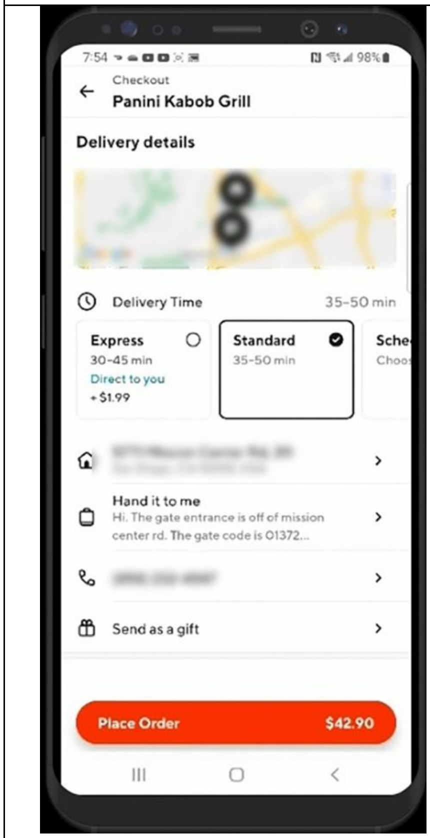
1× Side of Basmati Rice
$2.29

+ Add more items

Most Ordered Items

□ Save $4.57 on this order with a free trial of DashPass.
$0 delivery fees and reduced service fees on eligible orders.

Continue $39.40



7:54 98%

Checkout
Panini Kabob Grill

Delivery details

Delivery Time 35-50 min

Express ○ 30-45 min Direct to you +$1.99	Standard ● 35-50 min	Sche Choo

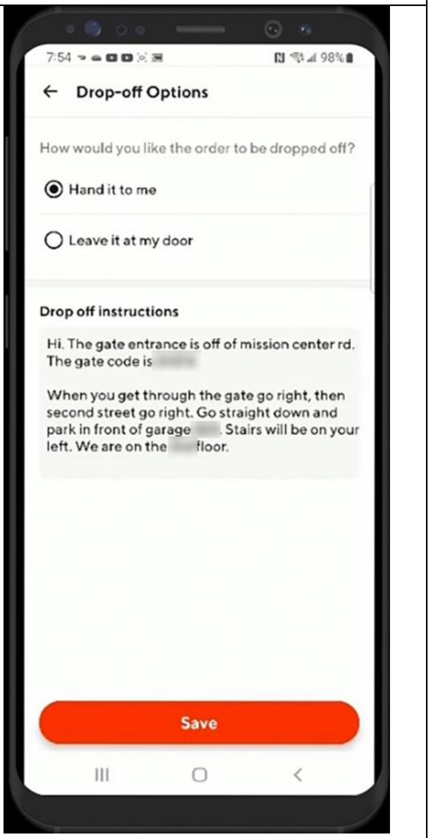
[redacted] >

Hand it to me
Hi. The gate entrance is off of mission center rd. The gate code is 01372... >

[redacted] >

Send as a gift >

Place Order $42.90



7:54 98%

Drop-off Options

How would you like the order to be dropped off?

● Hand it to me

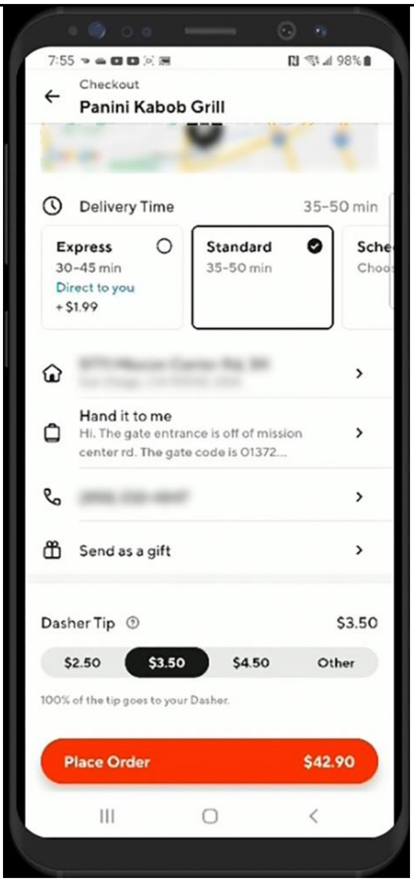
○ Leave it at my door

Drop off instructions

Hi. The gate entrance is off of mission center rd. The gate code is [redacted]

When you get through the gate go right, then second street go right. Go straight down and park in front of garage [redacted]. Stairs will be on your left. We are on the [redacted] floor.

Save



7:55 · 98%

Checkout

Panini Kabob Grill

Delivery Time 35-50 min

○ Express 30-45 min Direct to you +$1.99

● Standard 35-50 min

Sche Choo

[redacted]

Hand it to me
Hi. The gate entrance is off of mission center rd. The gate code is 01372...

[redacted]

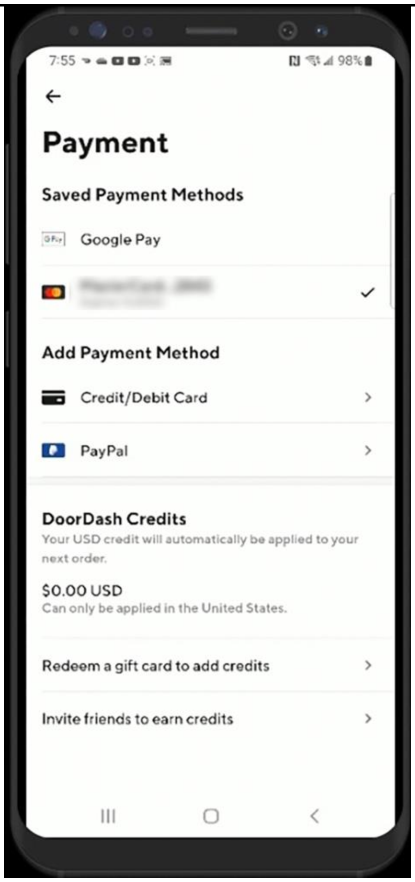
Send as a gift

Dasher Tip $3.50

$2.50 | **$3.50** | $4.50 | Other

100% of the tip goes to your Dasher.

Place Order $42.90



7:55 · 98%

Payment

Saved Payment Methods

Google Pay

[redacted] ✓

Add Payment Method

Credit/Debit Card

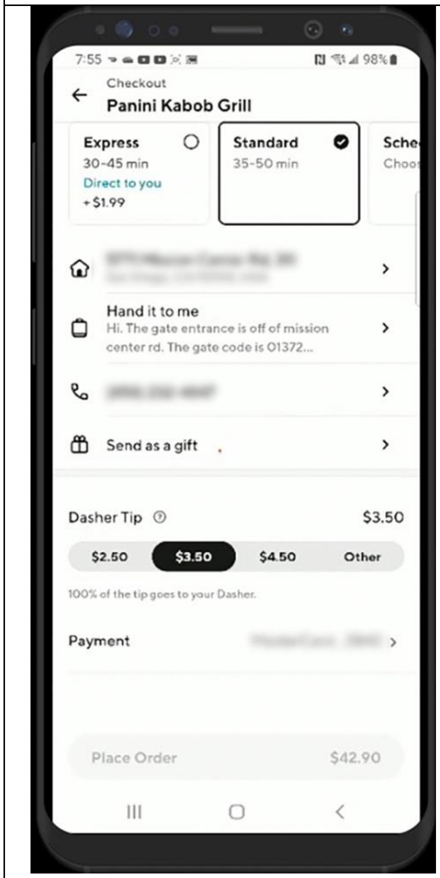
PayPal

DoorDash Credits
Your USD credit will automatically be applied to your next order.

$0.00 USD
Can only be applied in the United States.

Redeem a gift card to add credits

Invite friends to earn credits



7:55 · 98%

Checkout

Panini Kabob Grill

○ Express 30-45 min Direct to you +$1.99

● Standard 35-50 min

Sche Choo

[redacted]

Hand it to me
Hi. The gate entrance is off of mission center rd. The gate code is 01372...

[redacted]

Send as a gift

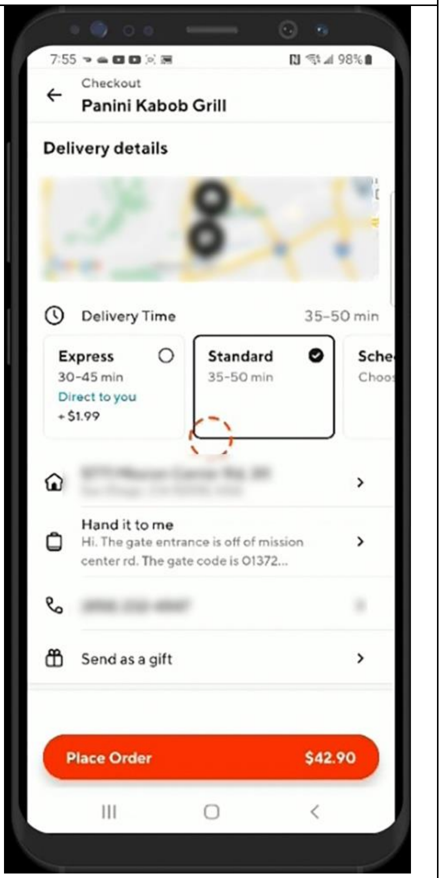
Dasher Tip $3.50

$2.50 | **$3.50** | $4.50 | Other

100% of the tip goes to your Dasher.

Payment [redacted]

Place Order $42.90



7:55 · 98%

Checkout

Panini Kabob Grill

Delivery details

Delivery Time 35-50 min

○ Express 30-45 min Direct to you +$1.99

● Standard 35-50 min

Sche Choo

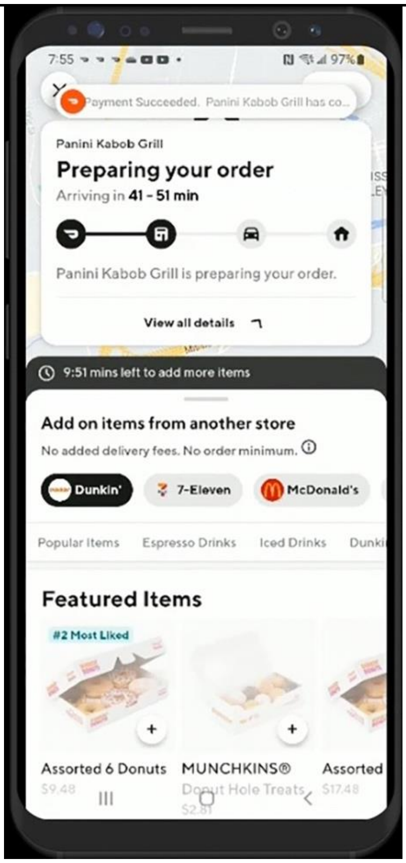
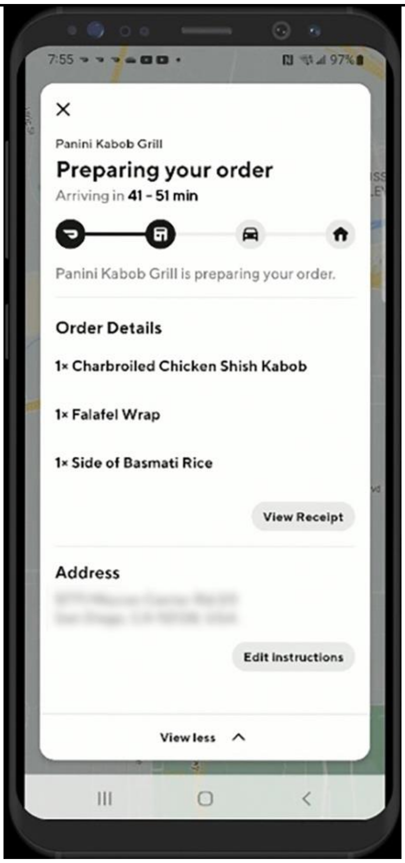
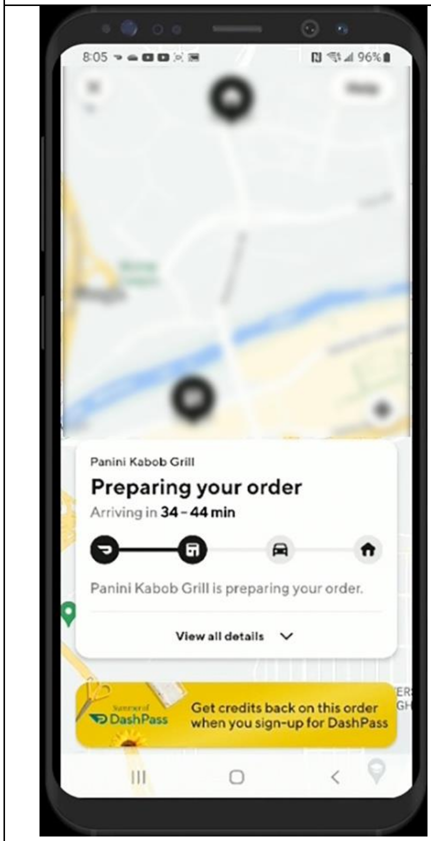
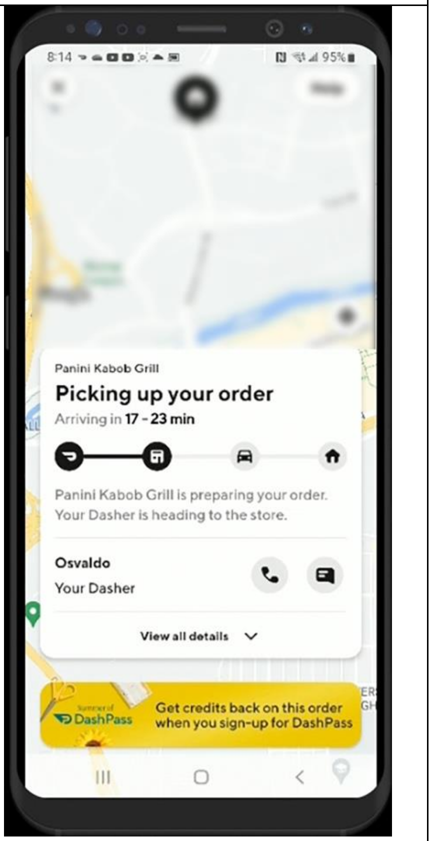
[redacted]

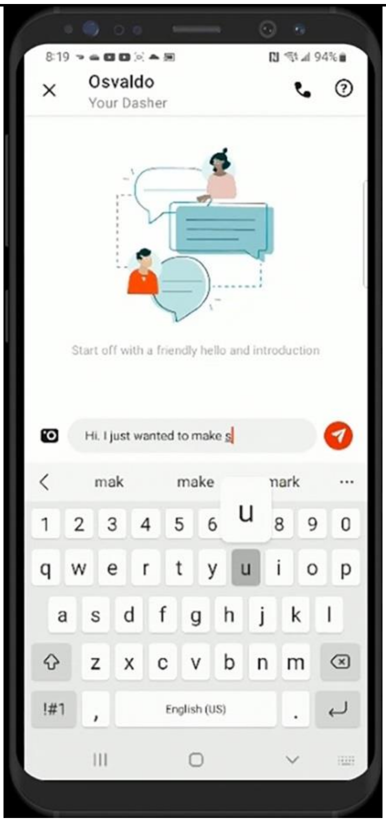
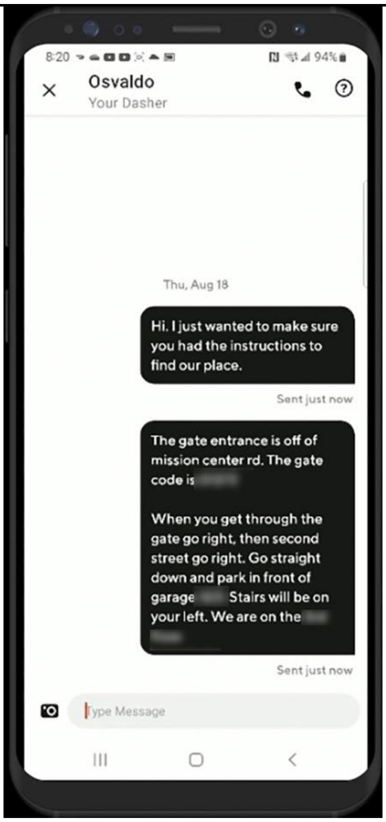
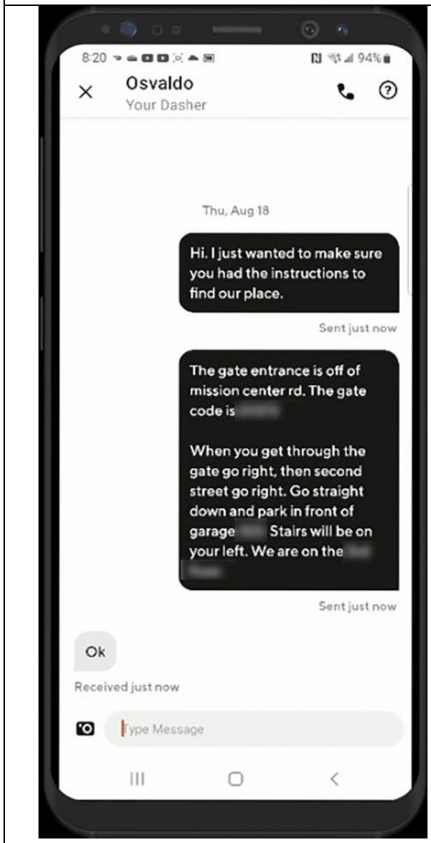
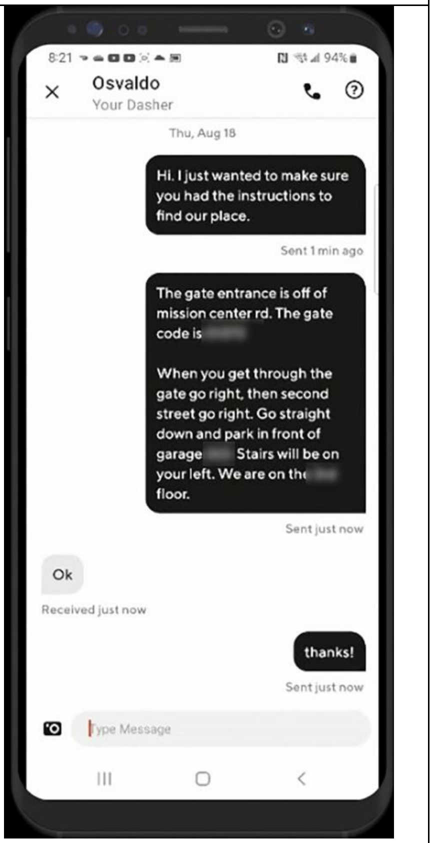
Hand it to me
Hi. The gate entrance is off of mission center rd. The gate code is 01372...

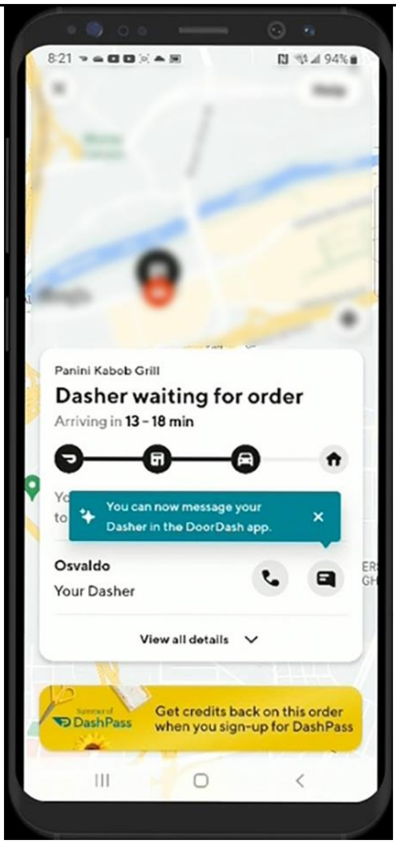
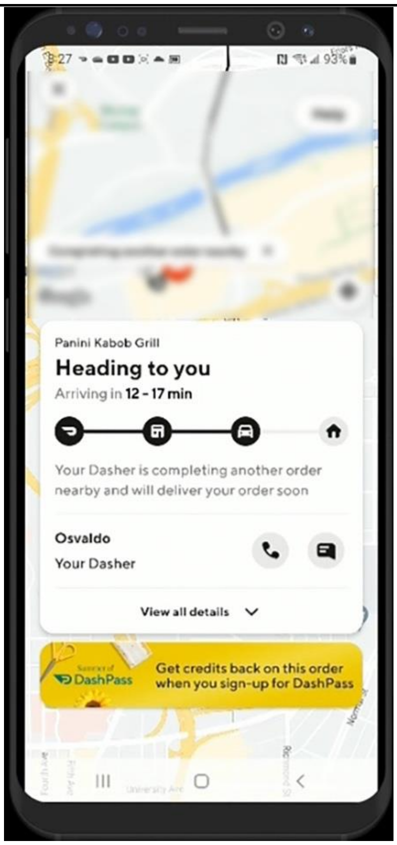
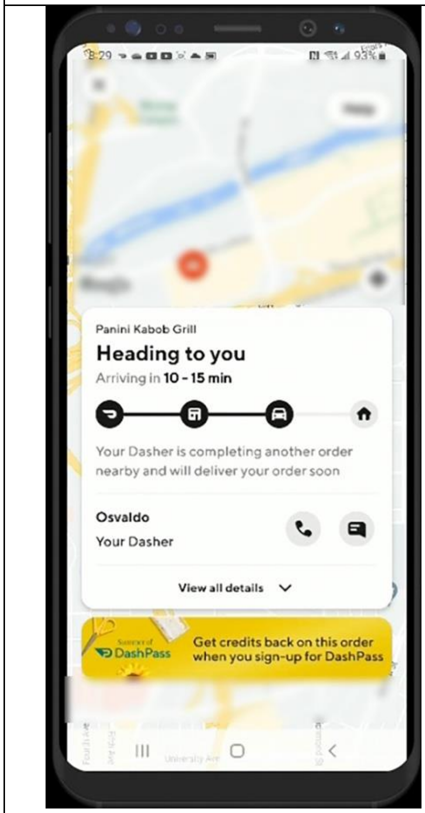
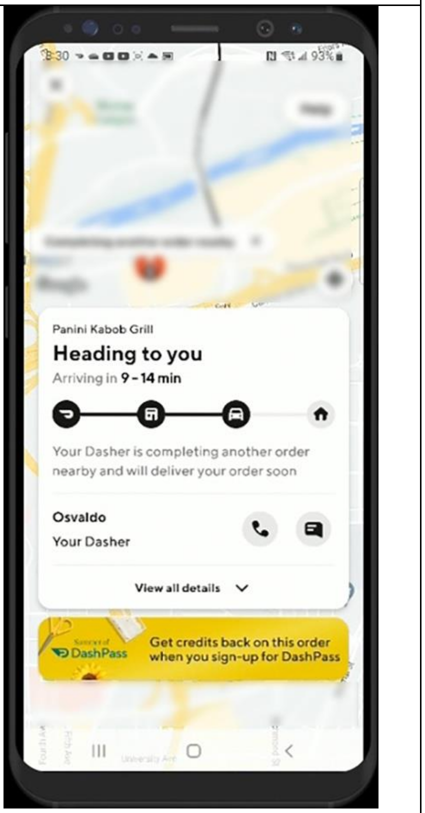
[redacted]

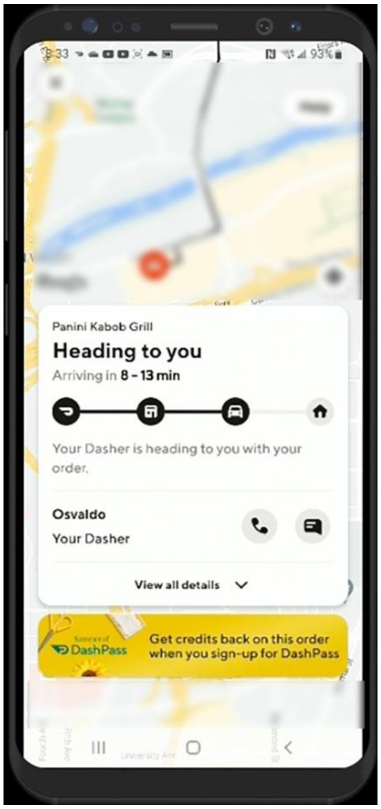
Send as a gift

Place Order $42.90

		 7:55 97% Payment Succeeded. Panini Kabob Grill has co... Panini Kabob Grill **Preparing your order** Arriving in **41 - 51 min** Panini Kabob Grill is preparing your order. View all details 9:51 mins left to add more items **Add on items from another store** No added delivery fees. No order minimum. Dunkin' 7-Eleven McDonald's Popular Items Espresso Drinks Iced Drinks Dunki **Featured Items** #2 Most Liked Assorted 6 Donuts $9.48 MUNCHKINS® Donut Hole Treats $2.81 Assorted $17.48	 7:55 97% Panini Kabob Grill **Preparing your order** Arriving in **41 - 51 min** Panini Kabob Grill is preparing your order. **Order Details** 1× Charbroiled Chicken Shish Kabob 1× Falafel Wrap 1× Side of Basmati Rice View Receipt **Address** [illegible] Edit instructions View less
		 8:05 96% Panini Kabob Grill **Preparing your order** Arriving in **34 - 44 min** Panini Kabob Grill is preparing your order. View all details Summer of DashPass Get credits back on this order when you sign-up for DashPass	 8:14 95% Panini Kabob Grill **Picking up your order** Arriving in **17 - 23 min** Panini Kabob Grill is preparing your order. Your Dasher is heading to the store. Osvaldo Your Dasher View all details Summer of DashPass Get credits back on this order when you sign-up for DashPass

		 Osvaldo Your Dasher Start off with a friendly hello and introduction Hi. I just wanted to make s 	 Osvaldo Your Dasher Thu, Aug 18 Hi. I just wanted to make sure you had the instructions to find our place. Sent just now The gate entrance is off of mission center rd. The gate code is [redacted] When you get through the gate go right, then second street go right. Go straight down and park in front of garage [redacted] Stairs will be on your left. We are on the [redacted] Sent just now Type Message	
		 Osvaldo Your Dasher Thu, Aug 18 Hi. I just wanted to make sure you had the instructions to find our place. Sent just now The gate entrance is off of mission center rd. The gate code is [redacted] When you get through the gate go right, then second street go right. Go straight down and park in front of garage [redacted] Stairs will be on your left. We are on the [redacted] Sent just now Ok Received just now Type Message	 Osvaldo Your Dasher Thu, Aug 18 Hi. I just wanted to make sure you had the instructions to find our place. Sent 1 min ago The gate entrance is off of mission center rd. The gate code is [redacted] When you get through the gate go right, then second street go right. Go straight down and park in front of garage [redacted] Stairs will be on your left. We are on the [redacted] floor. Sent just now Ok Received just now thanks! Sent just now Type Message	

		 8:21 94% Panini Kabob Grill Dasher waiting for order Arriving in **13 - 18 min** Yo to You can now message your Dasher in the DoorDash app. Osvaldo Your Dasher View all details Summer of DashPass Get credits back on this order when you sign-up for DashPass	 8:27 93% Panini Kabob Grill Heading to you Arriving in **12 - 17 min** Your Dasher is completing another order nearby and will deliver your order soon Osvaldo Your Dasher View all details Summer of DashPass Get credits back on this order when you sign-up for DashPass
		 8:29 93% Panini Kabob Grill Heading to you Arriving in **10 - 15 min** Your Dasher is completing another order nearby and will deliver your order soon Osvaldo Your Dasher View all details Summer of DashPass Get credits back on this order when you sign-up for DashPass	 8:30 93% Panini Kabob Grill Heading to you Arriving in **9 - 14 min** Your Dasher is completing another order nearby and will deliver your order soon Osvaldo Your Dasher View all details Summer of DashPass Get credits back on this order when you sign-up for DashPass



8:33 93%

Help

Panini Kabob Grill

Heading to you

Arriving in **8 - 13 min**

Your Dasher is heading to you with your order.

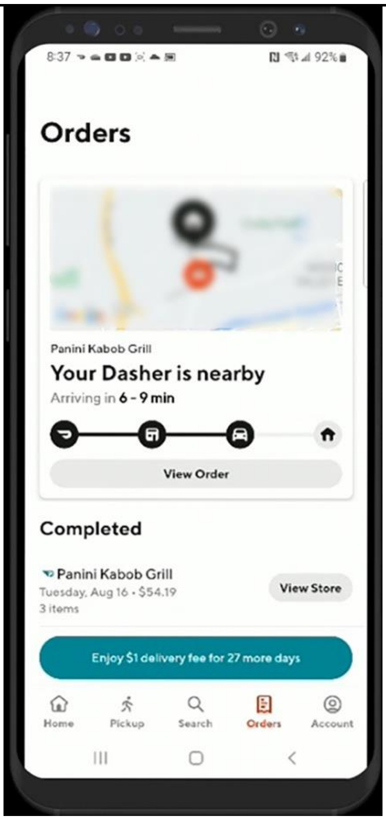
Osvaldo

Your Dasher

View all details

Summer of DashPass

Get credits back on this order when you sign-up for DashPass



8:37 92%

Orders

Panini Kabob Grill

Your Dasher is nearby

Arriving in **6 - 9 min**

View Order

Completed

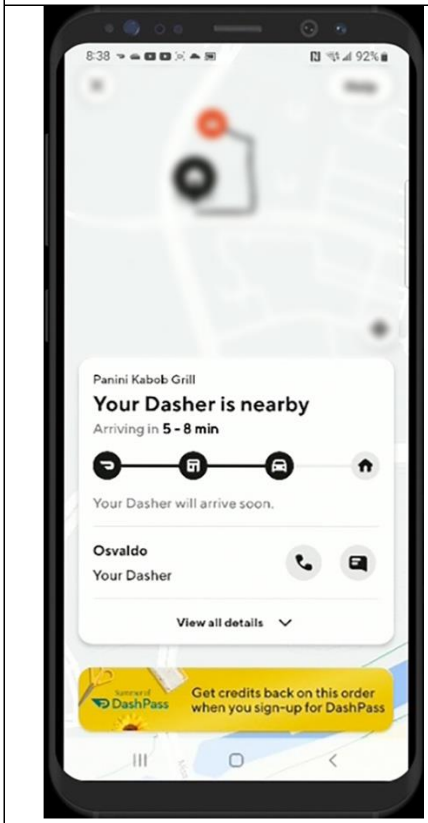
Panini Kabob Grill

Tuesday, Aug 16 • $54.19

3 items

View Store

Enjoy $1 delivery fee for 27 more days



8:38 92%

Help

Panini Kabob Grill

Your Dasher is nearby

Arriving in **5 - 8 min**

Your Dasher will arrive soon.

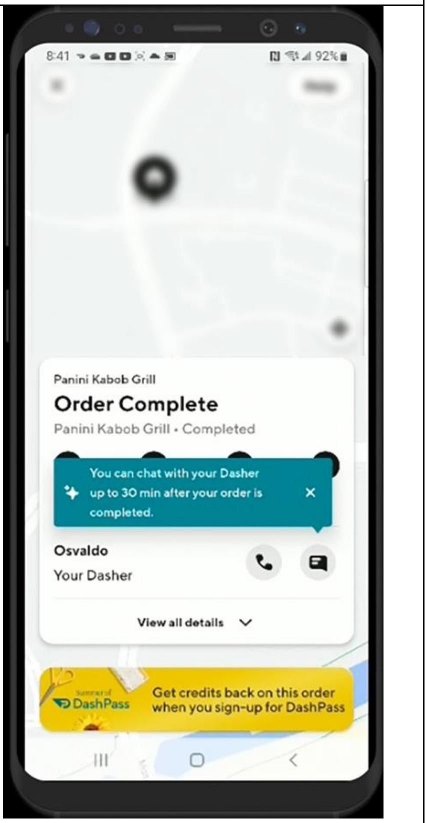
Osvaldo

Your Dasher

View all details

Summer of DashPass

Get credits back on this order when you sign-up for DashPass



8:41 92%

Help

Panini Kabob Grill

Order Complete

Panini Kabob Grill • Completed

You can chat with your Dasher up to 30 min after your order is completed.

Osvaldo

Your Dasher

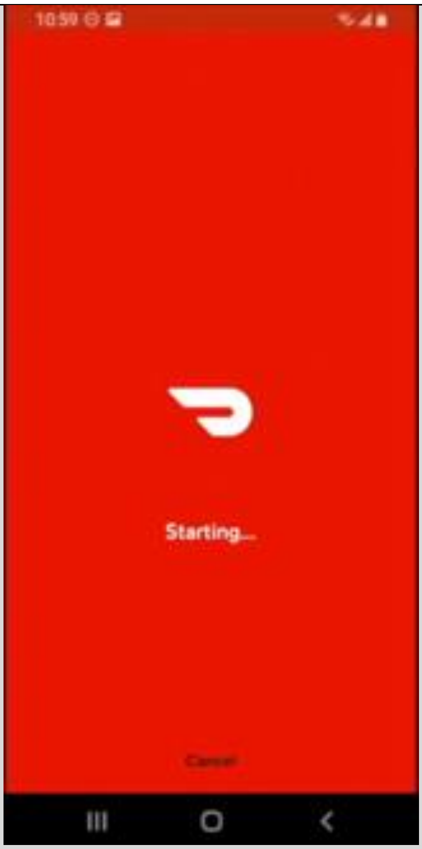
View all details

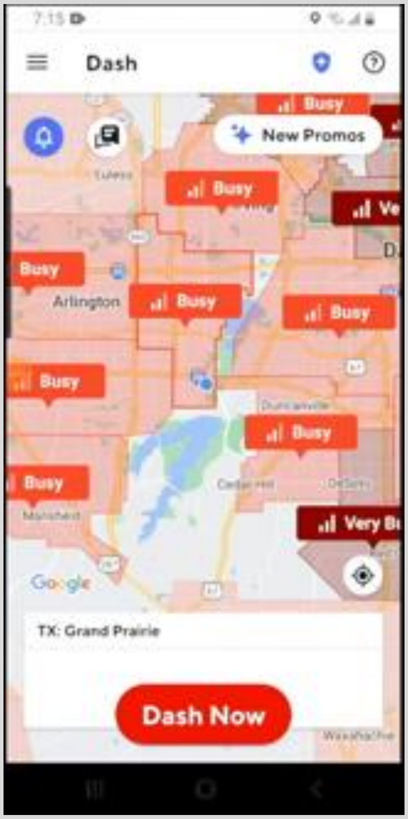
Summer of DashPass

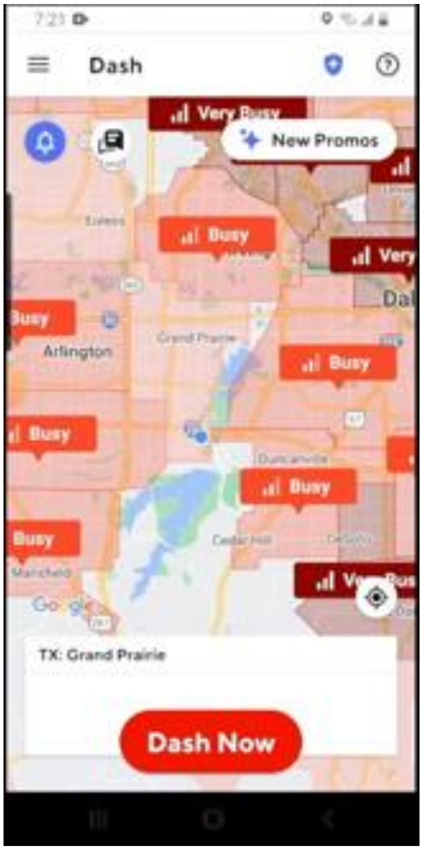
Get credits back on this order when you sign-up for DashPass

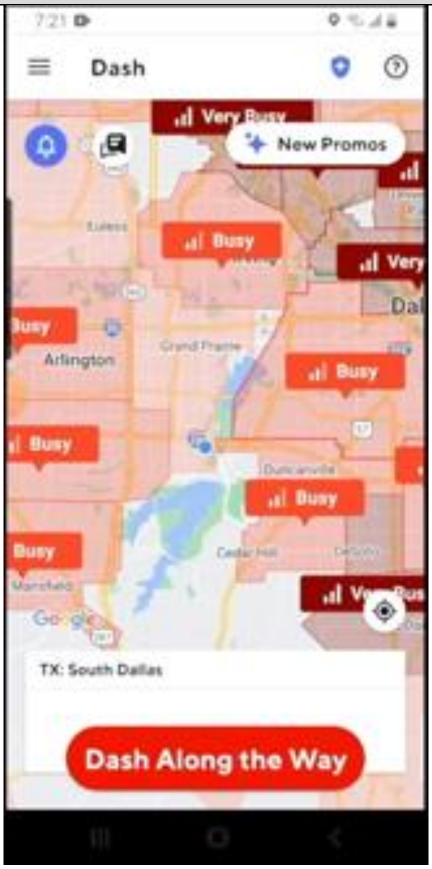
DoorDash Dasher App – Android

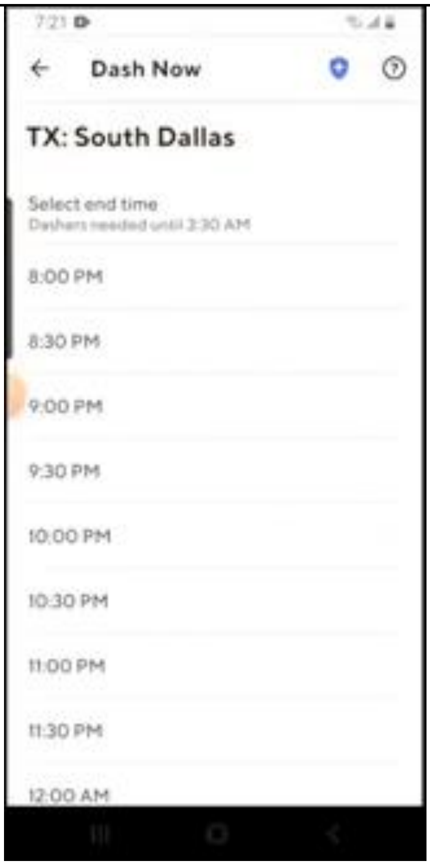
Below are screen shots of the Dasher App for Android. The Dasher app is the app that that DoorDash drivers use to pick-up orders at restaurants and deliver orders to consumers (see Exh 86):











7:21

Dash Now

TX: South Dallas

Select end time
Dashers needed until 2:30 AM

8:00 PM

8:30 PM

9:00 PM

9:30 PM

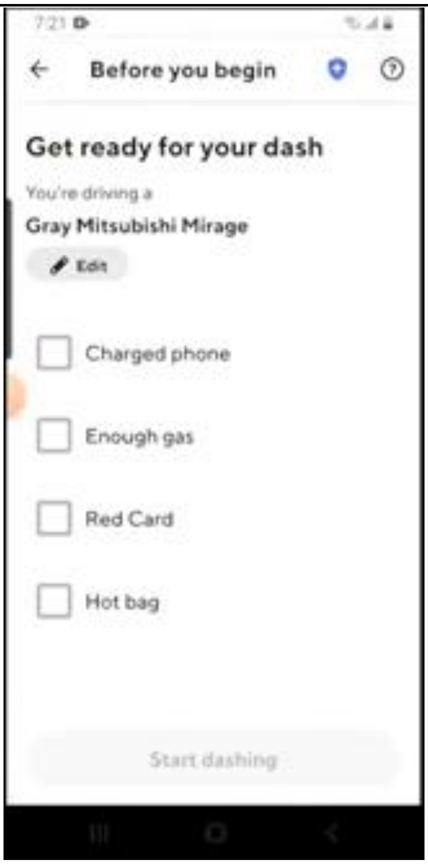
10:00 PM

10:30 PM

11:00 PM

11:30 PM

12:00 AM



7:21

Before you begin

Get ready for your dash

You're driving a
Gray Mitsubishi Mirage

Edit

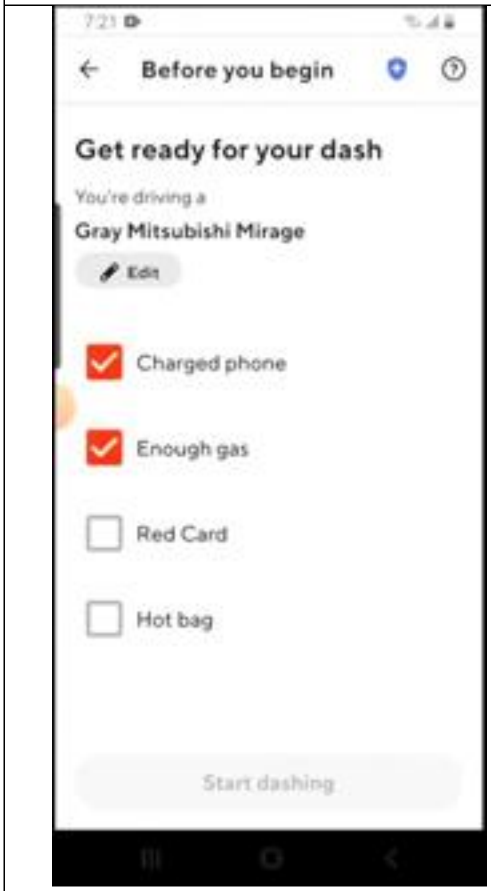
□ Charged phone

□ Enough gas

□ Red Card

□ Hot bag

Start dashing



7:21

Before you begin

Get ready for your dash

You're driving a
Gray Mitsubishi Mirage

Edit

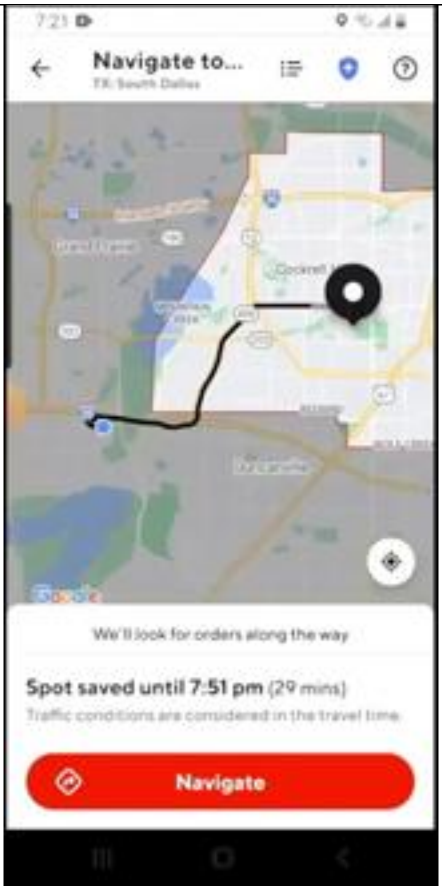
☑ Charged phone

☑ Enough gas

□ Red Card

□ Hot bag

Start dashing



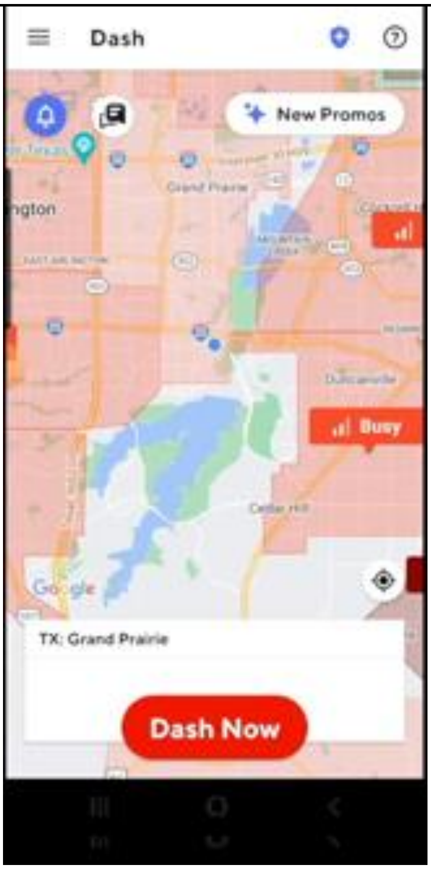
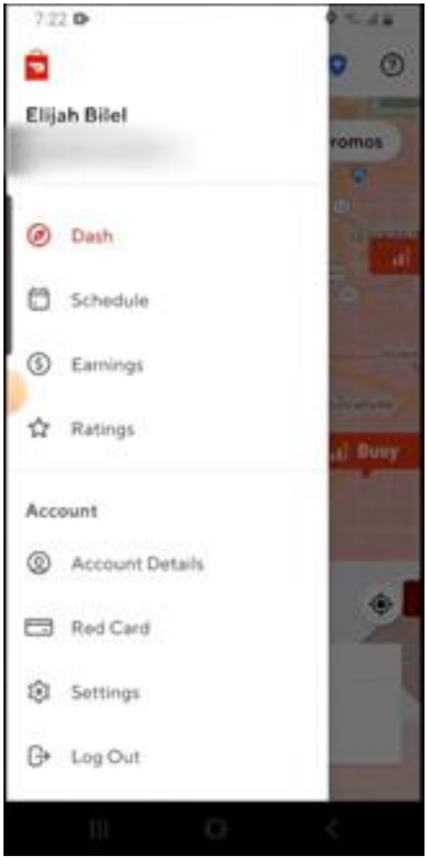
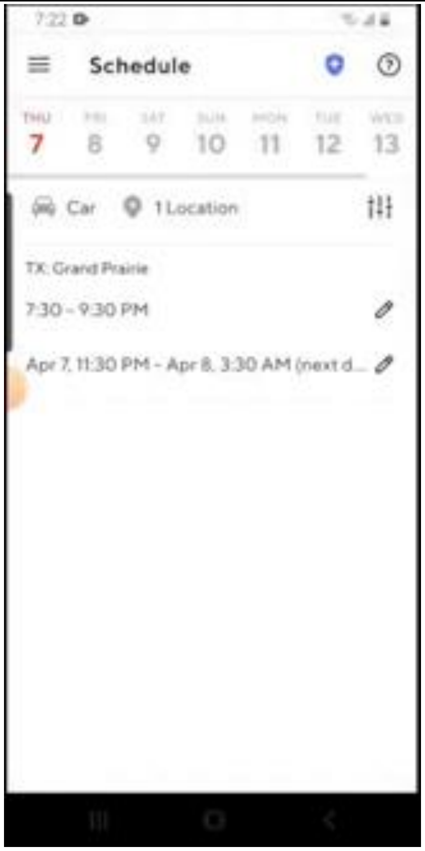
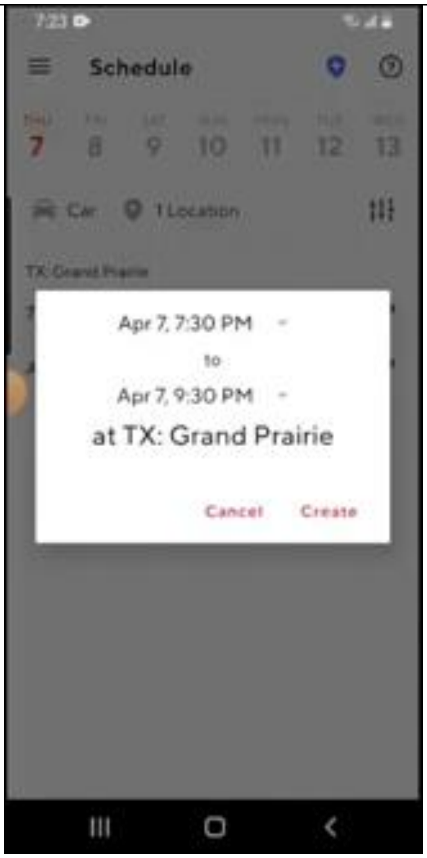
7:21

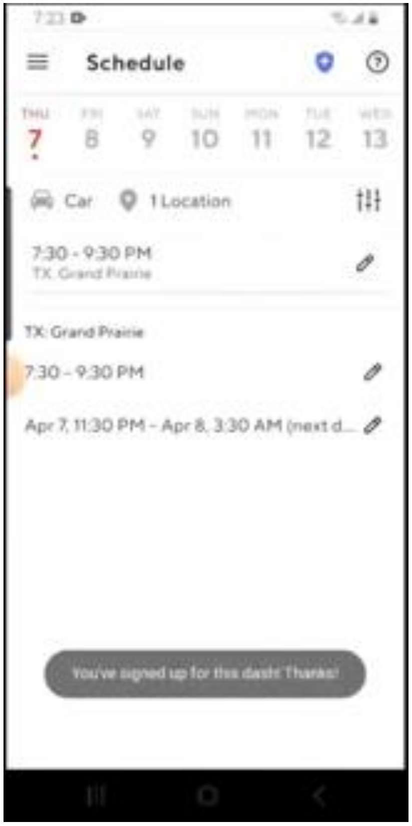
Navigate to...
TX: South Dallas

We'll look for orders along the way

Spot saved until 7:51 pm (29 mins)
Traffic conditions are considered in the travel time

Navigate

	 Dash New Promos ngton Grand Prairie Busy Duncanville Cedar Hill Google TX: Grand Prairie Dash Now	 Elijah Bilel [redacted] Dash Schedule Earnings Ratings Account Account Details Red Card Settings Log Out
	 THU 7 FRI 8 SAT 9 SUN 10 MON 11 TUE 12 WED 13 Car 1 Location TX: Grand Prairie 7:30 - 9:30 PM Apr 7, 11:30 PM - Apr 8, 3:30 AM (next d...	 THU 7 FRI 8 SAT 9 SUN 10 MON 11 TUE 12 WED 13 Car 1 Location TX: Grand Prairie Apr 7, 7:30 PM to Apr 7, 9:30 PM at TX: Grand Prairie



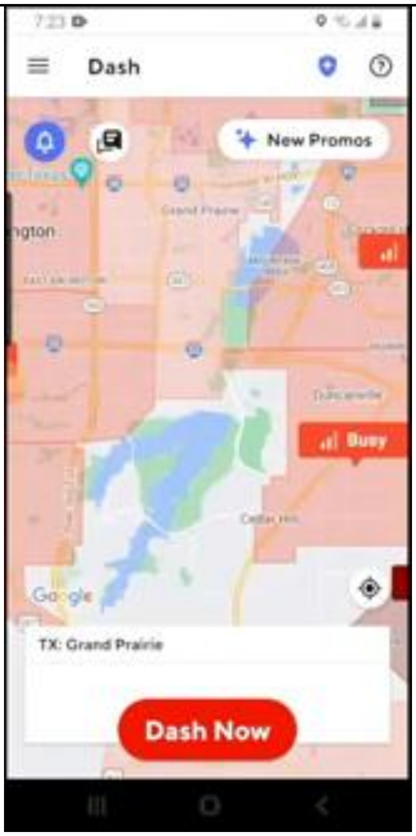
7:30 - 9:30 PM
TX: Grand Prairie

TX: Grand Prairie

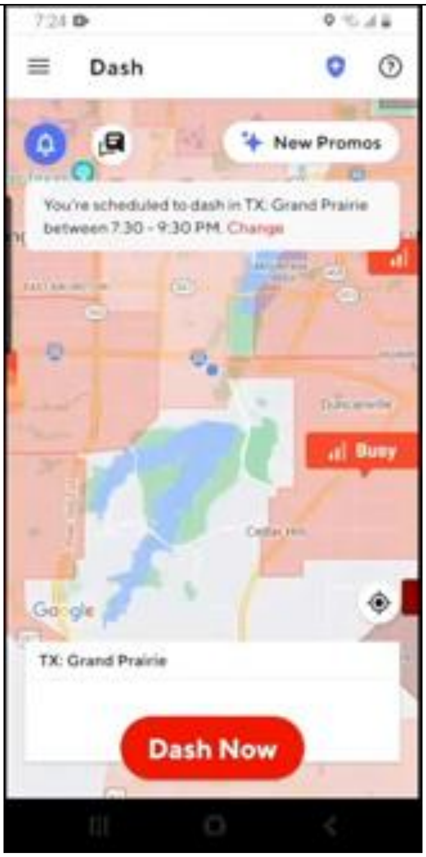
7:30 - 9:30 PM

Apr 7, 11:30 PM - Apr 8, 3:30 AM (next d...

You've signed up for this dash! Thanks!

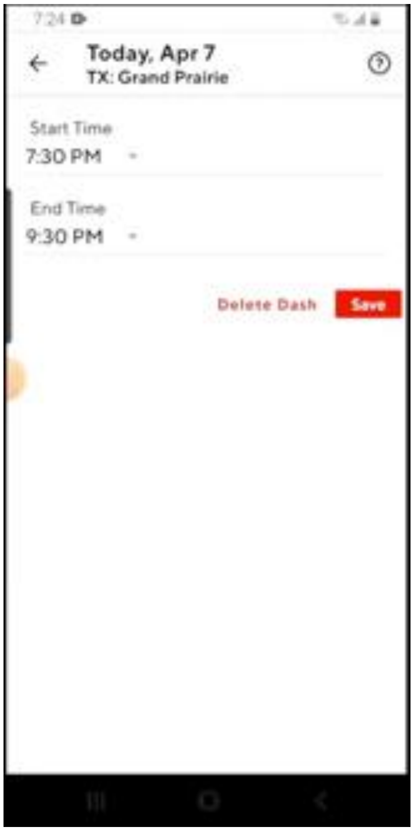


TX: Grand Prairie



You're scheduled to dash in TX: Grand Prairie between 7:30 - 9:30 PM. Change

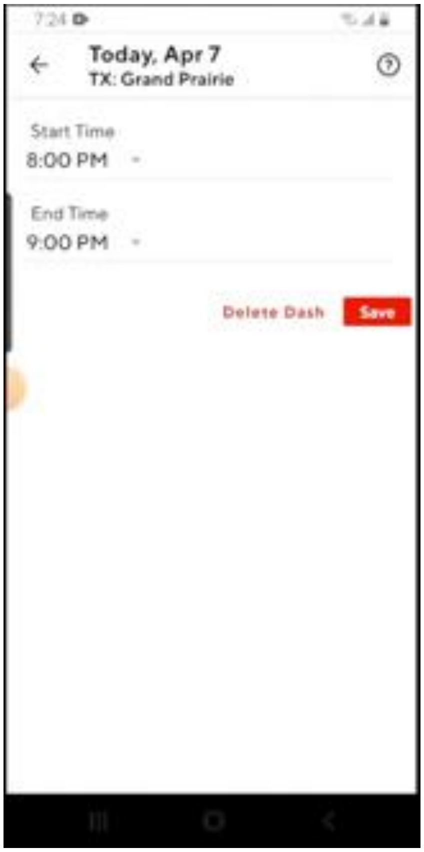
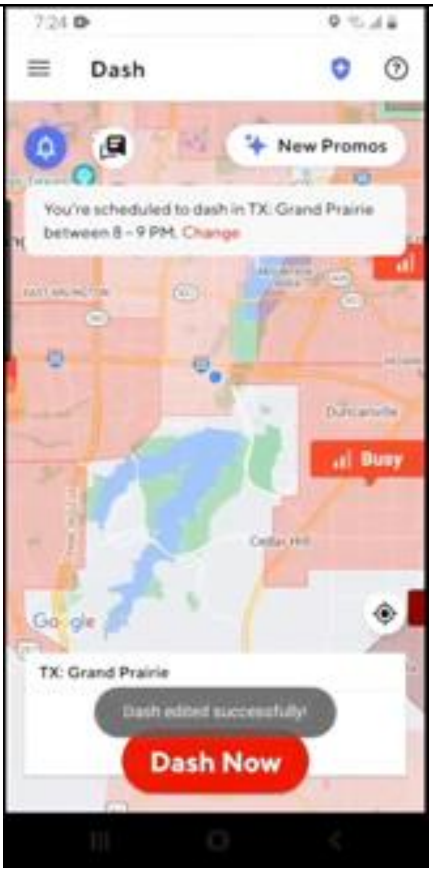
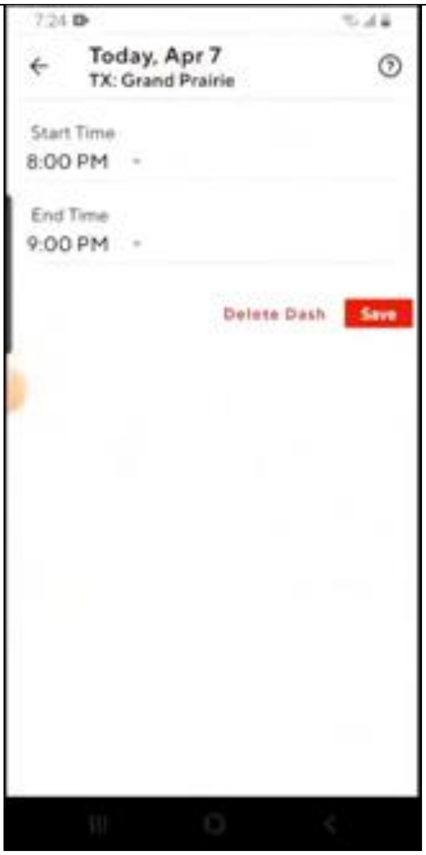
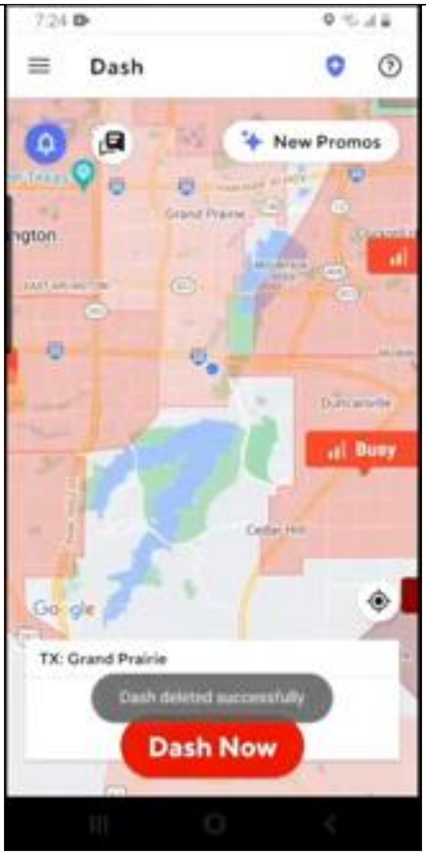
TX: Grand Prairie

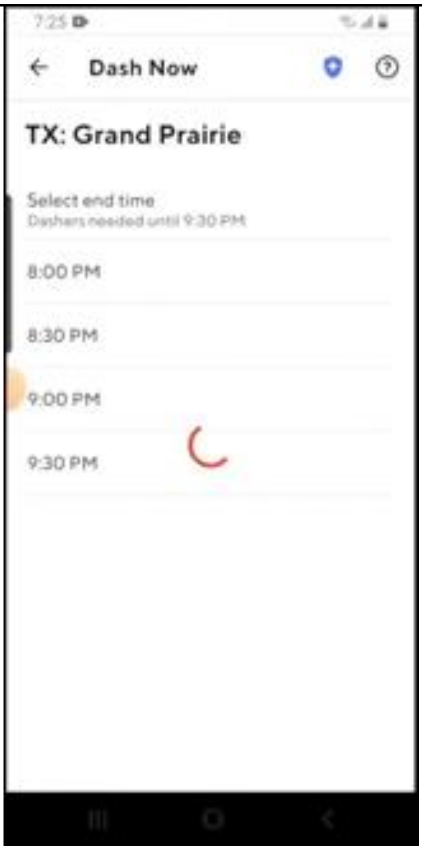


Today, Apr 7
TX: Grand Prairie

Start Time
7:30 PM

End Time
9:30 PM

	 7:24 Today, Apr 7 TX: Grand Prairie Start Time 8:00 PM End Time 9:00 PM 	 7:24 Dash You're scheduled to dash in TX: Grand Prairie between 8 - 9 PM. Change TX: Grand Prairie Dash edited successfully! New Promos Busy Duncanville Cedar Hill Google Dash Now
	 7:24 Today, Apr 7 TX: Grand Prairie Start Time 8:00 PM End Time 9:00 PM 	 7:24 Dash TX: Grand Prairie Dash deleted successfully New Promos ngton Grand Prairie Busy Duncanville Cedar Hill Google Dash Now



7:25

Dash Now

TX: Grand Prairie

Select end time

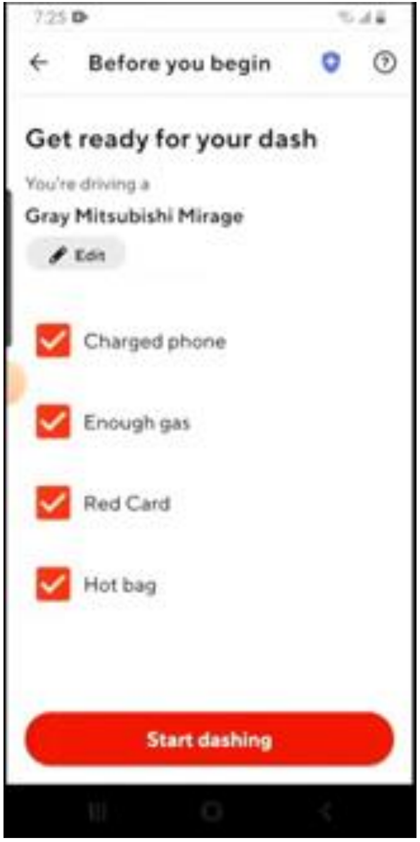
Dashers needed until 9:30 PM

8:00 PM

8:30 PM

9:00 PM

9:30 PM



7:25

Before you begin

Get ready for your dash

You're driving a

Gray Mitsubishi Mirage

Edit

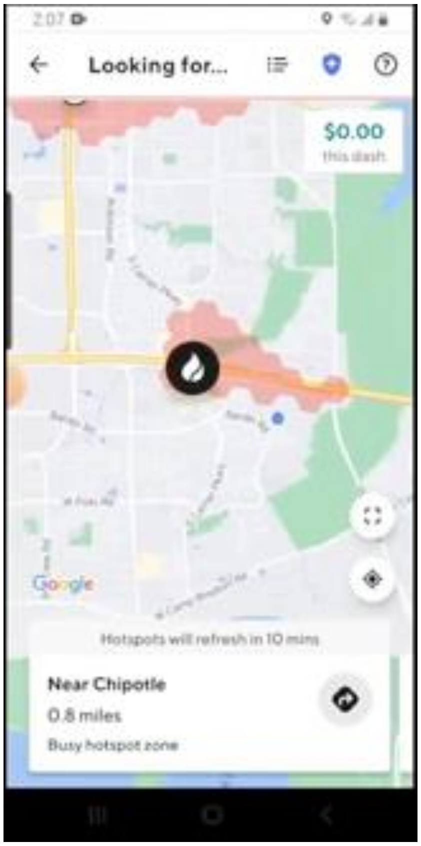
☑ Charged phone

☑ Enough gas

☑ Red Card

☑ Hot bag

Start dashing



2:07

Looking for...

$0.00

this dash

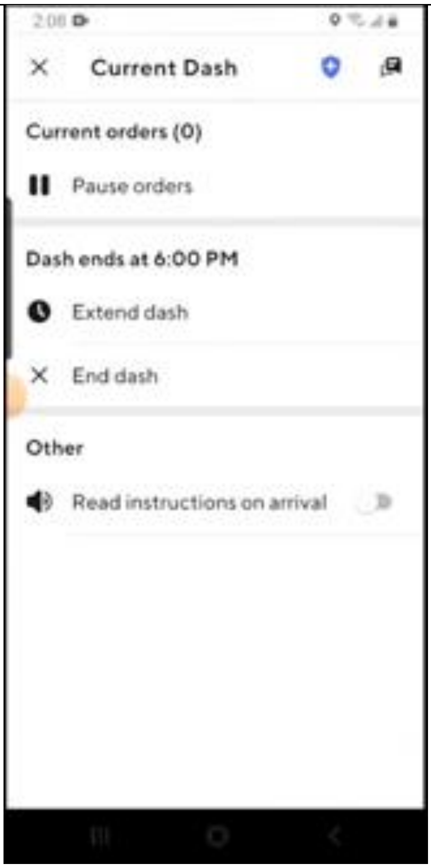
Google

Hotspots will refresh in 10 mins

Near Chipotle

0.8 miles

Busy hotspot zone



2:08

Current Dash

Current orders (0)

Pause orders

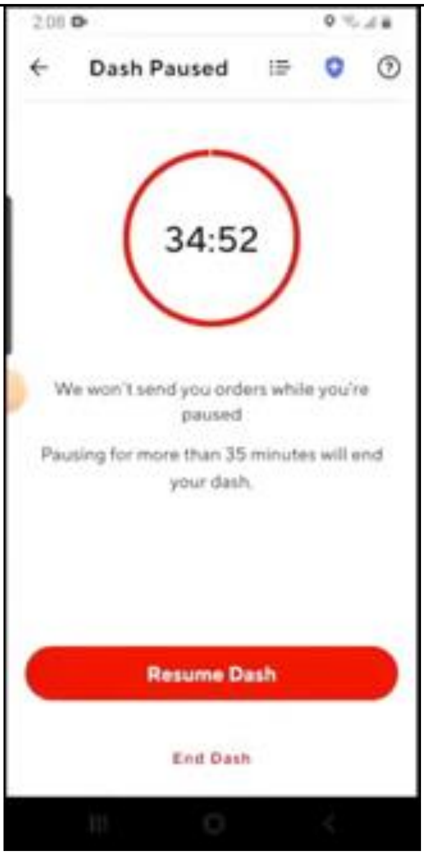
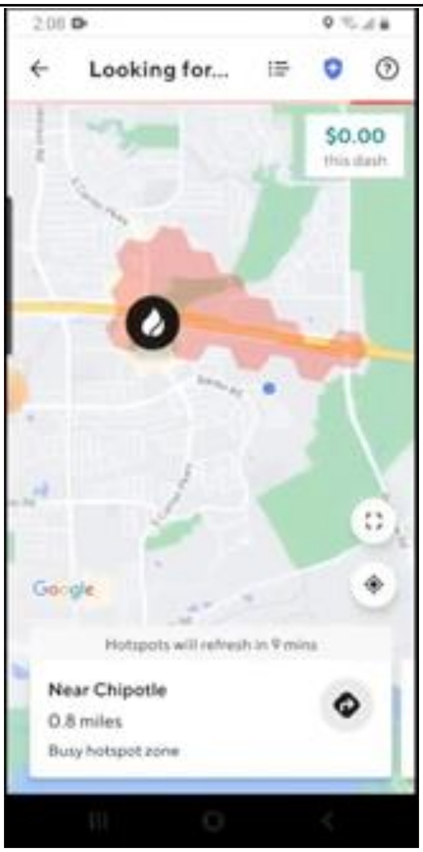
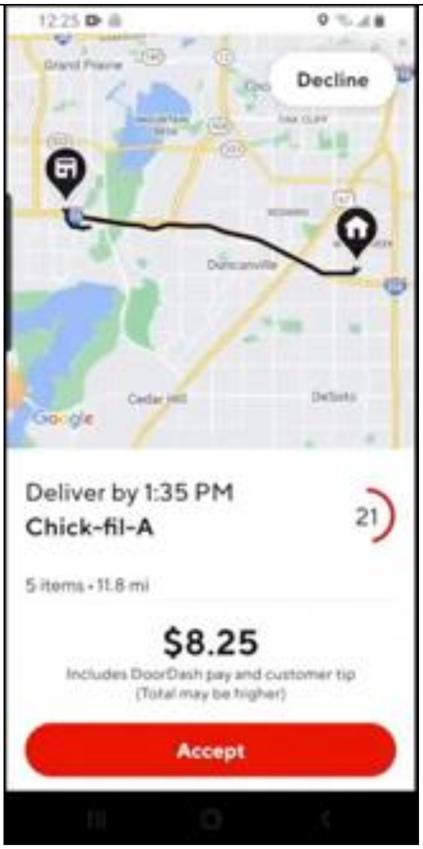
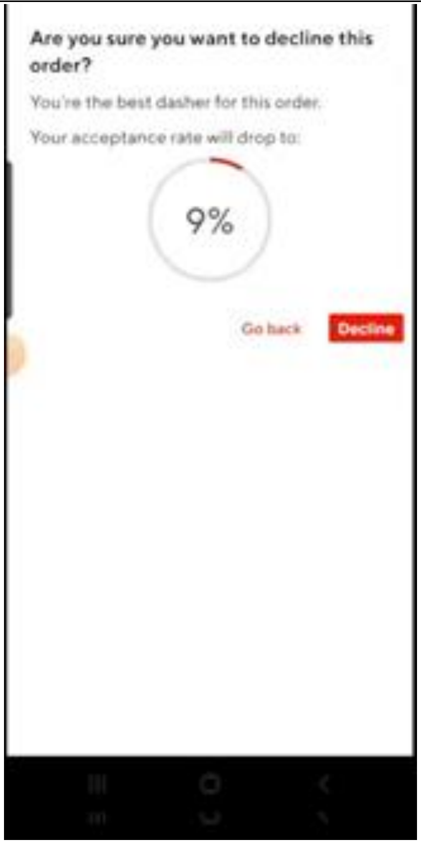
Dash ends at 6:00 PM

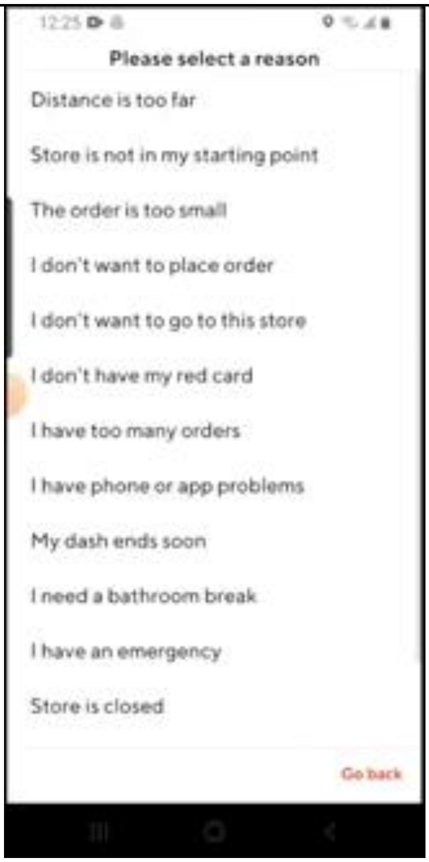
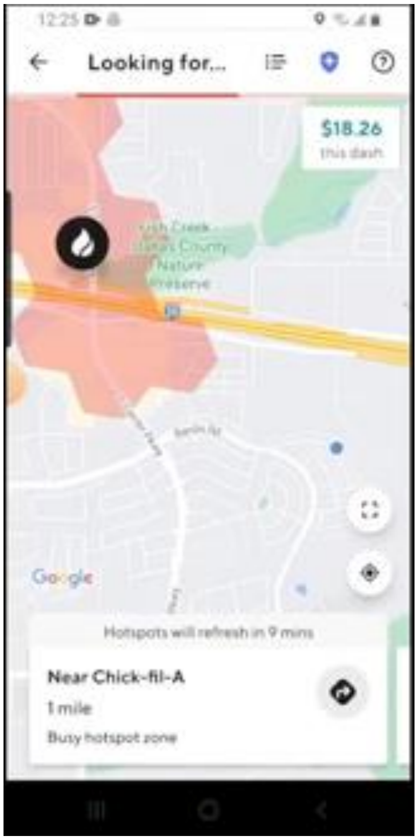
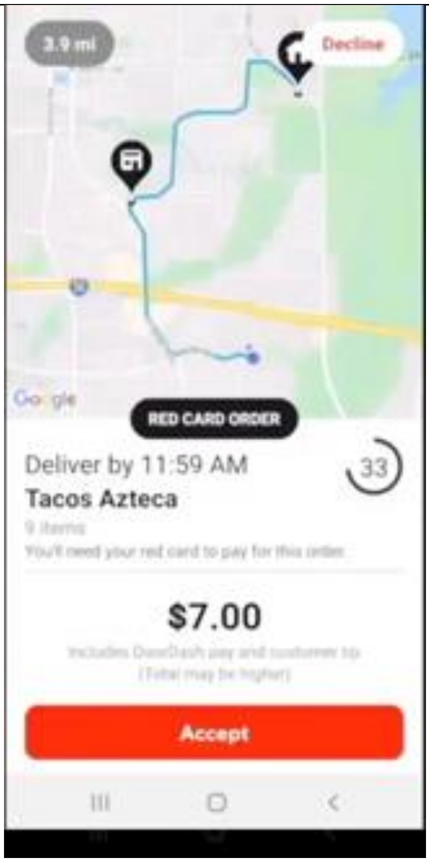
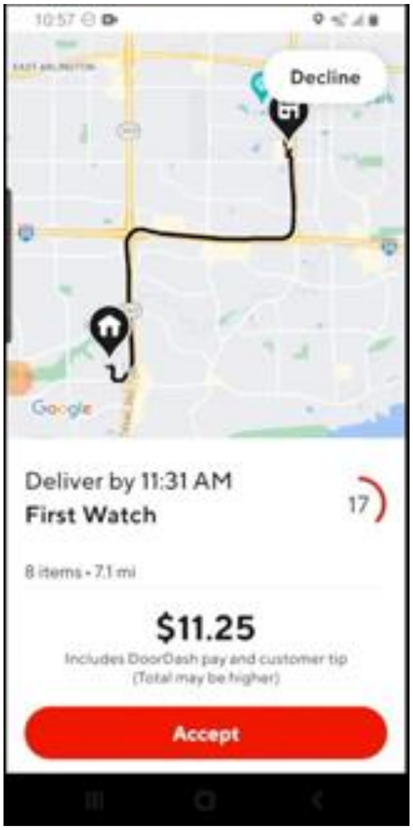
Extend dash

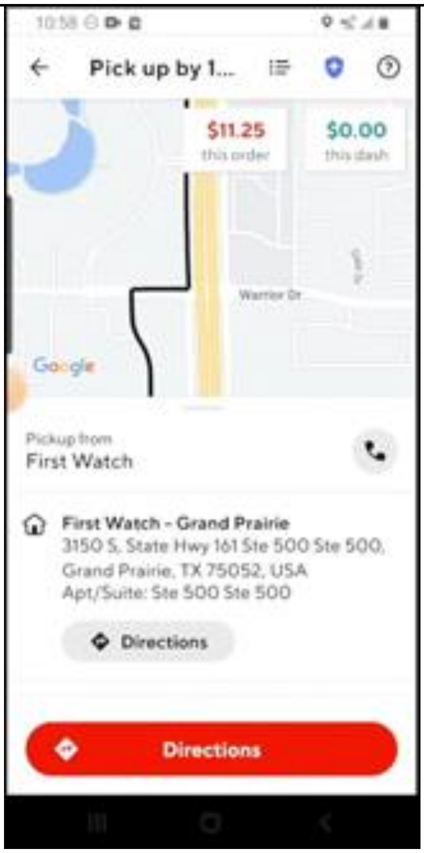
End dash

Other

Read instructions on arrival

	 2:08 Dash Paused 34:52 We won't send you orders while you're paused Pausing for more than 35 minutes will end your dash. Resume Dash End Dash	 2:08 Looking for... $0.00 this dash Hotspots will refresh in 9 mins Near Chipotle 0.8 miles Busy hotspot zone
	 12:25 Decline Grand Prairie Duncanville Cedar Hill DeSoto Google Deliver by 1:35 PM Chick-fil-A 21 5 items • 11.8 mi $8.25 Includes DoorDash pay and customer tip (Total may be higher) Accept	 Are you sure you want to decline this order? You're the best dasher for this order. Your acceptance rate will drop to: 9% Go back Decline

	 12:25 Please select a reason Distance is too far Store is not in my starting point The order is too small I don't want to place order I don't want to go to this store I don't have my red card I have too many orders I have phone or app problems My dash ends soon I need a bathroom break I have an emergency Store is closed Go back	 12:25 Looking for... $18.26 this dash Hotspots will refresh in 9 mins Near Chick-fil-A 1 mile Busy hotspot zone
	 Decline RED CARD ORDER Deliver by 11:59 AM 33 Tacos Azteca 9 items You'll need your red card to pay for this order $7.00 Includes DoorDash pay and customer tip (Total may be higher) Accept	 10:57 Decline Deliver by 11:31 AM 17 First Watch 8 items • 7.1 mi $11.25 Includes DoorDash pay and customer tip (Total may be higher) Accept



10:58

← Pick up by 1...

$11.25 this order

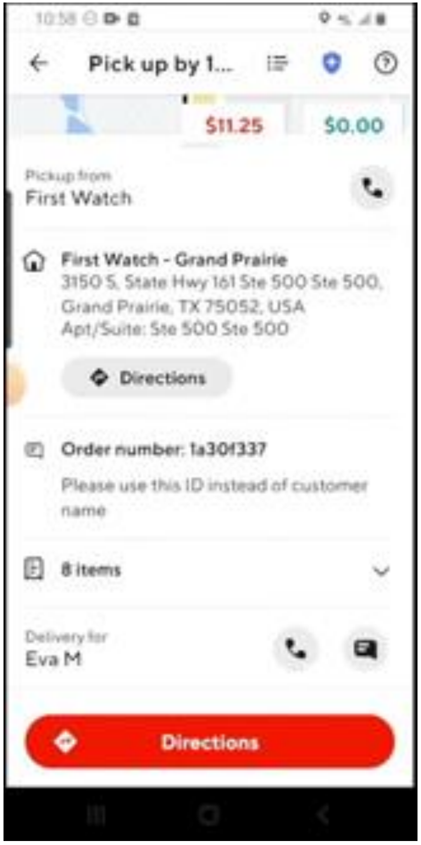
$0.00 this dash

Pickup from
First Watch

First Watch - Grand Prairie
3150 S. State Hwy 161 Ste 500 Ste 500,
Grand Prairie, TX 75052, USA
Apt/Suite: Ste 500 Ste 500

Directions

Directions



10:58

← Pick up by 1...

$11.25

$0.00

Pickup from
First Watch

First Watch - Grand Prairie
3150 S. State Hwy 161 Ste 500 Ste 500,
Grand Prairie, TX 75052, USA
Apt/Suite: Ste 500 Ste 500

Directions

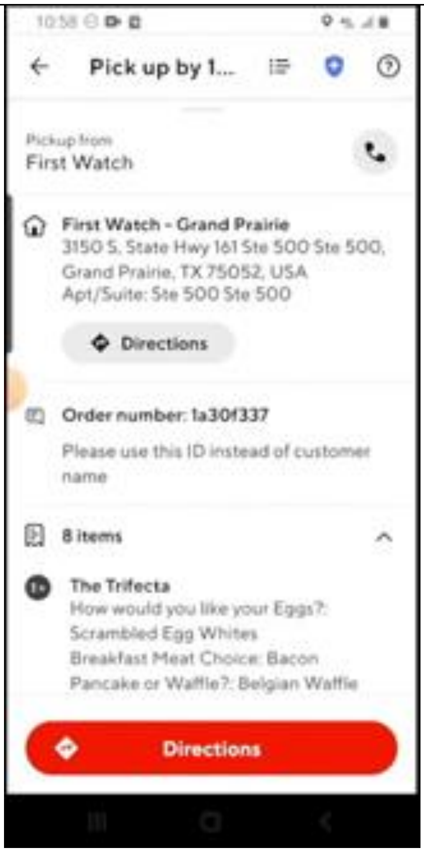
Order number: 1a30f337

Please use this ID instead of customer name

8 items

Delivery for
Eva M

Directions



10:58

← Pick up by 1...

Pickup from
First Watch

First Watch - Grand Prairie
3150 S. State Hwy 161 Ste 500 Ste 500,
Grand Prairie, TX 75052, USA
Apt/Suite: Ste 500 Ste 500

Directions

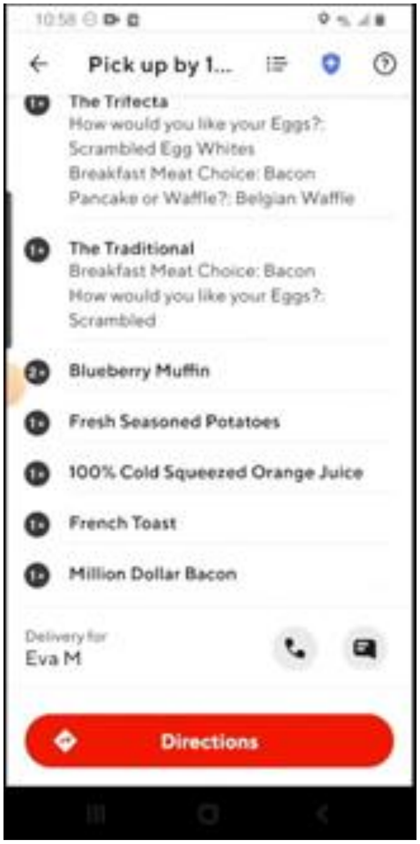
Order number: 1a30f337

Please use this ID instead of customer name

8 items

1× The Trifecta
How would you like your Eggs?: Scrambled Egg Whites
Breakfast Meat Choice: Bacon
Pancake or Waffle?: Belgian Waffle

Directions



10:58

← Pick up by 1...

1× The Trifecta
How would you like your Eggs?: Scrambled Egg Whites
Breakfast Meat Choice: Bacon
Pancake or Waffle?: Belgian Waffle

1× The Traditional
Breakfast Meat Choice: Bacon
How would you like your Eggs?: Scrambled

2× Blueberry Muffin

1× Fresh Seasoned Potatoes

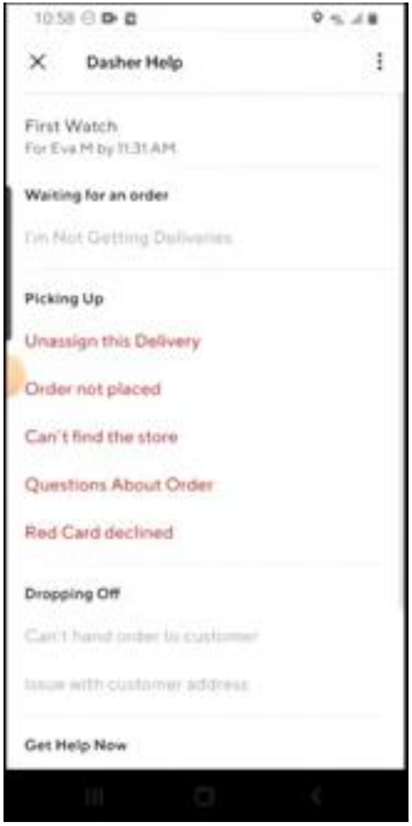
1× 100% Cold Squeezed Orange Juice

1× French Toast

1× Million Dollar Bacon

Delivery for
Eva M

Directions



First Watch
For Eva M by 11:31 AM

Waiting for an order

I'm Not Getting Deliveries

Picking Up

Unassign this Delivery

Order not placed

Can't find the store

Questions About Order

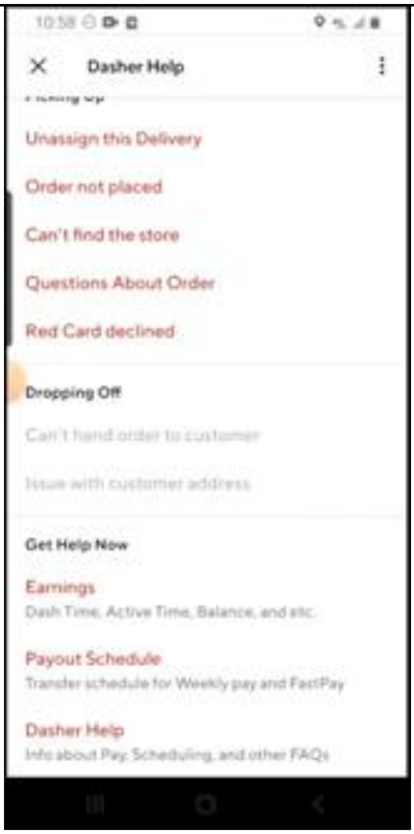
Red Card declined

Dropping Off

Can't hand order to customer

Issue with customer address

Get Help Now



Picking Up

Unassign this Delivery

Order not placed

Can't find the store

Questions About Order

Red Card declined

Dropping Off

Can't hand order to customer

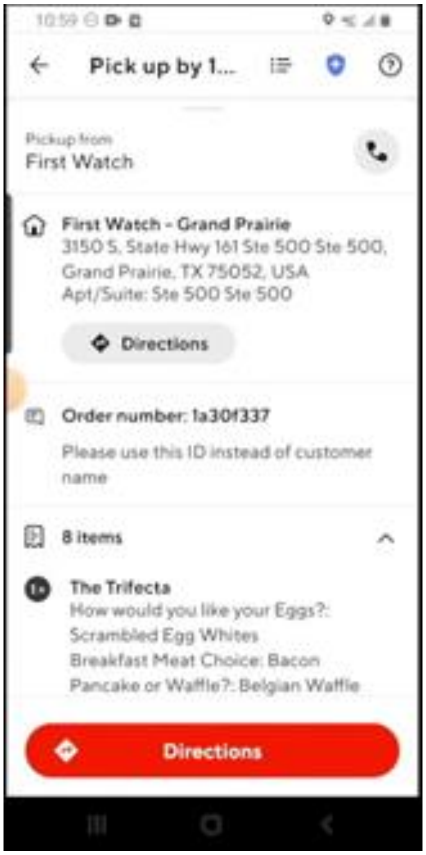
Issue with customer address

Get Help Now

Earnings
Dash Time, Active Time, Balance, and etc.

Payout Schedule
Transfer schedule for Weekly pay and FastPay

Dasher Help
Info about Pay, Scheduling, and other FAQs



Pickup from
First Watch

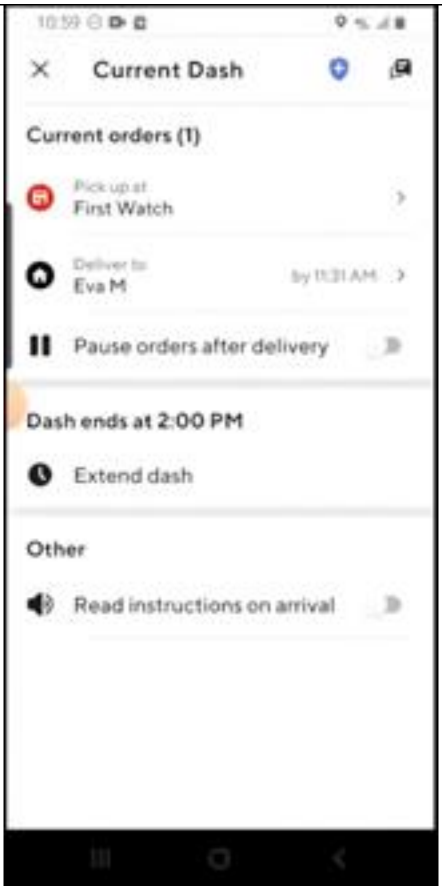
First Watch - Grand Prairie
3150 S. State Hwy 161 Ste 500 Ste 500,
Grand Prairie, TX 75052, USA
Apt/Suite: Ste 500 Ste 500

Order number: 1a30f337

Please use this ID instead of customer name

8 items

The Trifecta
How would you like your Eggs?: Scrambled Egg Whites
Breakfast Meat Choice: Bacon
Pancake or Waffle?: Belgian Waffle



Current orders (1)

Pick up at
First Watch

Deliver to
Eva M
by 11:31 AM

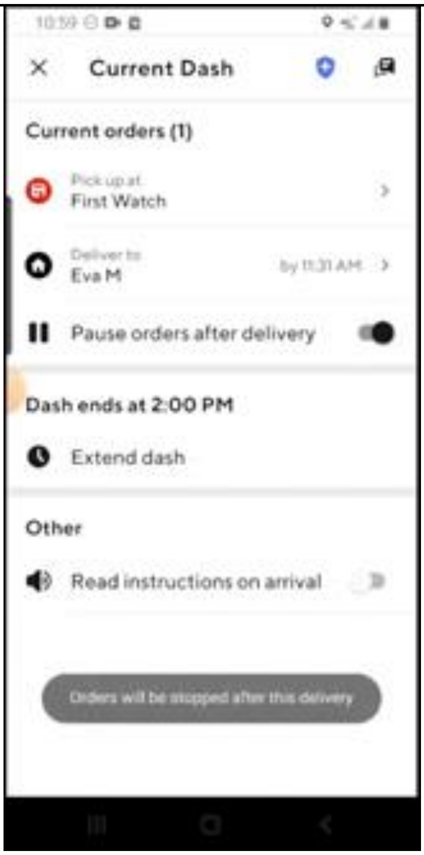
Pause orders after delivery

Dash ends at 2:00 PM

Extend dash

Other

Read instructions on arrival



Current Dash

Current orders (1)

Pick up at
First Watch

Deliver to
Eva M
by 11:31 AM

Pause orders after delivery

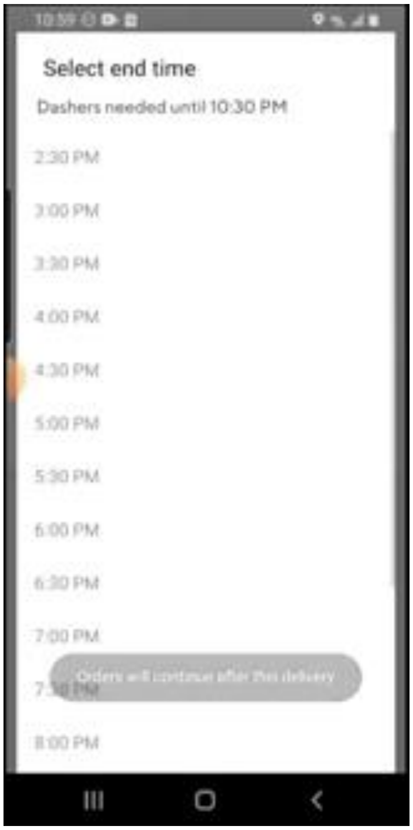
Dash ends at 2:00 PM

Extend dash

Other

Read instructions on arrival

Orders will be stopped after this delivery

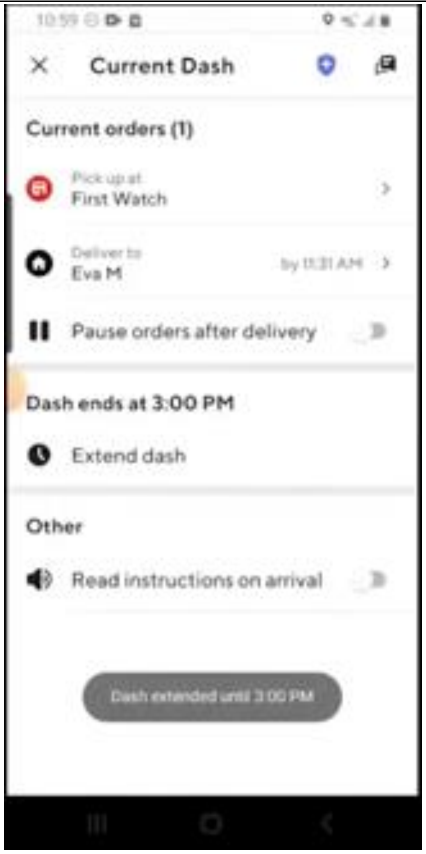


Select end time

Dashers needed until 10:30 PM

2:30 PM
3:00 PM
3:30 PM
4:00 PM
4:30 PM
5:00 PM
5:30 PM
6:00 PM
6:30 PM
7:00 PM
7:30 PM
8:00 PM

Orders will continue after this delivery



Current Dash

Current orders (1)

Pick up at
First Watch

Deliver to
Eva M
by 11:31 AM

Pause orders after delivery

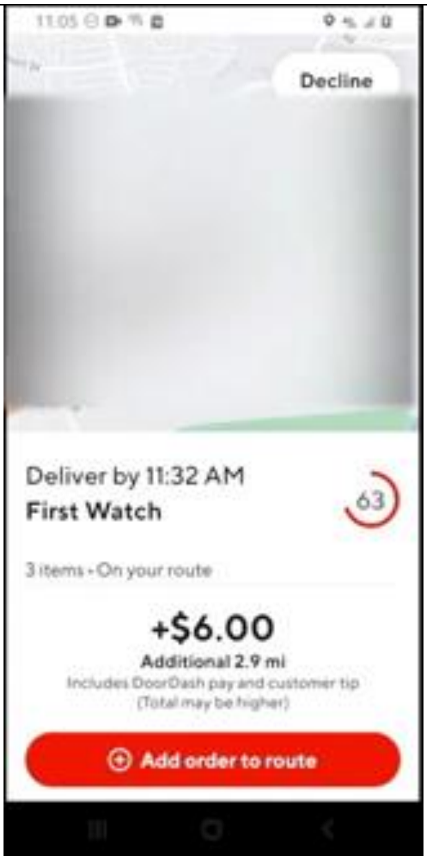
Dash ends at 3:00 PM

Extend dash

Other

Read instructions on arrival

Dash extended until 3:00 PM



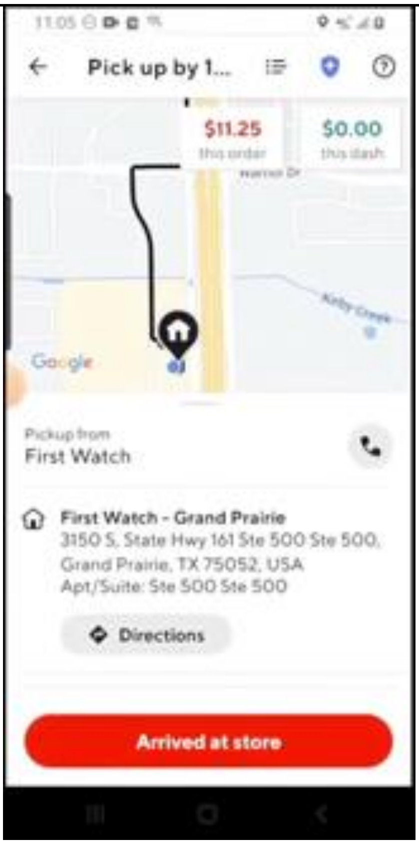
Decline

Deliver by 11:32 AM
First Watch
63

3 items • On your route

+$6.00
Additional 2.9 mi
Includes DoorDash pay and customer tip
(Total may be higher)

Add order to route


11:05

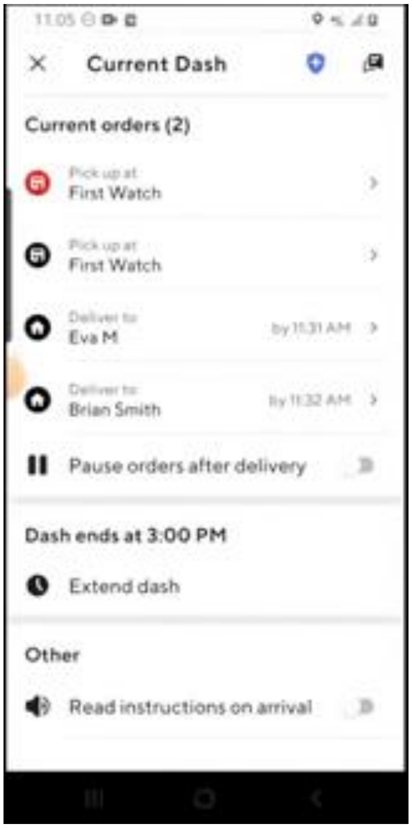
Pick up by 1...

$11.25 this order

$0.00 this dash

Pickup from
First Watch

First Watch - Grand Prairie
3150 S. State Hwy 161 Ste 500 Ste 500, Grand Prairie, TX 75052, USA
Apt/Suite: Ste 500 Ste 500


11:05

Current Dash

Current orders (2)

Pick up at
First Watch

Pick up at
First Watch

Deliver to
Eva M by 11:31 AM

Deliver to
Brian Smith by 11:32 AM

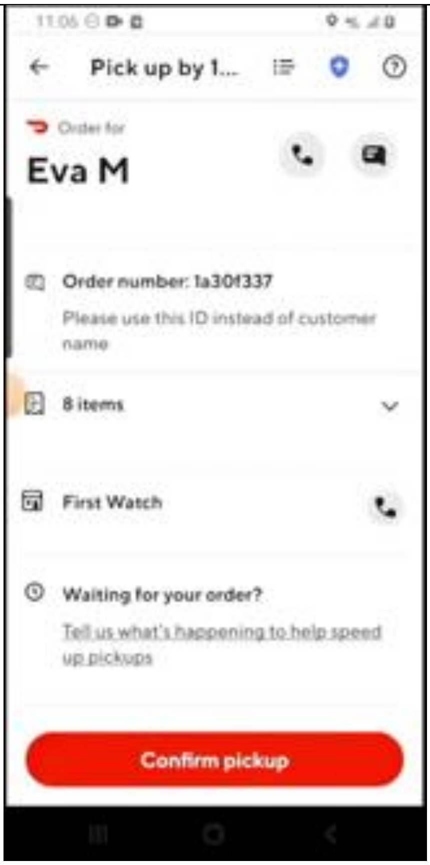
Pause orders after delivery

Dash ends at 3:00 PM

Extend dash

Other

Read instructions on arrival


11:06

Pick up by 1...

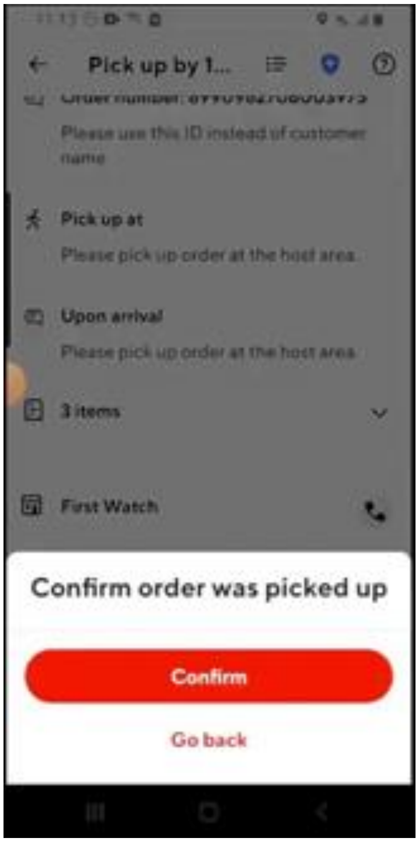
Order for
Eva M

Order number: 1a30f337
Please use this ID instead of customer name

8 items

First Watch

Waiting for your order?
Tell us what's happening to help speed up pickups


11:13

Pick up by 1...

Order number: [illegible]
Please use this ID instead of customer name

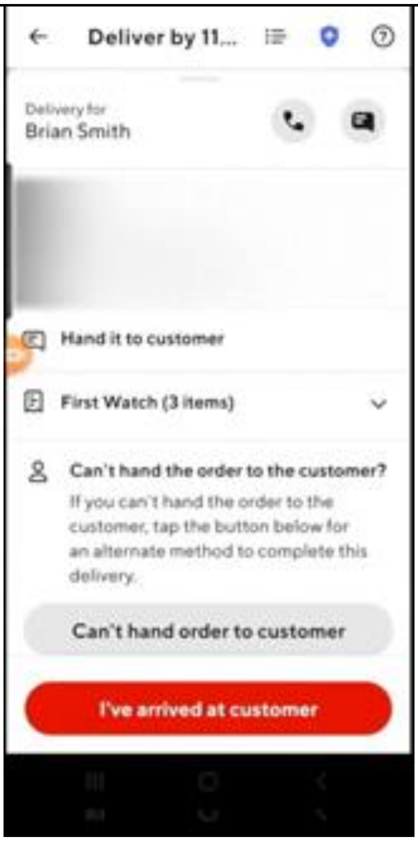
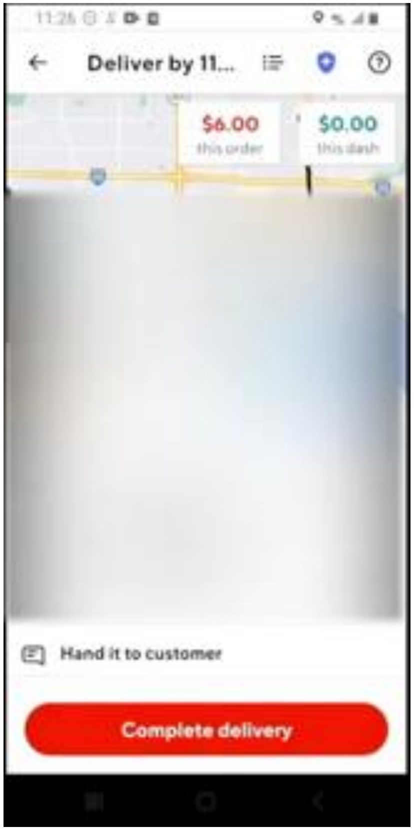
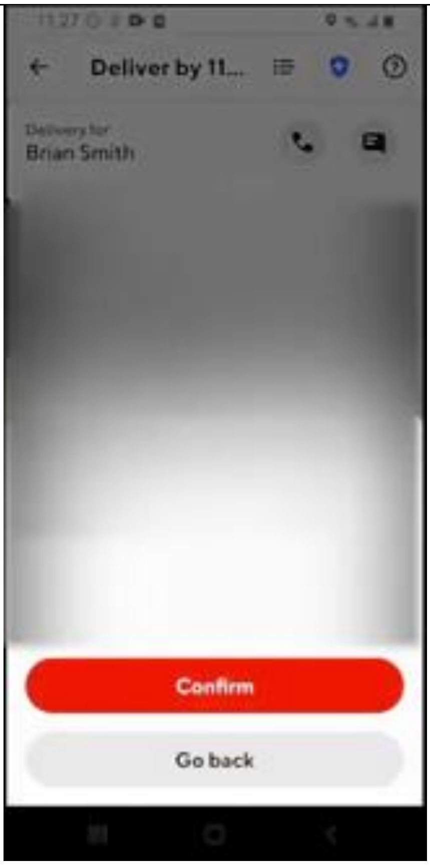
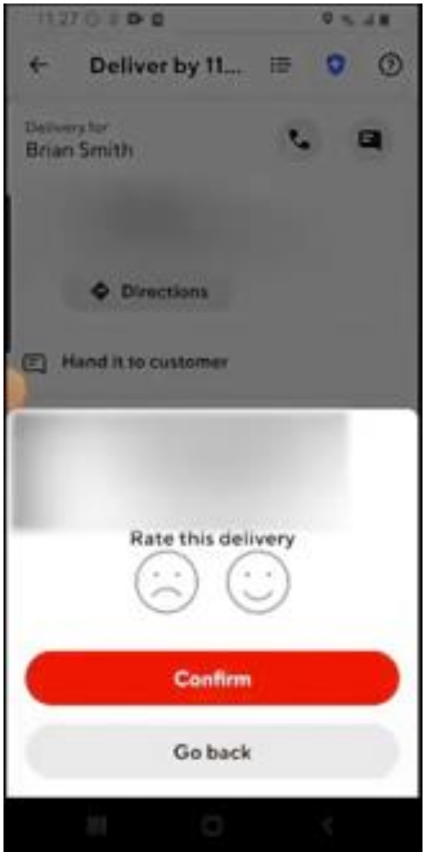
Pick up at
Please pick up order at the host area.

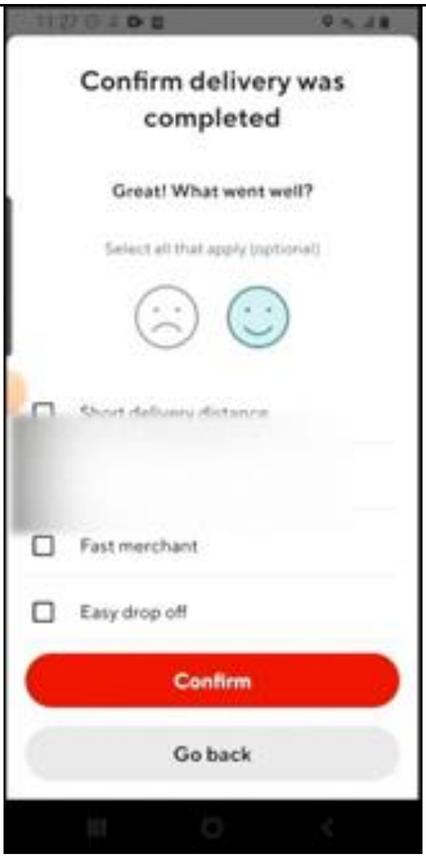
Upon arrival
Please pick up order at the host area.

3 items

First Watch

Confirm order was picked up

	 Deliver by 11... Delivery for Brian Smith Hand it to customer First Watch (3 items) Can't hand the order to the customer? If you can't hand the order to the customer, tap the button below for an alternate method to complete this delivery. Can't hand order to customer I've arrived at customer	 11:26 Deliver by 11... $6.00 this order $0.00 this dash Hand it to customer Complete delivery
	 11:27 Deliver by 11... Delivery for Brian Smith Confirm Go back	 11:27 Deliver by 11... Delivery for Brian Smith Directions Hand it to customer Rate this delivery Confirm Go back



Confirm delivery was completed

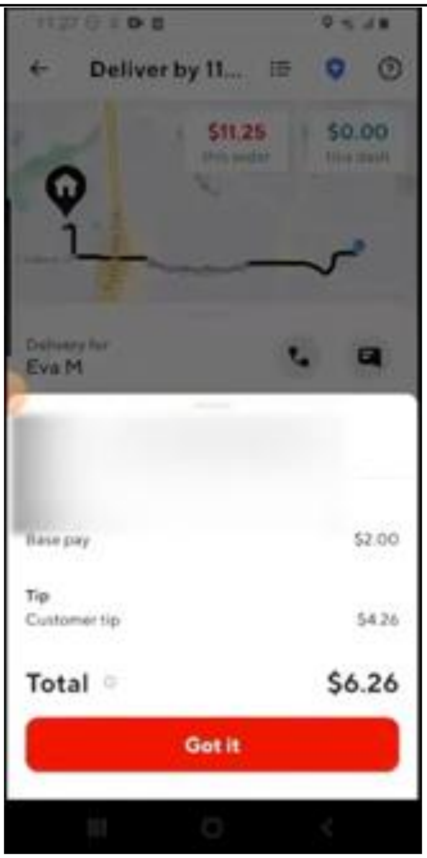
Great! What went well?

Select all that apply (optional)

□ Short delivery distance

□ Fast merchant

□ Easy drop off

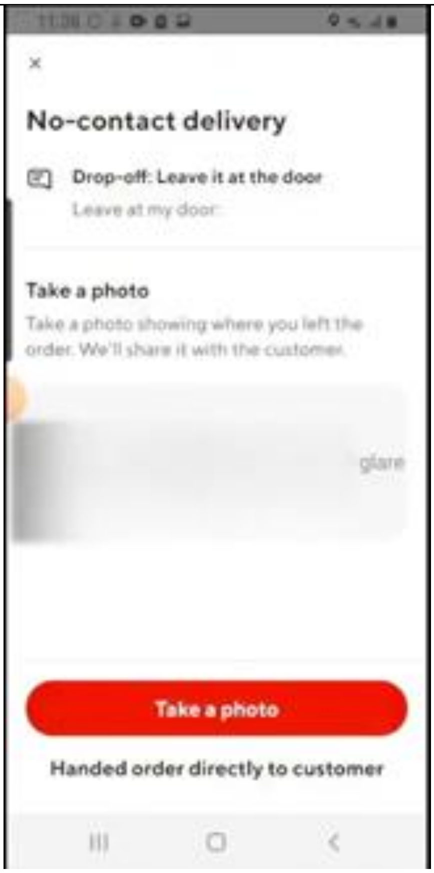


$11.25 This order

$0.00 This dash

Delivery for
Eva M

Base pay	$2.00
Tip Customer tip	$4.26
Total	**$6.26**

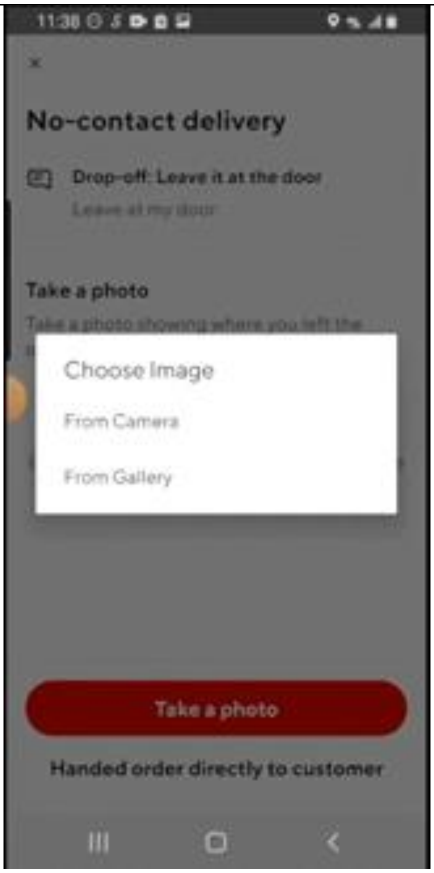


No-contact delivery

Drop-off: Leave it at the door
Leave at my door

Take a photo

Take a photo showing where you left the order. We'll share it with the customer.



11:38

No-contact delivery

Drop-off: Leave it at the door
Leave at my door

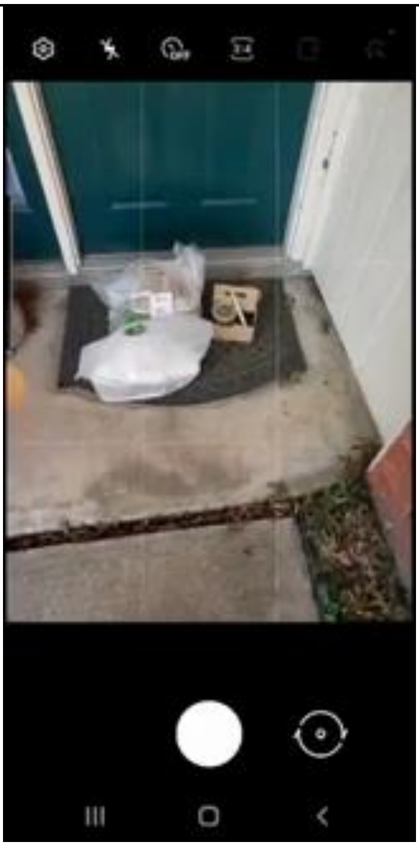
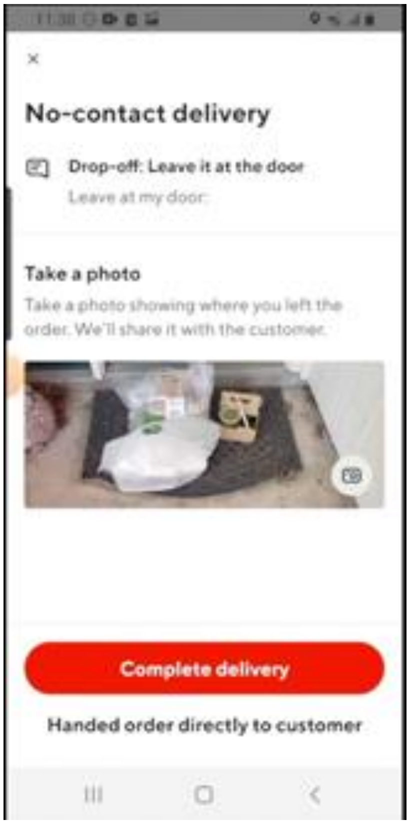
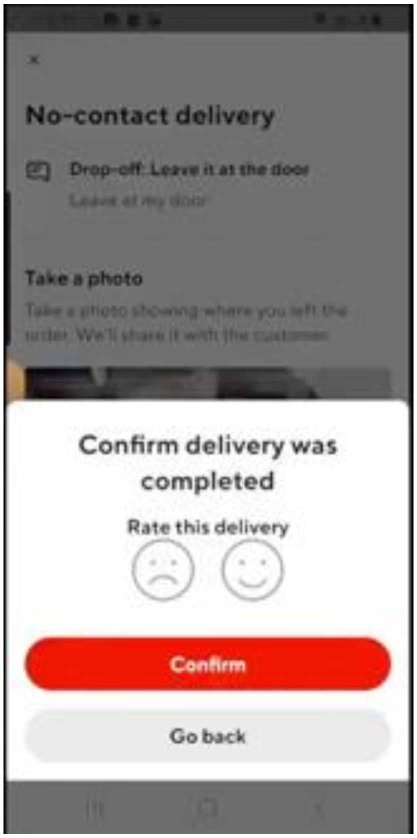
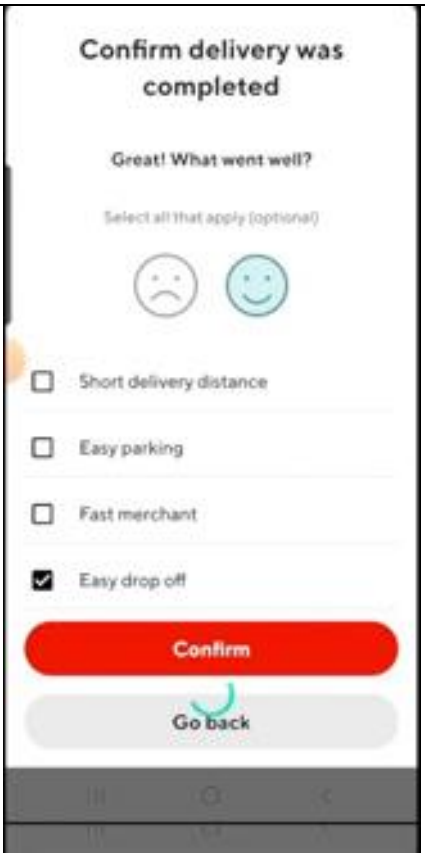
Take a photo

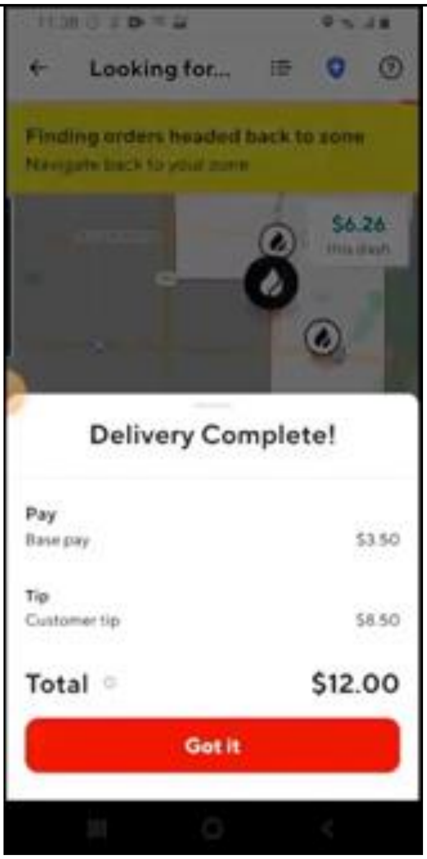
Take a photo showing where you left the

Choose Image

From Camera

From Gallery

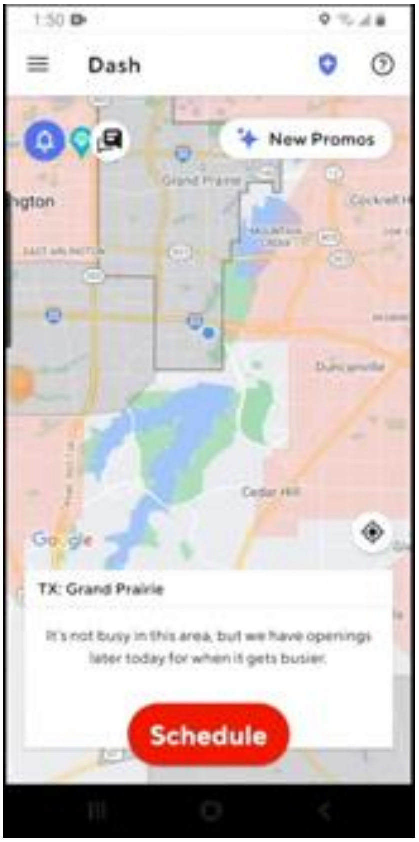
		 × No-contact delivery Drop-off: Leave it at the door Leave at my door Take a photo Take a photo showing where you left the order. We'll share it with the customer. Complete delivery Handed order directly to customer
	 × No-contact delivery Drop-off: Leave it at the door Leave at my door Take a photo Take a photo showing where you left the order. We'll share it with the customer. Confirm delivery was completed Rate this delivery Confirm Go back	 Confirm delivery was completed Great! What went well? Select all that apply (optional) □ Short delivery distance □ Easy parking □ Fast merchant ☑ Easy drop off Confirm Go back



Finding orders headed back to zone
Navigate back to your zone

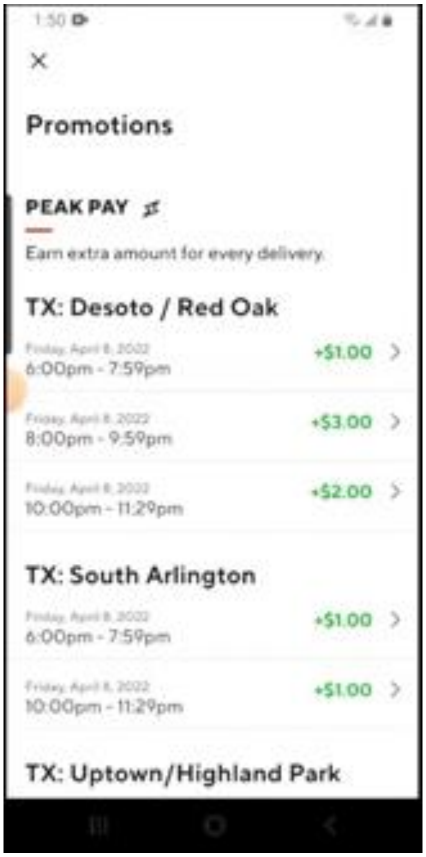
Delivery Complete!

Pay Base pay	$3.50
Tip Customer tip	$8.50
Total	**$12.00**



TX: Grand Prairie

It's not busy in this area, but we have openings later today for when it gets busier.



Promotions

PEAK PAY

Earn extra amount for every delivery.

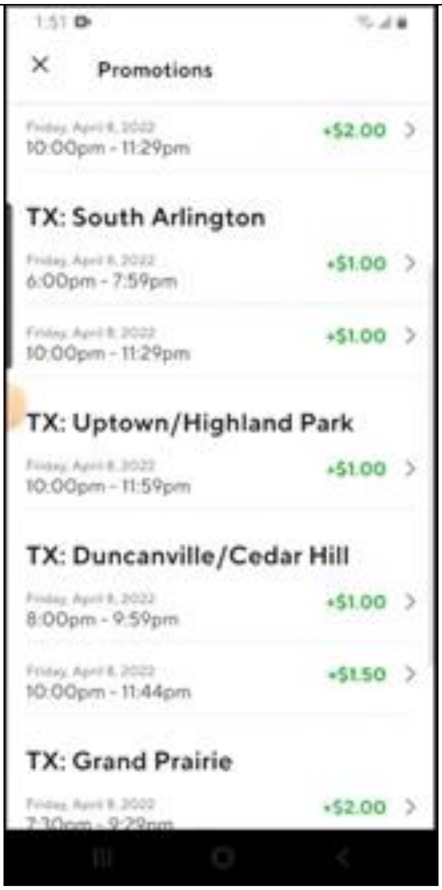
TX: Desoto / Red Oak

Friday, April 8, 2022 6:00pm - 7:59pm	+$1.00
Friday, April 8, 2022 8:00pm - 9:59pm	+$3.00
Friday, April 8, 2022 10:00pm - 11:29pm	+$2.00

TX: South Arlington

Friday, April 8, 2022 6:00pm - 7:59pm	+$1.00
Friday, April 8, 2022 10:00pm - 11:29pm	+$1.00

TX: Uptown/Highland Park



Promotions

Friday, April 8, 2022 10:00pm - 11:29pm	+$2.00

TX: South Arlington

Friday, April 8, 2022 6:00pm - 7:59pm	+$1.00
Friday, April 8, 2022 10:00pm - 11:29pm	+$1.00

TX: Uptown/Highland Park

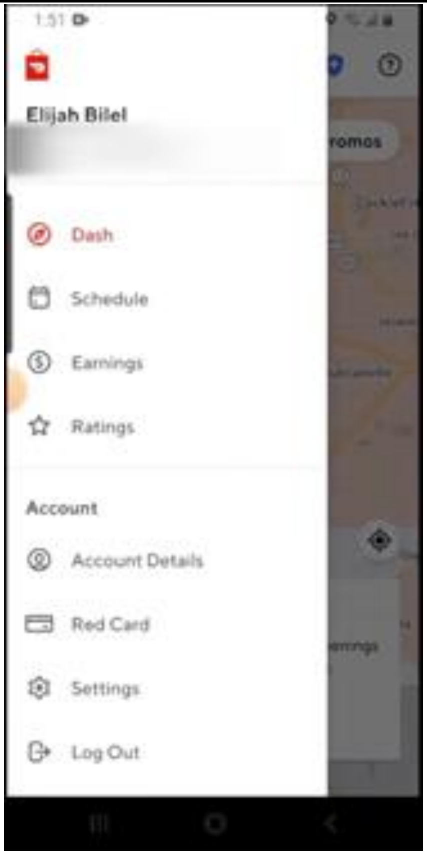
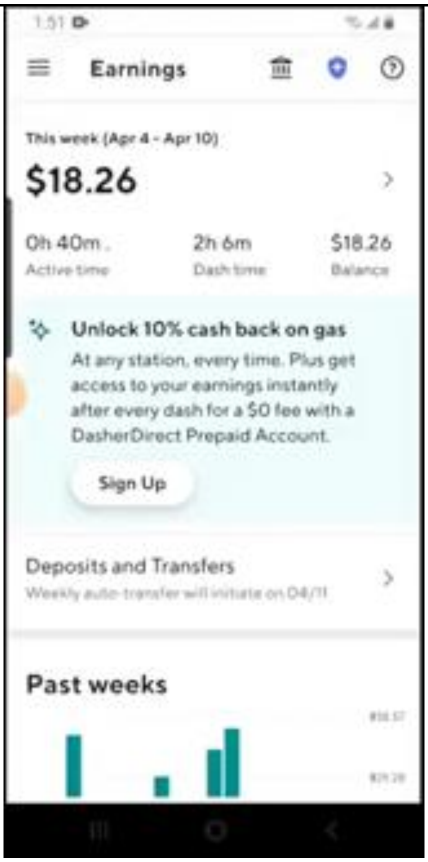
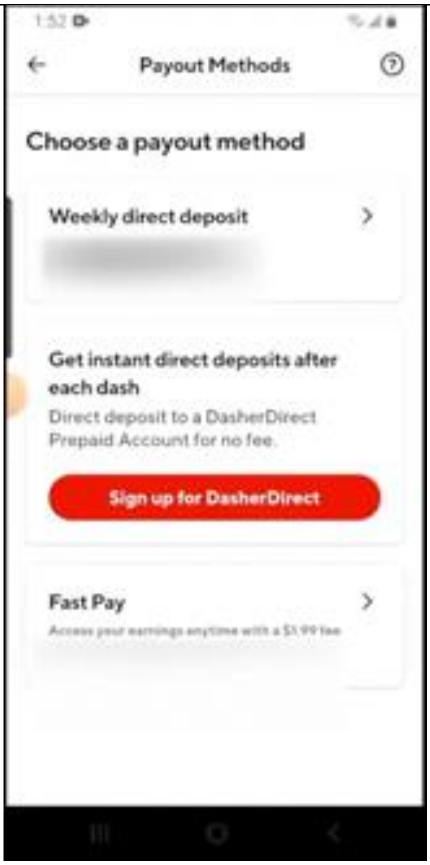
Friday, April 8, 2022 10:00pm - 11:59pm	+$1.00

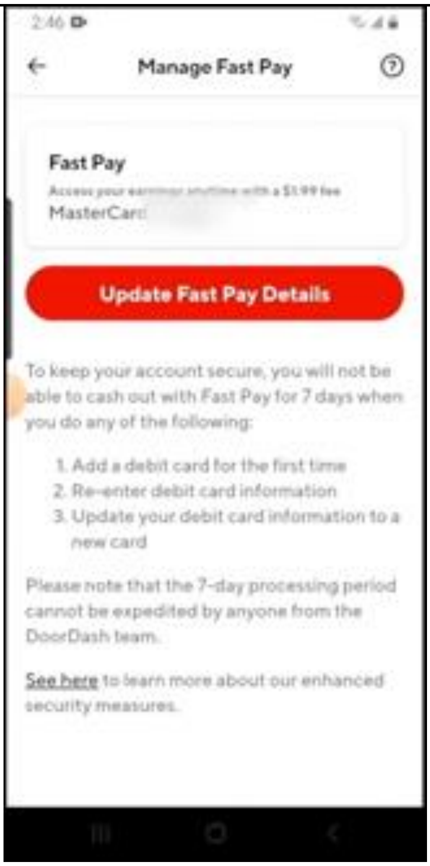
TX: Duncanville/Cedar Hill

Friday, April 8, 2022 8:00pm - 9:59pm	+$1.00
Friday, April 8, 2022 10:00pm - 11:44pm	+$1.50

TX: Grand Prairie

Friday, April 8, 2022 7:30pm - 9:29pm	+$2.00

	 1:51 Elijah Bilel [redacted] Dash Schedule Earnings Ratings Account Account Details Red Card Settings Log Out	 1:51 Earnings This week (Apr 4 - Apr 10) $18.26 0h 40m Active time 2h 6m Dash time $18.26 Balance Unlock 10% cash back on gas At any station, every time. Plus get access to your earnings instantly after every dash for a $0 fee with a DasherDirect Prepaid Account. Sign Up Deposits and Transfers Weekly auto-transfer will initiate on 04/11 Past weeks
	 1:52 Payout Methods Choose a payout method Weekly direct deposit [redacted] Get instant direct deposits after each dash Direct deposit to a DasherDirect Prepaid Account for no fee. Sign up for DasherDirect Fast Pay Access your earnings anytime with a $1.99 fee	 2:46 Payout Methods Choose a payout method [redacted]



2:46

Manage Fast Pay

Fast Pay

Access your earnings anytime with a $1.99 fee

MasterCard

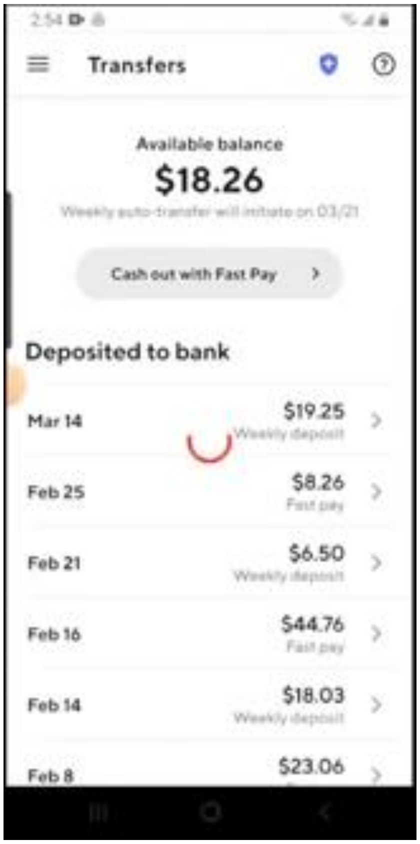
Update Fast Pay Details

To keep your account secure, you will not be able to cash out with Fast Pay for 7 days when you do any of the following:

1. Add a debit card for the first time
2. Re-enter debit card information
3. Update your debit card information to a new card

Please note that the 7-day processing period cannot be expedited by anyone from the DoorDash team.

See here to learn more about our enhanced security measures.



2:54

Transfers

Available balance

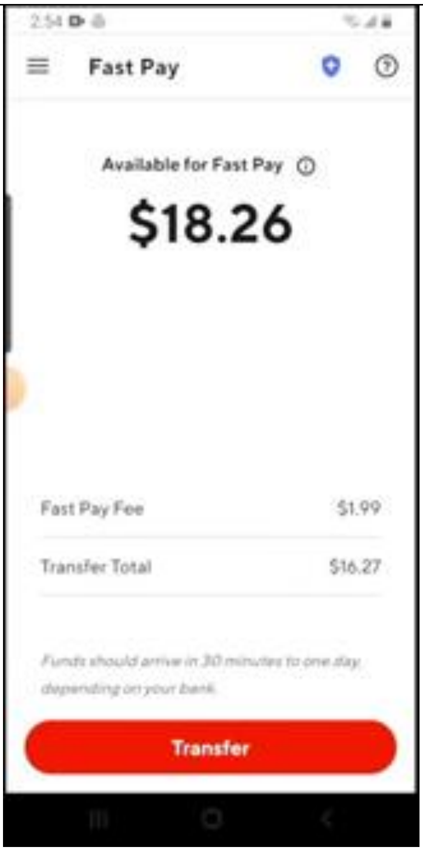
$18.26

Weekly auto-transfer will initiate on 03/21

Cash out with Fast Pay ›

Deposited to bank

Mar 14	$19.25 Weekly deposit	›
Feb 25	$8.26 Fast pay	›
Feb 21	$6.50 Weekly deposit	›
Feb 16	$44.76 Fast pay	›
Feb 14	$18.03 Weekly deposit	›
Feb 8	$23.06	›



2:54

Fast Pay

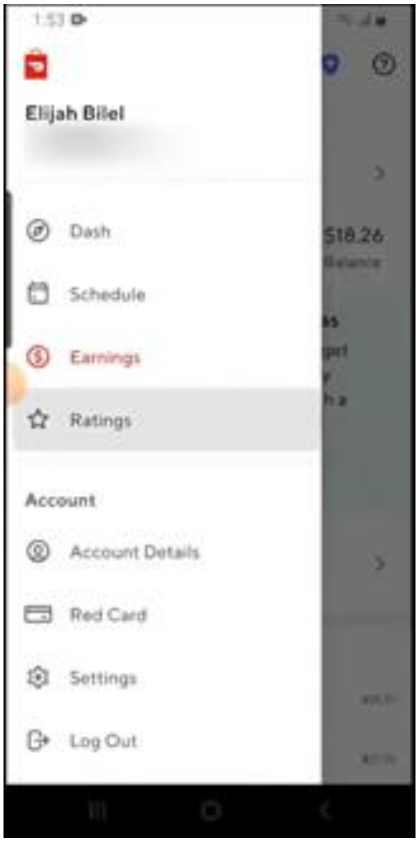
Available for Fast Pay ⓘ

$18.26

Fast Pay Fee	$1.99
Transfer Total	$16.27

Funds should arrive in 30 minutes to one day depending on your bank.

Transfer



1:53

Elijah Bilel

Dash

Schedule

Earnings

Ratings

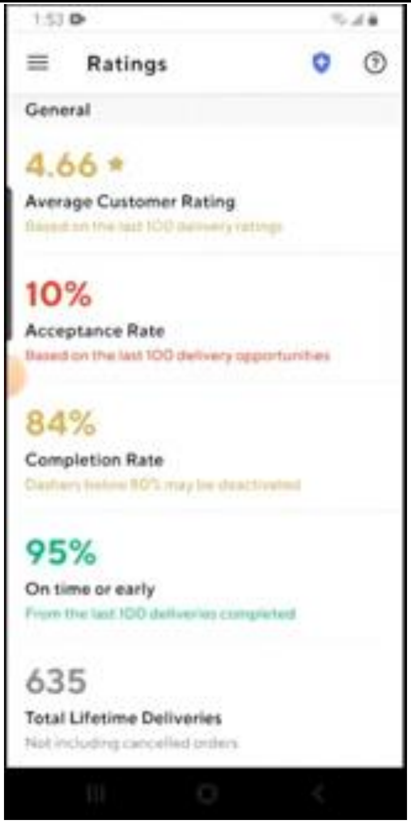
Account

Account Details

Red Card

Settings

Log Out



1:53

Ratings

General

4.66 ★

Average Customer Rating

Based on the last 100 delivery ratings

10%

Acceptance Rate

Based on the last 100 delivery opportunities

84%

Completion Rate

Dashers below 80% may be deactivated

95%

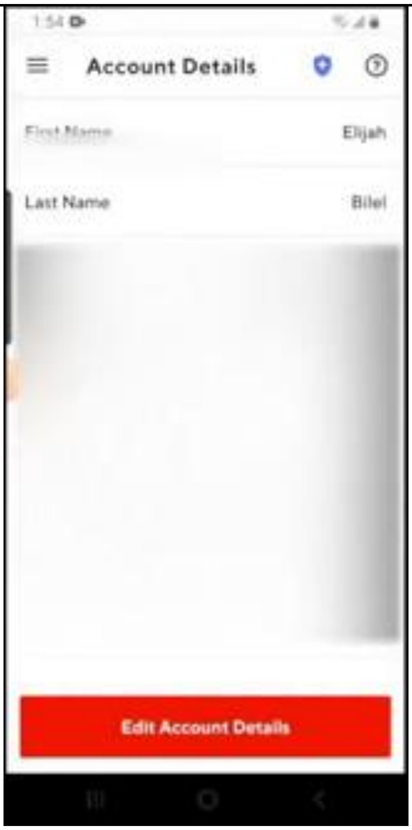
On time or early

From the last 100 deliveries completed

635

Total Lifetime Deliveries

Not including cancelled orders



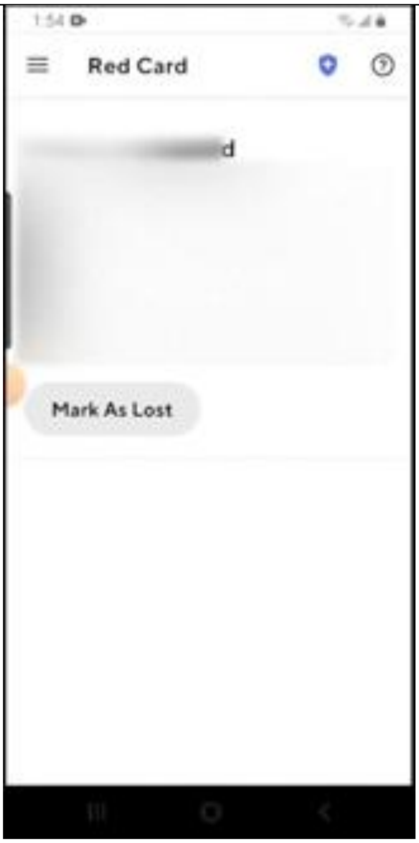
1:54

Account Details

First Name Elijah

Last Name Bilel

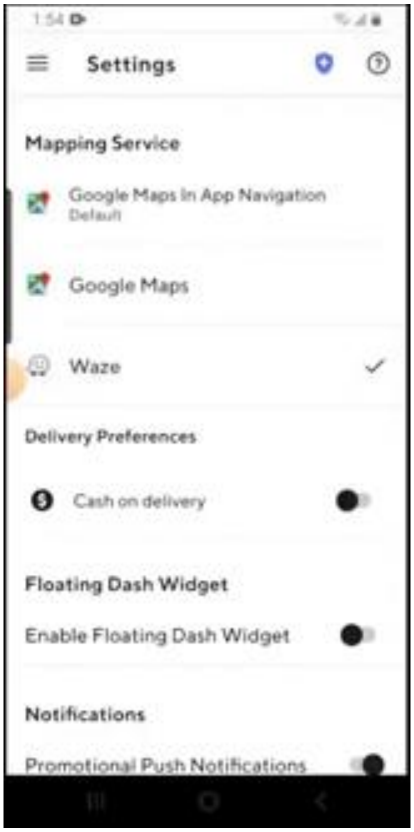
[redacted]



1:54

Red Card

[redacted]



1:54

Settings

Mapping Service

Google Maps In App Navigation
Default

Google Maps

Waze ✓

Delivery Preferences

Cash on delivery ●

Floating Dash Widget

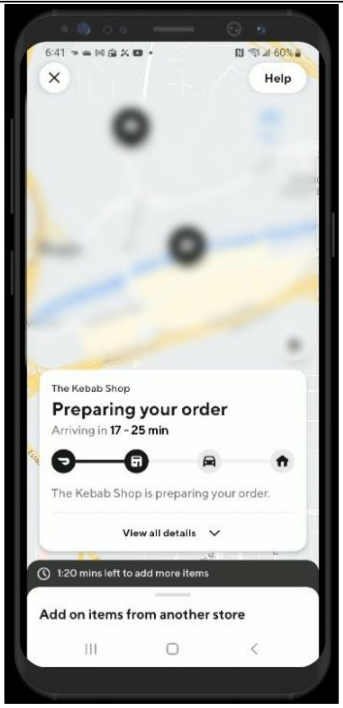
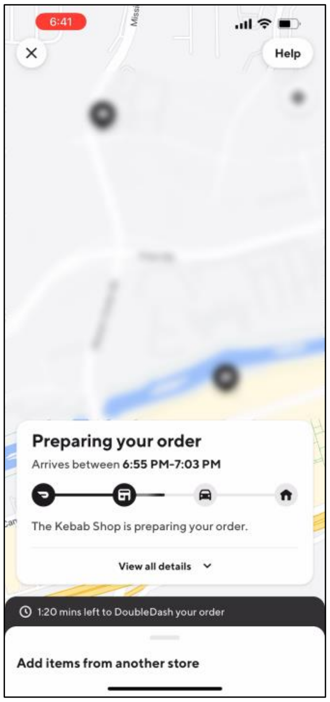
Enable Floating Dash Widget ●

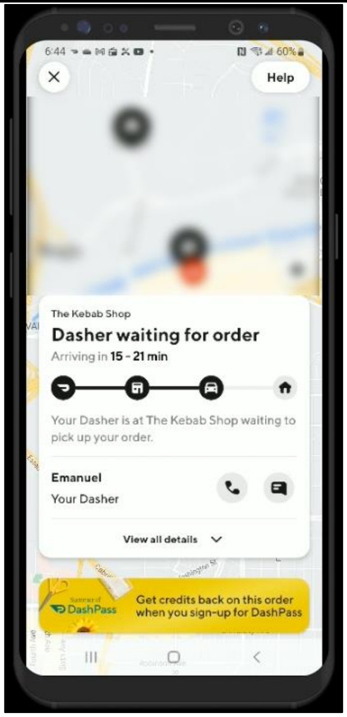
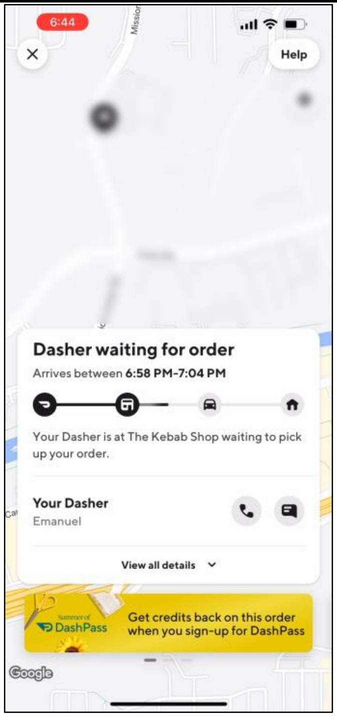
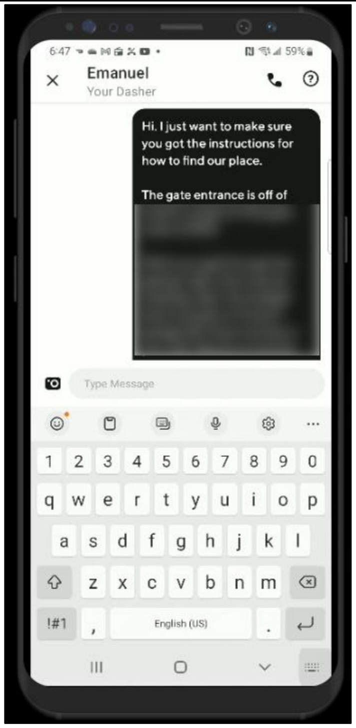
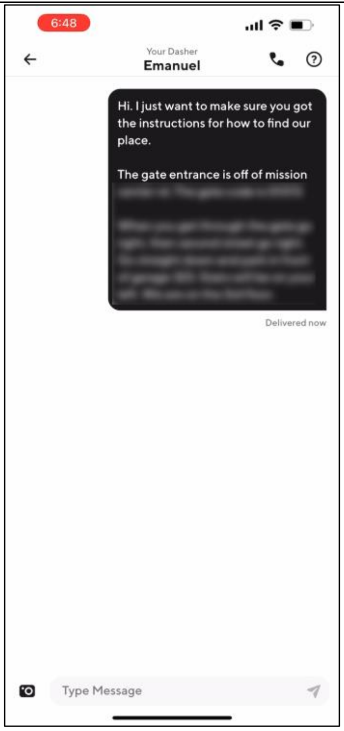
Notifications

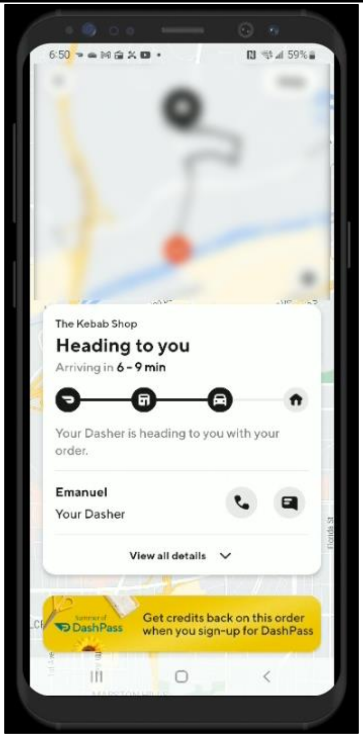
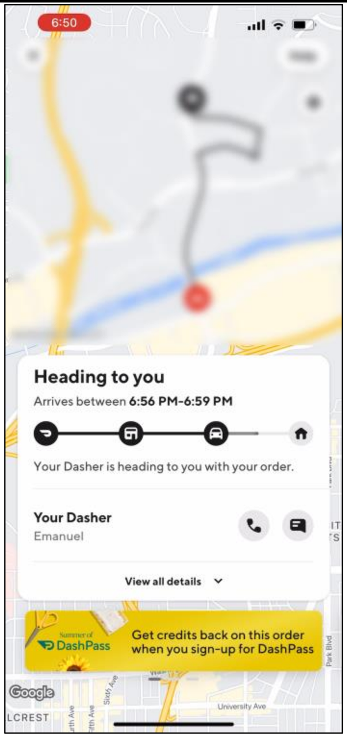
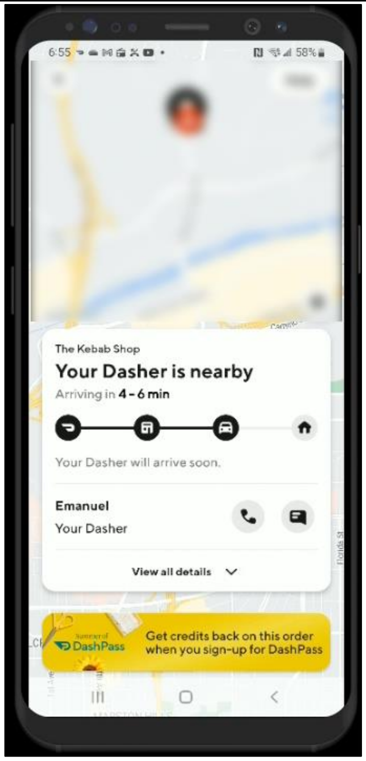
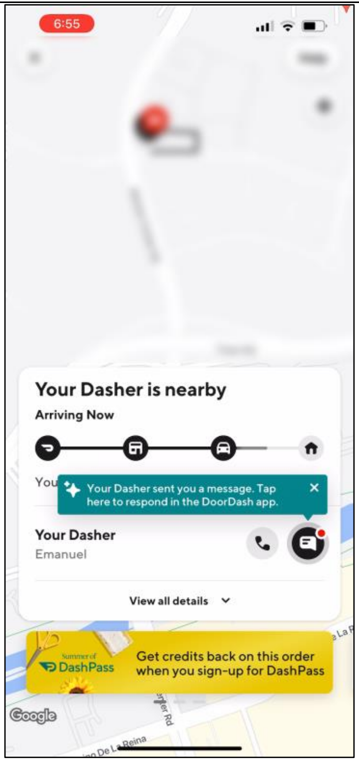
Promotional Push Notifications ●

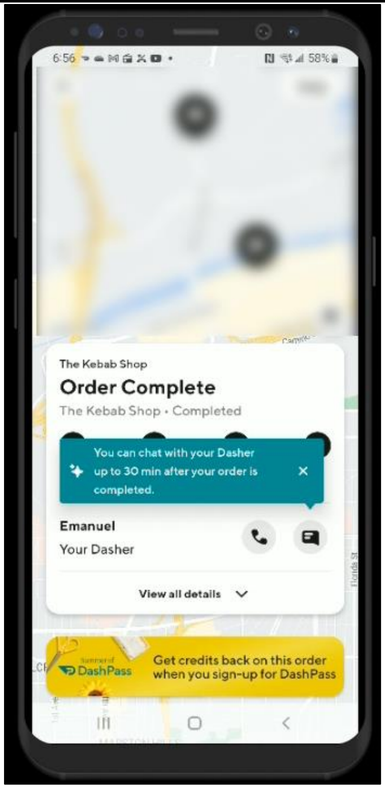
Mobile App Order Tracking, Notification, and in-app Chat

Below are a series of screen shots taken from one iPhone and one Android each tracking the same order placed by a user in the DoorDash Android App. They depict the order notifications and order updates in the app for the user to be able to track their order and delivery. In this case, we have one iPhone and one Android device tracking the same order, we can see the intelligent decisions being made by the Dispatcher regarding estimated time of delivery, and dasher time and distance from fulfilling the order. We also see text messages placed and sent by the user to the Dasher from the DoorDash android app, also viewable and accessible in the DoorDash iOS app on an iPhone that is tracking the order. When the Dasher responds to the chat from the user, the user is notified on the android phone and on the iOS phone. This functionality confirms multiple modes of contact are used by the two or more wireless handheld computers in support of the remote initiated hospitality tasks.

Android DoorDash App	iOS DoorDash App
 6:41 60% Help The Kebab Shop Preparing your order Arriving in 17 - 25 min The Kebab Shop is preparing your order. View all details 1:20 mins left to add more items Add on items from another store	 6:41 Help Preparing your order Arrives between 6:55 PM-7:03 PM The Kebab Shop is preparing your order. View all details 1:20 mins left to DoubleDash your order Add items from another store

	 The Kebab Shop **Dasher waiting for order** Arriving in **15 - 21 min** Your Dasher is at The Kebab Shop waiting to pick up your order. **Emanuel** Your Dasher **View all details** Get credits back on this order when you sign-up for DashPass 	 **Dasher waiting for order** Arrives between **6:58 PM-7:04 PM** Your Dasher is at The Kebab Shop waiting to pick up your order. **Your Dasher** Emanuel **View all details** Get credits back on this order when you sign-up for DashPass
	 Emanuel Your Dasher Hi. I just want to make sure you got the instructions for how to find our place. The gate entrance is off of [redacted] 	 Your Dasher **Emanuel** Hi. I just want to make sure you got the instructions for how to find our place. The gate entrance is off of mission [redacted] Delivered now

	 6:50 59% The Kebab Shop **Heading to you** Arriving in **6 - 9 min** Your Dasher is heading to you with your order. **Emanuel** Your Dasher **View all details** Summer of DashPass Get credits back on this order when you sign-up for DashPass	 6:50 **Heading to you** Arrives between **6:56 PM-6:59 PM** Your Dasher is heading to you with your order. **Your Dasher** Emanuel **View all details** Summer of DashPass Get credits back on this order when you sign-up for DashPass
	 6:55 58% The Kebab Shop **Your Dasher is nearby** Arriving in **4 - 6 min** Your Dasher will arrive soon. **Emanuel** Your Dasher **View all details** Summer of DashPass Get credits back on this order when you sign-up for DashPass	 6:55 **Your Dasher is nearby** **Arriving Now** Your Dasher sent you a message. Tap here to respond in the DoorDash app. **Your Dasher** Emanuel **View all details** Summer of DashPass Get credits back on this order when you sign-up for DashPass



6:56 58%

The Kebab Shop

Order Complete

The Kebab Shop • Completed

You can chat with your Dasher up to 30 min after your order is completed.

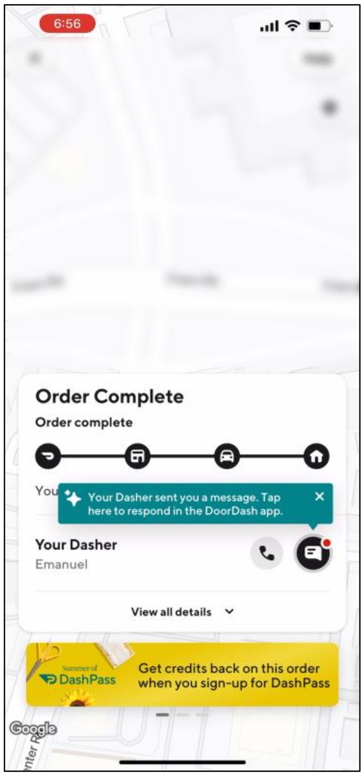
Emanuel

Your Dasher

View all details

Summer of DashPass

Get credits back on this order when you sign-up for DashPass



6:56

Order Complete

Order complete

You

Your Dasher sent you a message. Tap here to respond in the DoorDash app.

Your Dasher

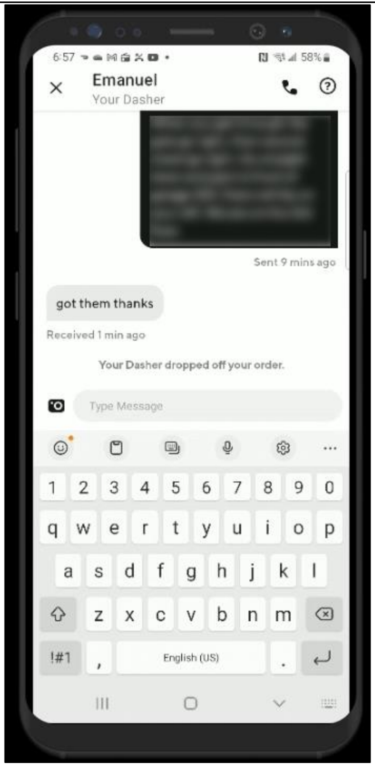
Emanuel

View all details

Summer of DashPass

Get credits back on this order when you sign-up for DashPass

Google



6:57 58%

Emanuel

Your Dasher

[redacted]

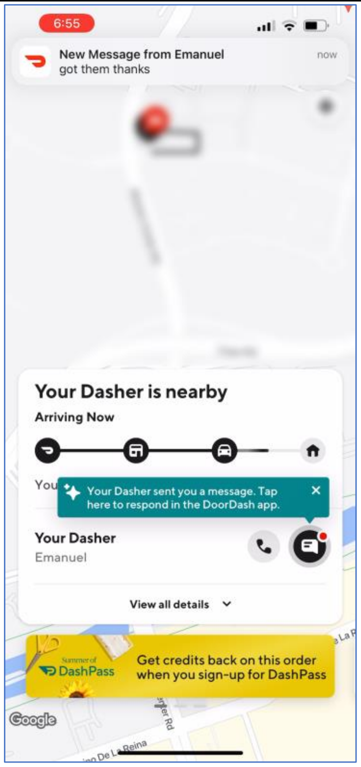
Sent 9 mins ago

got them thanks

Received 1 min ago

Your Dasher dropped off your order.

Type Message



6:55

New Message from Emanuel

got them thanks

now

Your Dasher is nearby

Arriving Now

You

Your Dasher sent you a message. Tap here to respond in the DoorDash app.

Your Dasher

Emanuel

View all details

Summer of DashPass

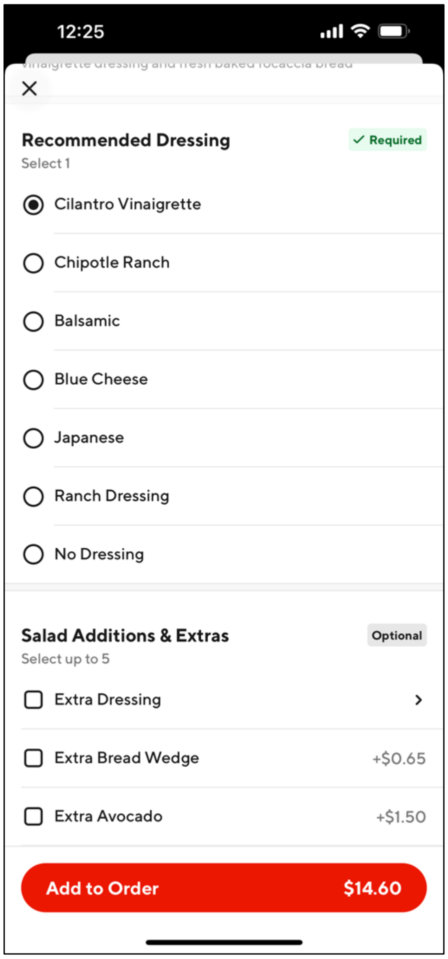
Get credits back on this order when you sign-up for DashPass

Google

In the DoorDash Engineering blog article "Managing React State on DoorDash's Item Modal Using the Class Pattern" (see Exh. 27) they state that DoorDash's created an Item Modal to shows users what menu items (and their sub-modifiers) they can order from. The Item Modal is a dynamic form in which they display menu item data (menus, modifiers, and sub-modifiers) to the user to;

> *"...take and validate user inputs based on boundary rules set by the item data, dynamically calculate item prices based on these user inputs, and submit valid user-modified items to a persistent data store. and validate their inputs based on rules set by the item data, dynamically item prices" (see Exh 75). This Item Modal they claim is:*
>
> *...one of the most complex components of our app and web frontends". When DoorDash moved to a microservices architecture, it gave them the ability to "...rethink how we manage the Item Modal on our React-based web frontend."*

Here is a screenshot example:



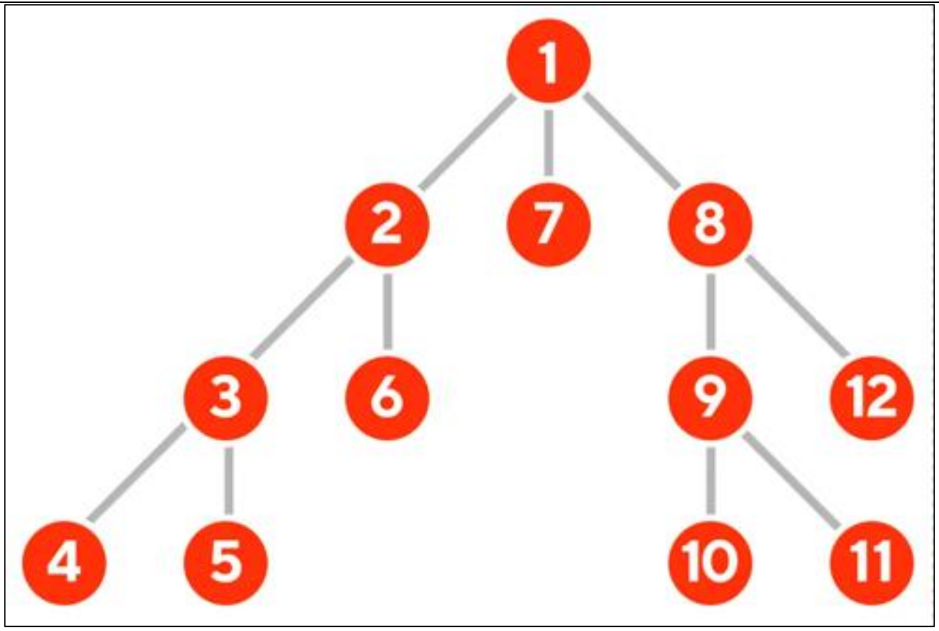
Recommended Dressing ✓ Required
Select 1

● Cilantro Vinaigrette
○ Chipotle Ranch
○ Balsamic
○ Blue Cheese
○ Japanese
○ Ranch Dressing
○ No Dressing

Salad Additions & Extras Optional
Select up to 5

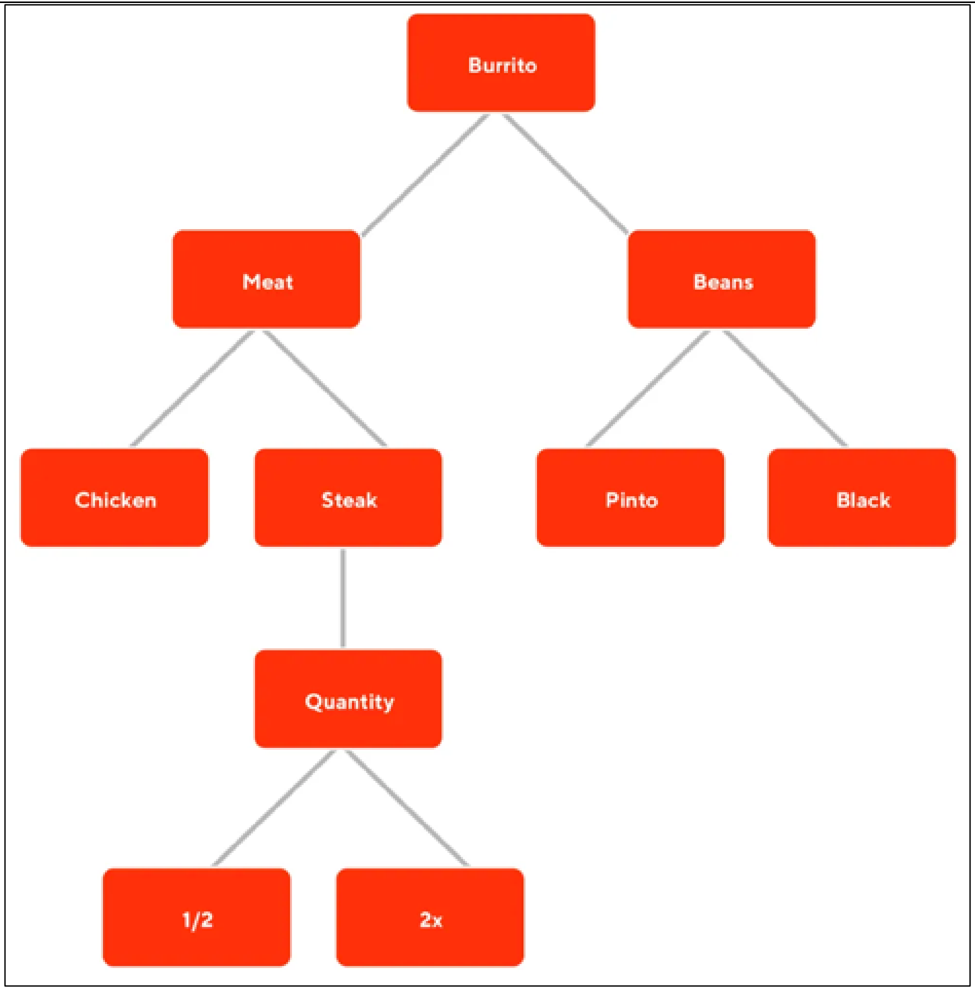
□ Extra Dressing ›
□ Extra Bread Wedge +$0.65
□ Extra Avocado +$1.50

They describe the most important characteristic of the Item Modal rebuild was "…a TreeState, which is represented as an N-ary tree…" as shown below. In this design "…every item, has an ItemNode, and this ItemNode can have any number of OptionListNode. Each OptionListNode can have any number of OptionNodes, and these OptionNodes can have any number of OptionListNodes and so on."

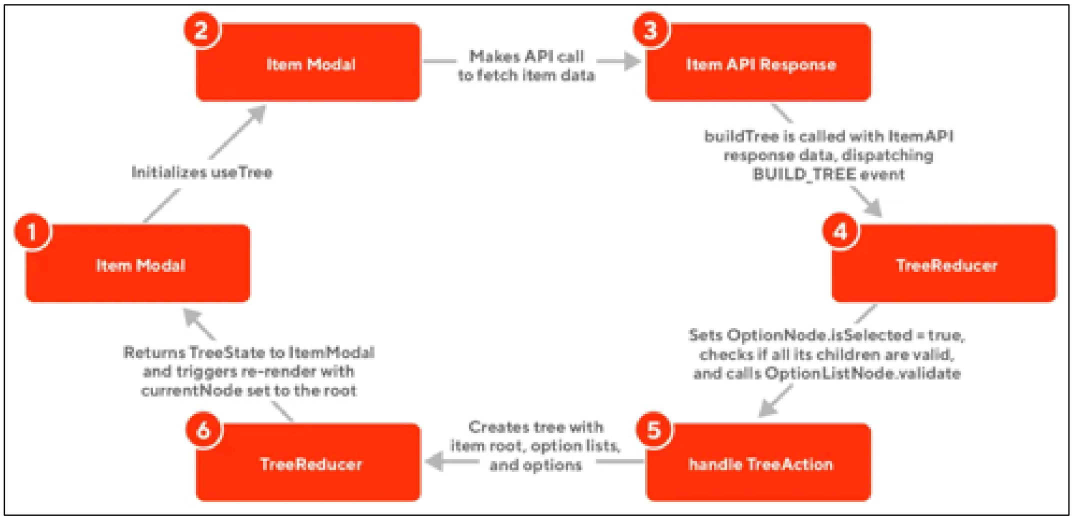


To better understand the model, they use the example of a user ordering a burrito and

“…in which a user can choose from two meats, chicken or steak, and two beans, pinto or black. We can take it further by allowing the user to select the quantity of meat via a nested option.” The figure below shows that “…[o]rdering a burrito provides a variety of options, as displayed in the N-ary tree above, making it a helpful way to visualize an otherwise complex item.”



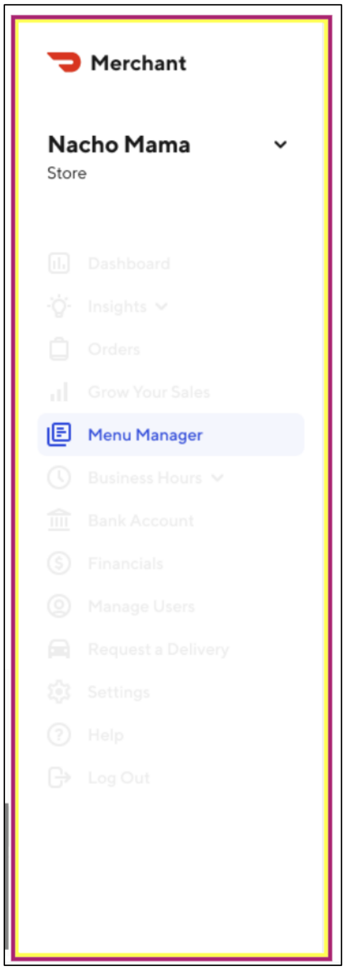
To render the Item Modal for a particular merchant, they must build the initial tree state with menu item data (including modifiers, and sub-modifiers) acquired via an API call to the web server (BFF) and validate accordingly. This requires a substantial workflow as exhibited by the chart below (see Exh. 75):

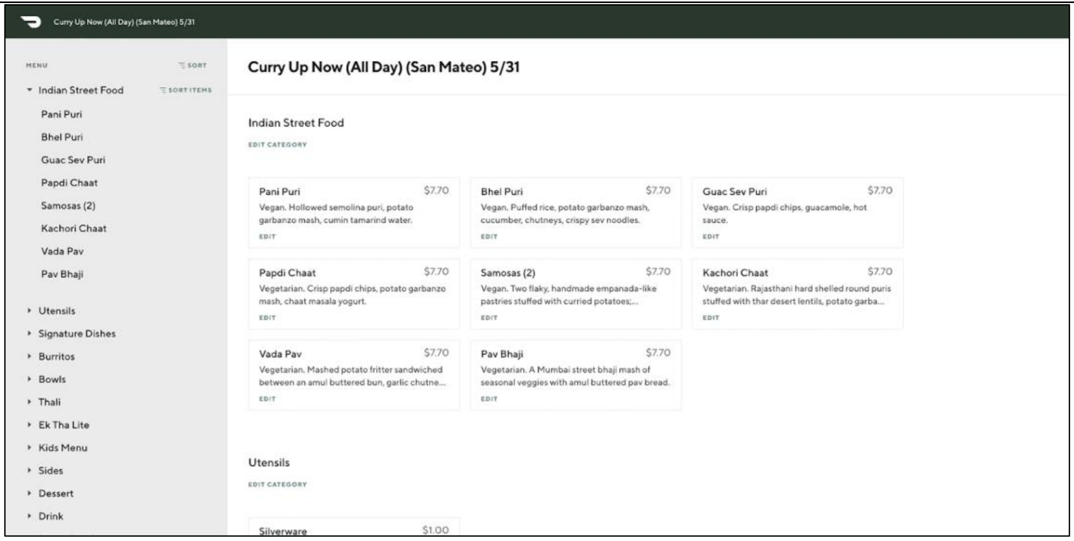

1
Item Modal
Initializes useTree
2
Item Modal
Makes API call to fetch item data
3
Item API Response
buildTree is called with ItemAPI response data, dispatching BUILD_TREE event
4
TreeReducer
Sets OptionNode.isSelected = true, checks if all its children are valid, and calls OptionListNode.validate
5
handle TreeAction
Creates tree with item root, option lists, and options
6
TreeReducer
Returns TreeState to ItemModal and triggers re-render with currentNode set to the root

Menu Management in DoorDash Business Manager

DoorDash provides merchants two methods for managing their menus on the DoorDash platform which are categorized into "POS Integrated Users" and "Non-POS Integrated users."

A "menu manager" on their merchant portal (website) allows the merchants to build and manage how their menu appears on the platform. The UI provides options to build menu items, categories, modifiers, add photos, and specify the sort order. Their Menu Editor Guide details how you can create menu items, categories, modifiers, etc. (see Exh 28, 29, 97). Example of this are screenshots from the Menu Editor tool below:





Curry Up Now (All Day) (San Mateo) 5/31

Curry Up Now (All Day) (San Mateo) 5/31

Indian Street Food

EDIT CATEGORY

Pani Puri $7.70
Vegan. Hollowed semolina puri, potato garbanzo mash, cumin tamarind water.
EDIT

Bhel Puri $7.70
Vegan. Puffed rice, potato garbanzo mash, cucumber, chutneys, crispy sev noodles.
EDIT

Guac Sev Puri $7.70
Vegan. Crisp papdi chips, guacamole, hot sauce.
EDIT

Papdi Chaat $7.70
Vegetarian. Crisp papdi chips, potato garbanzo mash, chaat masala yogurt.
EDIT

Samosas (2) $7.70
Vegan. Two flaky, handmade empanada-like pastries stuffed with curried potatoes;...
EDIT

Kachori Chaat $7.70
Vegetarian. Rajasthani hard shelled round puris stuffed with thar desert lentils, potato garba...
EDIT

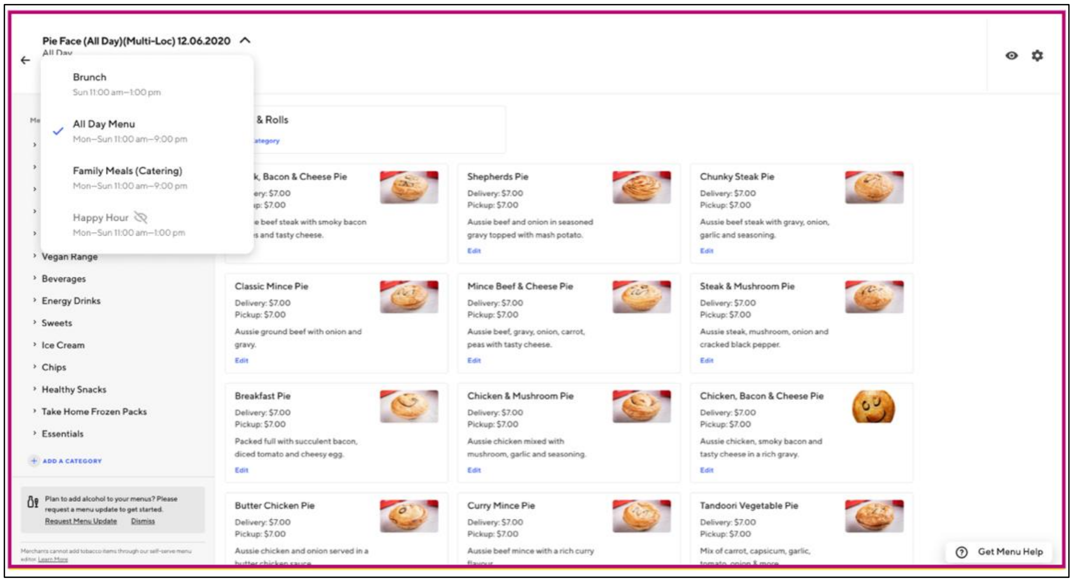
Vada Pav $7.70
Vegetarian. Mashed potato fritter sandwiched between an amul buttered bun, garlic chutne...
EDIT

Pav Bhaji $7.70
Vegetarian. A Mumbai street bhaji mash of seasonal veggies with amul buttered pav bread.
EDIT

Utensils

EDIT CATEGORY

Silverware $1.00



Pie Face (All Day)(Multi-Loc) 12.06.2020

All Day

& Rolls

ategory

k, Bacon & Cheese Pie
ery: $7.00
p: $7.00
e beef steak with smoky bacon s and tasty cheese.

Shepherds Pie
Delivery: $7.00
Pickup: $7.00
Aussie beef and onion in seasoned gravy topped with mash potato.
Edit

Chunky Steak Pie
Delivery: $7.00
Pickup: $7.00
Aussie beef steak with gravy, onion, garlic and seasoning.
Edit

Classic Mince Pie
Delivery: $7.00
Pickup: $7.00
Aussie ground beef with onion and gravy.
Edit

Mince Beef & Cheese Pie
Delivery: $7.00
Pickup: $7.00
Aussie beef, gravy, onion, carrot, peas with tasty cheese.
Edit

Steak & Mushroom Pie
Delivery: $7.00
Pickup: $7.00
Aussie steak, mushroom, onion and cracked black pepper.
Edit

Breakfast Pie
Delivery: $7.00
Pickup: $7.00
Packed full with succulent bacon, diced tomato and cheesy egg.
Edit

Chicken & Mushroom Pie
Delivery: $7.00
Pickup: $7.00
Aussie chicken mixed with mushroom, garlic and seasoning.
Edit

Chicken, Bacon & Cheese Pie
Delivery: $7.00
Pickup: $7.00
Aussie chicken, smoky bacon and tasty cheese in a rich gravy.
Edit

Butter Chicken Pie
Delivery: $7.00
Pickup: $7.00
Aussie chicken and onion served in a butter chicken sauce

Curry Mince Pie
Delivery: $7.00
Pickup: $7.00
Aussie beef mince with a rich curry flavour

Tandoori Vegetable Pie
Delivery: $7.00
Pickup: $7.00
Mix of carrot, capsicum, garlic, tomato, onion & more

Plan to add alcohol to your menus? Please request a menu update to get started.
Request Menu Update Dismiss

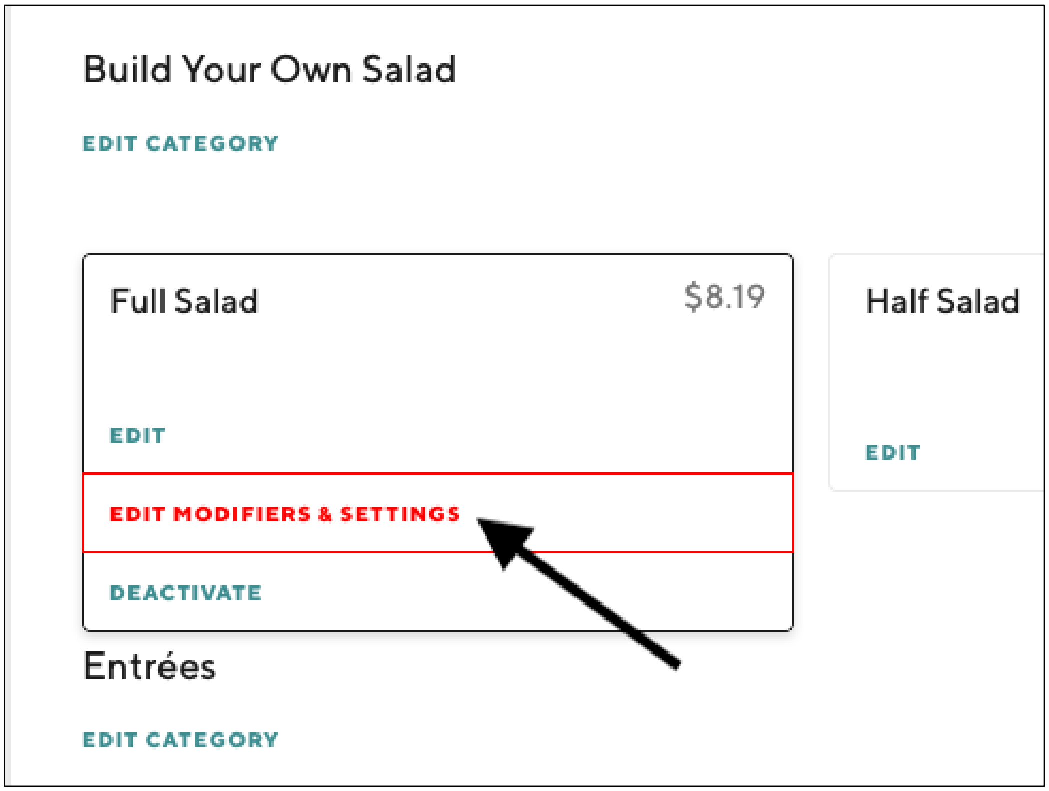
Merchants cannot add tobacco items through our self-serve menu editor. Learn More

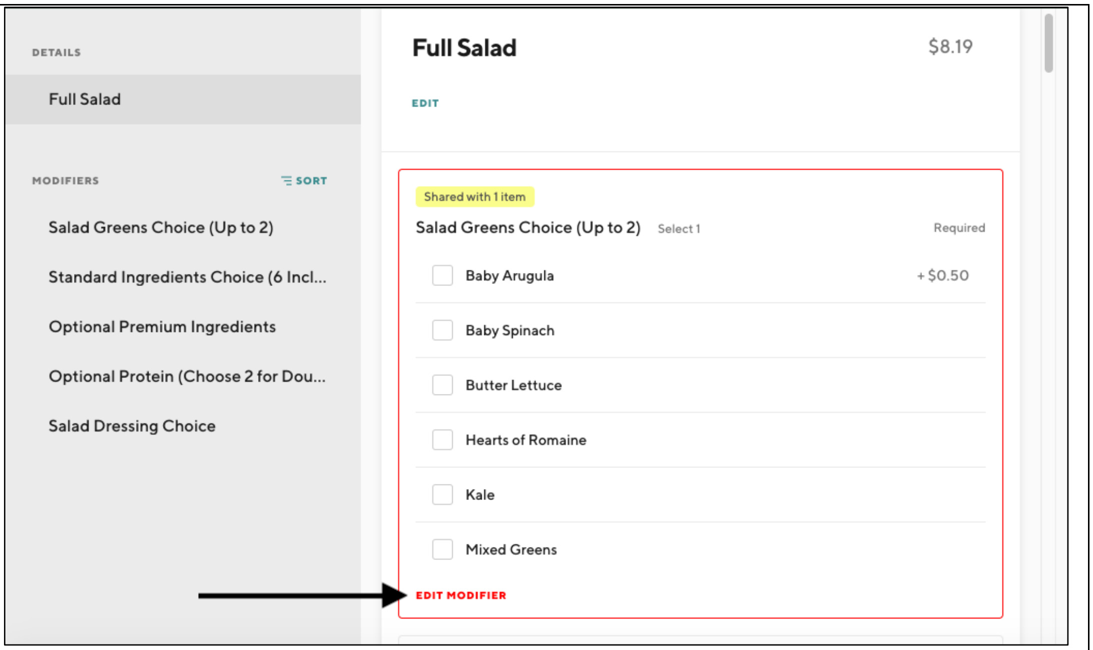
According to the DoorDash documentation by using the merchant portal, restaurants can: (See Exh. 29, 30)

> *"Add new items, modifiers, and options to your menu*
>
> *Edit categories, items, modifiers, and options (setting prices, descriptions and names for each)*
>
> *Sort categories, items, and modifiers*
>
> *Temporarily deactivate items*
>
> *Remove items from your menu permanently*
>
> *Update modifier settings"*

Menu: How to Add a New Option to a Modifier

In the user support article, "Adding a new option to a modifier on your menu" (see

	Exh. 73) they state " …[a] Modifier is a part that makes up an Item on your menu. For example, Greens are a modifier of a salad entree. Options within a Modifier are Kale, Romaine, Mixed, etc." The article shows the user how to add a new option to their restaurant's menu which includes the following steps and screenshots: *"1. Click Edit Modifiers & Settings on the item with the modifier that you would like to edit* *2. On the next screen, click Edit Modifier at the bottom of the modifier* *3. Scroll to the bottom and click Add an Option* *4. Type in the new option and price and click Save"*  Build Your Own Salad EDIT CATEGORY Full Salad $8.19 EDIT EDIT MODIFIERS & SETTINGS DEACTIVATE Half Salad EDIT Entrées EDIT CATEGORY



DETAILS

Full Salad

MODIFIERS ☰ SORT

Salad Greens Choice (Up to 2)

Standard Ingredients Choice (6 Incl...

Optional Premium Ingredients

Optional Protein (Choose 2 for Dou...

Salad Dressing Choice

Full Salad $8.19

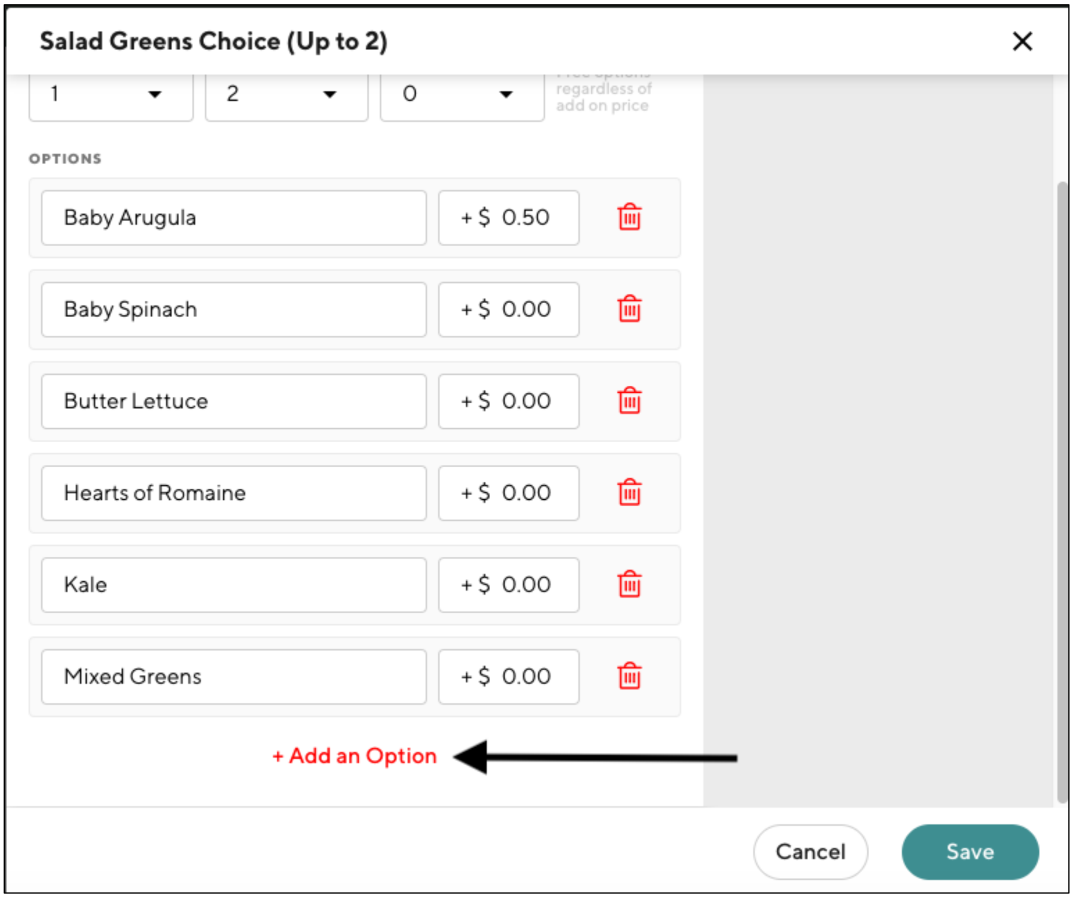
EDIT

Shared with 1 item

Salad Greens Choice (Up to 2) Select 1 Required

□ Baby Arugula	+ $0.50
□ Baby Spinach	
□ Butter Lettuce	
□ Hearts of Romaine	
□ Kale	
□ Mixed Greens	

EDIT MODIFIER



Salad Greens Choice (Up to 2) ✕

1 ▾ 2 ▾ 0 ▾ regardless of add on price

OPTIONS

Baby Arugula	+ $ 0.50
Baby Spinach	+ $ 0.00
Butter Lettuce	+ $ 0.00
Hearts of Romaine	+ $ 0.00
Kale	+ $ 0.00
Mixed Greens	+ $ 0.00

+ Add an Option

Cancel Save

To edit the modifier settings for a single menu, according to the article, a user follows the following steps (as shown in the below screenshots):

"

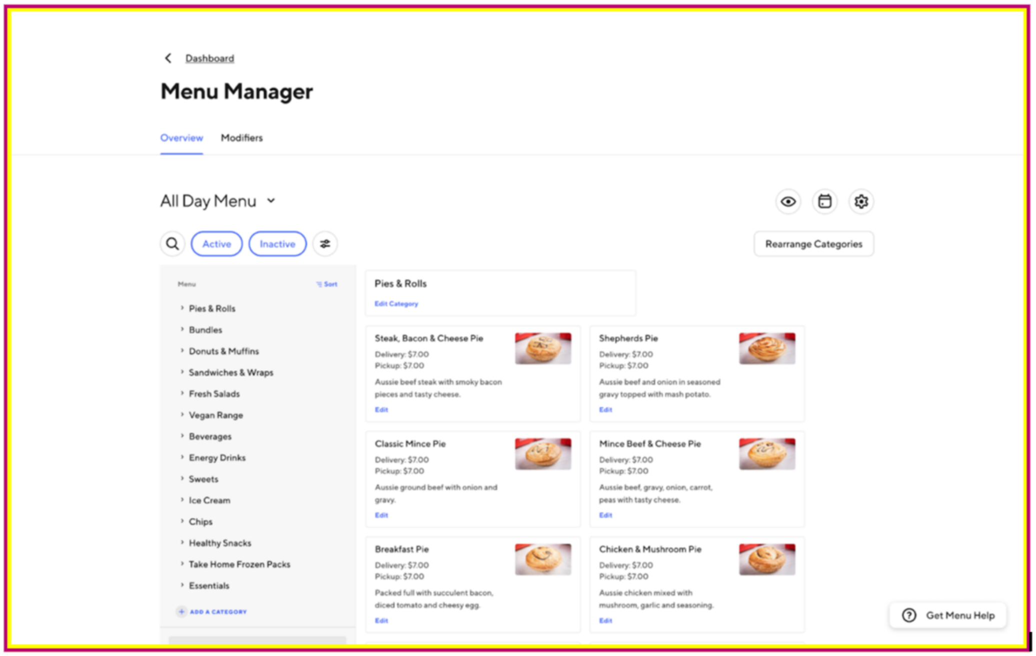
1. *Click Modifiers at the top*

2. *On the Modifiers page, click on the three dots to the right of the modifier that you would like to edit*

3. *In the pop-up that appears, click Edit Details*

4. *In the right panel, in "Add an option", enter new option name and price*

5. *Press enter and click Save Changes"*



Menu Manager

All Day Menu

Menu

- Pies & Rolls
- Bundles
- Donuts & Muffins
- Sandwiches & Wraps
- Fresh Salads
- Vegan Range
- Beverages
- Energy Drinks
- Sweets
- Ice Cream
- Chips
- Healthy Snacks
- Take Home Frozen Packs
- Essentials

Pies & Rolls

Steak, Bacon & Cheese Pie
Delivery: $7.00
Pickup: $7.00
Aussie beef steak with smoky bacon pieces and tasty cheese.

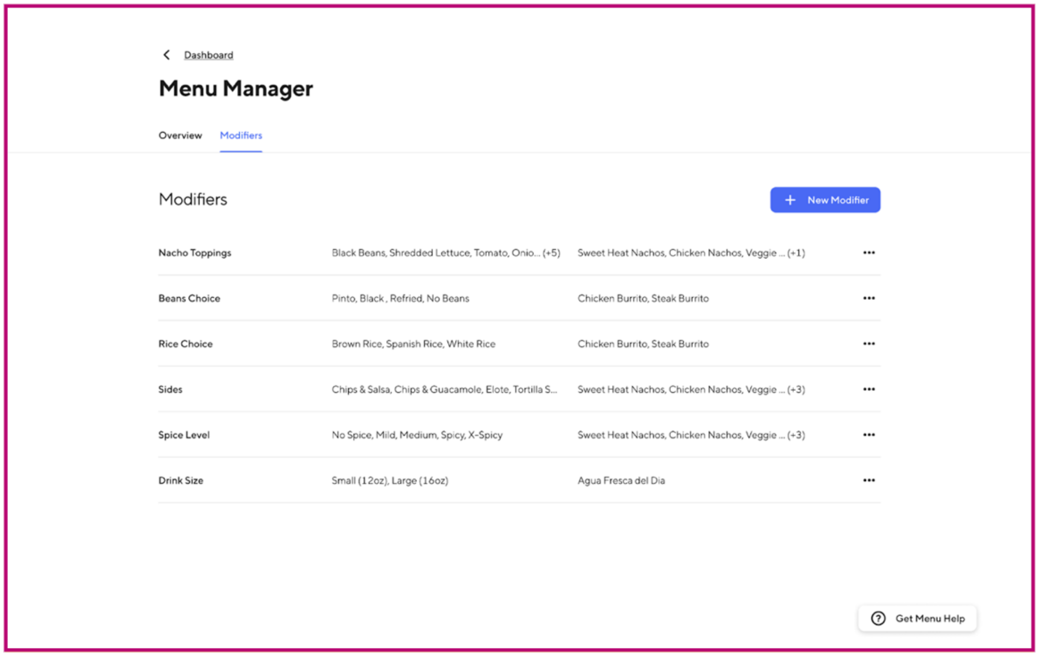
Shepherds Pie
Delivery: $7.00
Pickup: $7.00
Aussie beef and onion in seasoned gravy topped with mash potato.

Classic Mince Pie
Delivery: $7.00
Pickup: $7.00
Aussie ground beef with onion and gravy.

Mince Beef & Cheese Pie
Delivery: $7.00
Pickup: $7.00
Aussie beef, gravy, onion, carrot, peas with tasty cheese.

Breakfast Pie
Delivery: $7.00
Pickup: $7.00
Packed full with succulent bacon, diced tomato and cheesy egg.

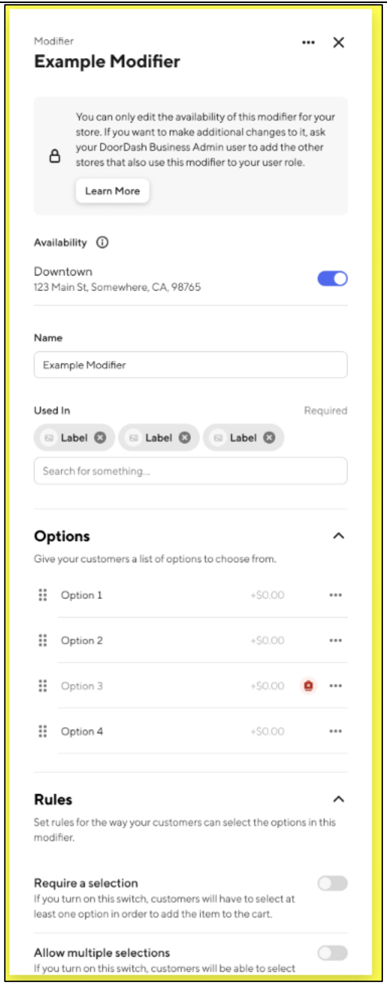
Chicken & Mushroom Pie
Delivery: $7.00
Pickup: $7.00
Aussie chicken mixed with mushroom, garlic and seasoning.



Menu Manager

Modifiers

Nacho Toppings	Black Beans, Shredded Lettuce, Tomato, Onio... (+5)	Sweet Heat Nachos, Chicken Nachos, Veggie ... (+1)	•••
Beans Choice	Pinto, Black , Refried, No Beans	Chicken Burrito, Steak Burrito	•••
Rice Choice	Brown Rice, Spanish Rice, White Rice	Chicken Burrito, Steak Burrito	•••
Sides	Chips & Salsa, Chips & Guacamole, Elote, Tortilla S...	Sweet Heat Nachos, Chicken Nachos, Veggie ... (+3)	•••
Spice Level	No Spice, Mild, Medium, Spicy, X-Spicy	Sweet Heat Nachos, Chicken Nachos, Veggie ... (+3)	•••
Drink Size	Small (12oz), Large (16oz)	Agua Fresca del Dia	•••



Modifier

Example Modifier

You can only edit the availability of this modifier for your store. If you want to make additional changes to it, ask your DoorDash Business Admin user to add the other stores that also use this modifier to your user role.

Learn More

Availability

Downtown
123 Main St, Somewhere, CA, 98765

Name: Example Modifier

Used In — Required

Label | Label | Label

Search for something...

Options

Give your customers a list of options to choose from.

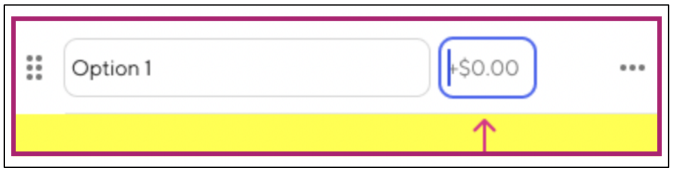
Option 1	+$0.00
Option 2	+$0.00
Option 3	+$0.00
Option 4	+$0.00

Rules

Set rules for the way your customers can select the options in this modifier.

Require a selection
If you turn on this switch, customers will have to select at least one option in order to add the item to the cart.

Allow multiple selections
If you turn on this switch, customers will be able to select



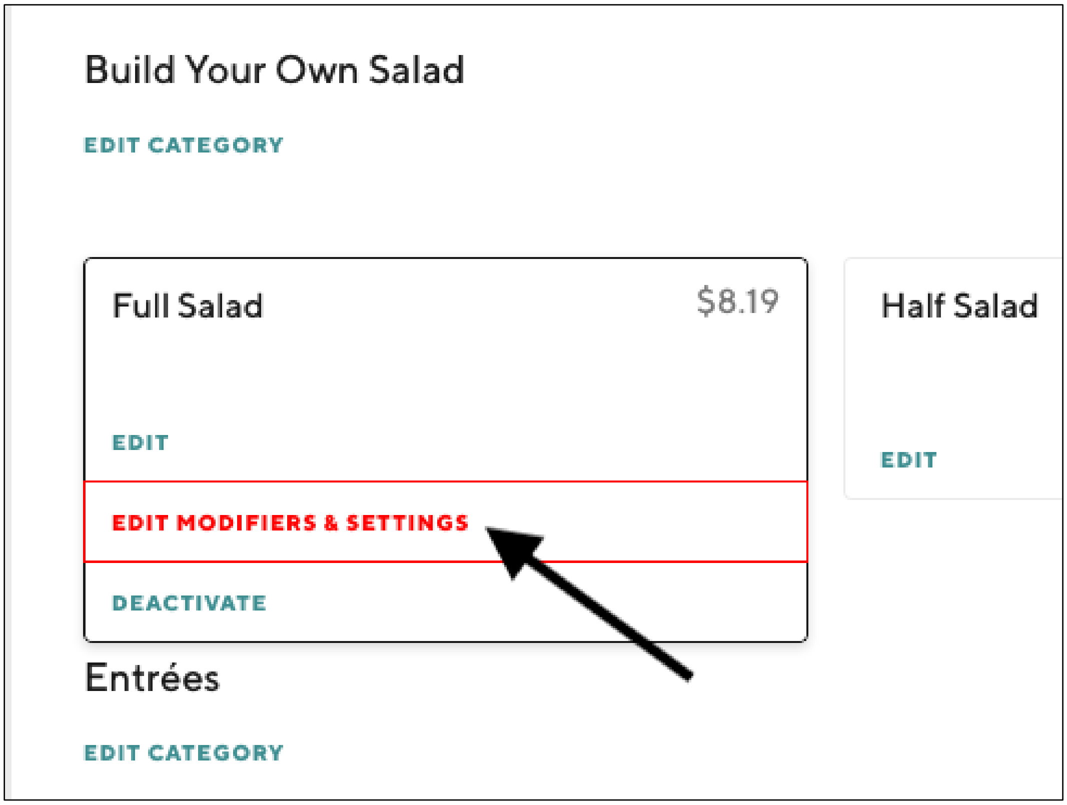
Option 1 | +$0.00

Menu: How to Edit Modifier Settings on your Menu

In the user support article, “Editing Modifier Settings on your Menu” (see Exh. 74) they state, *“Changes to modifier settings can be made in the Menu Editor in your Merchant Portal by following [these] steps”*. The article proceeds to train the user on how to edit modifier settings by following these steps and screenshots:

> *“Select at least: The minimum selections a customer must make on the modifier. Set this to 0 if the modifier is optional.*
>
> *Select at most: The maximum selections a customer can make on the modifier. This should be set to at least 1 and can not be less than the number in Select at least.*
>
> *Free options: The number of free options available to the customer. The*

option is free regardless of add on price. For example, if Free options is set to 1 and each option costs $1.00, the customer will not be charged $1.00 for the first option they select, but they will be charged for the second option they select."



Build Your Own Salad

EDIT CATEGORY

Full Salad $8.19

EDIT

EDIT MODIFIERS & SETTINGS

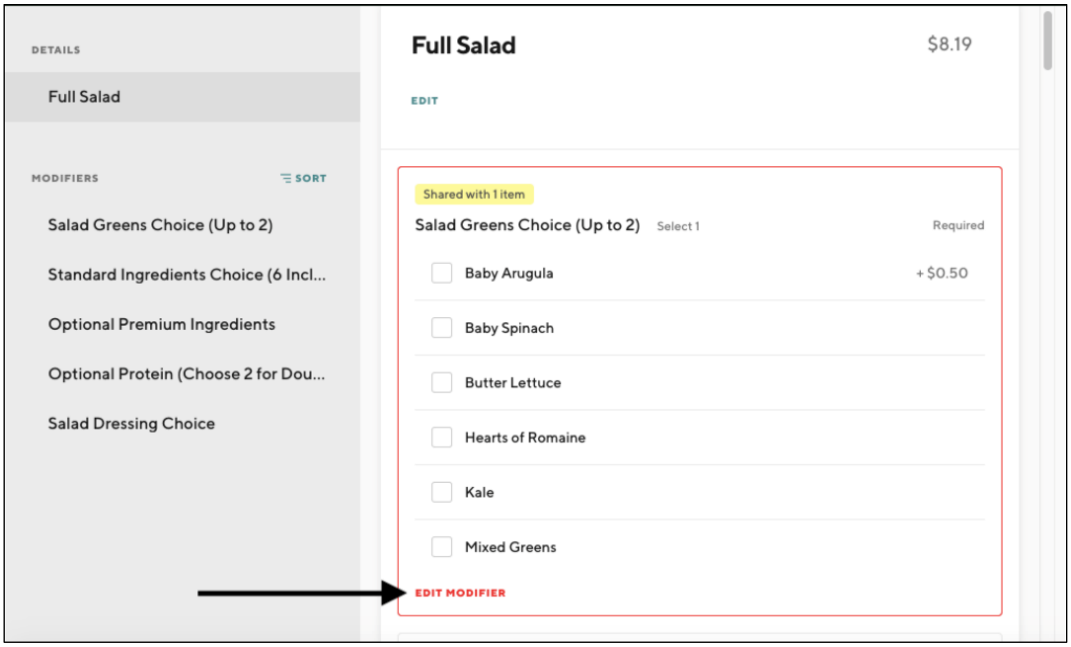
DEACTIVATE

Half Salad

EDIT

Entrées

EDIT CATEGORY



DETAILS

Full Salad

MODIFIERS

SORT

Salad Greens Choice (Up to 2)

Standard Ingredients Choice (6 Incl...

Optional Premium Ingredients

Optional Protein (Choose 2 for Dou...

Salad Dressing Choice

Full Salad $8.19

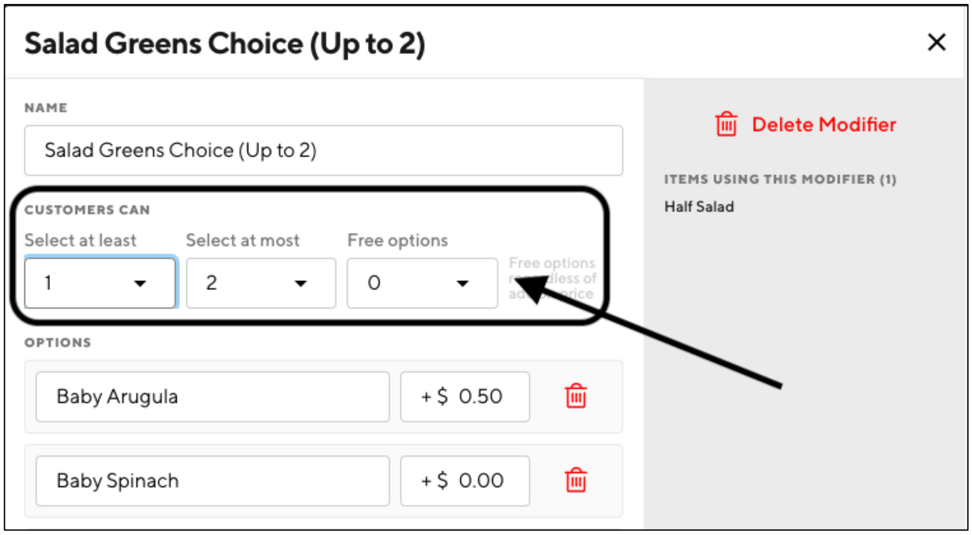
EDIT

Shared with 1 item

Salad Greens Choice (Up to 2) Select 1 Required

□ Baby Arugula	+ $0.50
□ Baby Spinach	
□ Butter Lettuce	
□ Hearts of Romaine	
□ Kale	
□ Mixed Greens	

EDIT MODIFIER



Salad Greens Choice (Up to 2) ✕

NAME

Salad Greens Choice (Up to 2)

CUSTOMERS CAN

Select at least	Select at most	Free options
1 ▾	2 ▾	0 ▾

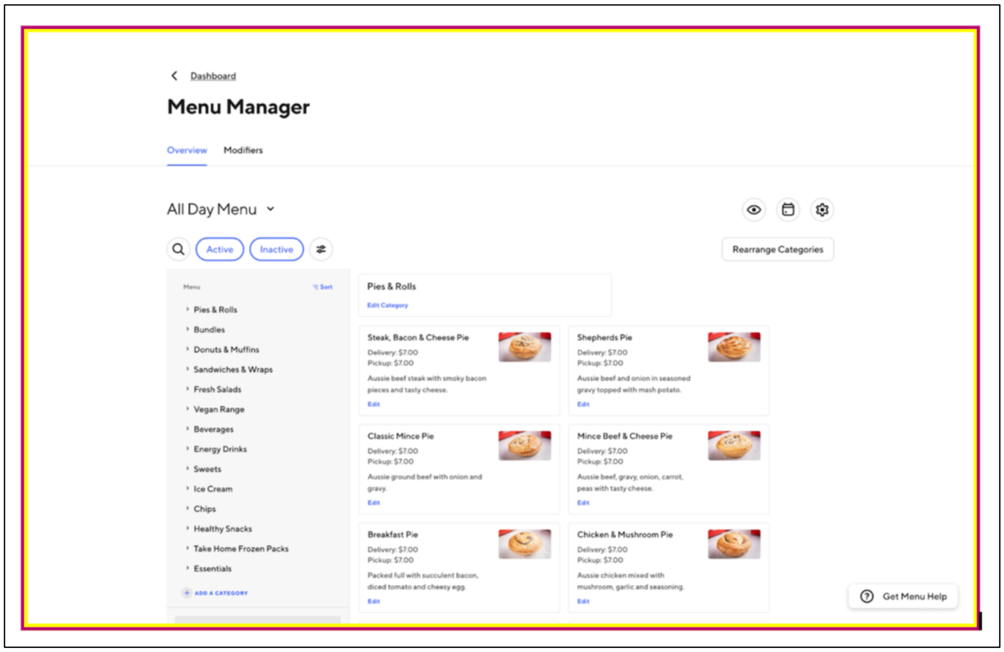
OPTIONS

Baby Arugula	+ $ 0.50	🗑
Baby Spinach	+ $ 0.00	🗑

🗑 Delete Modifier

ITEMS USING THIS MODIFIER (1)

Half Salad



‹ Dashboard

Menu Manager

- Pies & Rolls
- Bundles
- Donuts & Muffins
- Sandwiches & Wraps
- Fresh Salads
- Vegan Range
- Beverages
- Energy Drinks
- Sweets
- Ice Cream
- Chips
- Healthy Snacks
- Take Home Frozen Packs
- Essentials

Pies & Rolls

Steak, Bacon & Cheese Pie
Delivery: $7.00
Pickup: $7.00
Aussie beef steak with smoky bacon pieces and tasty cheese.
Edit

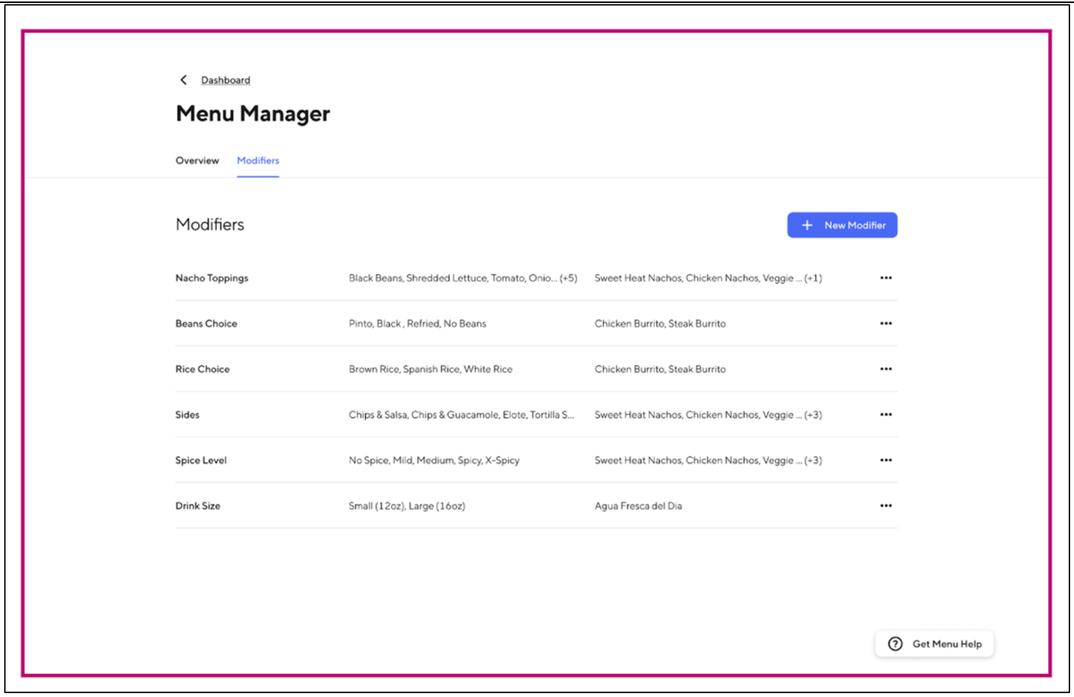
Shepherds Pie
Delivery: $7.00
Pickup: $7.00
Aussie beef and onion in seasoned gravy topped with mash potato.
Edit

Classic Mince Pie
Delivery: $7.00
Pickup: $7.00
Aussie ground beef with onion and gravy.
Edit

Mince Beef & Cheese Pie
Delivery: $7.00
Pickup: $7.00
Aussie beef, gravy, onion, carrot, peas with tasty cheese.
Edit

Breakfast Pie
Delivery: $7.00
Pickup: $7.00
Packed full with succulent bacon, diced tomato and cheesy egg.
Edit

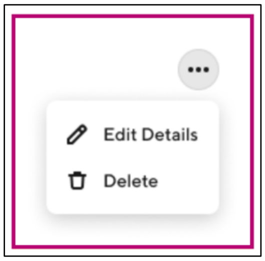
Chicken & Mushroom Pie
Delivery: $7.00
Pickup: $7.00
Aussie chicken mixed with mushroom, garlic and seasoning.
Edit

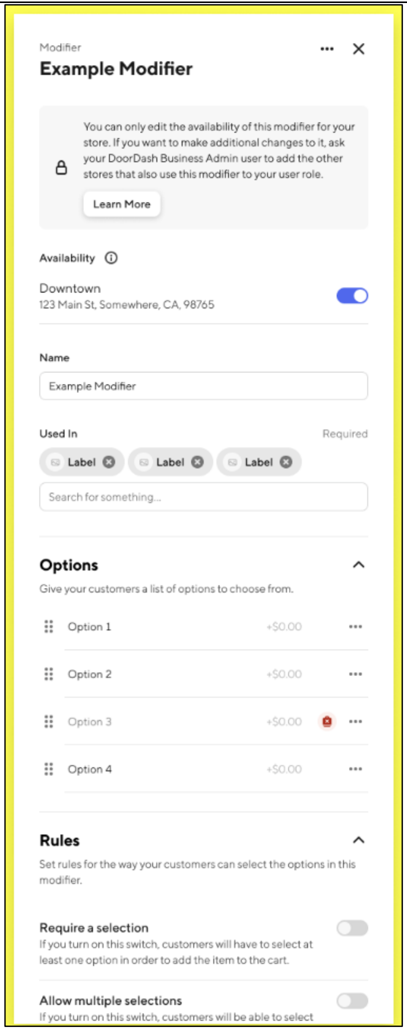
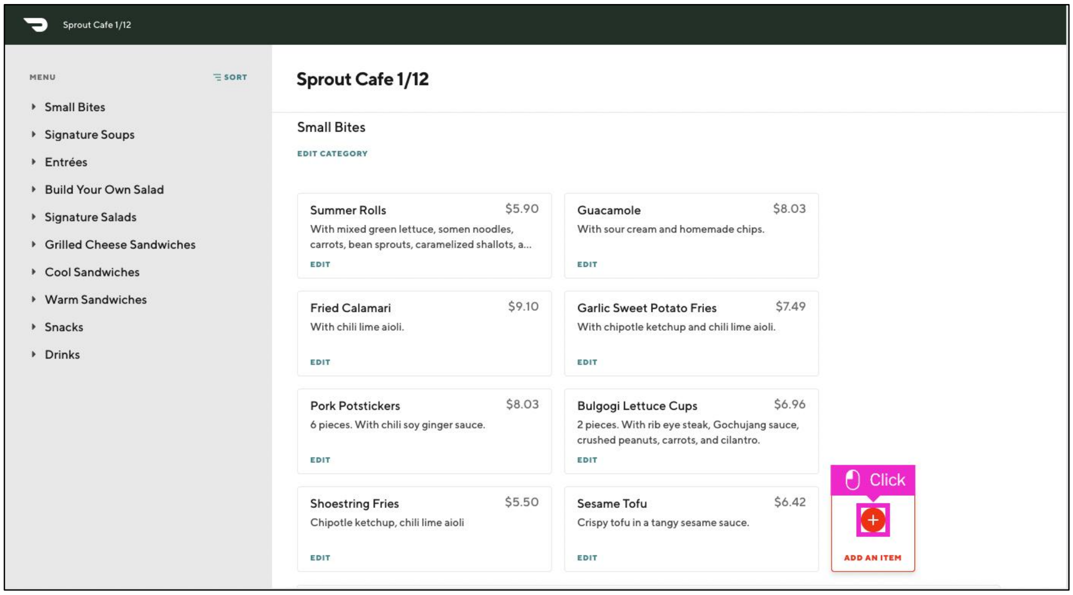


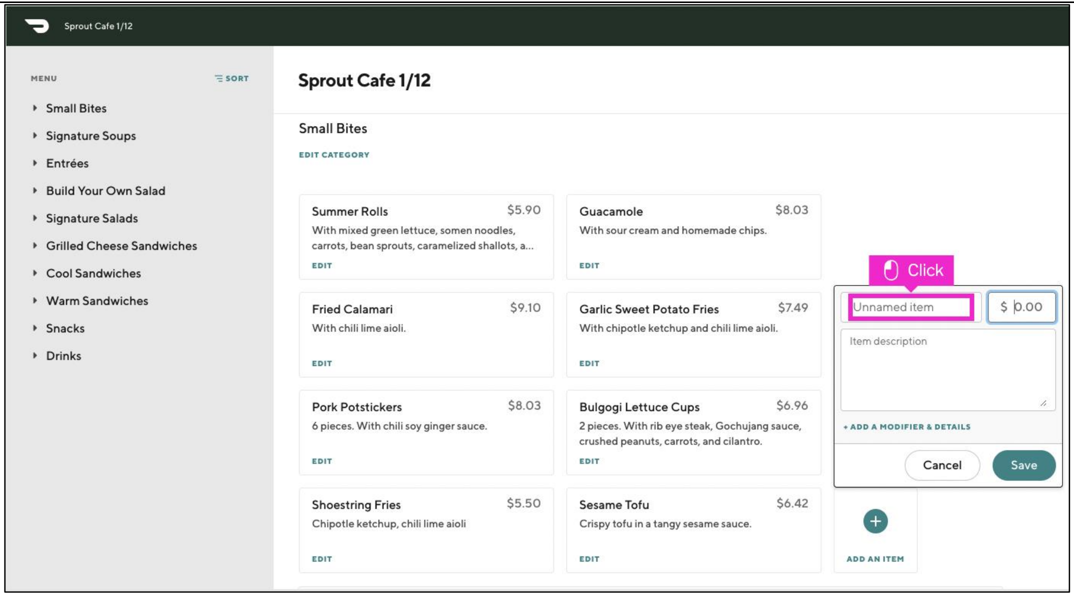
Menu Manager

Modifiers

Nacho Toppings	Black Beans, Shredded Lettuce, Tomato, Onio... (+5)	Sweet Heat Nachos, Chicken Nachos, Veggie ... (+1)	•••
Beans Choice	Pinto, Black , Refried, No Beans	Chicken Burrito, Steak Burrito	•••
Rice Choice	Brown Rice, Spanish Rice, White Rice	Chicken Burrito, Steak Burrito	•••
Sides	Chips & Salsa, Chips & Guacamole, Elote, Tortilla S...	Sweet Heat Nachos, Chicken Nachos, Veggie ... (+3)	•••
Spice Level	No Spice, Mild, Medium, Spicy, X-Spicy	Sweet Heat Nachos, Chicken Nachos, Veggie ... (+3)	•••
Drink Size	Small (12oz), Large (16oz)	Agua Fresca del Dia	•••



	 Modifier Example Modifier You can only edit the availability of this modifier for your store. If you want to make additional changes to it, ask your DoorDash Business Admin user to add the other stores that also use this modifier to your user role. Learn More Availability Downtown 123 Main St, Somewhere, CA, 98765 Name Example Modifier Used In Required Label Label Label Search for something... Options Give your customers a list of options to choose from. Option 1 +$0.00 Option 2 +$0.00 Option 3 +$0.00 Option 4 +$0.00 Rules Set rules for the way your customers can select the options in this modifier. Require a selection If you turn on this switch, customers will have to select at least one option in order to add the item to the cart. Allow multiple selections If you turn on this switch, customers will be able to select Here is another example. The slides below were extracted from a DoorDash merchant training video in which they show the user how to add a menu item using the Menu Editor in the Merchant Portal (see Exh 37):  Sprout Cafe 1/12 MENU SORT Small Bites Signature Soups Entrées Build Your Own Salad Signature Salads Grilled Cheese Sandwiches Cool Sandwiches Warm Sandwiches Snacks Drinks Sprout Cafe 1/12 Small Bites EDIT CATEGORY Summer Rolls $5.90 With mixed green lettuce, somen noodles, carrots, bean sprouts, caramelized shallots, a... EDIT Guacamole $8.03 With sour cream and homemade chips. EDIT Fried Calamari $9.10 With chili lime aioli. EDIT Garlic Sweet Potato Fries $7.49 With chipotle ketchup and chili lime aioli. EDIT Pork Potstickers $8.03 6 pieces. With chili soy ginger sauce. EDIT Bulgogi Lettuce Cups $6.96 2 pieces. With rib eye steak, Gochujang sauce, crushed peanuts, carrots, and cilantro. EDIT Shoestring Fries $5.50 Chipotle ketchup, chili lime aioli EDIT Sesame Tofu $6.42 Crispy tofu in a tangy sesame sauce. EDIT Click ADD AN ITEM



Click

Sprout Cafe 1/12

Small Bites

Summer Rolls $5.90
With mixed green lettuce, somen noodles, carrots, bean sprouts, caramelized shallots, a...

Guacamole $8.03
With sour cream and homemade chips.

Fried Calamari $9.10
With chili lime aioli.

Garlic Sweet Potato Fries $7.49
With chipotle ketchup and chili lime aioli.

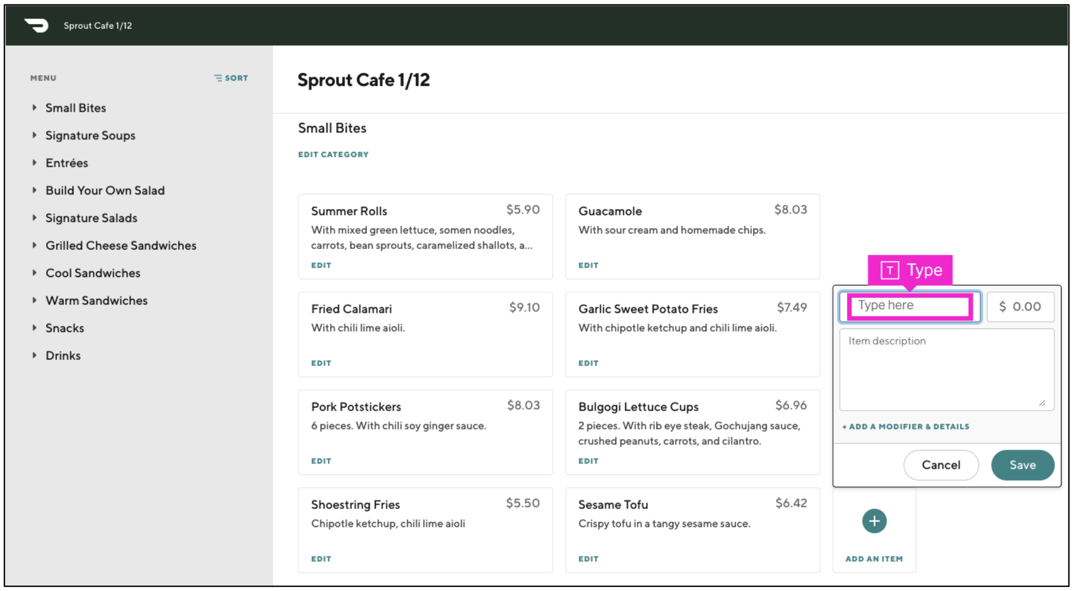
Pork Potstickers $8.03
6 pieces. With chili soy ginger sauce.

Bulgogi Lettuce Cups $6.96
2 pieces. With rib eye steak, Gochujang sauce, crushed peanuts, carrots, and cilantro.

Shoestring Fries $5.50
Chipotle ketchup, chili lime aioli

Sesame Tofu $6.42
Crispy tofu in a tangy sesame sauce.

Unnamed item $ 0.00
Item description



Type

Sprout Cafe 1/12

Small Bites

Summer Rolls $5.90
With mixed green lettuce, somen noodles, carrots, bean sprouts, caramelized shallots, a...

Guacamole $8.03
With sour cream and homemade chips.

Fried Calamari $9.10
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Garlic Sweet Potato Fries $7.49
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Pork Potstickers $8.03
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Bulgogi Lettuce Cups $6.96
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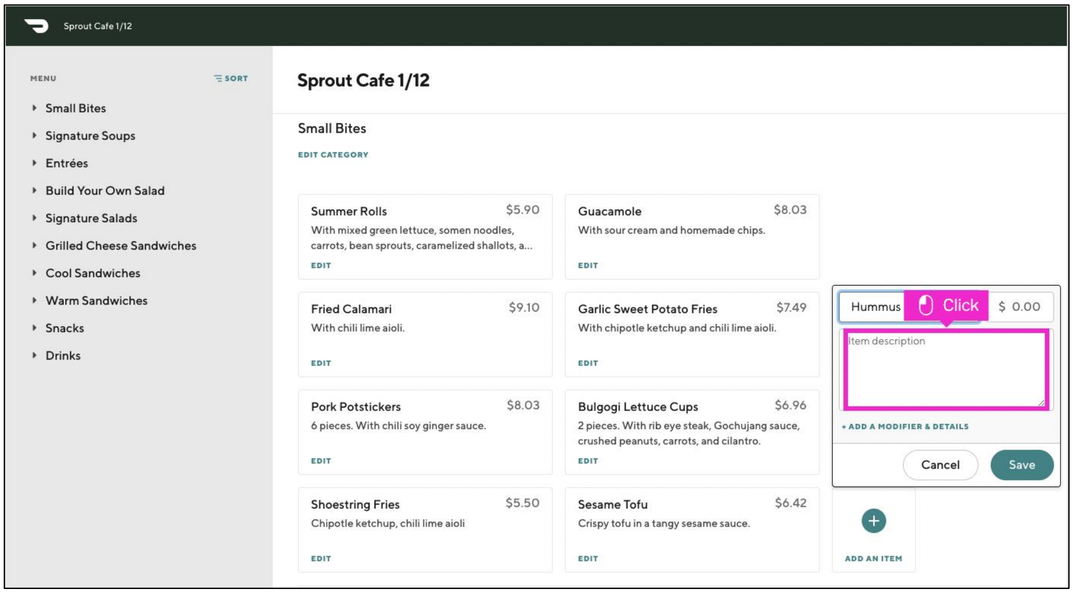
Shoestring Fries $5.50
Chipotle ketchup, chili lime aioli

Sesame Tofu $6.42
Crispy tofu in a tangy sesame sauce.

Type here $ 0.00
Item description



Click

Sprout Cafe 1/12

Small Bites

Summer Rolls $5.90
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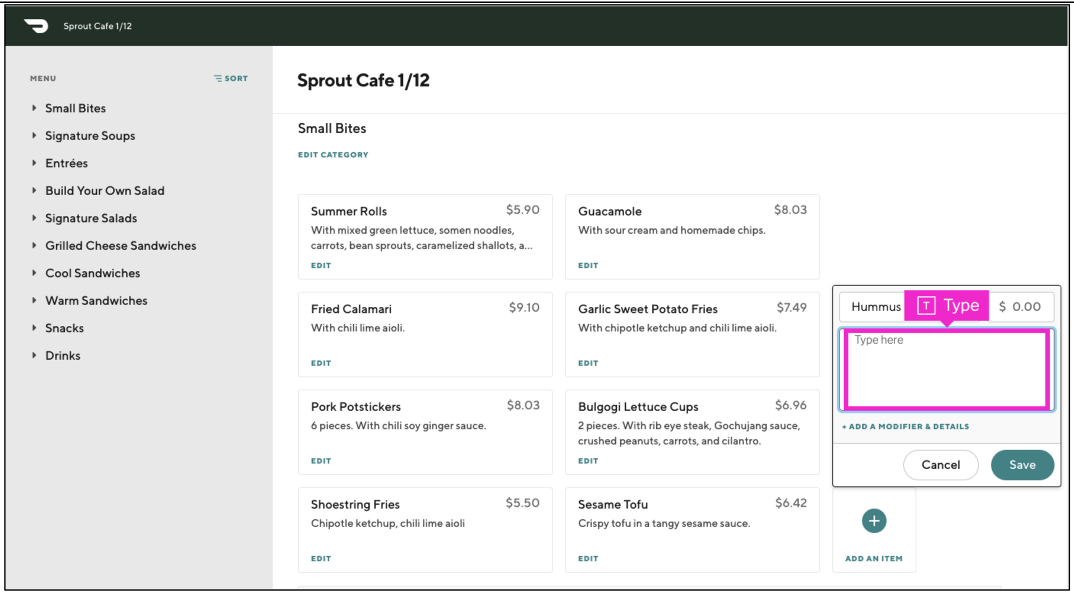
Shoestring Fries $5.50
Chipotle ketchup, chili lime aioli

Sesame Tofu $6.42
Crispy tofu in a tangy sesame sauce.

Hummus $ 0.00
Item description



Sprout Cafe 1/12

MENU ☰ SORT

- Small Bites
- Signature Soups
- Entrées
- Build Your Own Salad
- Signature Salads
- Grilled Cheese Sandwiches
- Cool Sandwiches
- Warm Sandwiches
- Snacks
- Drinks

Sprout Cafe 1/12

Small Bites

EDIT CATEGORY

Summer Rolls $5.90
With mixed green lettuce, somen noodles, carrots, bean sprouts, caramelized shallots, a...
EDIT

Guacamole $8.03
With sour cream and homemade chips.
EDIT

Fried Calamari $9.10
With chili lime aioli.
EDIT

Garlic Sweet Potato Fries $7.49
With chipotle ketchup and chili lime aioli.
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6 pieces. With chili soy ginger sauce.
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Bulgogi Lettuce Cups $6.96
2 pieces. With rib eye steak, Gochujang sauce, crushed peanuts, carrots, and cilantro.
EDIT

Shoestring Fries $5.50
Chipotle ketchup, chili lime aioli
EDIT

Sesame Tofu $6.42
Crispy tofu in a tangy sesame sauce.
EDIT

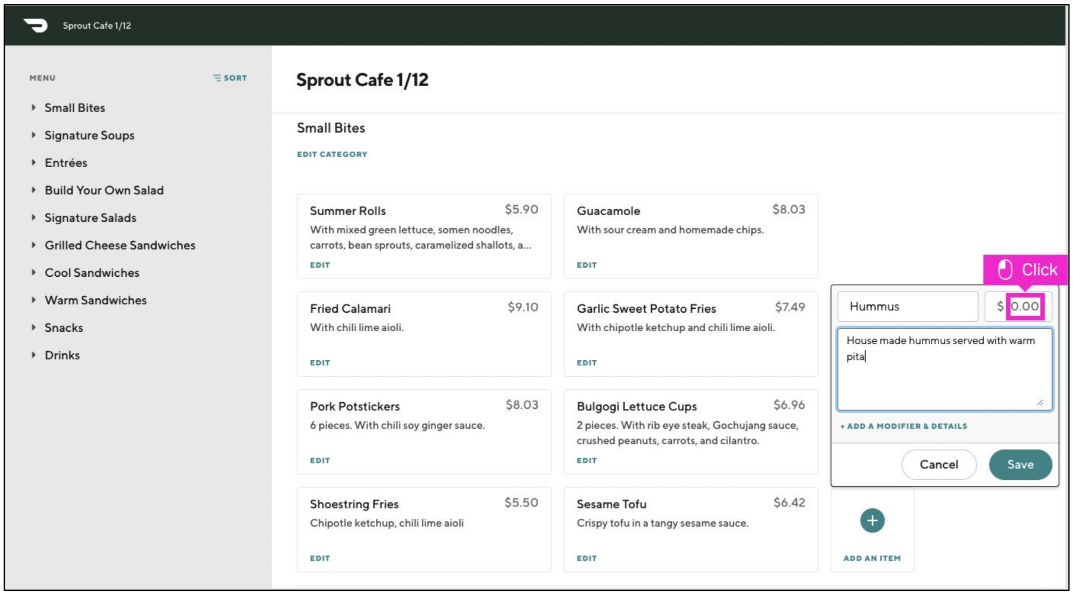
Hummus T Type $ 0.00

Type here

+ ADD A MODIFIER & DETAILS

Cancel Save

+ ADD AN ITEM



Sprout Cafe 1/12

MENU ☰ SORT

- Small Bites
- Signature Soups
- Entrées
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- Drinks

Sprout Cafe 1/12

Small Bites

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EDIT

Shoestring Fries $5.50
Chipotle ketchup, chili lime aioli
EDIT

Sesame Tofu $6.42
Crispy tofu in a tangy sesame sauce.
EDIT

Click

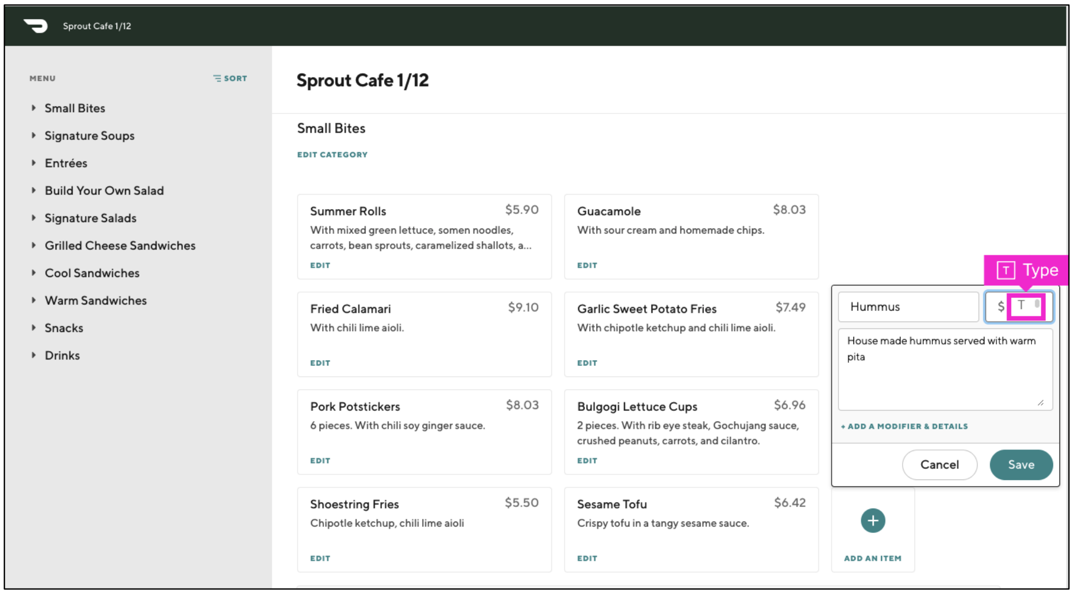
Hummus $ 0.00

House made hummus served with warm pita

+ ADD A MODIFIER & DETAILS

Cancel Save

+ ADD AN ITEM



Sprout Cafe 1/12

MENU ☰ SORT

- Small Bites
- Signature Soups
- Entrées
- Build Your Own Salad
- Signature Salads
- Grilled Cheese Sandwiches
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- Warm Sandwiches
- Snacks
- Drinks

Sprout Cafe 1/12

Small Bites

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Pork Potstickers $8.03
6 pieces. With chili soy ginger sauce.
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Bulgogi Lettuce Cups $6.96
2 pieces. With rib eye steak, Gochujang sauce, crushed peanuts, carrots, and cilantro.
EDIT

Shoestring Fries $5.50
Chipotle ketchup, chili lime aioli
EDIT

Sesame Tofu $6.42
Crispy tofu in a tangy sesame sauce.
EDIT

T Type

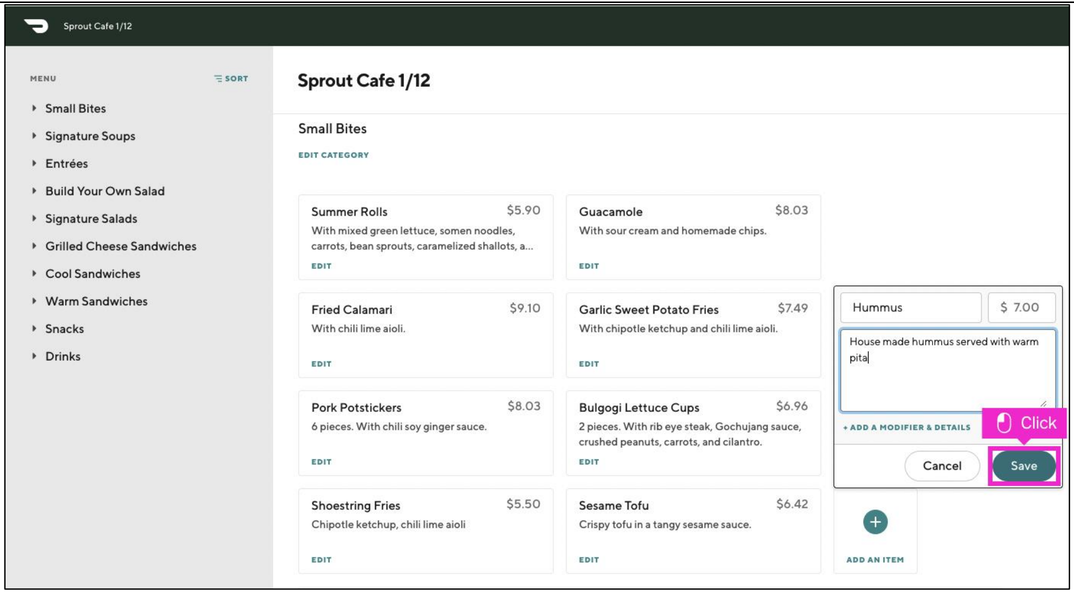
Hummus $ T

House made hummus served with warm pita

+ ADD A MODIFIER & DETAILS

Cancel Save

+ ADD AN ITEM



Sprout Cafe 1/12

Small Bites

Summer Rolls $5.90 With mixed green lettuce, somen noodles, carrots, bean sprouts, caramelized shallots, a... EDIT

Guacamole $8.03 With sour cream and homemade chips. EDIT

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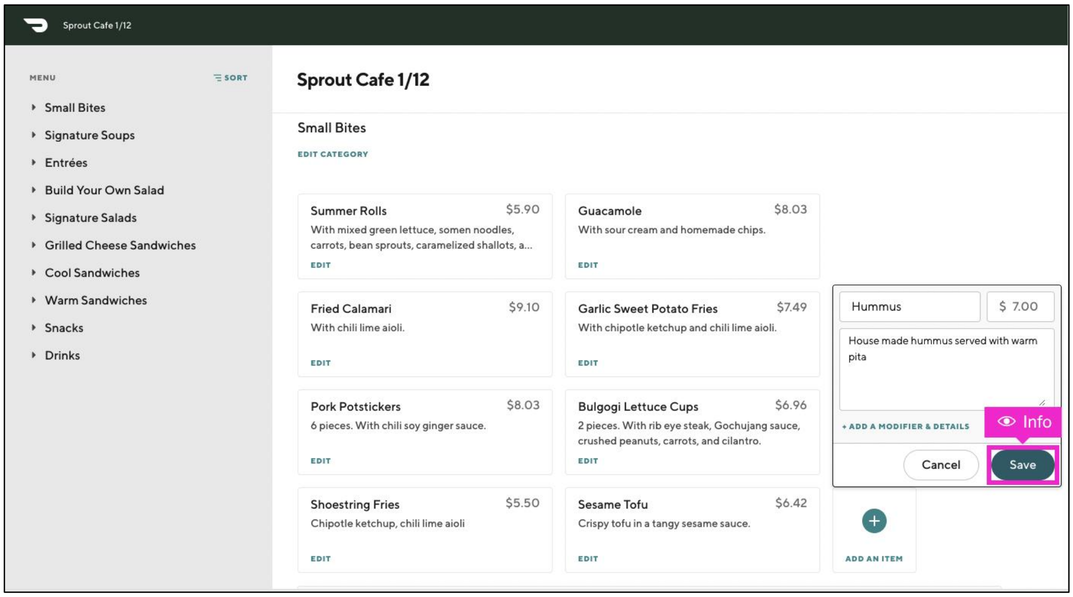
Sesame Tofu $6.42 Crispy tofu in a tangy sesame sauce. EDIT

Hummus $ 7.00

House made hummus served with warm pita



Sprout Cafe 1/12

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Summer Rolls $5.90 With mixed green lettuce, somen noodles, carrots, bean sprouts, caramelized shallots, a... EDIT

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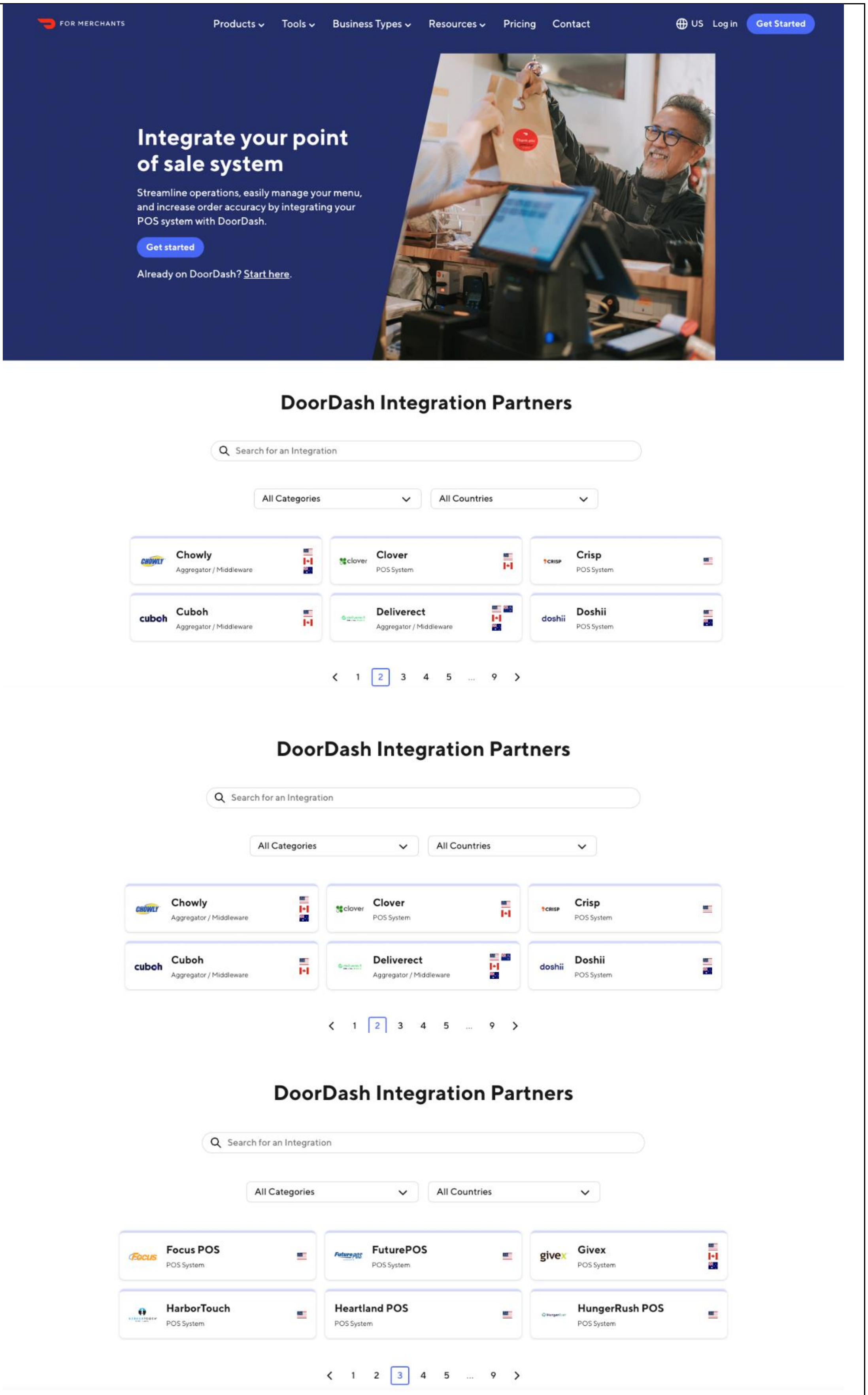
Hummus $ 7.00

House made hummus served with warm pita

Integration Partners

DoorDash has “partners” that offer direct integration with the DoorDash platform. These third parties provide a means in their respective UIs to connect to the merchant’s DoorDash account.

There appear to be around 57 existing partners that represent different POS systems (Aloha, Square, Toast) and aggregators (All Day Kitchens, Chowly, MealCo). Within the category of POS integration there are two main features that a merchant can take advantage of: menu management and order fulfillment. Below are screenshots from the DoorDash Merchant portal listing the various DoorDash integration partners (see Exh 36, 37).



Integrate your point of sale system

Streamline operations, easily manage your menu, and increase order accuracy by integrating your POS system with DoorDash.

Already on DoorDash? Start here.

DoorDash Integration Partners

Chowly
Aggregator / Middleware

Clover
POS System

Crisp
POS System

Cuboh
Aggregator / Middleware

Deliverect
Aggregator / Middleware

Doshii
POS System

DoorDash Integration Partners

Search for an Integration
All Categories
All Countries

Chowly
Aggregator / Middleware

Clover
POS System

Crisp
POS System

Cuboh
Aggregator / Middleware

Deliverect
Aggregator / Middleware

Doshii
POS System

1 2 3 4 5 ... 9

DoorDash Integration Partners

Focus POS
POS System

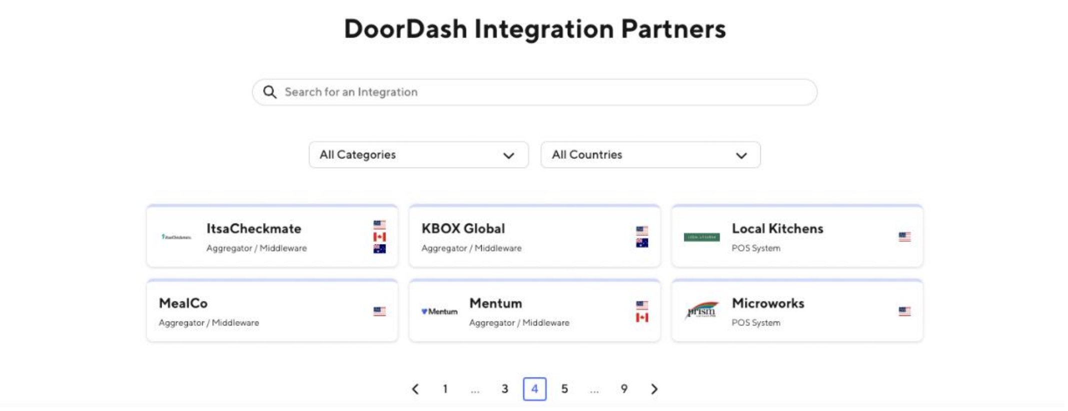
FuturePOS
POS System

Givex
POS System

HarborTouch
POS System

Heartland POS
POS System

HungerRush POS
POS System



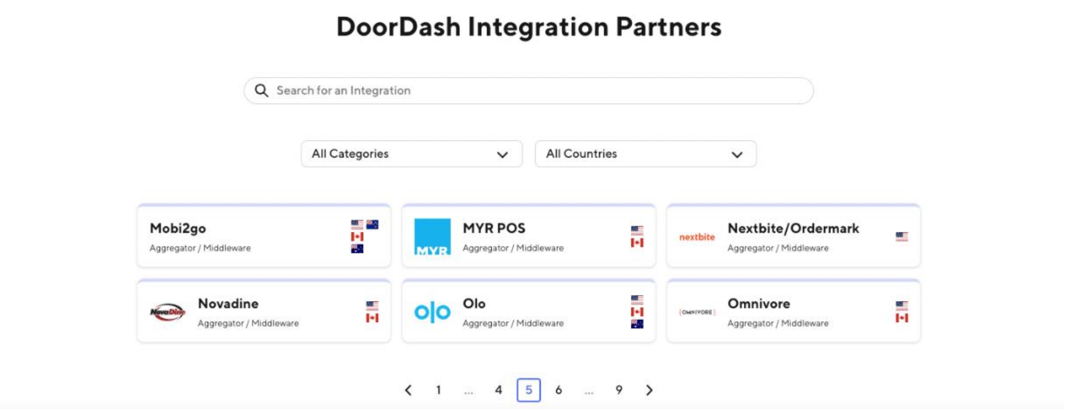
DoorDash Integration Partners

Search for an Integration

All Categories | All Countries

- **ItsaCheckmate** – Aggregator / Middleware 🇺🇸🇨🇦🇦🇺
- **KBOX Global** – Aggregator / Middleware 🇺🇸🇦🇺
- **Local Kitchens** – POS System 🇺🇸
- **MealCo** – Aggregator / Middleware 🇺🇸
- **Mentum** – Aggregator / Middleware 🇺🇸🇨🇦
- **Microworks** – POS System 🇺🇸

< 1 ... 3 4 5 ... 9 >



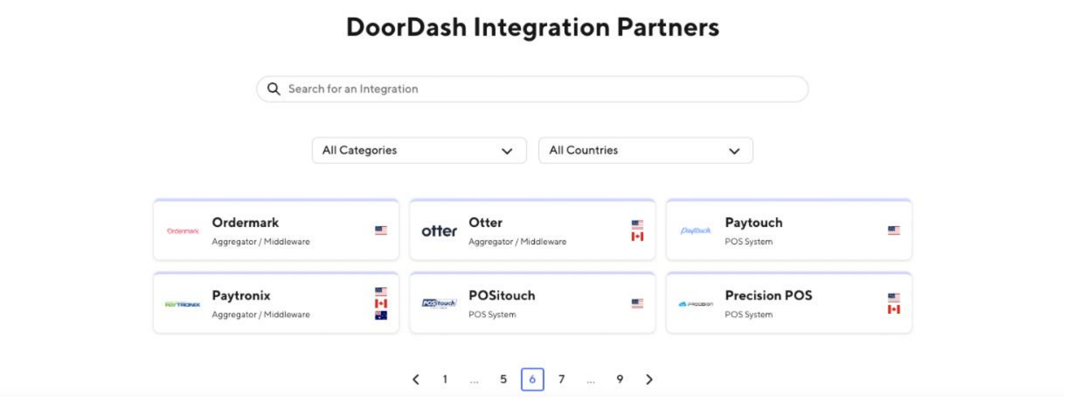
DoorDash Integration Partners

Search for an Integration

All Categories | All Countries

- **Mobi2go** – Aggregator / Middleware 🇺🇸🇳🇿🇨🇦🇦🇺
- **MYR POS** – Aggregator / Middleware 🇺🇸🇨🇦
- **Nextbite/Ordermark** – Aggregator / Middleware 🇺🇸
- **Novadine** – Aggregator / Middleware 🇺🇸🇨🇦
- **Olo** – Aggregator / Middleware 🇺🇸🇨🇦🇦🇺
- **Omnivore** – Aggregator / Middleware 🇺🇸🇨🇦

< 1 ... 4 5 6 ... 9 >



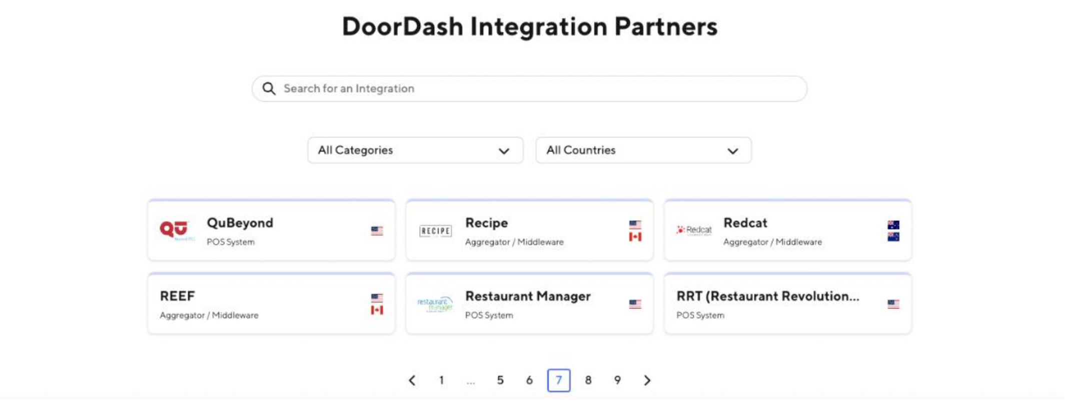
DoorDash Integration Partners

Search for an Integration

All Categories | All Countries

- **Ordermark** – Aggregator / Middleware 🇺🇸
- **Otter** – Aggregator / Middleware 🇺🇸🇨🇦
- **Paytouch** – POS System 🇺🇸
- **Paytronix** – Aggregator / Middleware 🇺🇸🇨🇦🇦🇺
- **POSitouch** – POS System 🇺🇸
- **Precision POS** – POS System 🇺🇸🇨🇦

< 1 ... 5 6 7 ... 9 >



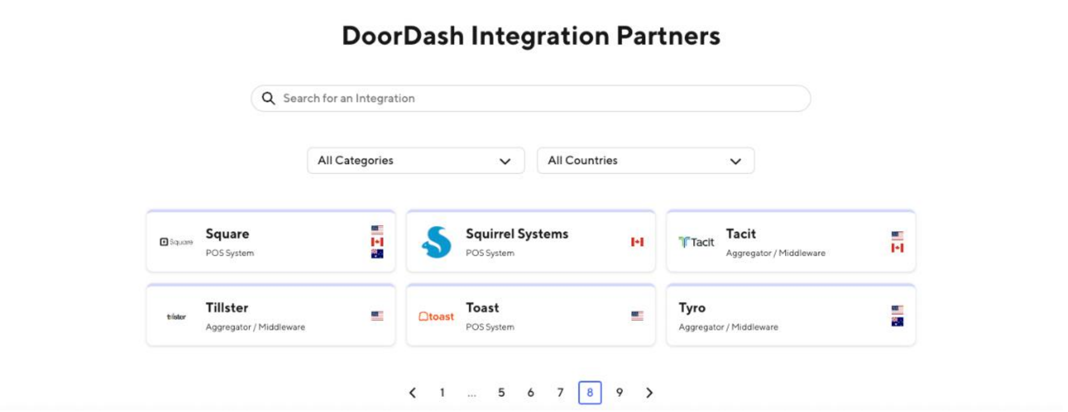
DoorDash Integration Partners

Search for an Integration

All Categories | All Countries

- **QuBeyond** – POS System 🇺🇸
- **Recipe** – Aggregator / Middleware 🇺🇸🇨🇦
- **Redcat** – Aggregator / Middleware 🇦🇺🇳🇿
- **REEF** – Aggregator / Middleware 🇺🇸🇨🇦
- **Restaurant Manager** – POS System 🇺🇸
- **RRT (Restaurant Revolution...** – POS System 🇺🇸

< 1 ... 5 6 7 8 9 >



DoorDash Integration Partners

Search for an Integration

All Categories

All Countries

Square
POS System

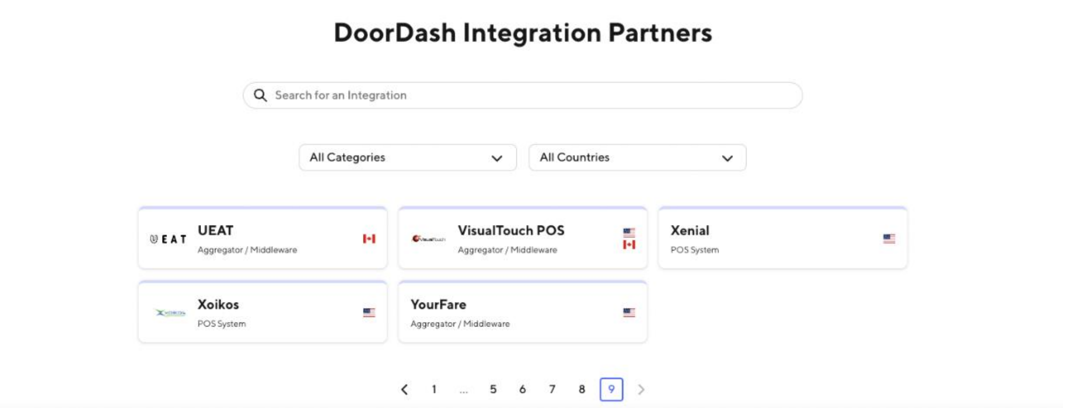
Squirrel Systems
POS System

Tacit
Aggregator / Middleware

Tillster
Aggregator / Middleware

Toast
POS System

Tyro
Aggregator / Middleware



DoorDash Integration Partners

Search for an Integration

All Categories

All Countries

UEAT
Aggregator / Middleware

VisualTouch POS
Aggregator / Middleware

Xenial
POS System

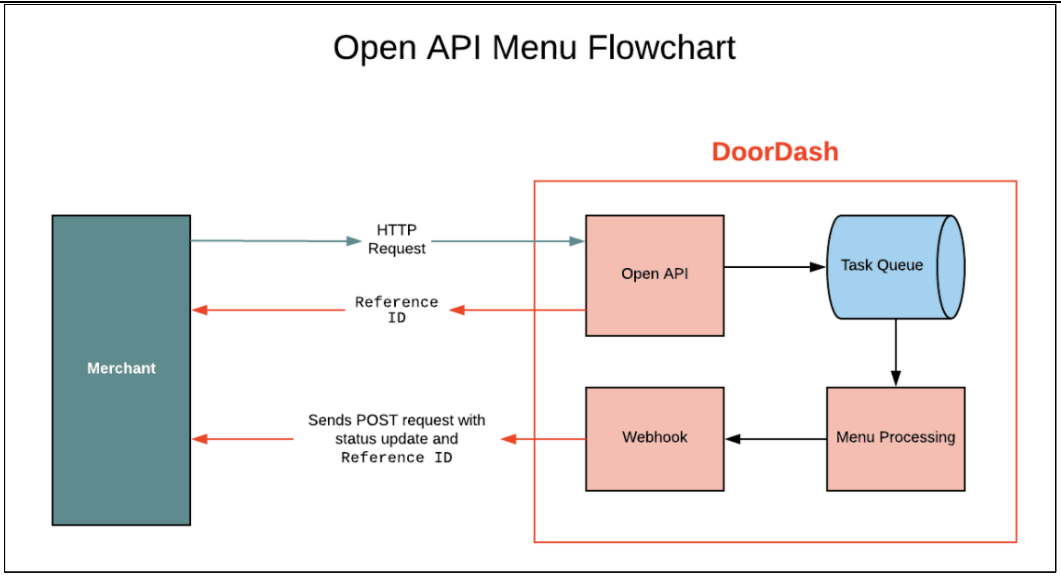
Xoikos
POS System

YourFare
Aggregator / Middleware

Menu Management

Menu management automatically synchronizes the merchant's menu with the DoorDash platform. This is a one-way synchronization from the POS system to DoorDash. Not all features of DoorDash's menu manager are supported for all merchants. In some cases, the menu items will sync over but the sort order will not. The merchant is still able to utilize the menu manager to adjust imported items. Order fulfillment can happen through one of four different order protocols: direct POS integration, middleware integration, tablet (DoorDash Order Manager app), or email (see Exh. 31, 32)

Updating menus on the DoorDash platform involves both Push (partner to DoorDash) and Pull (DoorDash to partner). When a partner is first added to the DoorDash platform, a request is issued to the partner's server to retrieve a merchant's menu. The partner's server must respond will the full menu in its body. Whenever there are changes to a merchant's menu, the partner can then issue a request to DoorDash's server, pushing the new menu. In both push and pull scenarios, once the menu has been processed by the DoorDash platform, a request is issued to the partner server indicating the success or fail (see Exh. 38).

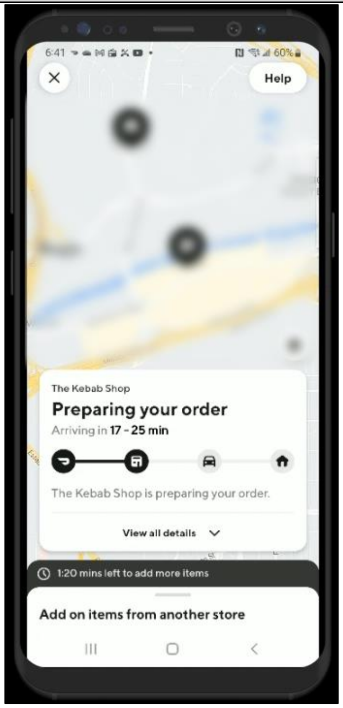
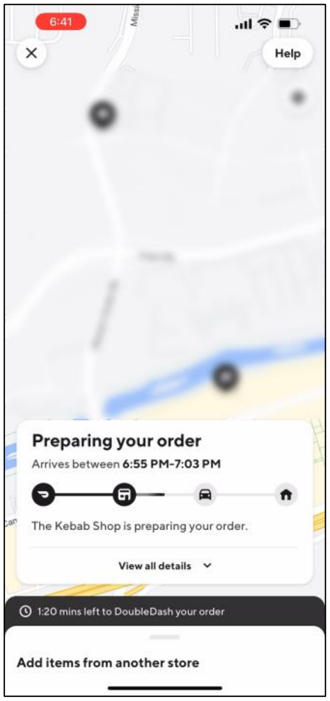
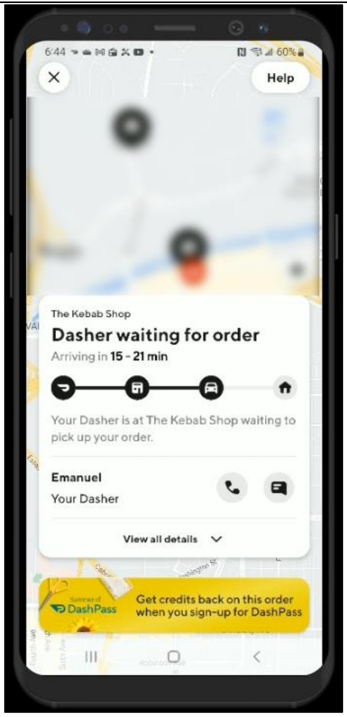
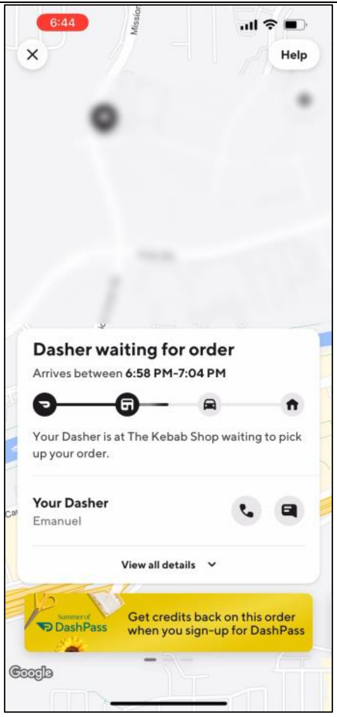


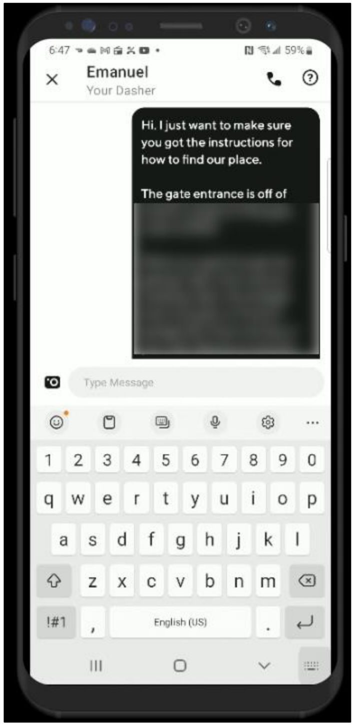
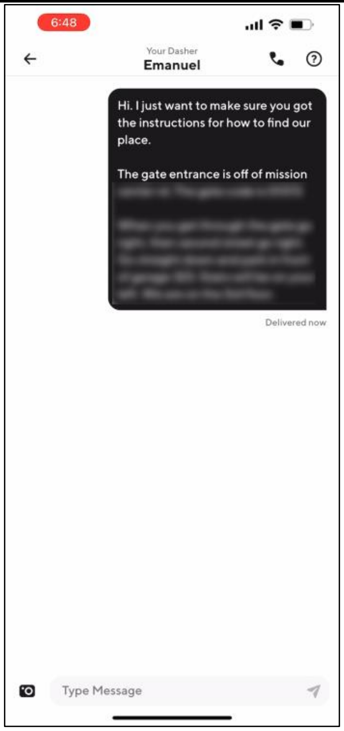
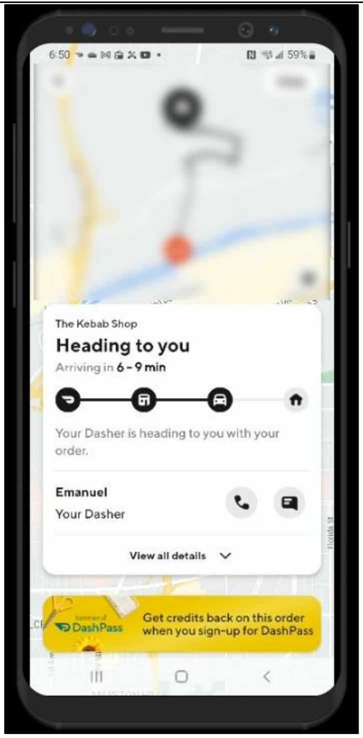
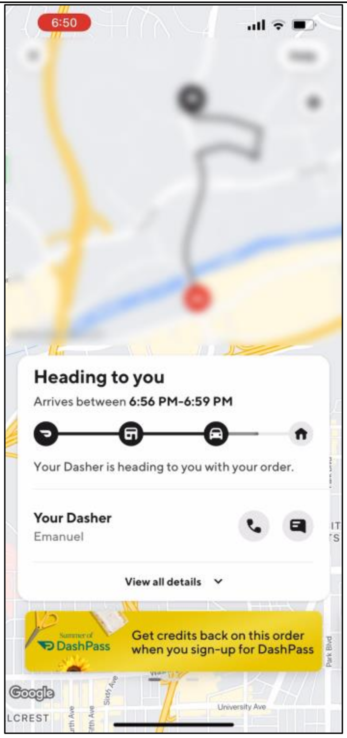
POS Integration

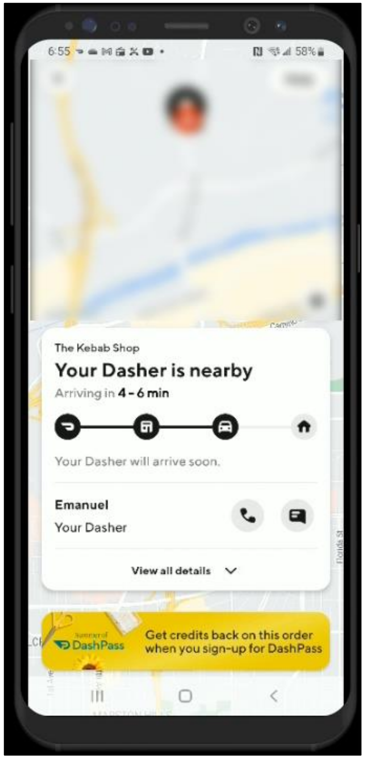
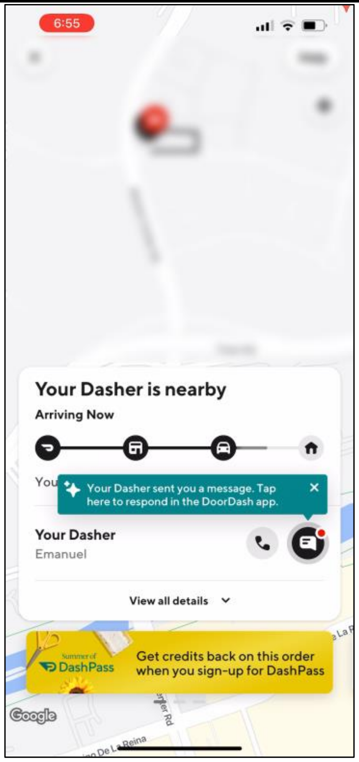
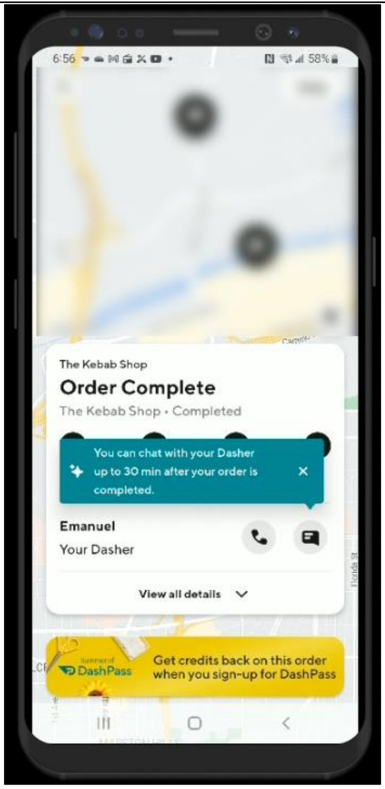
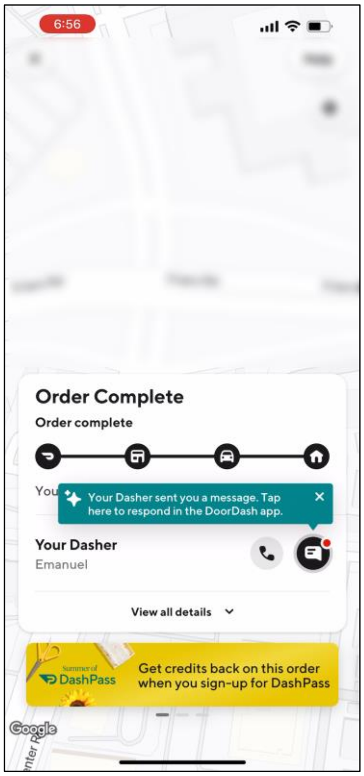
Two popular Point of Sale systems (OS) are Square and Clover. DoorDash provides the means for merchants to integrate with these POSs to fulfill DoorDash orders on said POS. Through this integration, merchants can manage their store menus (published on the DoorDash system) which included adding, editing, deleting, and updating menu item, menu photos, prices and price adjustment, special instructions, etc. Furthermore, through the integration merchants can directly interact with their POS to manage all aspects of DoorDash orders including fulfillment, refunds, cancellations, prep times, schedules, tips, etc. (See Exh 81, 82)

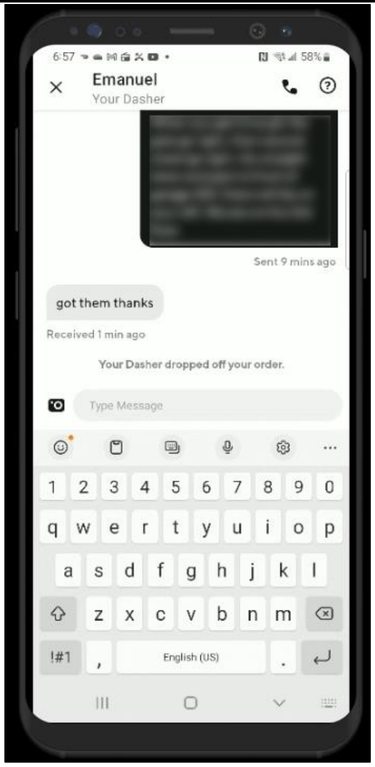
Order Tracking and Notification

The same holds true for order notifications, order tracking and texting/chatting between the dasher and user. Below are a series of screens take from one iPhone and one Android each tracking the same order placed by a user in the Android App. They depict the notifications and updates in the app for the user to be able to track their order. In this case, we have one iPhone and one Android device tracking the same order, we can see the intelligent decisions being made by the Dispatcher regarding estimated time of delivery and dasher time and distance from fulfilling the order. We also see text messages placed and sent by the user to the Dasher on the android app, being reflected in the iOS app on an iPhone that is tracking the order. When the Dasher responds to the chat from the user, the user is notified on the android phone and on the iOS phone.

	Android DoorDash App	iOS DoorDash App
	 6:41 60% Help The Kebab Shop Preparing your order Arriving in 17 - 25 min The Kebab Shop is preparing your order. View all details 1:20 mins left to add more items Add on items from another store	 6:41 Help Preparing your order Arrives between 6:55 PM-7:03 PM The Kebab Shop is preparing your order. View all details 1:20 mins left to DoubleDash your order Add items from another store
	 6:44 60% Help The Kebab Shop Dasher waiting for order Arriving in 15 - 21 min Your Dasher is at The Kebab Shop waiting to pick up your order. Emanuel Your Dasher View all details DashPass Get credits back on this order when you sign-up for DashPass	 6:44 Help Dasher waiting for order Arrives between 6:58 PM-7:04 PM Your Dasher is at The Kebab Shop waiting to pick up your order. Your Dasher Emanuel View all details DashPass Get credits back on this order when you sign-up for DashPass Google

		 6:47 · 59% Emanuel Your Dasher Hi. I just want to make sure you got the instructions for how to find our place. The gate entrance is off of [redacted] Type Message English (US)	 6:48 Your Dasher Emanuel Hi. I just want to make sure you got the instructions for how to find our place. The gate entrance is off of mission [redacted] Delivered now Type Message
		 6:50 · 59% The Kebab Shop Heading to you Arriving in 6 – 9 min Your Dasher is heading to you with your order. Emanuel Your Dasher View all details DashPass Get credits back on this order when you sign-up for DashPass	 6:50 Heading to you Arrives between 6:56 PM–6:59 PM Your Dasher is heading to you with your order. Your Dasher Emanuel View all details DashPass Get credits back on this order when you sign-up for DashPass

	 6:55 58% The Kebab Shop Your Dasher is nearby Arriving in **4 - 6 min** Your Dasher will arrive soon. Emanuel Your Dasher View all details Summer of DashPass Get credits back on this order when you sign-up for DashPass	 6:55 Your Dasher is nearby Arriving Now You Your Dasher sent you a message. Tap here to respond in the DoorDash app. Your Dasher Emanuel View all details Summer of DashPass Get credits back on this order when you sign-up for DashPass
	 6:56 58% The Kebab Shop Order Complete The Kebab Shop • Completed You can chat with your Dasher up to 30 min after your order is completed. Emanuel Your Dasher View all details Summer of DashPass Get credits back on this order when you sign-up for DashPass	 6:56 Order Complete Order complete You Your Dasher sent you a message. Tap here to respond in the DoorDash app. Your Dasher Emanuel View all details Summer of DashPass Get credits back on this order when you sign-up for DashPass



6:57

Emanuel
Your Dasher

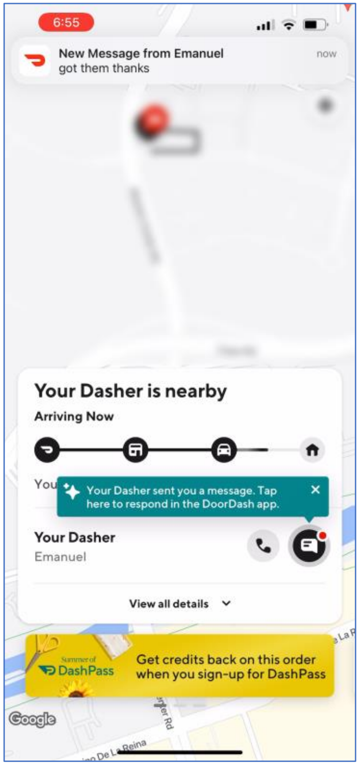
[redacted]

Sent 9 mins ago

got them thanks

Received 1 min ago

Your Dasher dropped off your order.



6:55

New Message from Emanuel
got them thanks
now

Your Dasher is nearby
Arriving Now

Your Dasher sent you a message. Tap here to respond in the DoorDash app.

Your Dasher
Emanuel

View all details

Get credits back on this order when you sign-up for DashPass

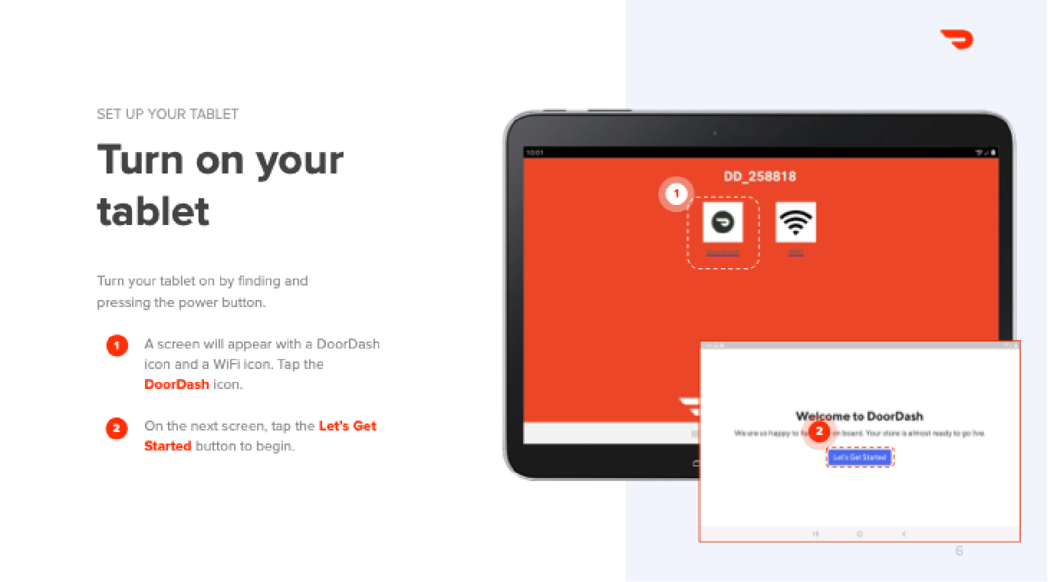
DoorDash Tablet (wireless handheld computer)

Restaurants use the DoorDash's custom app called **DoorDash Tablet** to receive and manage customer orders, manage their menus, manage hours of operation and kitchen status, and chat with DoorDash support. The following screenshots are taken from the DoorDash document "Your DoorDash Tablet A Step-by-Step Guide.pdf" (see Exh 88) and depict a step by step process as to how restaurants/merchants/entities use the tablet app:

DOORDASH

Your DoorDash Tablet

A Step-by-Step Guide



SET UP YOUR TABLET

Turn on your tablet

Turn your tablet on by finding and pressing the power button.

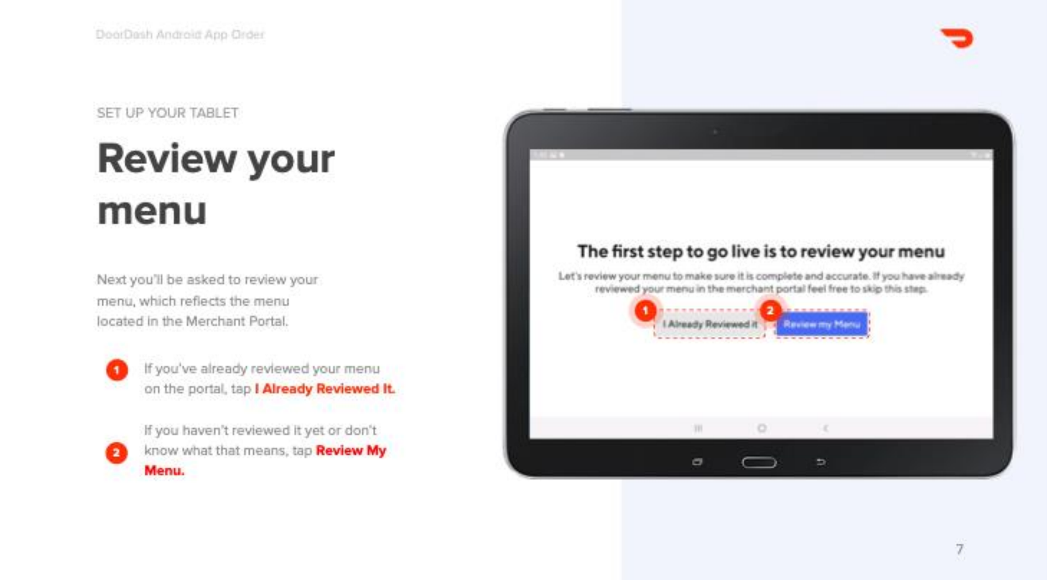
1. A screen will appear with a DoorDash icon and a WiFi icon. Tap the **DoorDash** icon.
2. On the next screen, tap the **Let's Get Started** button to begin.

DD_258818

Welcome to DoorDash

We are so happy to ha[illegible] on board. Your store is almost ready to go live.

6



DoorDash Android App Order

SET UP YOUR TABLET

Review your menu

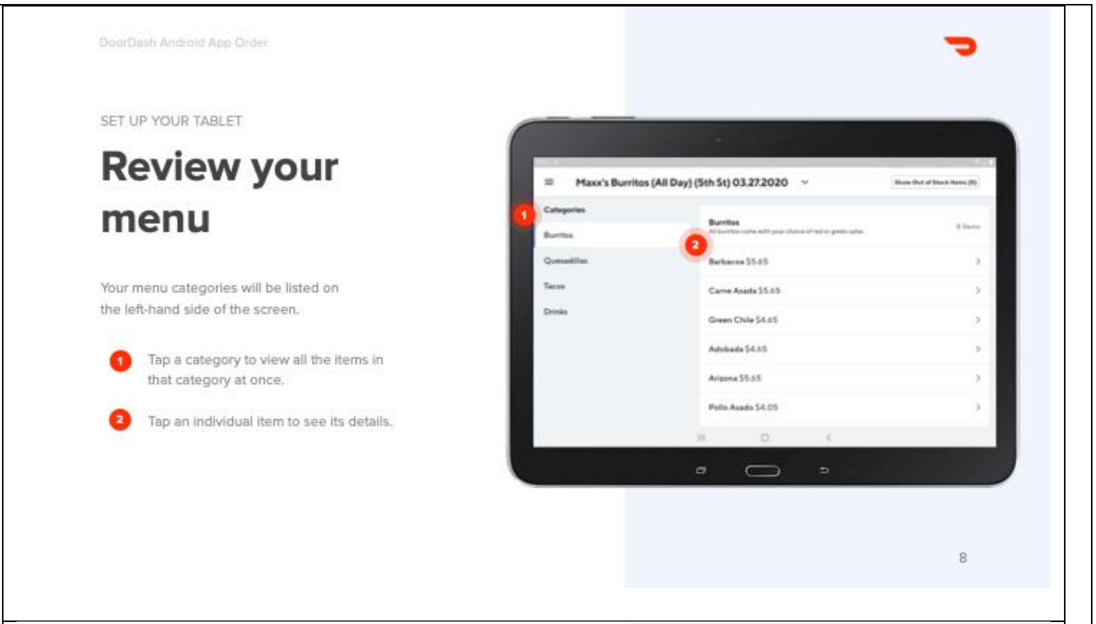
Next you'll be asked to review your menu, which reflects the menu located in the Merchant Portal.

1. If you've already reviewed your menu on the portal, tap **I Already Reviewed It.**
2. If you haven't reviewed it yet or don't know what that means, tap **Review My Menu.**

The first step to go live is to review your menu

Let's review your menu to make sure it is complete and accurate. If you have already reviewed your menu in the merchant portal feel free to skip this step.

7



DoorDash Android App Order

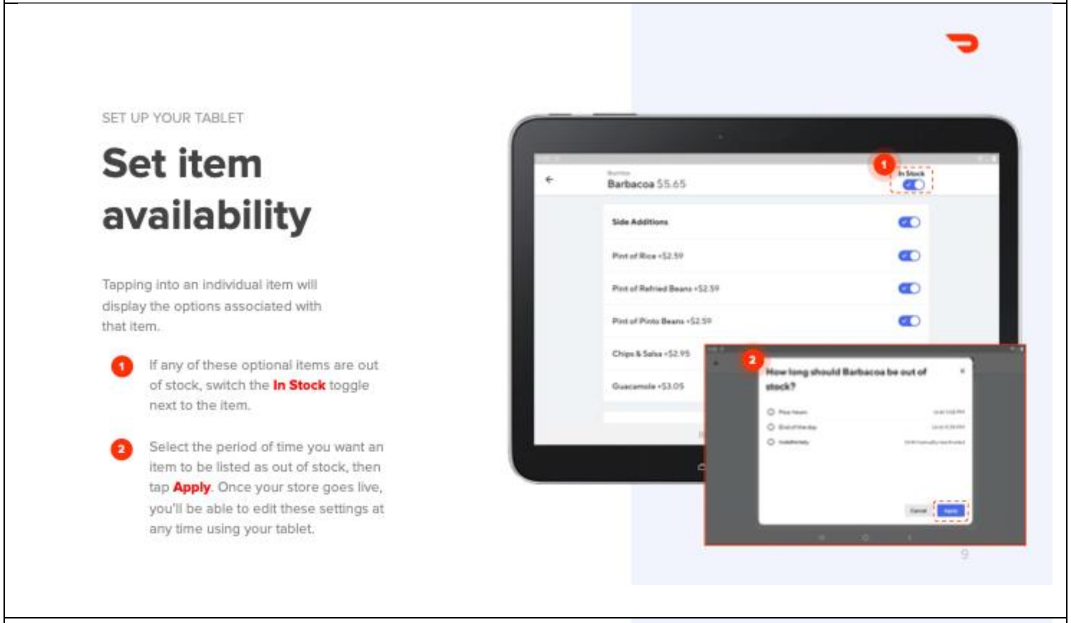
SET UP YOUR TABLET

Review your menu

Your menu categories will be listed on the left-hand side of the screen.

1. Tap a category to view all the items in that category at once.
2. Tap an individual item to see its details.

8



SET UP YOUR TABLET

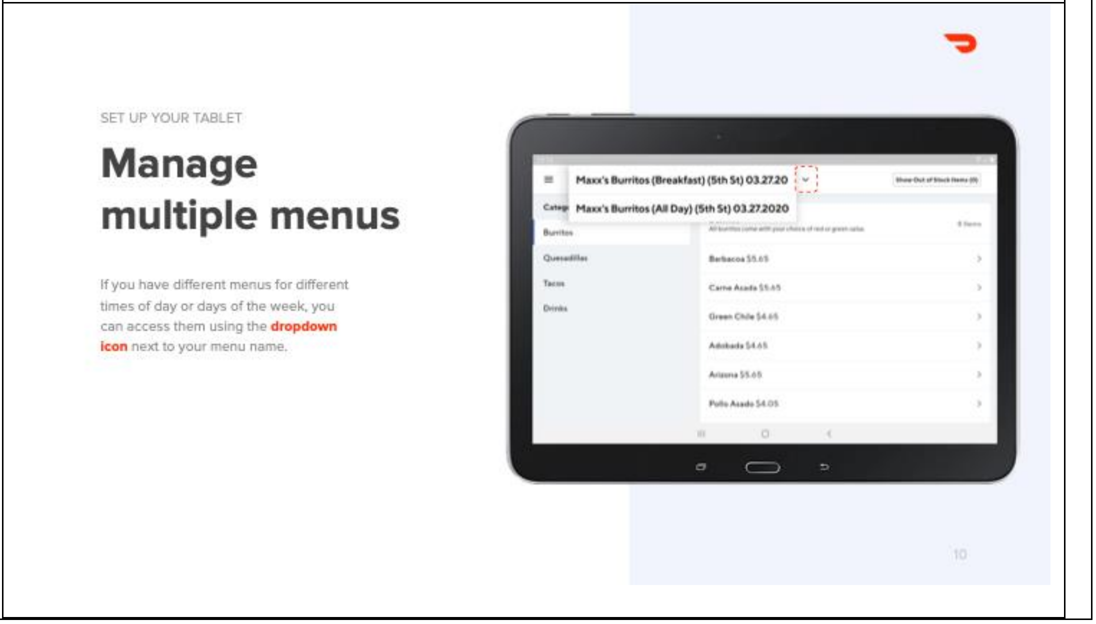
Set item availability

Tapping into an individual item will display the options associated with that item.

1. If any of these optional items are out of stock, switch the **In Stock** toggle next to the item.
2. Select the period of time you want an item to be listed as out of stock, then tap **Apply**. Once your store goes live, you'll be able to edit these settings at any time using your tablet.

Barbacoa $5.65
1
In Stock
Side Additions
Pint of Rice +$2.59
Pint of Refried Beans +$2.59
Pint of Pinto Beans +$2.59
Chips & Salsa +$2.95
Guacamole +$3.05
2
How long should Barbacoa be out of stock?

9

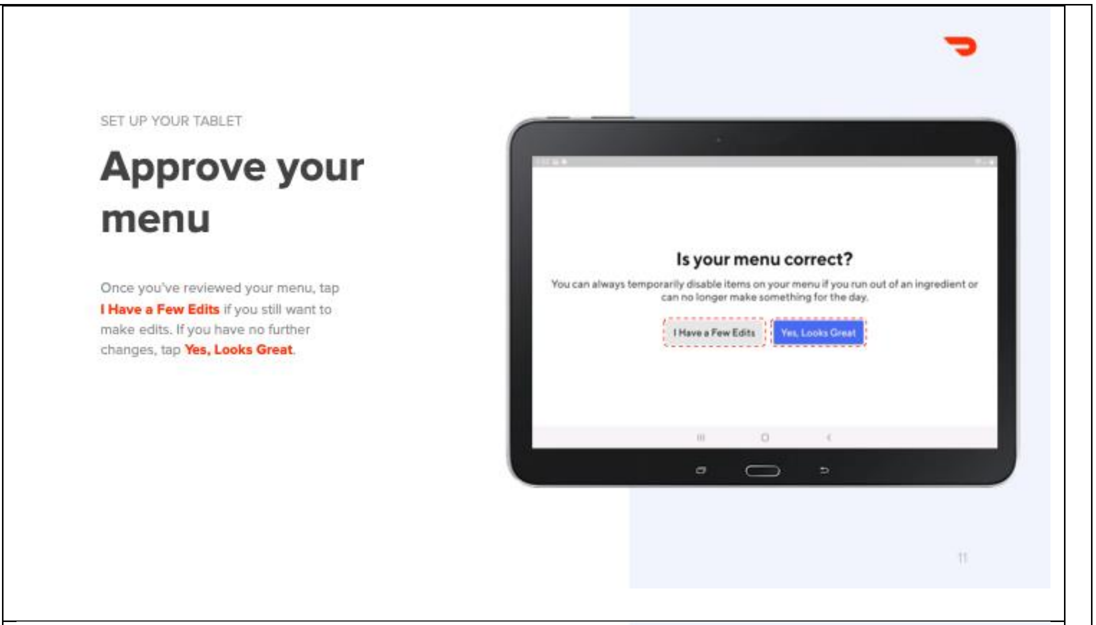


SET UP YOUR TABLET

Manage multiple menus

If you have different menus for different times of day or days of the week, you can access them using the **dropdown icon** next to your menu name.

10



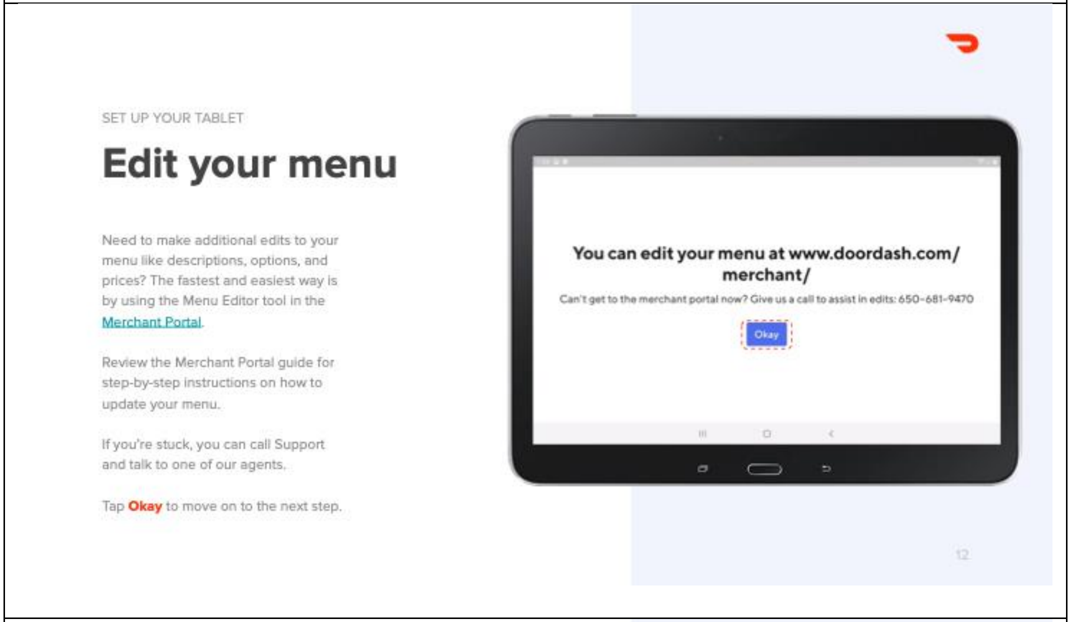
SET UP YOUR TABLET

Approve your menu

Once you've reviewed your menu, tap **I Have a Few Edits** if you still want to make edits. If you have no further changes, tap **Yes, Looks Great**.

Is your menu correct?

You can always temporarily disable items on your menu if you run out of an ingredient or can no longer make something for the day.



SET UP YOUR TABLET

Edit your menu

Need to make additional edits to your menu like descriptions, options, and prices? The fastest and easiest way is by using the Menu Editor tool in the Merchant Portal.

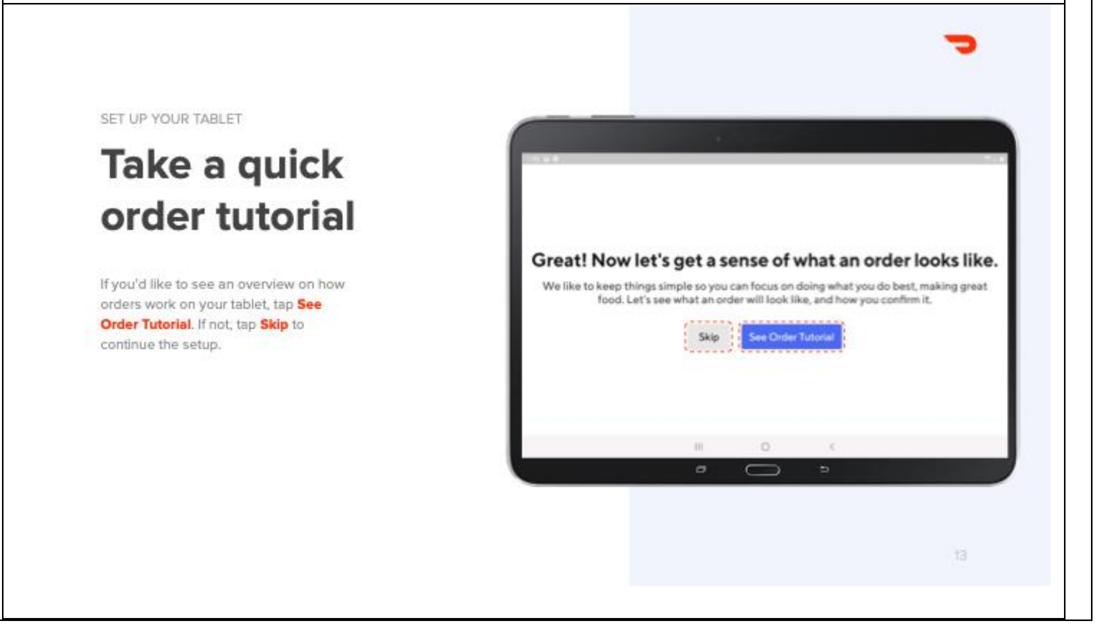
Review the Merchant Portal guide for step-by-step instructions on how to update your menu.

If you're stuck, you can call Support and talk to one of our agents.

Tap **Okay** to move on to the next step.

You can edit your menu at www.doordash.com/merchant/

Can't get to the merchant portal now? Give us a call to assist in edits: 650-681-9470



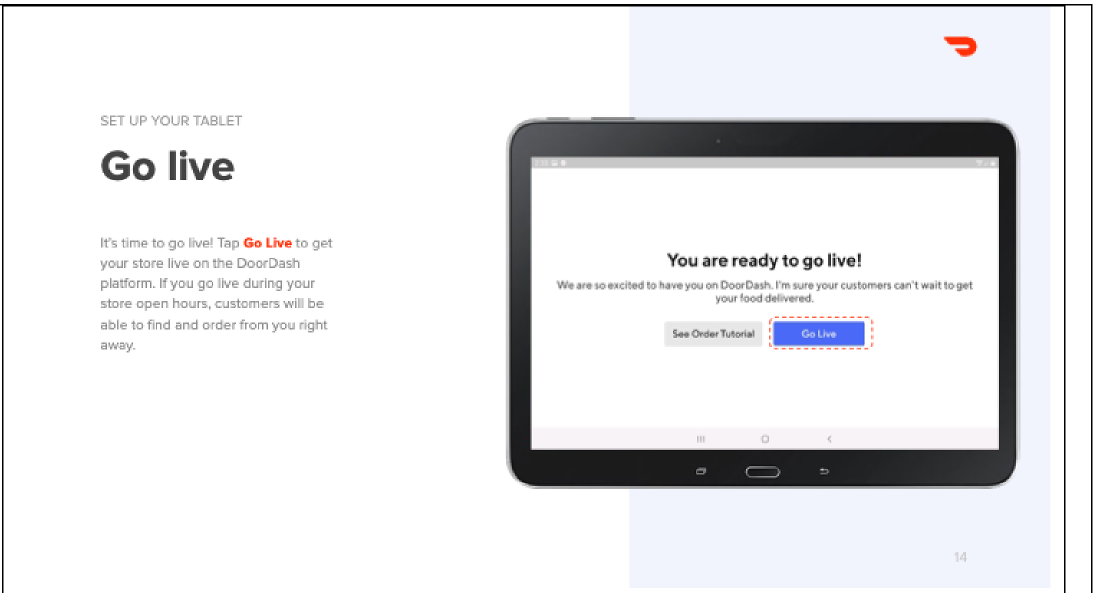
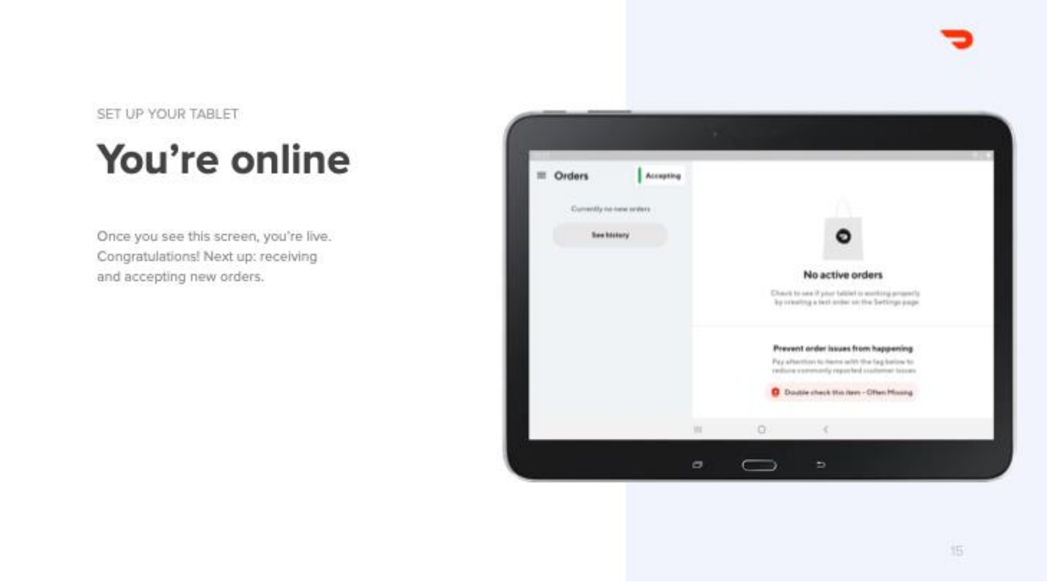
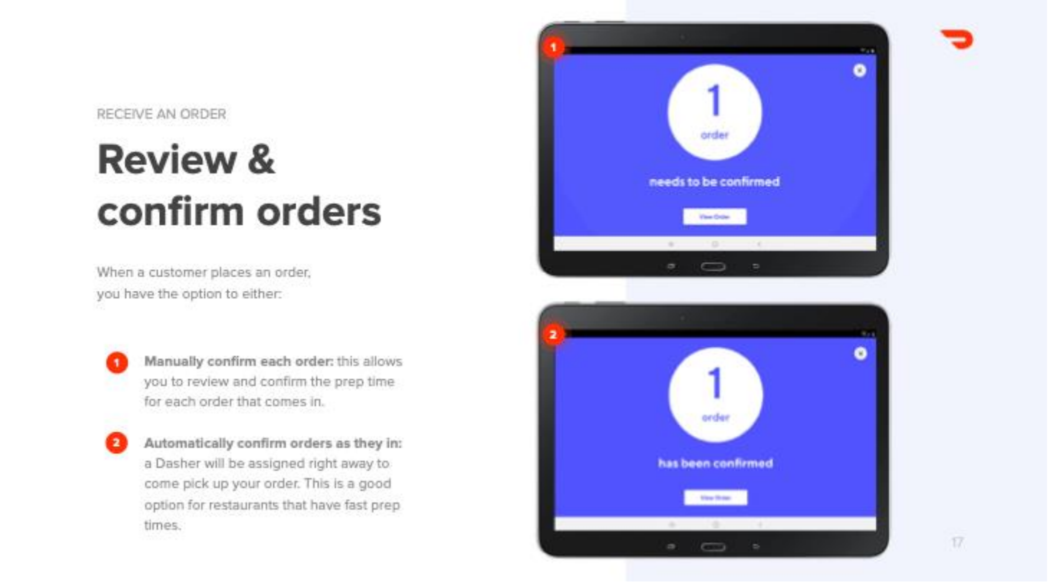
SET UP YOUR TABLET

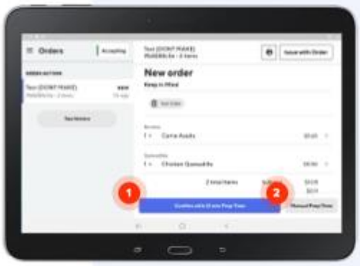
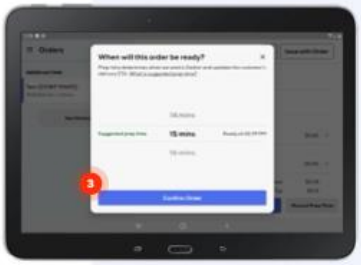
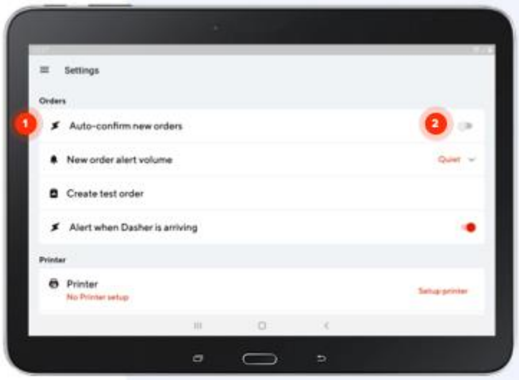
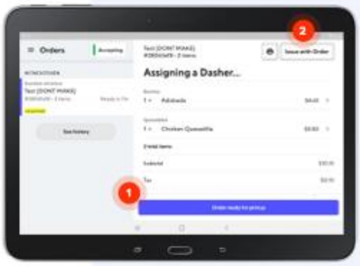
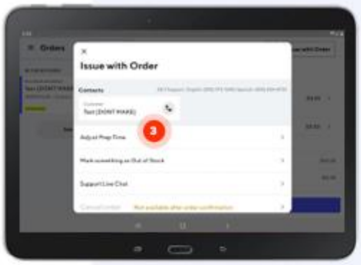
Take a quick order tutorial

If you'd like to see an overview on how orders work on your tablet, tap **See Order Tutorial**. If not, tap **Skip** to continue the setup.

Great! Now let's get a sense of what an order looks like.

We like to keep things simple so you can focus on doing what you do best, making great food. Let's see what an order will look like, and how you confirm it.

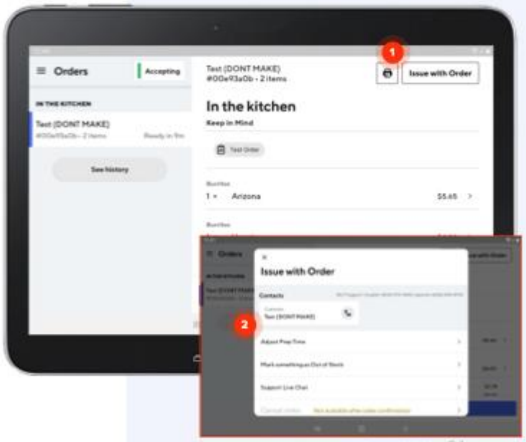
	 SET UP YOUR TABLET **Go live** It's time to go live! Tap **Go Live** to get your store live on the DoorDash platform. If you go live during your store open hours, customers will be able to find and order from you right away. **You are ready to go live!** We are so excited to have you on DoorDash. I'm sure your customers can't wait to get your food delivered.
	 SET UP YOUR TABLET **You're online** Once you see this screen, you're live. Congratulations! Next up: receiving and accepting new orders. Orders Accepting Currently no new orders See history No active orders Check to see if your tablet is working properly by creating a test order on the Settings page Prevent order issues from happening Pay attention to items with the tag below to reduce commonly reported customer issues Double check this item - Often Missing
	 RECEIVE AN ORDER **Review & confirm orders** When a customer places an order, you have the option to either: 1 **Manually confirm each order:** this allows you to review and confirm the prep time for each order that comes in. 2 **Automatically confirm orders as they in:** a Dasher will be assigned right away to come pick up your order. This is a good option for restaurants that have fast prep times. 1 1 order needs to be confirmed View Order 2 1 order has been confirmed View Order

	RECEIVE AN ORDER **Manually confirming orders** 1 Tap **Confirm with # min Prep Time** if the default time frame is accurate. 2 Or Tap **Manual Prep Time** if you need want to select less or more time. 3 Tap **Confirm Order.** Note: If you've run out of an item, you'll need to report an issue with the order.  Orders Accepting Test (DON'T MAKE) New order Keep in Mind Issue with Order Carne Asada Chicken Quesadilla 2 total items Manual Prep Time 1 2  Orders When will this order be ready? 15 mins Confirm Order 3 18
	RECEIVE AN ORDER **Auto-confirm new orders** 1 When **Auto-confirm new orders** is on, new customer orders will automatically be confirmed and a Dasher will be assigned immediately. 2 Use the toggle to switch this function on or off.  Settings Orders Auto-confirm new orders New order alert volume Quiet Create test order Alert when Dasher is arriving Printer Printer No Printer setup Setup printer CONFIDENTIAL 19
	RECEIVE AN ORDER **Automatically confirm orders** 1 Tap **Order ready for pickup** once you are ready for Dasher pickup. 2 If you need to adjust your prep time, tap **Issue with Order.** 3 Tap **Adjust Prep Time** to select your desired order ready time  Orders Accepting Test (DON'T MAKE) Assigning a Dasher... Chicken Quesadilla Issue with Order Order ready for pickup 1 2  Orders Issue with Order Contacts Test (DON'T MAKE) Adjust Prep Time Mark something as Out of Stock Support Live Chat Cancel order Not available after order confirmation 3

ADJUST PICKUP TIME

Add more time

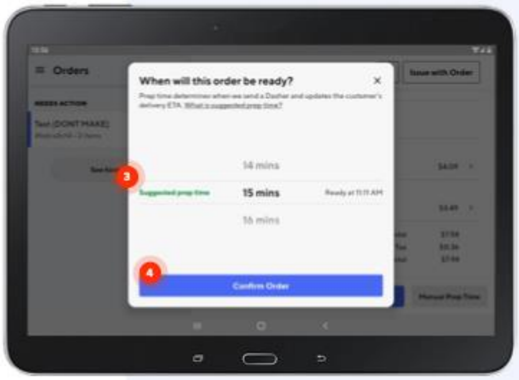
1. If an order will take longer than you originally estimated, you can move the pickup time back by tapping **Issue with Order**.
2. Select **Adjust Prep Time** in the pop-up menu.



ADJUST PICKUP TIME

Add more time, continued.

3. From here, you can choose when the order will be ready for Dasher or customer pickup.
4. Tap **Confirm** to update the pickup time

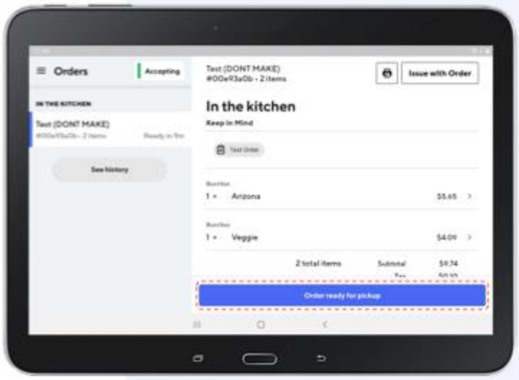

When will this order be ready?

Prep time determines when we send a Dasher and updates the customer's delivery ETA. What is suggested prep time?

ORDER READY

Order ready for pickup

If an order is ready before the estimated time you originally selected, simply tap **Order ready for pickup** and we will notify the Dasher to head to your restaurant as soon as possible.



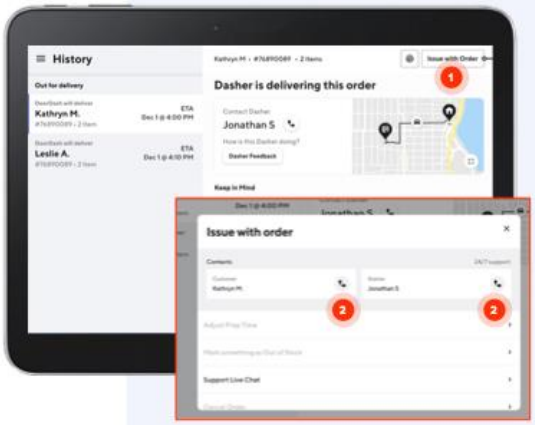
Contacting the Customer or Dasher on Tablet

Contact Customer or Dasher on Live Orders

We understand that at times, questions arise and you may need to contact the customer or Dasher during an active order or after the order has been picked up.

To do so:

1. Navigate to **Active Orders tab** or **Order history tab** and tap on **Issue with Order** at the top right.
2. Choose either **Customer** or **Dasher** to contact on this screen by **tapping the phone icon**.



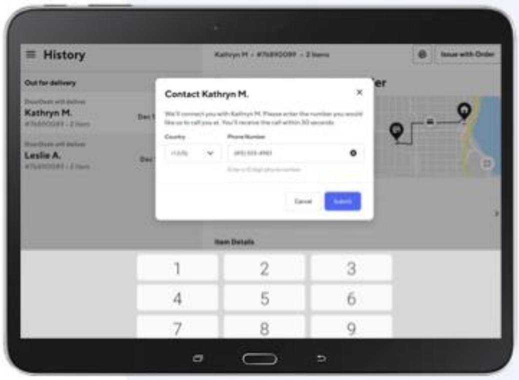
Contacting the Customer or Dasher on Tablet

Contact Customer or Dasher on Live Orders

After you hit the phone icon, you will be prompted to **enter your phone number**. This can be any phone you wish to use to speak with the Customer or Dasher.

After entering your phone number, you will shortly receive a phone call from DoorDash connecting you to the Customer or Dasher.

Note: Your phone number will be masked, the Customer or Dasher will not be able to view your number or call you back.


History
Out for delivery
Kathryn M.
Leslie A.
Kathryn M • #76890089 • 2 Items
Issue with Order
Contact Kathryn M.
We'll connect you with Kathryn M. Please enter the number you would like us to call you at. You'll receive the call within 30 seconds.
Country
Phone Number
Cancel
Submit
Item Details
1
2
3
4
5
6
7
8
9

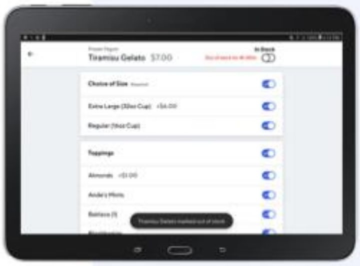
RESOLVE AN OUT OF STOCK ITEM

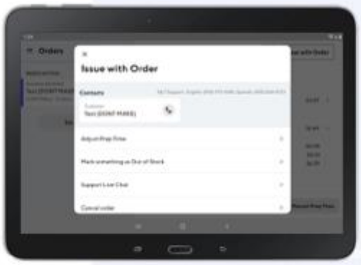
Resolve an out-of-stock item

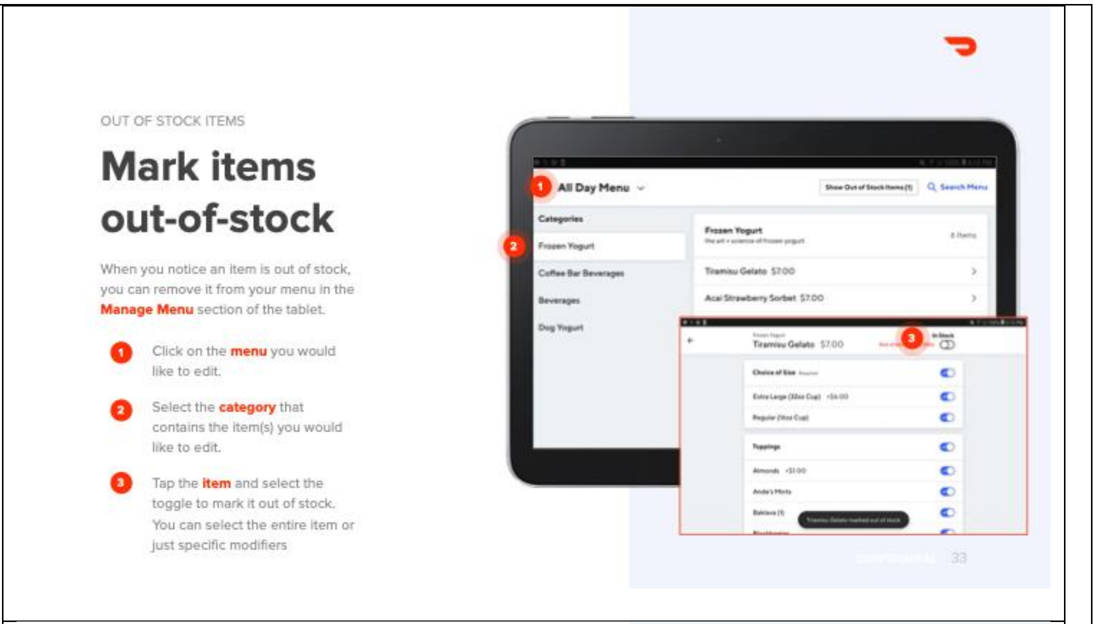
When you run out of an item, there are two ways to resolve:

If you proactively notice the item is out of stock before an order is placed, you'll want to update your menu ASAP. Review the following slides, "Mark Items Out-of-Stock".

If you notice the item is out of stock as part of an existing order, you'll need to follow the order issue resolution process. Review the following slides, "Resolving Orders with an Out-of-Stock Item".





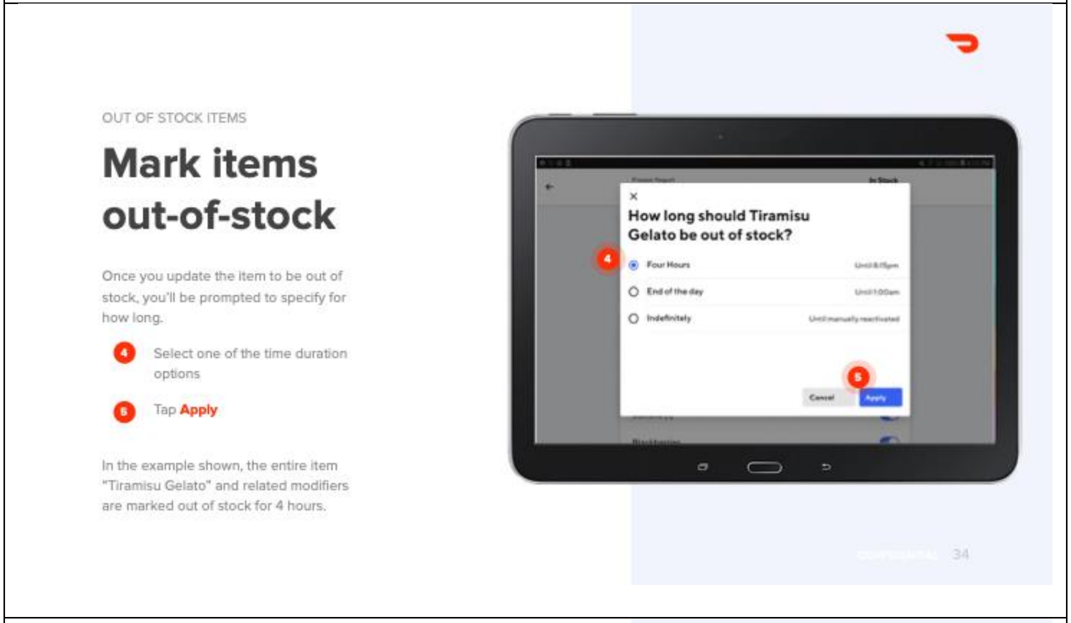


OUT OF STOCK ITEMS

Mark items out-of-stock

When you notice an item is out of stock, you can remove it from your menu in the **Manage Menu** section of the tablet.

1. Click on the **menu** you would like to edit.
2. Select the **category** that contains the item(s) you would like to edit.
3. Tap the **item** and select the toggle to mark it out of stock. You can select the entire item or just specific modifiers



OUT OF STOCK ITEMS

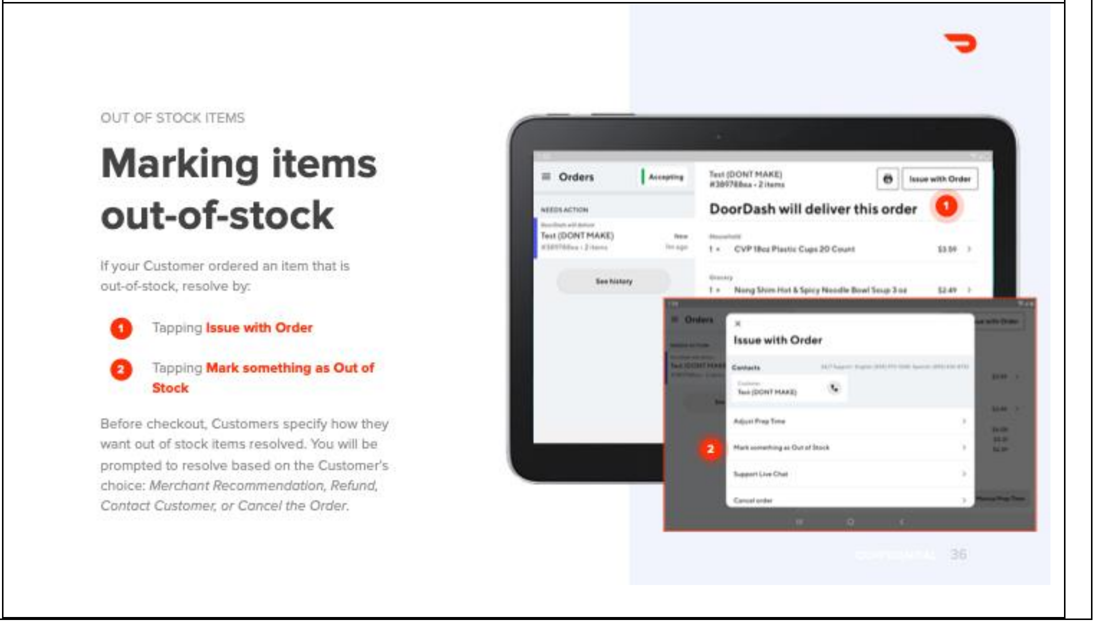
Mark items out-of-stock

Once you update the item to be out of stock, you'll be prompted to specify for how long.

4. Select one of the time duration options
5. Tap **Apply**

In the example shown, the entire item "Tiramisu Gelato" and related modifiers are marked out of stock for 4 hours.

How long should Tiramisu Gelato be out of stock?
Four Hours
End of the day
Indefinitely
Until manually reactivated
Cancel
Apply
CONFIDENTIAL 34



OUT OF STOCK ITEMS

Marking items out-of-stock

If your Customer ordered an item that is out-of-stock, resolve by:

1. Tapping **Issue with Order**
2. Tapping **Mark something as Out of Stock**

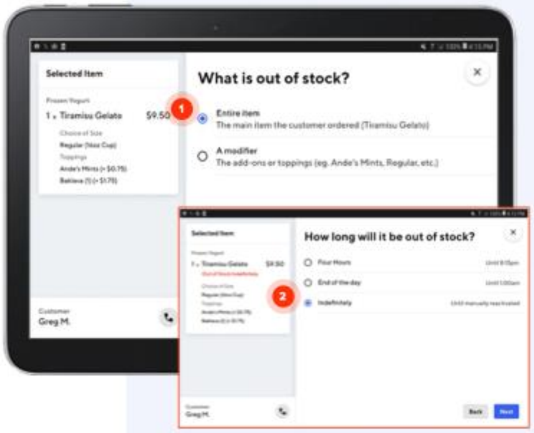
Before checkout, Customers specify how they want out of stock items resolved. You will be prompted to resolve based on the Customer's choice: *Merchant Recommendation, Refund, Contact Customer, or Cancel the Order.*

OUT OF STOCK ITEMS

Merchant Recommendation

If the Customer selected **Merchant Recommendation**, they are leaving the substitution up to your discretion.

1. Once you have selected the item with an order issue, you can choose either the **entire item** or **just specific modifiers**.
2. You will then be prompted to select how long to deactivate the item or modifier.



Selected Item

1 x Tiramisu Gelato $9.50

Regular (16oz Cup)

Ande's Mints (+ $0.75)

Baklava (1) (+ $1.75)

Customer
Greg M.

What is out of stock?

1

● Entire item
The main item the customer ordered (Tiramisu Gelato)

○ A modifier
The add-ons or toppings (eg. Ande's Mints, Regular, etc.)

How long will it be out of stock?

2

○ Four Hours

○ End of the day

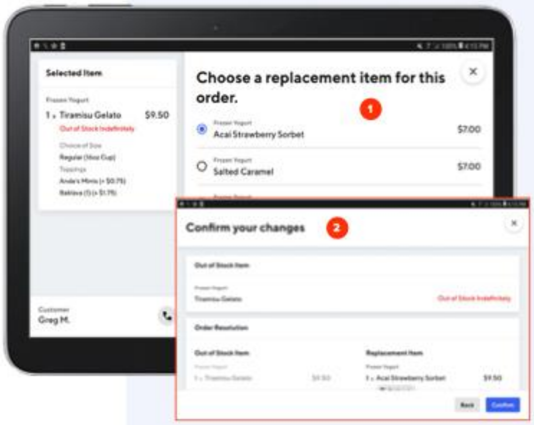
● Indefinitely

OUT OF STOCK ITEMS

Merchant Recommendation

Next, you'll be asked to choose a replacement item for the order.

1. Select and customize a replacement item for your Customer.
2. Confirm your changes.



Selected Item

Frozen Yogurt

1 x Tiramisu Gelato $9.50

Out of Stock Indefinitely

Choice of Size

Regular (16oz Cup)

Toppings

Ande's Mints (+ $0.75)

Baklava (1) (+ $1.75)

Customer
Greg M.

Choose a replacement item for this order.

1

● Frozen Yogurt
Acai Strawberry Sorbet $7.00

○ Frozen Yogurt
Salted Caramel $7.00

Confirm your changes

2

Out of Stock Item

Tiramisu Gelato Out of Stock Indefinitely

Order Resolution

Out of Stock Item

Replacement Item

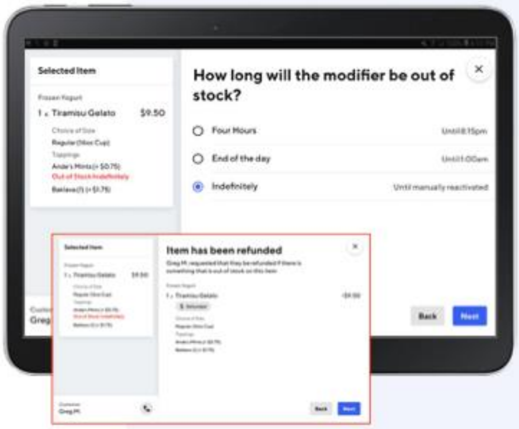
1 x Acai Strawberry Sorbet $9.50

OUT OF STOCK ITEMS

Refund

If the Customer selected **Refund**, they do not want a replacement and would like to be refunded for the item.

Once you mark the item as out of stock, we will automatically refund your Customer for the related item.



Selected Item

Frozen Yogurt

1 x Tiramisu Gelato $9.50

Choice of Size

Regular (16oz Cup)

Toppings

Ande's Mints (+ $0.75)

Out of Stock Indefinitely

Baklava (1) (+ $1.75)

How long will the modifier be out of stock?

○ Four Hours Until 8:15pm

○ End of the day Until 1:00am

● Indefinitely Until manually reactivated

Item has been refunded

OUT OF STOCK ITEMS

Contact Customer

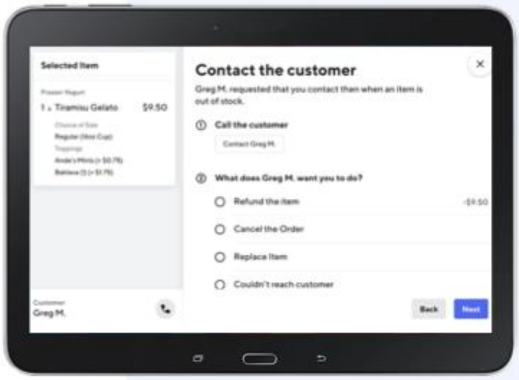
If the Customer selected **Contact Customer**, they want you to reach out to them to decide what to do about the out of stock item.

Call them by tapping the 'Contact Name' button in the active orders tab. Then ask how they would like to proceed. They can choose to:

- Receive a refund for the individual item;
- Cancel and refund the order;
- Or replace the item.

Choose the customer's preferred option and tap **Next**.

If you are unable to reach the customer, select **Couldn't reach customer** and then tap **Next**.



Selected Item

Frozen Yogurt

1 x Tiramisu Gelato $9.50

Choice of Size

Regular (8oz Cup)

Toppings

Andes's Mints (+ $0.75)

Baklava (1) (+ $1.75)

Customer

Greg M.

Contact the customer

Greg M. requested that you contact then when an item is out of stock.

① Call the customer

Contact Greg M.

② What does Greg M. want you to do?

○ Refund the item -$9.50

○ Cancel the Order

○ Replace Item

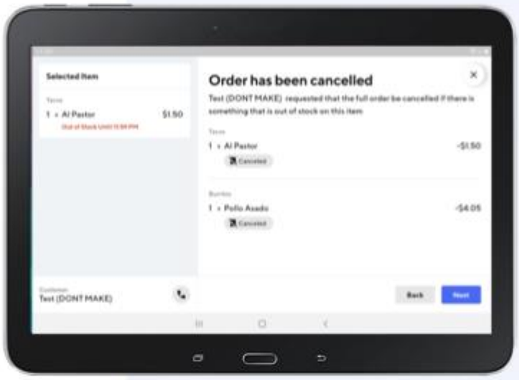
○ Couldn't reach customer

ITEM OUT OF STOCK

Cancel and refund the order

If the Customer selected **Cancel and refund the order**, they no longer want their order and would prefer a refund.

The entire order will be cancelled and the customer to be refunded after you have marked it out of stock for a specific duration.



Selected Item

Tacos

1 x Al Pastor $1.50

Out of Stock Until 11:59 PM

Customer

Test (DONT MAKE)

Order has been cancelled

Test (DONT MAKE) requested that the full order be cancelled if there is something that is out of stock on this item

Tacos

1 x Al Pastor -$1.50

Canceled

Burritos

1 x Pollo Asado -$4.05

Canceled

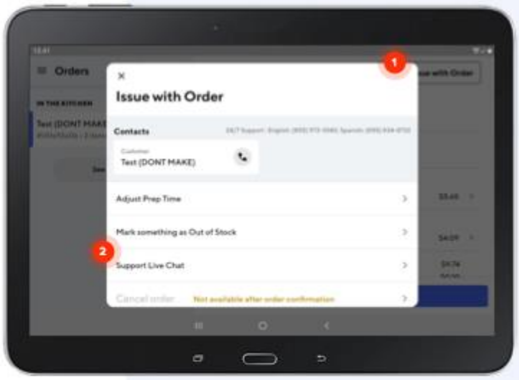
Live Chat with Support

LIVE CHAT WITH SUPPORT

Contact support

If you need assistance beyond contacting a customer, adjusting pickup time or marking an item out of stock, you can reach out to the Support team.

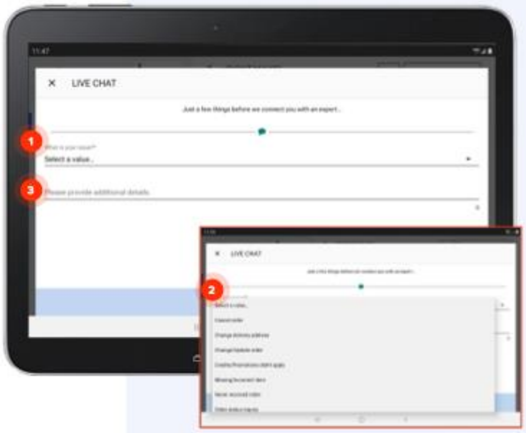
1. Tap on **Issue with Order** at the top right.
2. Tap **Support Live Chat** to open a chat window with our Support team. This feature is accessible for all orders that are currently in progress or have already been picked up.



LIVE CHAT WITH SUPPORT

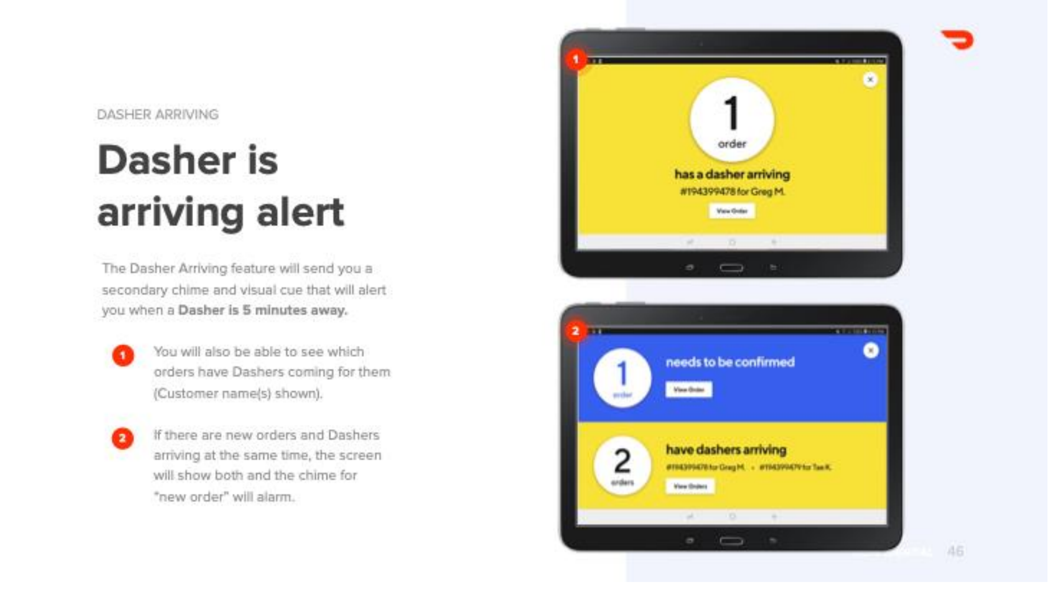
Contact support, continued.

1. Tap **Select a value** to reveal a drop-down menu.
2. Select the issue you're experiencing.
3. Provide additional details so our Support team can resolve quickly.
4. Tap **Chat with an Agent** to start the chat.



11:47
× LIVE CHAT
Just a few things before we connect you with an expert...
Select a value..
Please provide additional details
1
2
3

Dasher Arriving

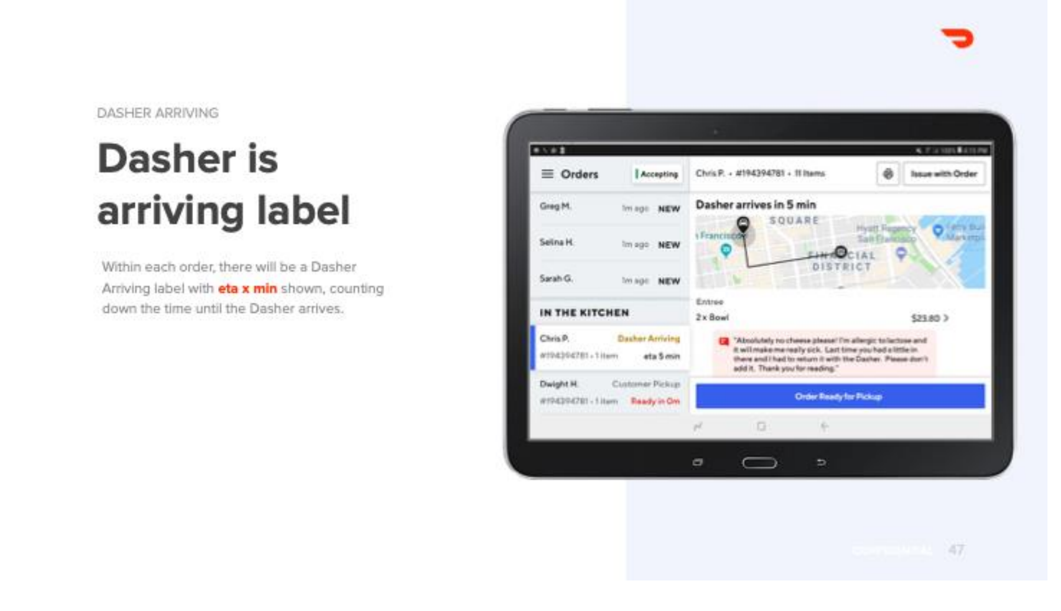


DASHER ARRIVING

Dasher is arriving alert

The Dasher Arriving feature will send you a secondary chime and visual cue that will alert you when a **Dasher is 5 minutes away.**

1. You will also be able to see which orders have Dashers coming for them (Customer name(s) shown).
2. If there are new orders and Dashers arriving at the same time, the screen will show both and the chime for "new order" will alarm.

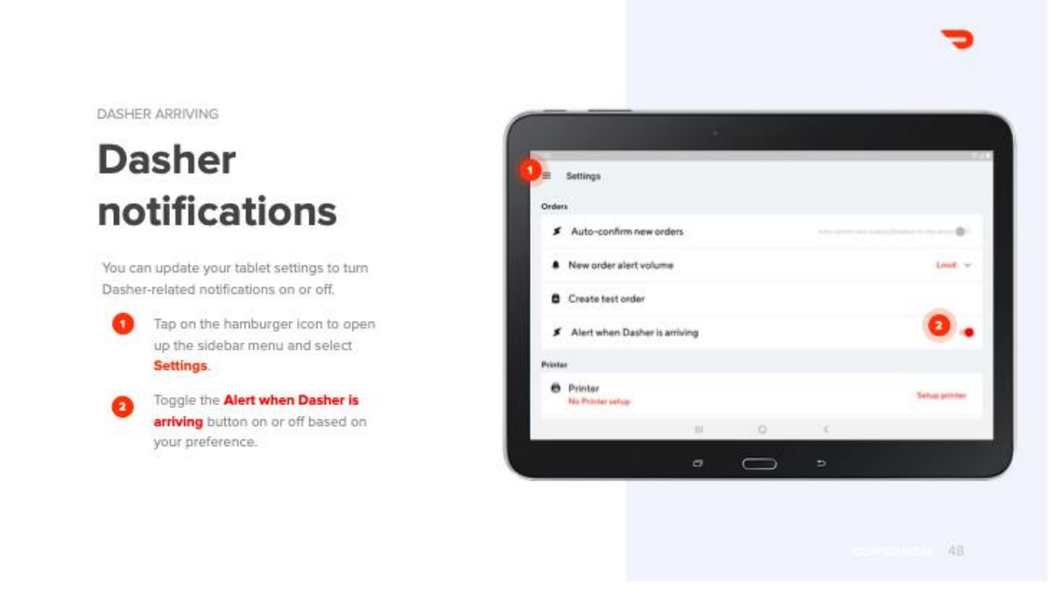


DASHER ARRIVING

Dasher is arriving label

Within each order, there will be a Dasher Arriving label with **eta x min** shown, counting down the time until the Dasher arrives.

Orders
Accepting
Greg M. 1m ago NEW
Selina H. 1m ago NEW
Sarah G. 1m ago NEW
IN THE KITCHEN
Chris P. Dasher Arriving
#194394781 • 1 item eta 5 min
Dwight H. Customer Pickup
#194394781 • 1 item Ready in 0m
Chris P. • #194394781 • 11 Items
Issue with Order
Dasher arrives in 5 min
SQUARE
Francisco
FINANCIAL DISTRICT
Hyatt Regency San Francisco
Ferry Building Marketplace
Entree
2 x Bowl $23.80
"Absolutely no cheese please! I'm allergic to lactose and it will make me really sick. Last time you had a little in there and I had to return it with the Dasher. Please don't add it. Thank you for reading."
Order Ready for Pickup



DASHER ARRIVING

Dasher notifications

You can update your tablet settings to turn Dasher-related notifications on or off.

1. Tap on the hamburger icon to open up the sidebar menu and select **Settings**.
2. Toggle the **Alert when Dasher is arriving** button on or off based on your preference.

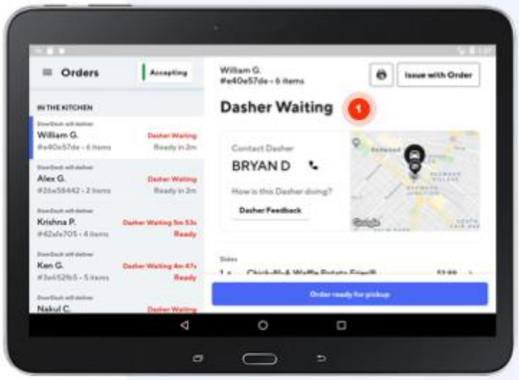
DASHER WAITING

Dasher is waiting status

The Dasher Waiting feature will let you know how long Dashers have been waiting at your store to pick up an order.

1 **Dasher Early Arrival:**
We will show a Dasher is waiting as soon as they arrive (Dasher Waiting), but we will wait to start the timer only after your confirmed prep time has lapsed

Note: If the Dasher is early, your order ready time will show in grey (e.g. **Ready in 2m**)

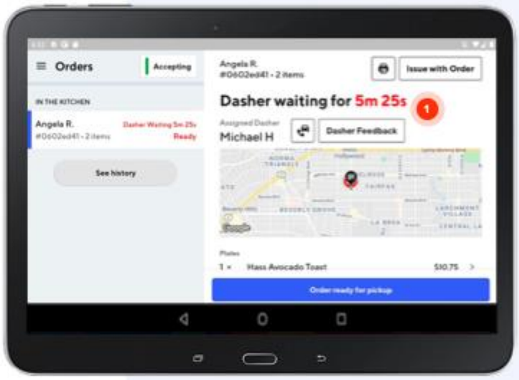


CONFIDENTIAL 50

DASHER WAITING

Dasher is waiting timer

1 **Merchant Running Late:**
In this example, the merchant-confirmed prep time has already lapsed (**Ready**); late orders will show **Dasher waiting for Xm XXs** (Dasher wait will align with your Avoidable wait time)



CONFIDENTIAL 51

Change an existing order

In this section, we'll cover how to:

- Update the status of your kitchen
- Adjust store hours

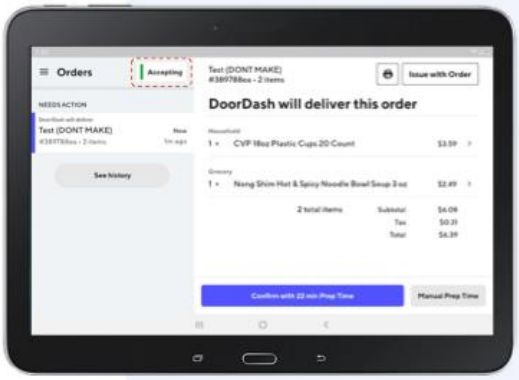
CONFIDENTIAL 53

MANAGE YOUR STORE

Update kitchen status

If you are experiencing a rush in the kitchen, you can update your kitchen status and choose to either slow down the volume of orders you receive or temporarily pause receiving new orders.

To change your kitchen status, tap on the **status button** on your order manager.



DoorDash will deliver
Test (DONT MAKE) New
#389788ea • 2 items 1m ago

Test (DONT MAKE)
#389788ea • 2 items

DoorDash will deliver this order

Household
1 × CVP 18oz Plastic Cups 20 Count $3.59

Grocery
1 × Nong Shim Hot & Spicy Noodle Bowl Soup 3 oz $2.49

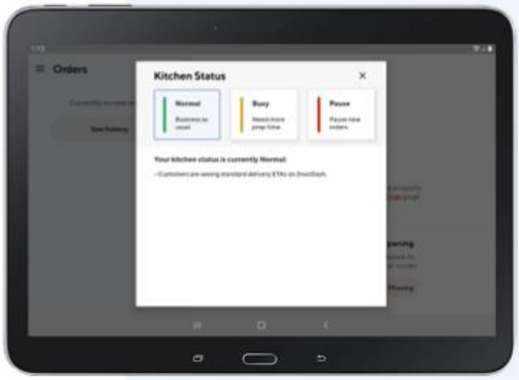
2 total items Subtotal $6.08
Tax $0.31
Total $6.39

MANAGE YOUR STORE

Update kitchen status

The default setting for your kitchen status is **Normal**.

When customers are on DoorDash, the estimated delivery time they see for your restaurant is partly calculated based on the amount of time it normally takes for your kitchen to prepare an order.



Normal – Business as usual
Busy – Need more prep time
Pause – Pause new orders

Your kitchen status is currently Normal.
- Customers are seeing standard delivery ETAs on DoorDash.

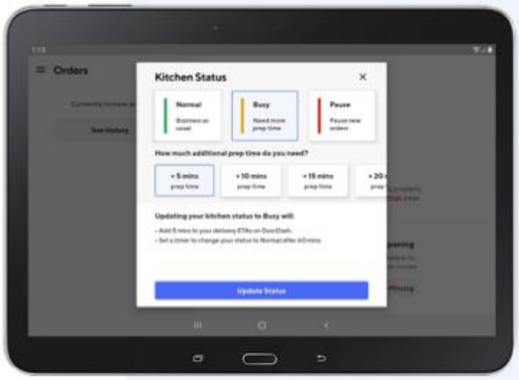
MANAGE YOUR STORE

Update kitchen status to busy

Setting your kitchen status to **Busy** adjusts the estimated delivery time so you can set accurate expectations with customers before they order.

To set your status as busy, tap **Busy** and select how much extra prep time you need to prepare an order. Then tap **Update Status**.

Tip: If your Kitchen Status is set to Busy, your suggested Prep Time will include the additional prep time you have selected.



Normal – Business as usual
Busy – Need more prep time
Pause – Pause new orders

How much additional prep time do you need?
+ 5 mins prep time
+ 10 mins prep time
+ 15 mins prep time
+ 20 prep

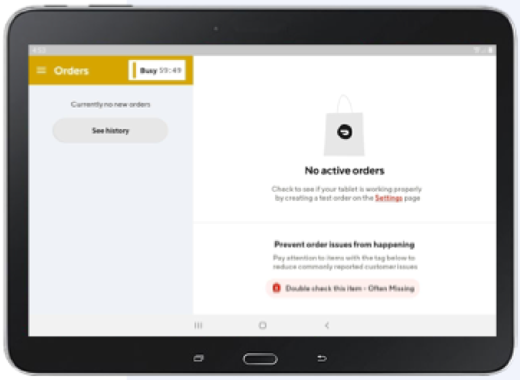
Updating your kitchen status to Busy will:
- Add 5 mins to your delivery ETAs on DoorDash.
- Set a timer to change your status to Normal after 60 mins.

MANAGE YOUR STORE

Update kitchen status to busy, continued

Your kitchen status will remain as **Busy** for one hour and then automatically shift back to **Normal**.

You can manually change your status to **Normal** any time within that hour by tapping on the **status button**.



Orders

Busy 59:49

Currently no new orders

See history

No active orders

Check to see if your tablet is working properly by creating a test order on the Settings page

Prevent order issues from happening

Pay attention to items with the tag below to reduce commonly reported customer issues

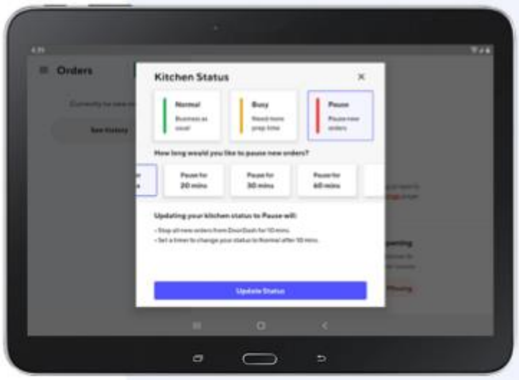
Double check this item - Often Missing

MANAGE YOUR STORE

Pause new orders

If your kitchen becomes so busy that you are unable to accept more DoorDash orders, you can pause new orders. This means customers will temporarily lose the ability to place new orders, but existing orders will be unaffected.

The maximum amount of time your store can be paused via your tablet is 60 minutes. If you need to pause your store for a longer period, you can do so in the Merchant Portal or contact Support.



Kitchen Status ×

Normal Business as usual

Busy Need more prep time

Pause Pause new orders

How long would you like to pause new orders?

Pause for 20 mins

Pause for 30 mins

Pause for 60 mins

Updating your kitchen status to Pause will:

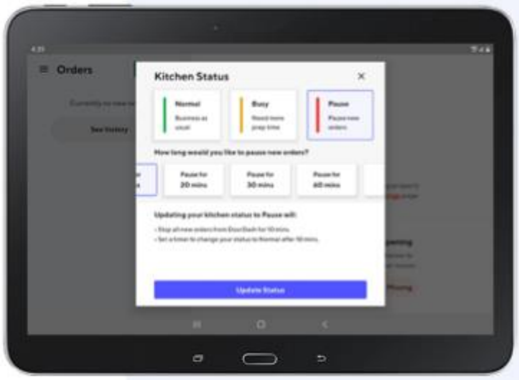
- Stop all new orders from DoorDash for 10 mins.
- Set a timer to change your status to Normal after 10 mins.

Update Status

MANAGE YOUR STORE

Pause new orders

To temporarily stop new orders, tap **Pause**, select the duration of time you want to pause new orders, and tap **Update Status**.



Kitchen Status ×

Normal Business as usual

Busy Need more prep time

Pause Pause new orders

How long would you like to pause new orders?

Pause for 20 mins

Pause for 30 mins

Pause for 60 mins

Updating your kitchen status to Pause will:

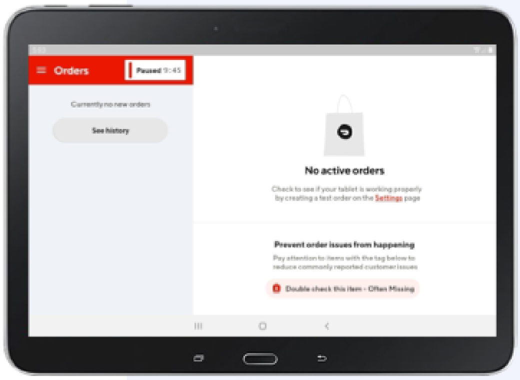
- Stop all new orders from DoorDash for 10 mins.
- Set a timer to change your status to Normal after 10 mins.

Update Status

MANAGE YOUR STORE

Pause new orders

Your store will remain **Paused** for the duration of time you selected and then automatically shift back to **Normal**. You can manually update your status to **Normal** at any time by tapping on the status button.



Orders

Paused 9:45

Currently no new orders

See history

No active orders

Check to see if your tablet is working properly by creating a test order on the Settings page

Prevent order issues from happening

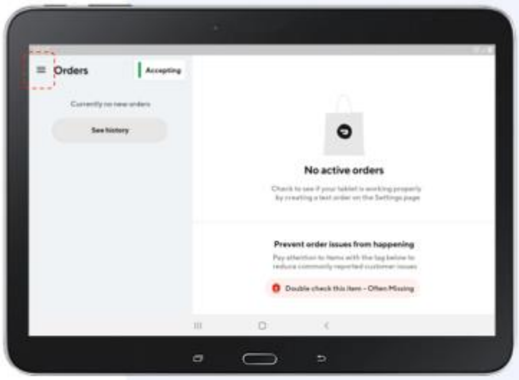
Pay attention to items with the tag below to reduce commonly reported customer issues

Double check this item - Often Missing

MANAGE YOUR STORE

Adjust store hours

View your store hours by tapping on the **hamburger icon** to open up the sidebar menu.



Orders

Accepting

Currently no new orders

See history

No active orders

Check to see if your tablet is working properly by creating a test order on the Settings page

Prevent order issues from happening

Pay attention to items with the tag below to reduce commonly reported customer issues

Double check this item - Often Missing

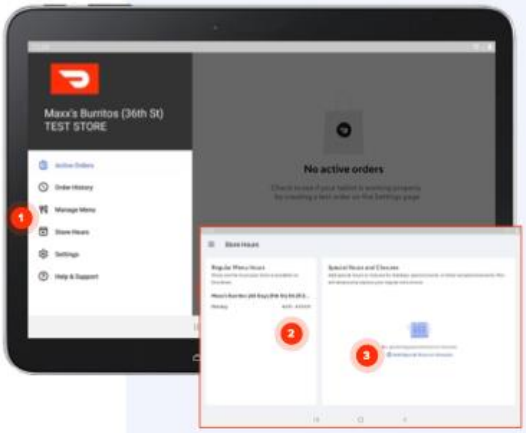
MANAGE YOUR STORE

Adjust store hours, cont.

1. Tap **Store Hours** in the sidebar menu

2. Your regular store hours will be listed in the left hand column. If you need to change your store hours *permanently*, visit the Merchant Portal and follow the instructions in the how to guide.

3. If you need to adjust store hours or add a closure for a specific date or dates, these can be done on your tablet. Tap the **Add Special Hours or Closures** link to continue.



Maxx's Burritos (36th St)
TEST STORE

Active Orders

Order History

Manage Menu

Store Hours

Settings

Help & Support

No active orders

Store Hours

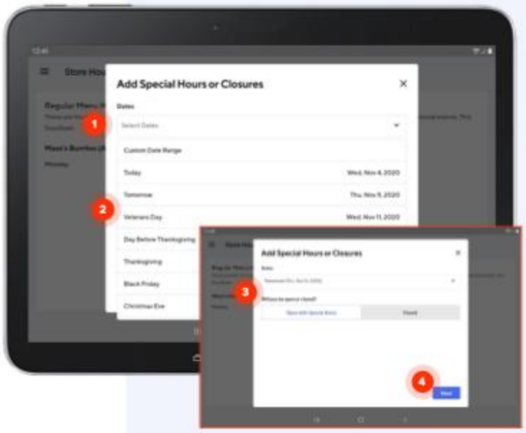
Regular Menu Hours

Special Hours and Closures

MANAGE YOUR STORE

Adjust store hours, cont.

1. Tap **Select Dates** in the Dates section
2. Choose one of the options in the dropdown menu and tap **Next**
3. Choose whether your store will be **Open with Special Hours** or **Closed** for the date selected
4. Tap **Next** to continue



Add Special Hours or Closures

Dates

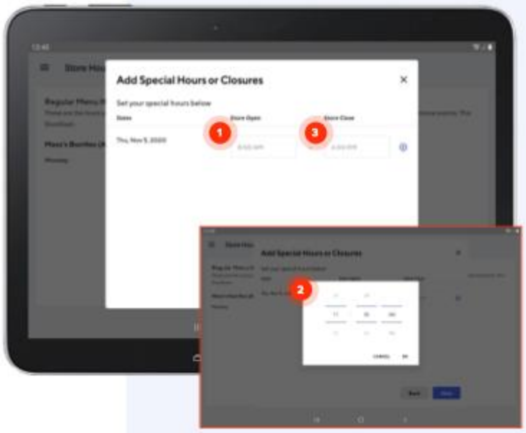
Select Dates

Custom Date Range	
Today	Wed, Nov 4, 2020
Tomorrow	Thu, Nov 5, 2020
Veterans Day	Wed, Nov 11, 2020
Day Before Thanksgiving	
Thanksgiving	
Black Friday	
Christmas Eve	

MANAGE YOUR STORE

Adjust store hours, cont.

1. Tap the box under **Store Open**
2. Use the pop-up to select the special opening time. Tap **OK**
3. Repeat steps 1 & 2 for **Store Close**
4. Tap **Next** to continue



Add Special Hours or Closures

Set your special hours below

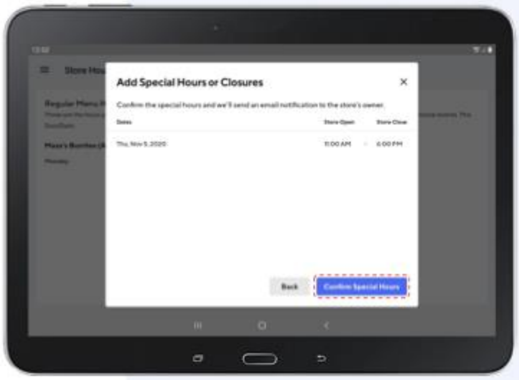
Dates	Store Open	Store Close
Thu, Nov 5, 2020		

MANAGE YOUR STORE

Adjust store hours, cont.

Check the date and the open and close times to confirm they are correct. Tap **Confirm Special Hours** to finalize.

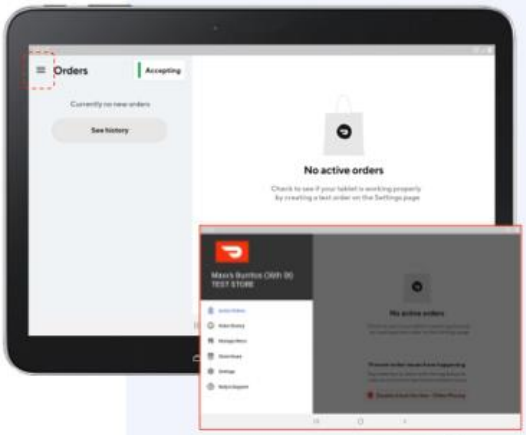
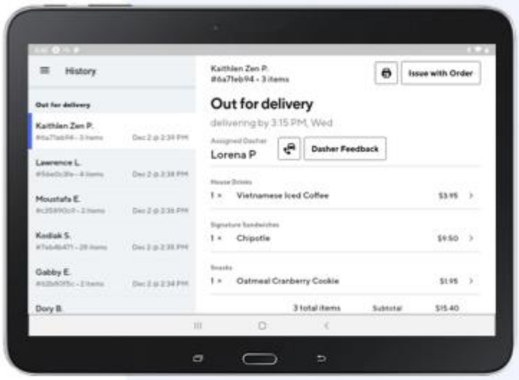
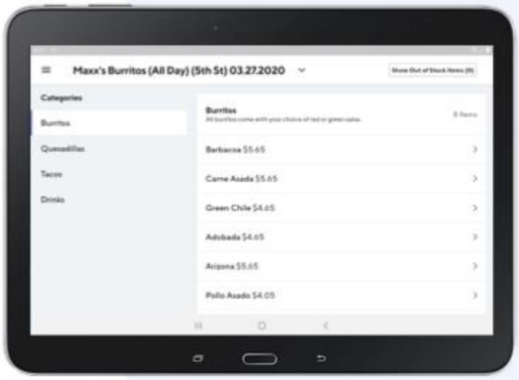
Your updates will also be reflected in the Merchant Portal under your **Business Hours → Special Closures/Hours** section.



Add Special Hours or Closures

Confirm the special hours and we'll send an email notification to the store's owner.

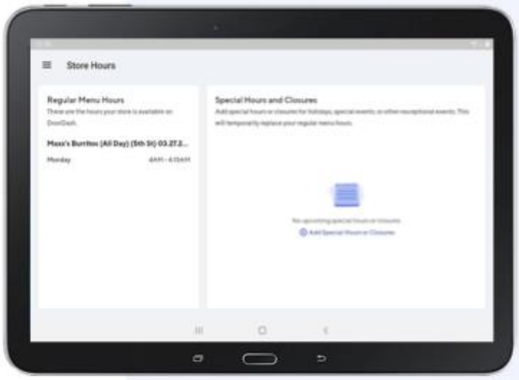
Dates	Store Open		Store Close
Thu, Nov 5, 2020	11:00 AM	-	6:00 PM

	SIDEBAR MENU **Access your sidebar menu** Access your sidebar menu by tapping on the **hamburger icon**.  Orders Accepting Currently no new orders See history No active orders Check to see if your tablet is working properly by creating a test order on the Settings page Maxx's Burritos (16th St) TEST STORE CONFIDENTIAL 70
	SIDEBAR MENU **Order history** When you tap **History**, the your most recent orders from the last 7 days (up to 100 orders total) will be displayed. Orders more than 7 days old will not appear here and can only be accessed via the Merchant Portal.  History Out for delivery Kaithlen Zen P. Dec 2 @ 2:39 PM Lawrence L. Dec 2 @ 2:38 PM Moustafa E. Dec 2 @ 2:36 PM Kodiak S. Dec 2 @ 2:35 PM Gabby E. Dec 2 @ 2:34 PM Dory B. Kaithlen Zen P. #6a71eb94 - 3 items Issue with Order Out for delivery delivering by 3:15 PM, Wed Assigned Dasher Lorena P Dasher Feedback 1 × Vietnamese Iced Coffee $3.95 1 × Chipotle $9.50 1 × Oatmeal Cranberry Cookie $1.95 3 total items Subtotal $15.40 CONFIDENTIAL 72
	SIDEBAR MENU **Manage your menu** Refer to the Review Your Menu section to learn how to review your menu and mark items out of stock.  Maxx's Burritos (All Day) (5th St) 03.27.2020 Show Out of Stock Items (0) Categories Burritos Quesadillas Tacos Drinks Burritos All burritos come with your choice of red or green salsa. Barbacoa $5.65 Carne Asada $5.65 Green Chile $4.65 Adobada $4.65 Arizona $5.65 Pollo Asado $4.05 CONFIDENTIAL 74

SIDEBAR MENU

Special store hours

Refer to the Adjust Store Hours section to learn how to add special holiday hours and closures. To permanently change your store hours, visit the Merchant Portal.



Store Hours

Regular Menu Hours

These are the hours your store is available on DoorDash.

Maxx's Burritos (All Day) (5th St) 03.27.2...

Monday 4AM - 4:15AM

Special Hours and Closures

Add special hours or closures for holidays, special events, or other exceptional events. This will temporarily replace your regular menu hours.

No upcoming special hours or closures

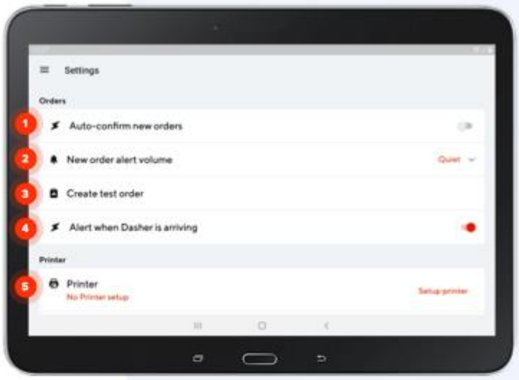
Add Special Hours or Closures

SIDEBAR MENU

Settings

In the Settings section, you can manage multiple settings, including:

1. Turning the automatic confirm of new orders on or off
2. Changing the volume of new order alerts
3. Creating a test order
4. Turning the Dasher arrival alert on or off
5. Setting up a printer



Settings

Orders

1 Auto-confirm new orders

2 New order alert volume Quiet

3 Create test order

4 Alert when Dasher is arriving

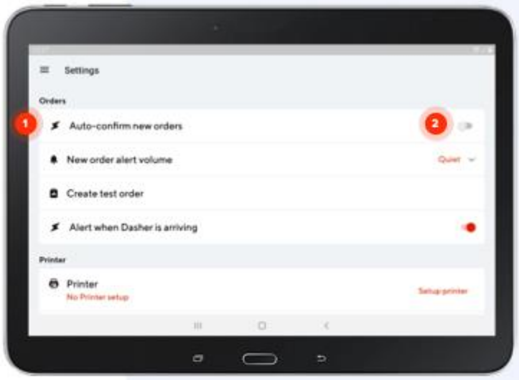
Printer

5 Printer
No Printer setup Setup printer

SIDEBAR MENU

Auto-confirm new orders

1. When **Auto-confirm new orders** is on, new customer orders will automatically be confirmed.
2. Use the toggle to switch this function on or off.



Settings

Orders

1 Auto-confirm new orders 2

New order alert volume Quiet

Create test order

Alert when Dasher is arriving

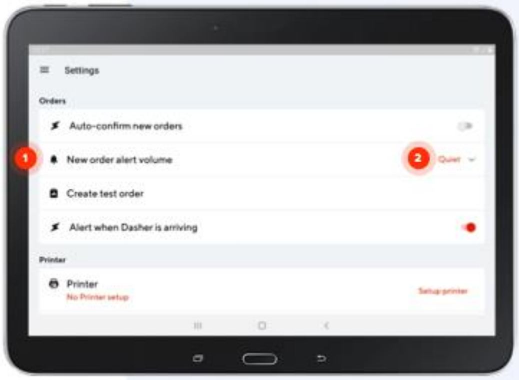
Printer

Printer
No Printer setup Setup printer

SIDEBAR MENU

New order alert volume

1. When **new order alert volume** is on, your tablet will "ding" every time a new order is received.
2. Use the dropdown menu to choose whether the alert is loud or quiet



Settings

Orders

Auto-confirm new orders

New order alert volume — Quiet

Create test order

Alert when Dasher is arriving

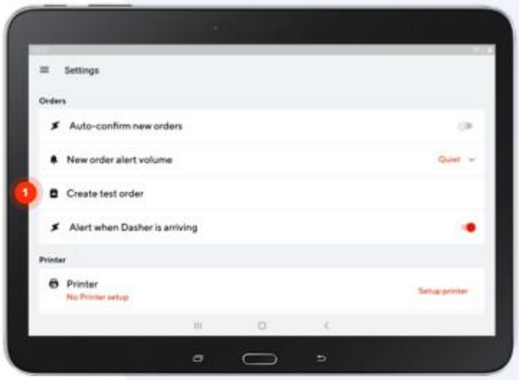
Printer

Printer
No Printer setup — Setup printer

SIDEBAR MENU

Create a test order

1. Creating a test order is a great way to familiarize yourself with order flow. Tap **Create test order** to initiate the test order process.



Settings

Orders

Auto-confirm new orders

New order alert volume — Quiet

Create test order

Alert when Dasher is arriving

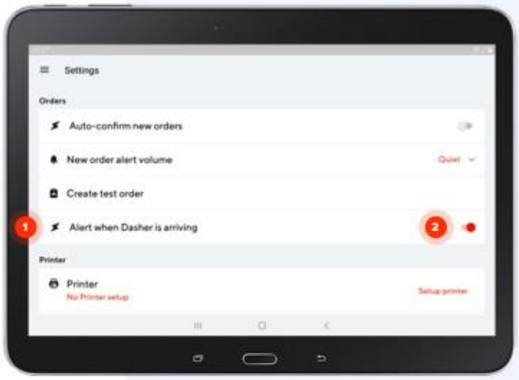
Printer

Printer
No Printer setup — Setup printer

SIDEBAR MENU

Alert when Dasher is arriving

1. When the **Alert when Dasher is arriving** is turned on, you will be notified (with a full-screen notification and a unique sound) when a Dasher is arriving to pick up your customer's order
2. Use the toggle to switch this function on or off



Settings

Orders

Auto-confirm new orders

New order alert volume — Quiet

Create test order

Alert when Dasher is arriving

Printer

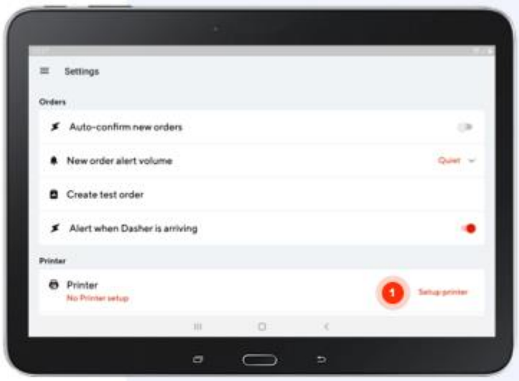
Printer
No Printer setup — Setup printer

SIDEBAR MENU

Printer setup

If you selected a printer during your sign-up process, you need to pair it with your tablet.

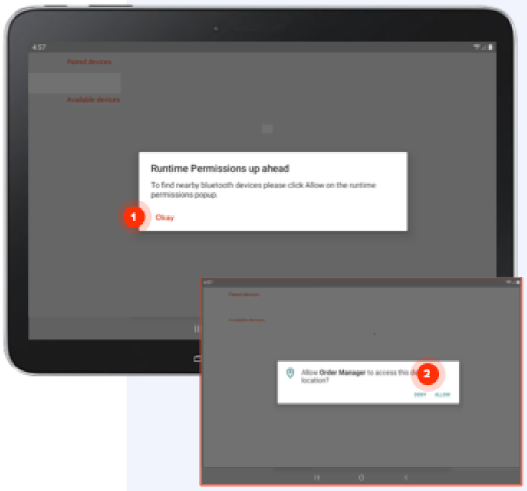
1. Ensure your printer is turned on and tap **Setup printer** to begin.



SIDEBAR MENU

Printer setup

1. Tap **Okay** to allow your tablet to find your printer via bluetooth
2. Tap **Allow** to continue pairing process


Runtime Permissions up ahead

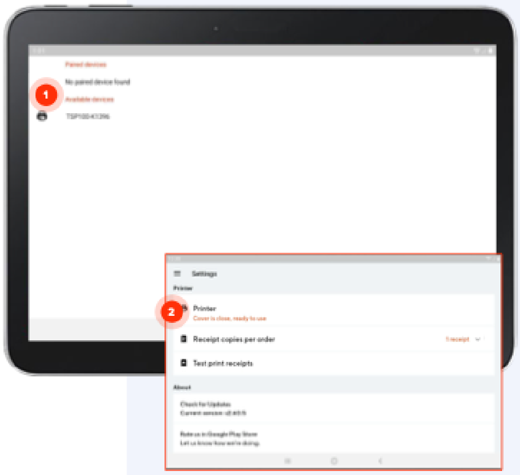
To find nearby bluetooth devices please click Allow on the runtime permissions popup.

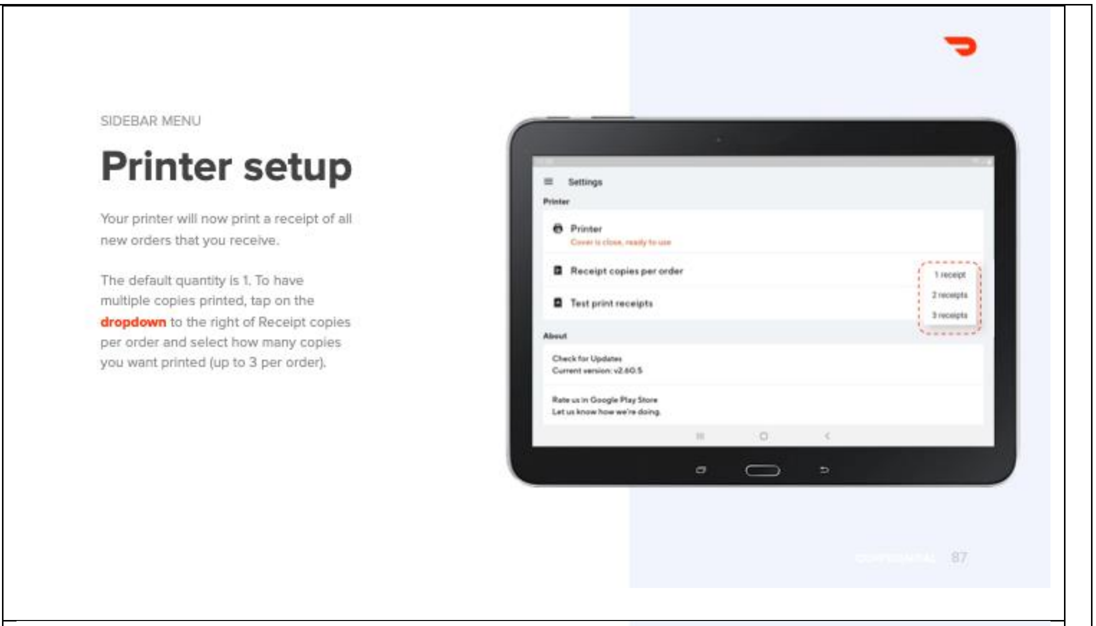
Allow **Order Manager** to access this device's location?

SIDEBAR MENU

Printer setup

1. Under **Available devices**, tap on the printer name to pair it with your tablet
2. When your printer and tablet are successfully paired, you will see a **Cover is close, ready to use** message under Printer in Settings.





SIDEBAR MENU

Printer setup

Your printer will now print a receipt of all new orders that you receive.

The default quantity is 1. To have multiple copies printed, tap on the **dropdown** to the right of Receipt copies per order and select how many copies you want printed (up to 3 per order).

Settings

Printer

Printer
Cover is close, ready to use

Receipt copies per order

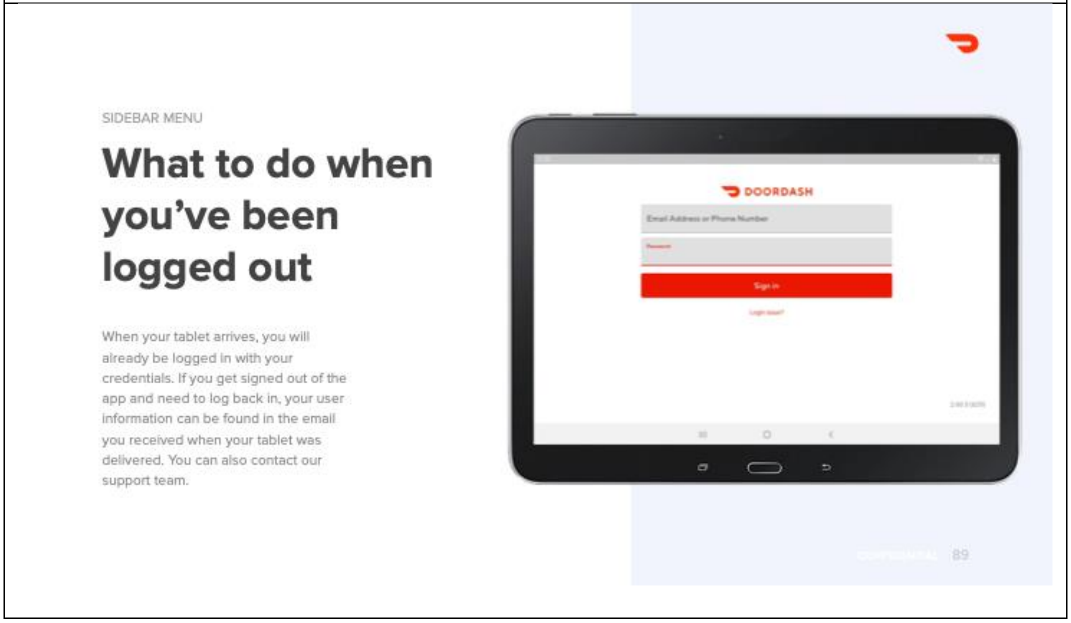
Test print receipts

About

Check for Updates
Current version: v2.60.5

Rate us in Google Play Store
Let us know how we're doing.

CONFIDENTIAL 87



SIDEBAR MENU

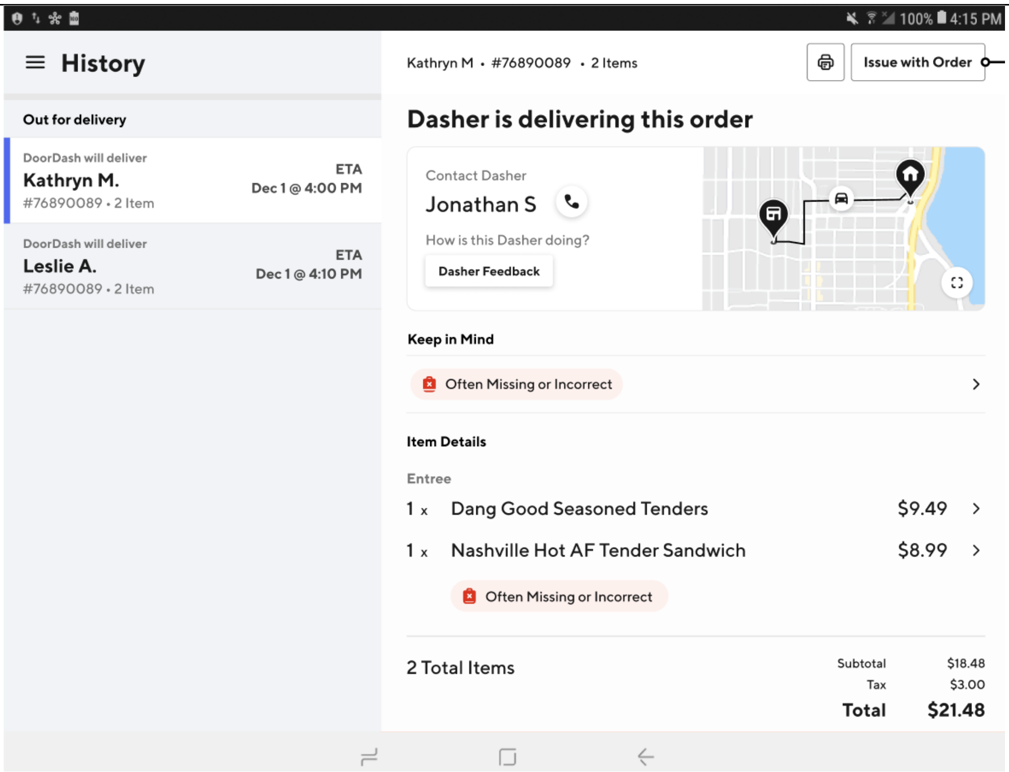
What to do when you've been logged out

When your tablet arrives, you will already be logged in with your credentials. If you get signed out of the app and need to log back in, your user information can be found in the email you received when your tablet was delivered. You can also contact our support team.

CONFIDENTIAL 89

The DoorDash Support article "How can I contact the Customer or Dasher through the tablet" (see Exh 114) instructs the DoorDash merchant how to communicate with a Dasher (delivery driver) or Customer for an order that's in process or has been picked up, should any questions arise. According to the article, the merchant uses the tablet and:

> *"…On the Order History page, tap on the Issue with Order button in the top right corner."*



Out for delivery

DoorDash will deliver
Kathryn M.
#76890089 • 2 Item
ETA
Dec 1 @ 4:00 PM

DoorDash will deliver
Leslie A.
#76890089 • 2 Item
ETA
Dec 1 @ 4:10 PM

Kathryn M • #76890089 • 2 Items

Dasher is delivering this order

Contact Dasher
Jonathan S
How is this Dasher doing?
Dasher Feedback

Keep in Mind
Often Missing or Incorrect

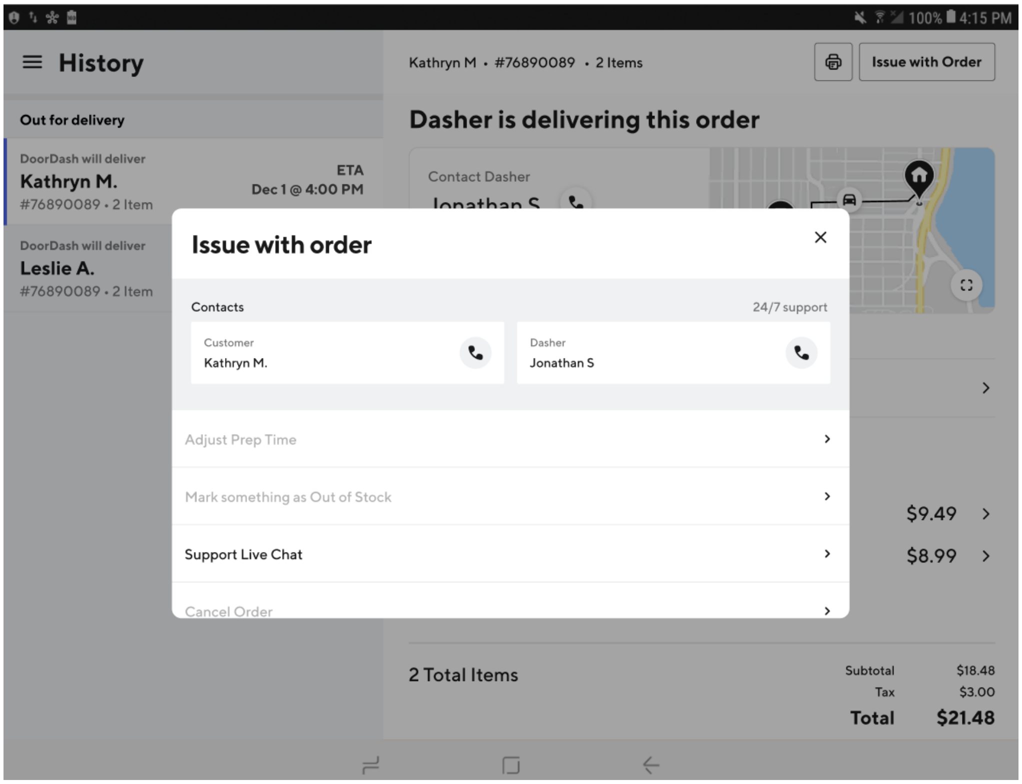
Item Details
Entree

1 x	Dang Good Seasoned Tenders	$9.49
1 x	Nashville Hot AF Tender Sandwich Often Missing or Incorrect	$8.99

2 Total Items

Subtotal	$18.48
Tax	$3.00
Total	**$21.48**

"Next, tap on either the Customer or Dasher that you would like to contact. "



Out for delivery

DoorDash will deliver
Kathryn M.
#76890089 • 2 Item
ETA
Dec 1 @ 4:00 PM

DoorDash will deliver
Leslie A.
#76890089 • 2 Item

Kathryn M • #76890089 • 2 Items

Dasher is delivering this order

Contact Dasher
Jonathan S

Issue with order

Contacts — 24/7 support

Customer
Kathryn M.

Dasher
Jonathan S

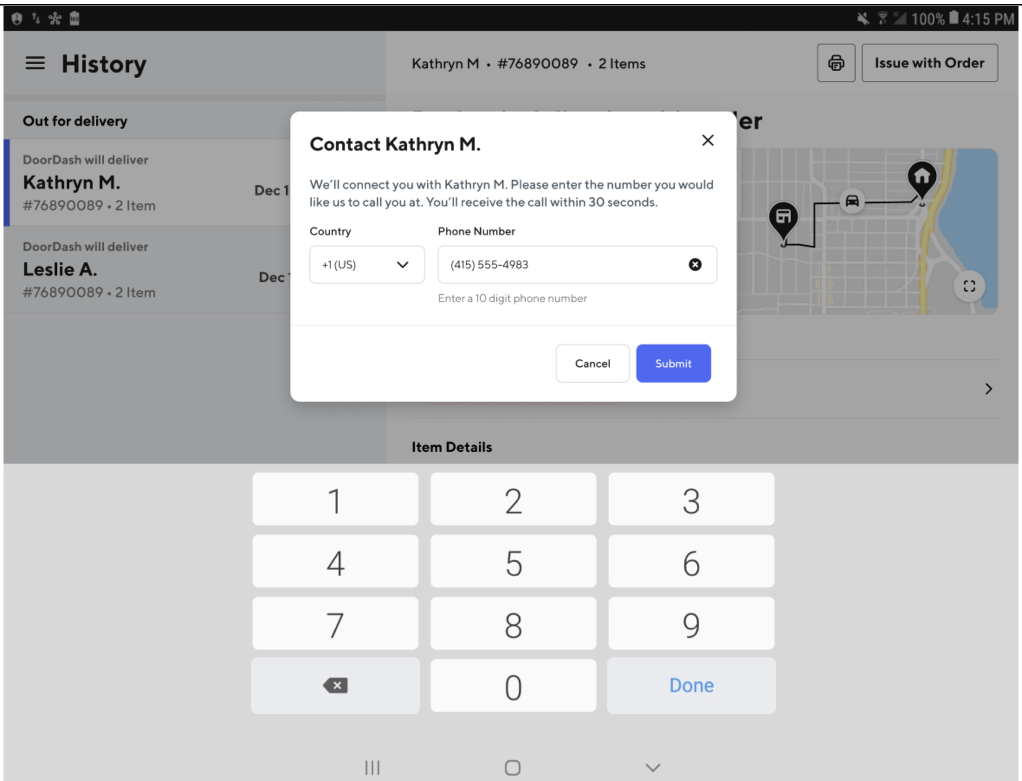
Adjust Prep Time
Mark something as Out of Stock
Support Live Chat
Cancel Order

$9.49
$8.99

2 Total Items

Subtotal	$18.48
Tax	$3.00
Total	**$21.48**

"Next, enter the phone number you would like to use to be connected to either the customer or Dasher. Tap Submit and we will call you on the number you enter within 30 seconds to connect your call!"



Contact Kathryn M.

We'll connect you with Kathryn M. Please enter the number you would like us to call you at. You'll receive the call within 30 seconds.

Country: +1 (US)

Phone Number: (415) 555-4983

Enter a 10 digit phone number

Cancel Submit

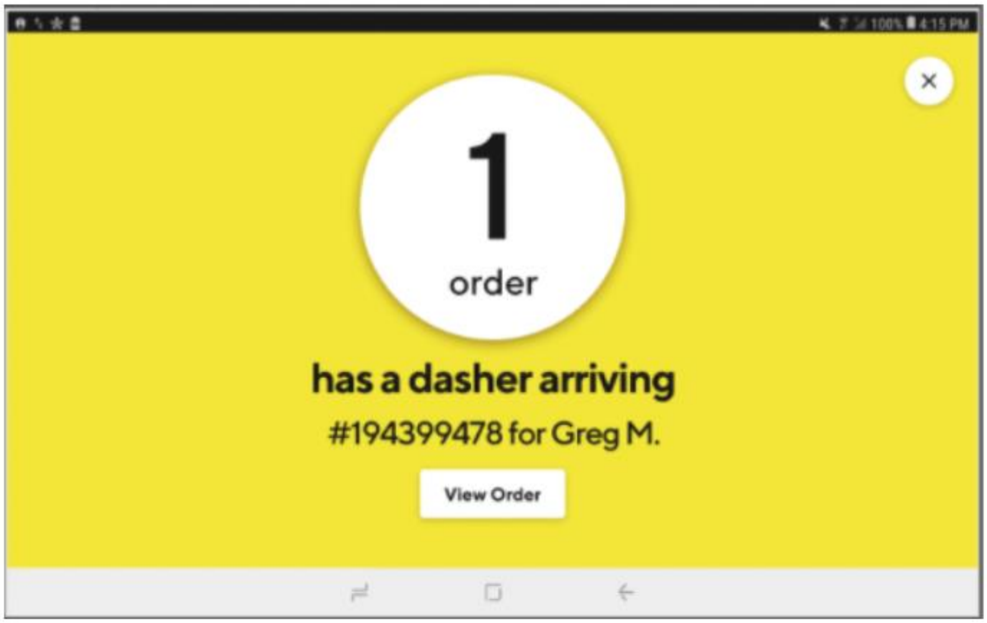
The DoorDash Merchant Support article *"How can I tell if my Dasher is arriving or waiting"* (see Exh 115), discusses how merchants receive real-time notifications on their DoorDash Tablet:

> *"…when a Dasher is nearby to pickup an order! The new Dasher Arriving feature will send you a secondary chime and visual cue that will alert when a Dasher is 5 minutes away. With this feature, Merchants will now know exactly when to start preparing and bagging those final items (cold drinks, ice cream, fries, etc) right before a Dasher's arrival, preserving food quality and also reducing overall wait times!"*

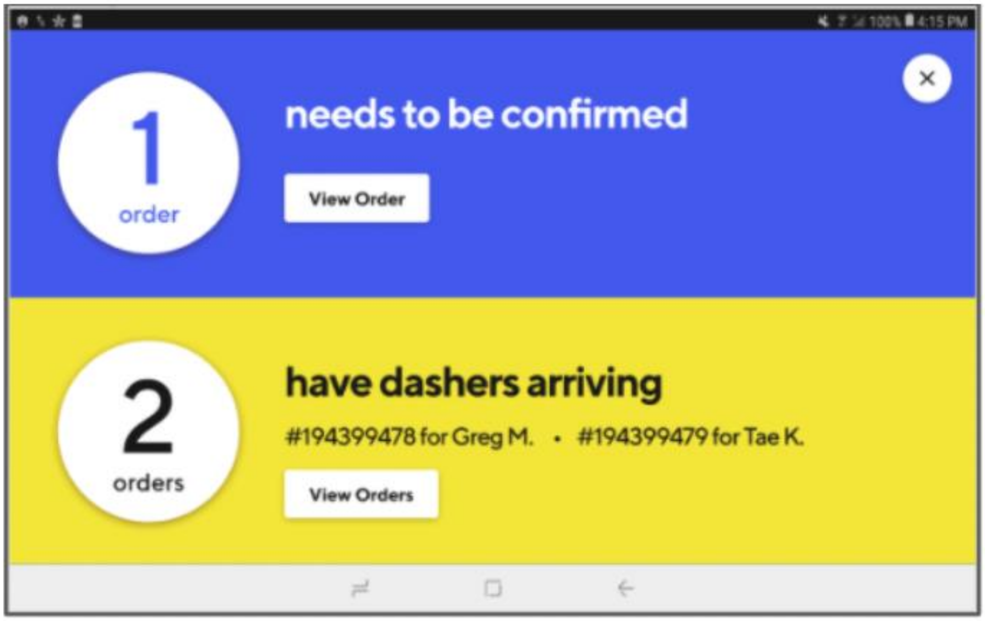
Notification

Once a Dasher is 5 minutes away, a full screen take-over will appear in yellow notifying staff on an approaching Dasher

Note: *A unique chime will sound, which will help staff differentiate between a normal incoming order versus an incoming Dasher.*

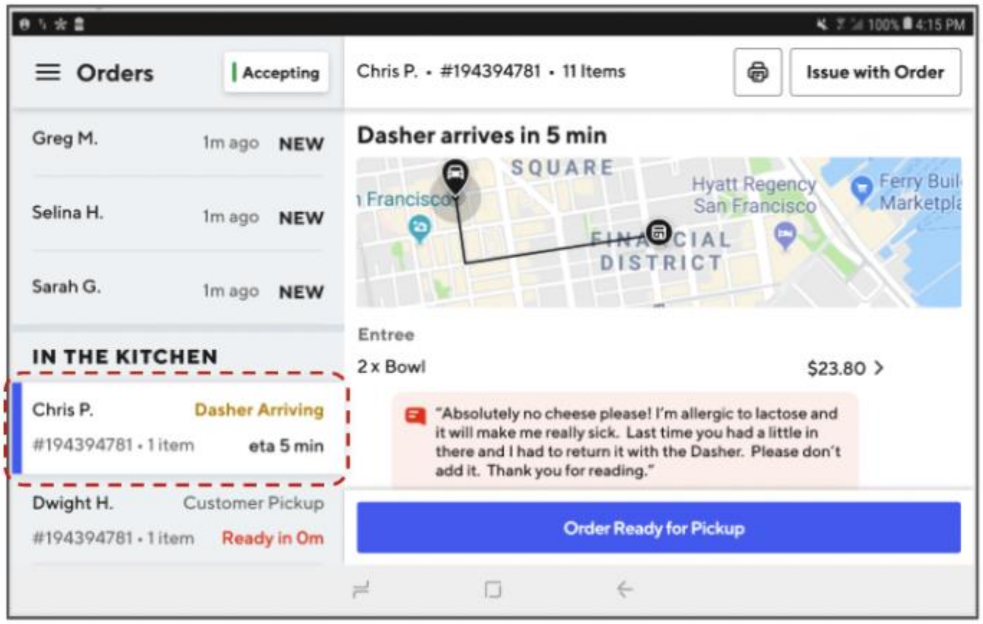


If there are new orders <u>and</u> Dashers arriving at the same time, the screen will appear as below, and the chime for "new order" will alarm. You will also be able to see which orders have Dashers coming for them (Customer name(s) shown).



Dasher Arriving Label

Within each order, there will be a Dasher Arriving label with eta x min shown, counting down until the Dasher arrives.



Orders | Accepting

Greg M. 1m ago NEW

Selina H. 1m ago NEW

Sarah G. 1m ago NEW

IN THE KITCHEN

Chris P. Dasher Arriving
#194394781 • 1 item eta 5 min

Dwight H. Customer Pickup
#194394781 • 1 item Ready in 0m

Chris P. • #194394781 • 11 Items | Issue with Order

Dasher arrives in 5 min

Entree

2 x Bowl $23.80 >

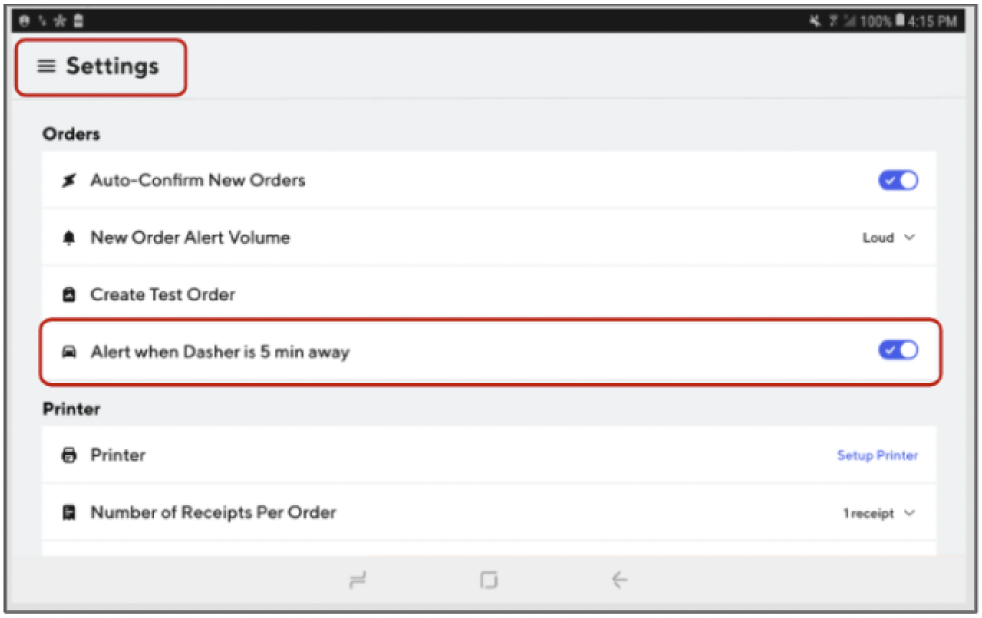
"Absolutely no cheese please! I'm allergic to lactose and it will make me really sick. Last time you had a little in there and I had to return it with the Dasher. Please don't add it. Thank you for reading."

Order Ready for Pickup

Feature Settings

Enter the flow directly in the tablet by selecting Settings from the main navigation page

Settings ➔ Alert when Dasher is 5 min away ➔ Toggle On / Off



Settings

Orders

Auto-Confirm New Orders: On

New Order Alert Volume: Loud

Create Test Order

Alert when Dasher is 5 min away: On

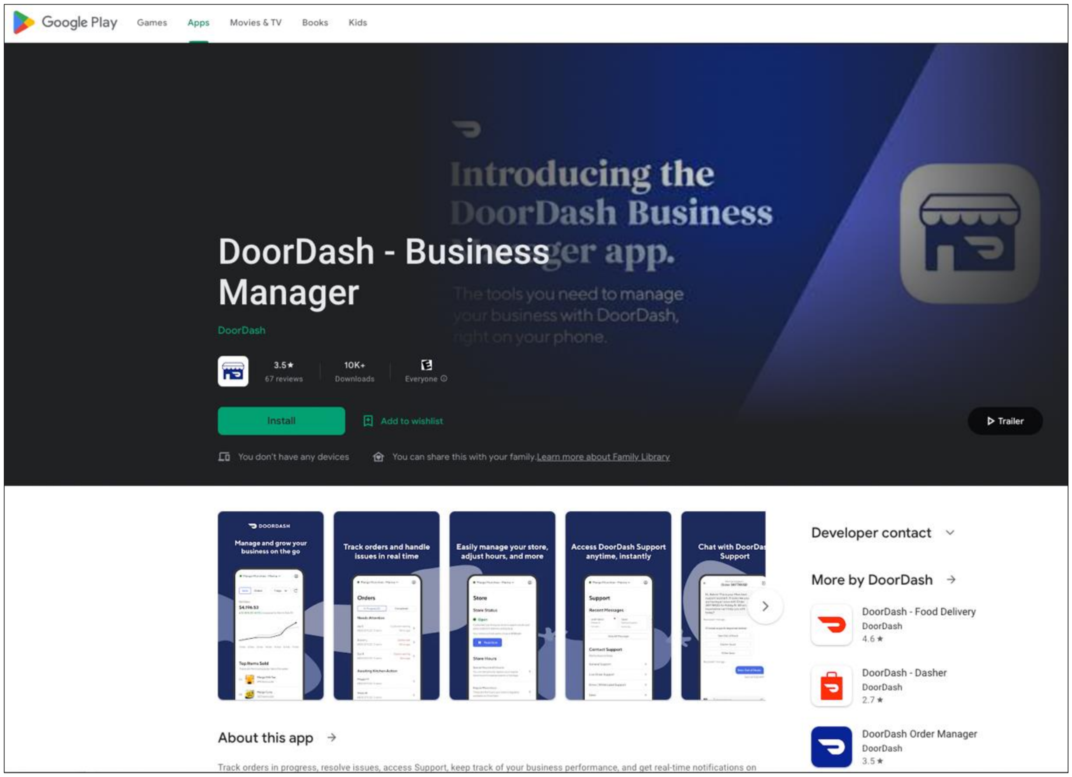
Printer

Printer: Setup Printer

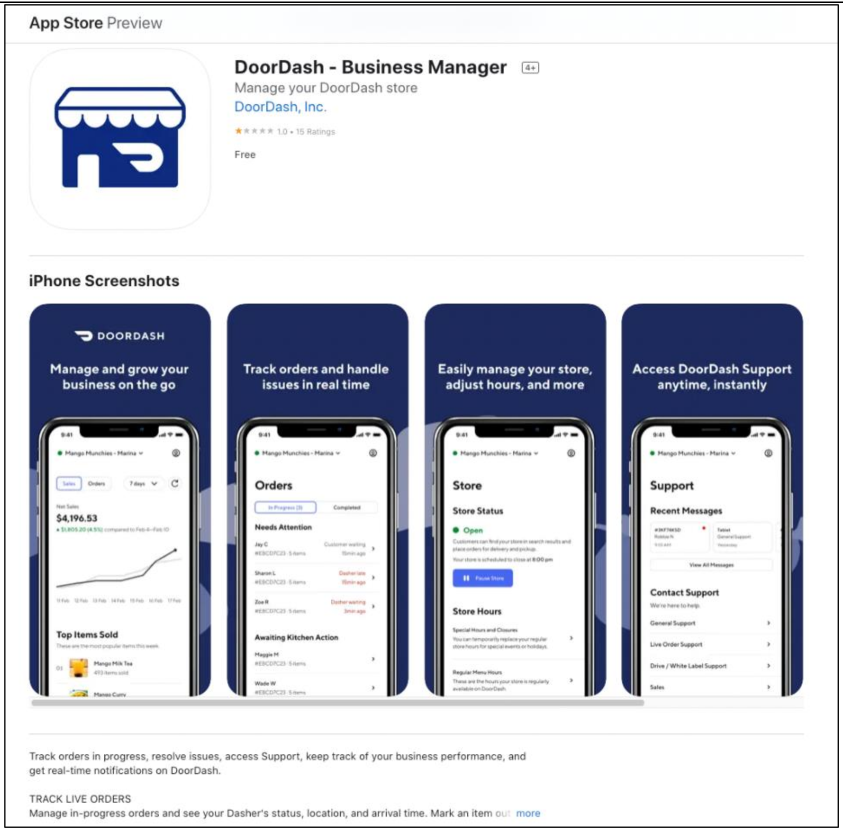
Number of Receipts Per Order: 1 receipt

DoorDash Business Manager Mobile Application

DoorDash offers the Business Manager app for iOS and Android and are found on the Apple App and Google Play Stores.


Google Play
Games
Apps
Movies & TV
Books
Kids
Introducing the DoorDash Business Manager app.
The tools you need to manage your business with DoorDash, right on your phone.
DoorDash - Business Manager
DoorDash
3.5★
67 reviews
10K+
Downloads
Everyone ⓘ
Install
Add to wishlist
Trailer
You don't have any devices
You can share this with your family. Learn more about Family Library
DOORDASH
Manage and grow your business on the go
Track orders and handle issues in real time
Easily manage your store, adjust hours, and more
Access DoorDash Support anytime, instantly
Chat with DoorDa Support
Developer contact
More by DoorDash
DoorDash - Food Delivery
DoorDash
4.6★
DoorDash - Dasher
DoorDash
2.7★
DoorDash Order Manager
DoorDash
3.5★
About this app

Track orders in progress, resolve issues, access Support, keep track of your business performance, and get real-time notifications on



DoorDash - Business Manager

Manage your DoorDash store

DoorDash, Inc.

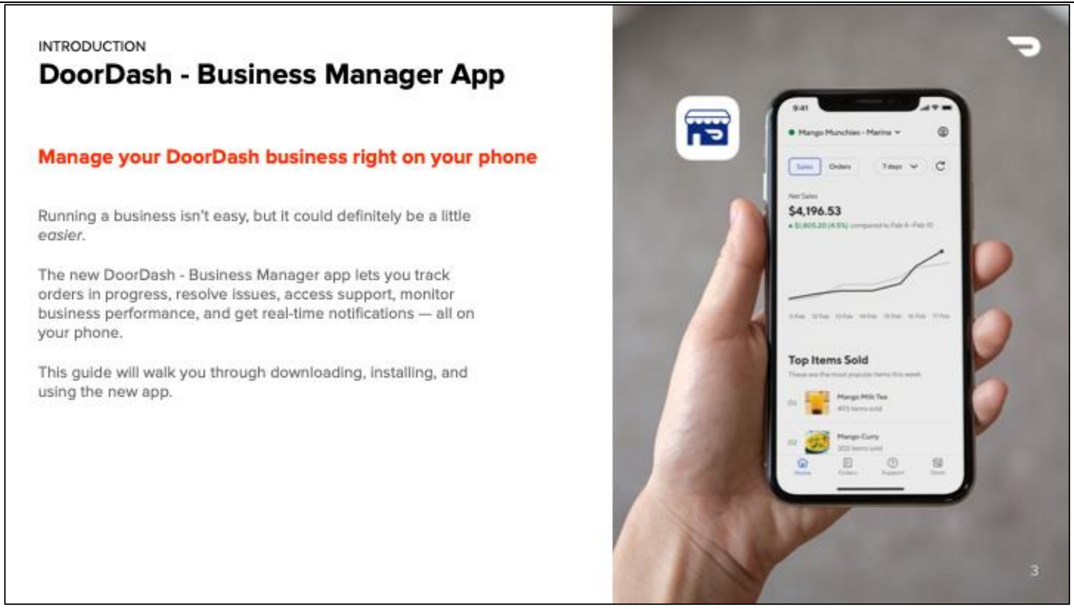
Track orders in progress, resolve issues, access Support, keep track of your business performance, and get real-time notifications on DoorDash.

TRACK LIVE ORDERS

Manage in-progress orders and see your Dasher's status, location, and arrival time. Mark an item out

The DoorDash Manger lets restaurants *"…track orders in progress, resolve issues, access support, monitor business performance, and get real-time notifications — all on your phone*." Selective screenshots from the DoorDash Business Manager App Guide describes the app, and it's features as below (See Exh 59, 62, 65). With the Business Manager App, managers can in real-time:

- track sales, orders, and trends, for one or multiple stores
- change store status
- update menu hours
- view active orders
- call the customer or Dasher
- contact DoorDash Support
- mark items out of stock
- cancel an order"



INTRODUCTION

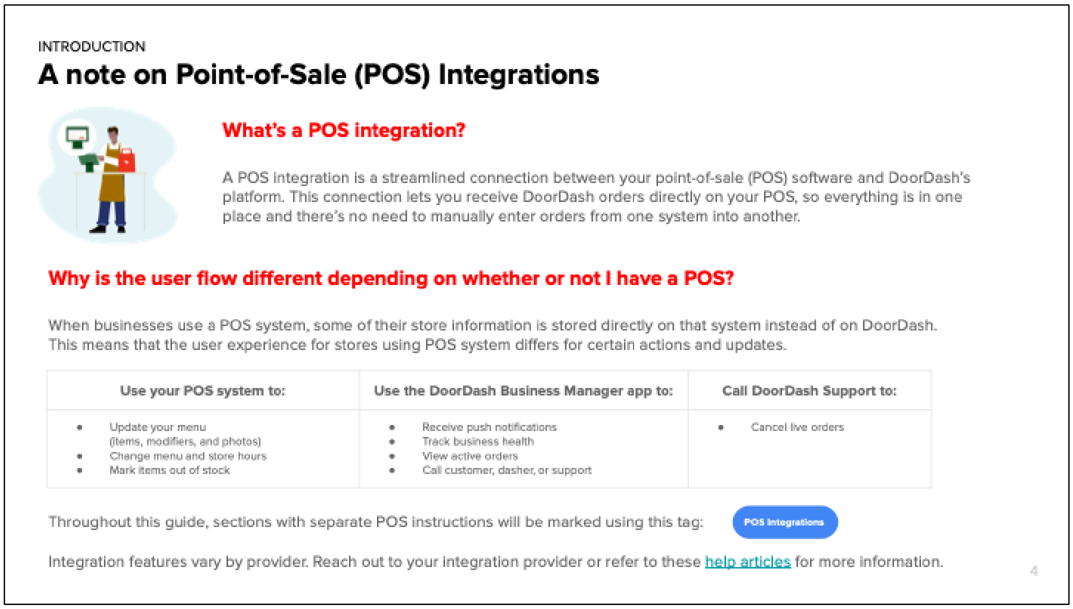
DoorDash - Business Manager App

Manage your DoorDash business right on your phone

Running a business isn't easy, but it could definitely be a little easier.

The new DoorDash - Business Manager app lets you track orders in progress, resolve issues, access support, monitor business performance, and get real-time notifications — all on your phone.

This guide will walk you through downloading, installing, and using the new app.



INTRODUCTION

A note on Point-of-Sale (POS) Integrations

What's a POS integration?

A POS integration is a streamlined connection between your point-of-sale (POS) software and DoorDash's platform. This connection lets you receive DoorDash orders directly on your POS, so everything is in one place and there's no need to manually enter orders from one system into another.

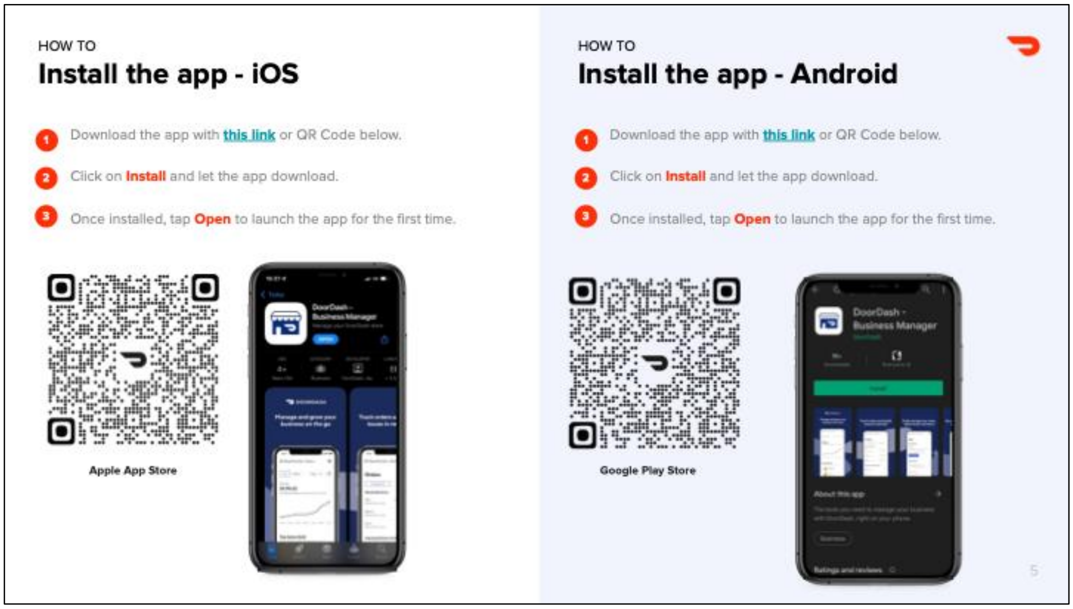
Why is the user flow different depending on whether or not I have a POS?

When businesses use a POS system, some of their store information is stored directly on that system instead of on DoorDash. This means that the user experience for stores using POS system differs for certain actions and updates.

Use your POS system to:	Use the DoorDash Business Manager app to:	Call DoorDash Support to:
• Update your menu (items, modifiers, and photos) • Change menu and store hours • Mark items out of stock	• Receive push notifications • Track business health • View active orders • Call customer, dasher, or support	• Cancel live orders

Throughout this guide, sections with separate POS instructions will be marked using this tag: POS Integrations

Integration features vary by provider. Reach out to your integration provider or refer to these help articles for more information.



HOW TO

Install the app - iOS

1. Download the app with **this link** or QR Code below.
2. Click on **Install** and let the app download.
3. Once installed, tap **Open** to launch the app for the first time.

HOW TO

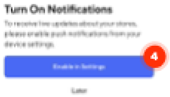
Install the app - Android

1. Download the app with **this link** or QR Code below.
2. Click on **Install** and let the app download.
3. Once installed, tap **Open** to launch the app for the first time.

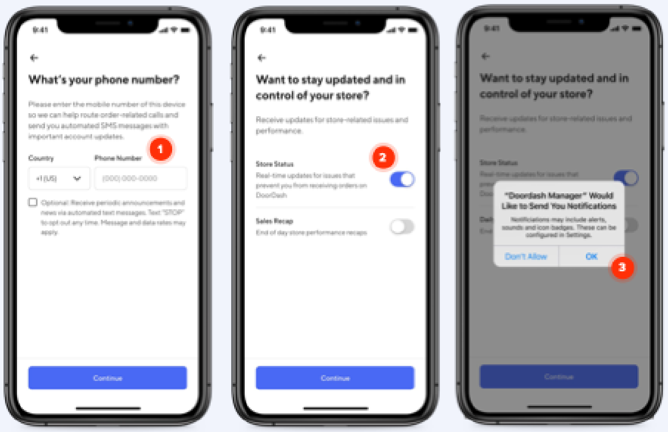
HOW TO

Enable push notifications

1. When you first log in, you'll be asked to provide your **phone number for authentication**. Once you've done that, tap Continue.
2. **Enable push notifications** in the toggle bar to receive real-time updates about store issues and end-of-day performance recaps. Tap Continue.
3. You'll see a pop-up asking you to allow **DoorDash Manager to send you notifications**. Be sure to select **OK** for full functionality.
4. If you select Don't Allow, you'll need to **re-enable notifications** via your device's Settings menu.


Turn On Notifications

To receive live updates about your stores, please enable push notifications from your device settings.


9:41

What's your phone number?

Please enter the mobile number of this device so we can help route order-related calls and send you automated SMS messages with important account updates.

Country: +1 (US)

Phone Number: (000) 000-0000

□ Optional: Receive periodic announcements and news via automated text messages. Text "STOP" to opt out any time. Message and data rates may apply.

Want to stay updated and in control of your store?

Receive updates for store-related issues and performance.

Store Status — Real-time updates for issues that prevent you from receiving orders on DoorDash

Sales Recap — End of day store performance recaps

"Doordash Manager" Would Like to Send You Notifications

Notifications may include alerts, sounds and icon badges. These can be configured in Settings.

1st time authentication

Notifications selector

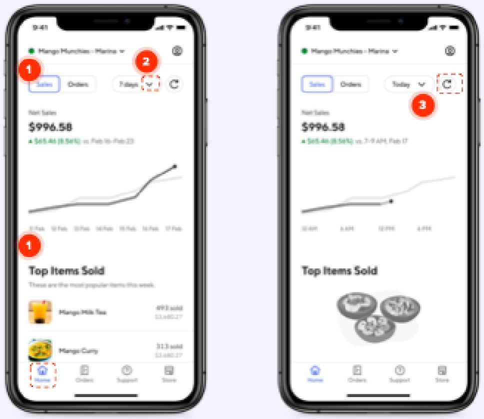
Accept device notifications

HOW TO

Track business health (single store)

1. The Home tab of your Dashboard allows you to see **sales, orders, trends and top items sold** in a specific time range.
2. You'll have the option to choose from today, yesterday, 7 days, 30 days. Just tap the dropdown arrow.
3. If you select **today**, you'll be able to:
   - Monitor sales and orders in real time by tapping the refresh arrow
   - Analyze partial-day trends

Menu item performance is calculated at 7 days and 30 days, so to view that data just change the time range.


9:41

Mango Munchies - Marina

Net Sales $996.58

▲ $65.46 (8.56%) vs. Feb 16-Feb 23

▲ $65.46 (8.56%) vs. 7-9 AM, Feb 17

Top Items Sold

These are the most popular items this week.

Mango Milk Tea	493 sold	$3,680.27
Mango Curry	313 sold	$3,680.27

View top-line metrics and trends

Monitor day-of performance

HOW TO

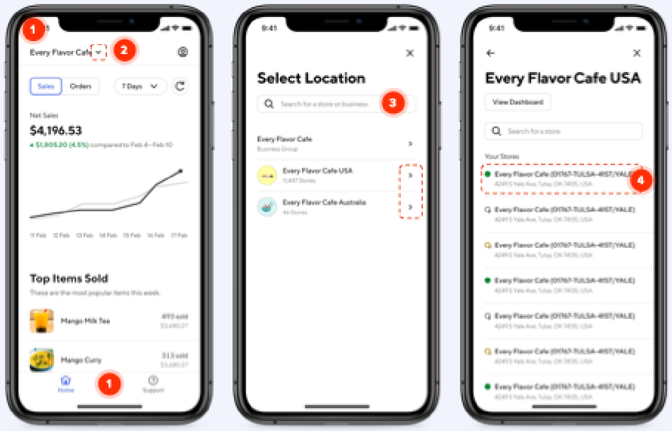
Track business health (multiple stores)

1. If you own **multiple locations**, the home screen will display metrics across all stores by default. You can confirm this by noting:
   - The business (or group) name at the top left
   - Your bottom navigation bar will only show 2 tabs (Home and Support)

2. To view **store-level metrics and features**, tap the arrow in the top navigation bar.

3. Depending on how your business was set up on DoorDash, it may take 1-2 taps to get to an individual store (tap the **arrow to navigate**). You can also locate the store in the **search bar**.

4. **Tap the store** you'd like to view and both the app dashboard and metrics will automatically refresh.


Every Flavor Cafe

Net Sales $4,196.53

▲ $1,805.20 (4.5%) compared to Feb 4—Feb 10

Top Items Sold

These are the most popular items this week.

Mango Milk Tea	493 sold	$3,680.27
Mango Curry	313 sold	$3,680.27

Select Location

Search for a store or business

Every Flavor Cafe — Business Group

Every Flavor Cafe USA — 11,647 Stores

Every Flavor Cafe Australia — 46 Stores

Every Flavor Cafe USA

View Dashboard

Search for a store

Your Stores

Every Flavor Cafe (01767-TULSA-41ST/YALE) — 4241 S Yale Ave, Tulsa, OK 74135, USA

Every Flavor Cafe (01767-TULSA-41ST/YALE) — 4241 S Yale Ave, Tulsa, OK 74135, USA

Every Flavor Cafe (01767-TULSA-41ST/YALE) — 4241 S Yale Ave, Tulsa, OK 74135, USA

Every Flavor Cafe (01767-TULSA-41ST/YALE) — 4241 S Yale Ave, Tulsa, OK 74135, USA

Every Flavor Cafe (01767-TULSA-41ST/YALE) — 4241 S Yale Ave, Tulsa, OK 74135, USA

Every Flavor Cafe (01767-TULSA-41ST/YALE) — 4241 S Yale Ave, Tulsa, OK 74135, USA

Every Flavor Cafe (01767-TULSA-41ST/YALE) — 4241 S Yale Ave, Tulsa, OK 74135, USA

Business-level Dashboard

Select a business (if applicable)

Select a store

HOW TO

Change store status

POS Integrations

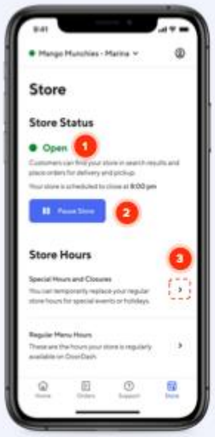
1 You can view and change your store status (**open, paused, closed**) in the Store tab. If you have access to multiple stores, select the specific store from the dropdown menu.

2 Tap **Pause Store** to pause an open store and choose when it reopens (in an hour, the next day, etc).

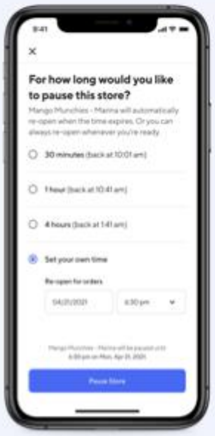
3 View or add special hours or closures by tapping the right-hand arrow next to **Special Hours and Closures**.*

When you change your store status in the app, it will be reflected on the Tablet and Portal (and vice versa).

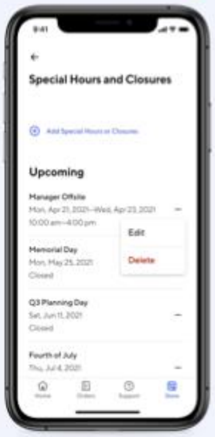
*If you use a POS protocol, we recommend making special hours updates and closures using your POS. When you make these changes via the app, they may be overwritten during a POS sync.



View status


For how long would you like to pause this store?
30 minutes (back at 10:01 am)
1 hour (back at 10:41 am)
4 hours (back at 1:41 am)
Set your own time
Pause Store

Pause store



Special hours

HOW TO

Update menu hours*

POS Integrations

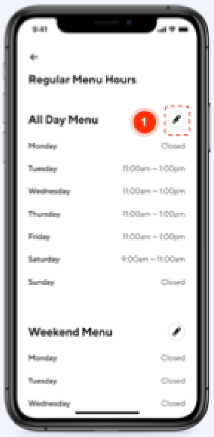
1 From the Store tab (refer to previous page for a screenshot) you can update your menu hours by tapping the right-hand arrow next to **Regular Menu Hours**.

2 If you have multiple menus for your store, scroll down to find the specific menu. Then tap the **pencil to edit**.

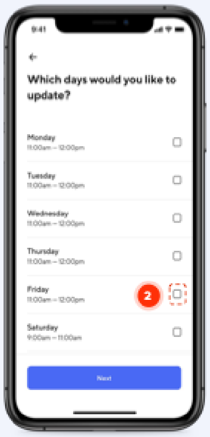
3 **Check the box** next to the day(s) of the week you'd like to update the menu hours for and tap **Next**.

Indicate whether the new hours reflect when you're open or closed by clicking on the top toggle. Then **tap on the start or end time** and select the desired time from the dropdown. Tap **Next** and then **Confirm**.

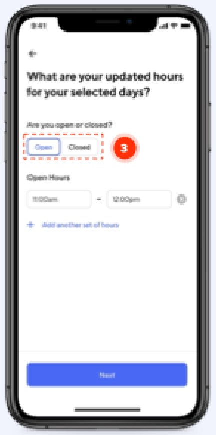
*If you use a POS protocol, we recommend updating menu hours using your POS. When you make these changes via the app, they may be overwritten during a POS sync.



Edit menu hours



Day of week



Start and end time

HOW TO

View active orders

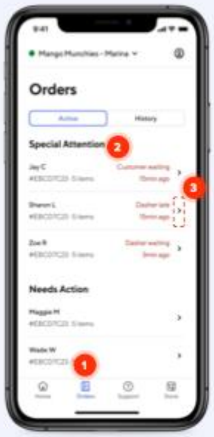
1 **Tap on the Orders button** in the bottom navigation to view active orders. For already completed orders, you can also toggle to History.

2 **Note the order status** on the right-side to see if an order needs attention.

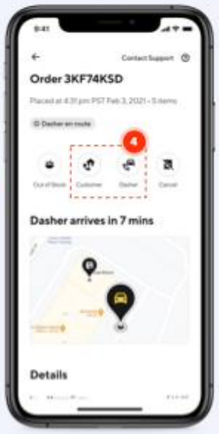
Dasher late
Dasher en route
Dasher arriving
Customer pickup
Dasher waiting
Customer arriving
Delivered
Customer picked up

3 **See order details** by tapping on the right-hand arrow by the individual order.

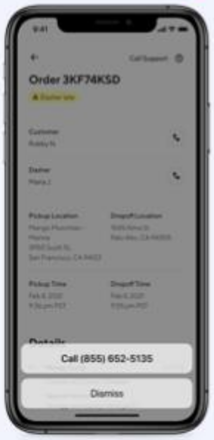
4 **Call a customer or Dasher directly** by tapping the phone icon.



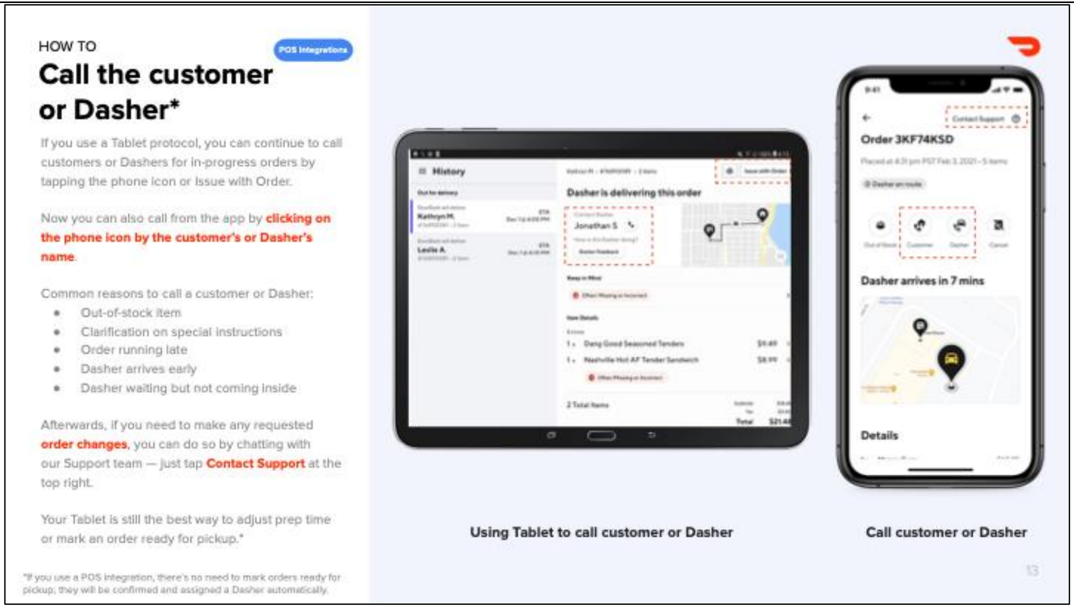
Orders



Order details



Call customer or Dasher



HOW TO

POS Integrations

Call the customer or Dasher*

If you use a Tablet protocol, you can continue to call customers or Dashers for in-progress orders by tapping the phone icon or Issue with Order.

Now you can also call from the app by **clicking on the phone icon by the customer's or Dasher's name**.

Common reasons to call a customer or Dasher:

- Out-of-stock item
- Clarification on special instructions
- Order running late
- Dasher arrives early
- Dasher waiting but not coming inside

Afterwards, if you need to make any requested **order changes**, you can do so by chatting with our Support team — just tap **Contact Support** at the top right.

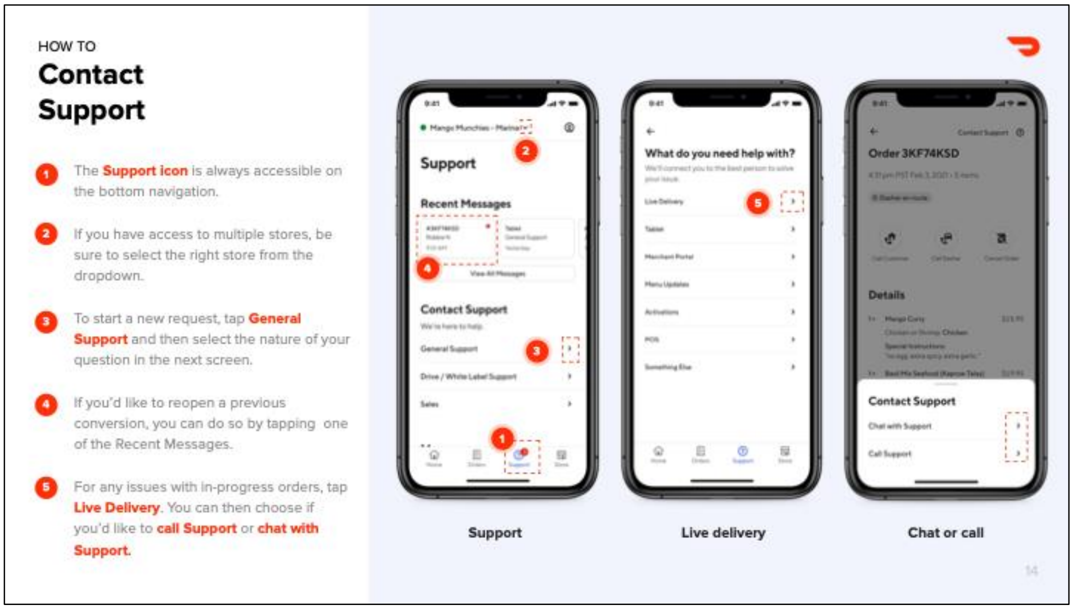
Your Tablet is still the best way to adjust prep time or mark an order ready for pickup.*

Using Tablet to call customer or Dasher

Call customer or Dasher

*If you use a POS integration, there's no need to mark orders ready for pickup; they will be confirmed and assigned a Dasher automatically.

13



HOW TO

Contact Support

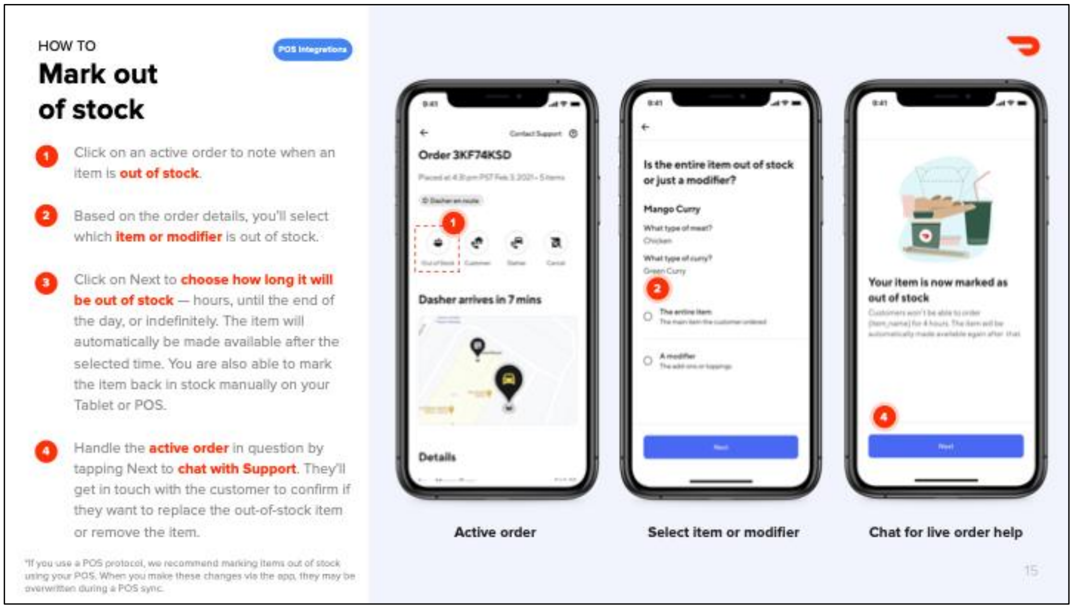
1. The **Support icon** is always accessible on the bottom navigation.
2. If you have access to multiple stores, be sure to select the right store from the dropdown.
3. To start a new request, tap **General Support** and then select the nature of your question in the next screen.
4. If you'd like to reopen a previous conversion, you can do so by tapping one of the Recent Messages.
5. For any issues with in-progress orders, tap **Live Delivery**. You can then choose if you'd like to **call Support** or **chat with Support.**

Support

Live delivery

Chat or call

14



HOW TO

POS Integrations

Mark out of stock

1. Click on an active order to note when an item is **out of stock**.
2. Based on the order details, you'll select which **item or modifier** is out of stock.
3. Click on Next to **choose how long it will be out of stock** — hours, until the end of the day, or indefinitely. The item will automatically be made available after the selected time. You are also able to mark the item back in stock manually on your Tablet or POS.
4. Handle the **active order** in question by tapping Next to **chat with Support**. They'll get in touch with the customer to confirm if they want to replace the out-of-stock item or remove the item.

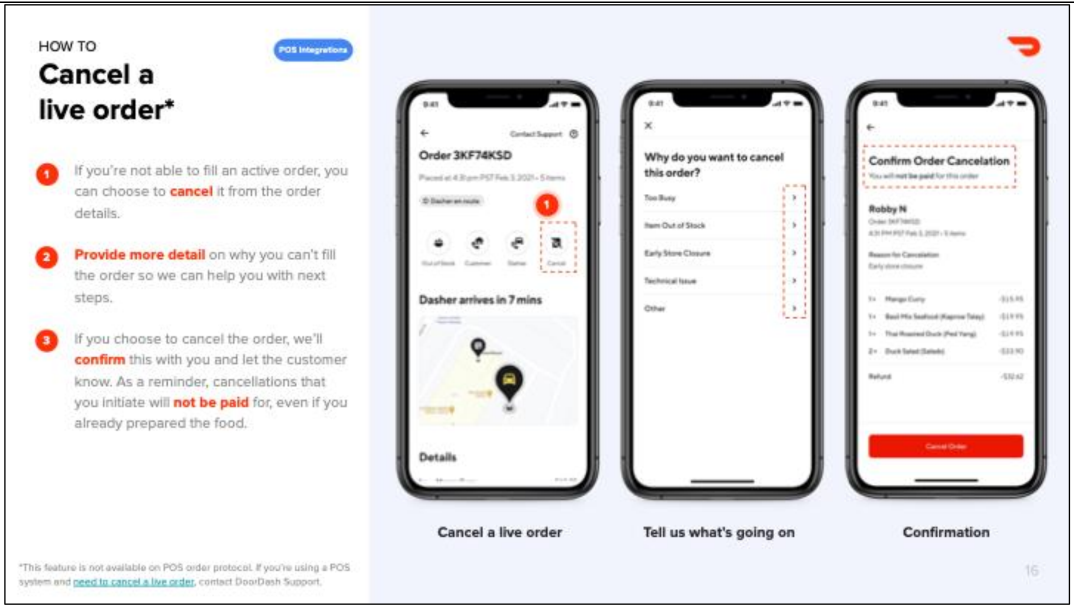
Active order

Select item or modifier

Chat for live order help

*If you use a POS protocol, we recommend marking items out of stock using your POS. When you make these changes via the app, they may be overwritten during a POS sync.

15



HOW TO

Cancel a live order*

1. If you're not able to fill an active order, you can choose to **cancel** it from the order details.
2. **Provide more detail** on why you can't fill the order so we can help you with next steps.
3. If you choose to cancel the order, we'll **confirm** this with you and let the customer know. As a reminder, cancellations that you initiate will **not be paid** for, even if you already prepared the food.

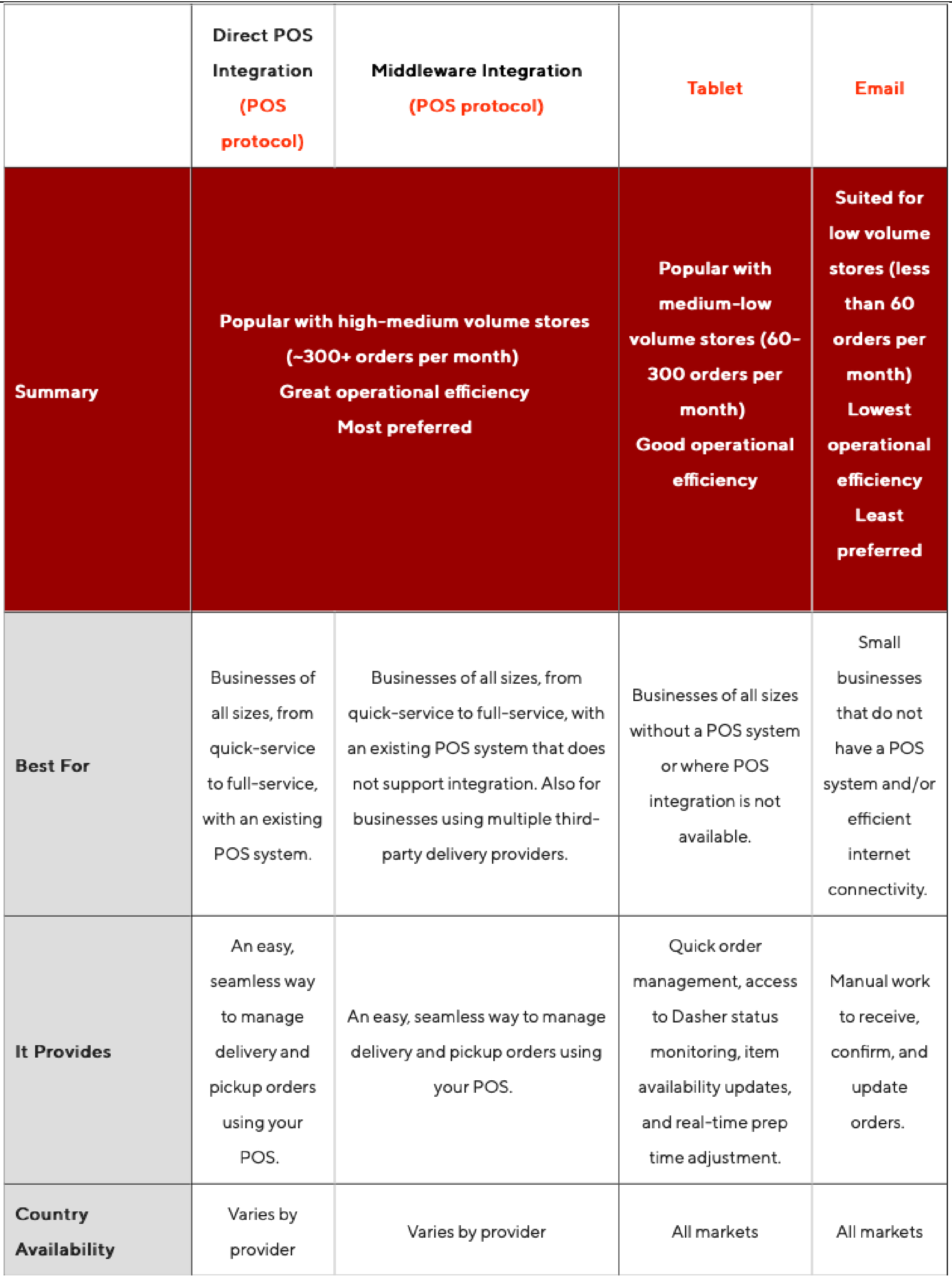
*This feature is not available on POS order protocol. If you're using a POS system and need to cancel a live order, contact DoorDash Support.

Multi-Modes of Communication

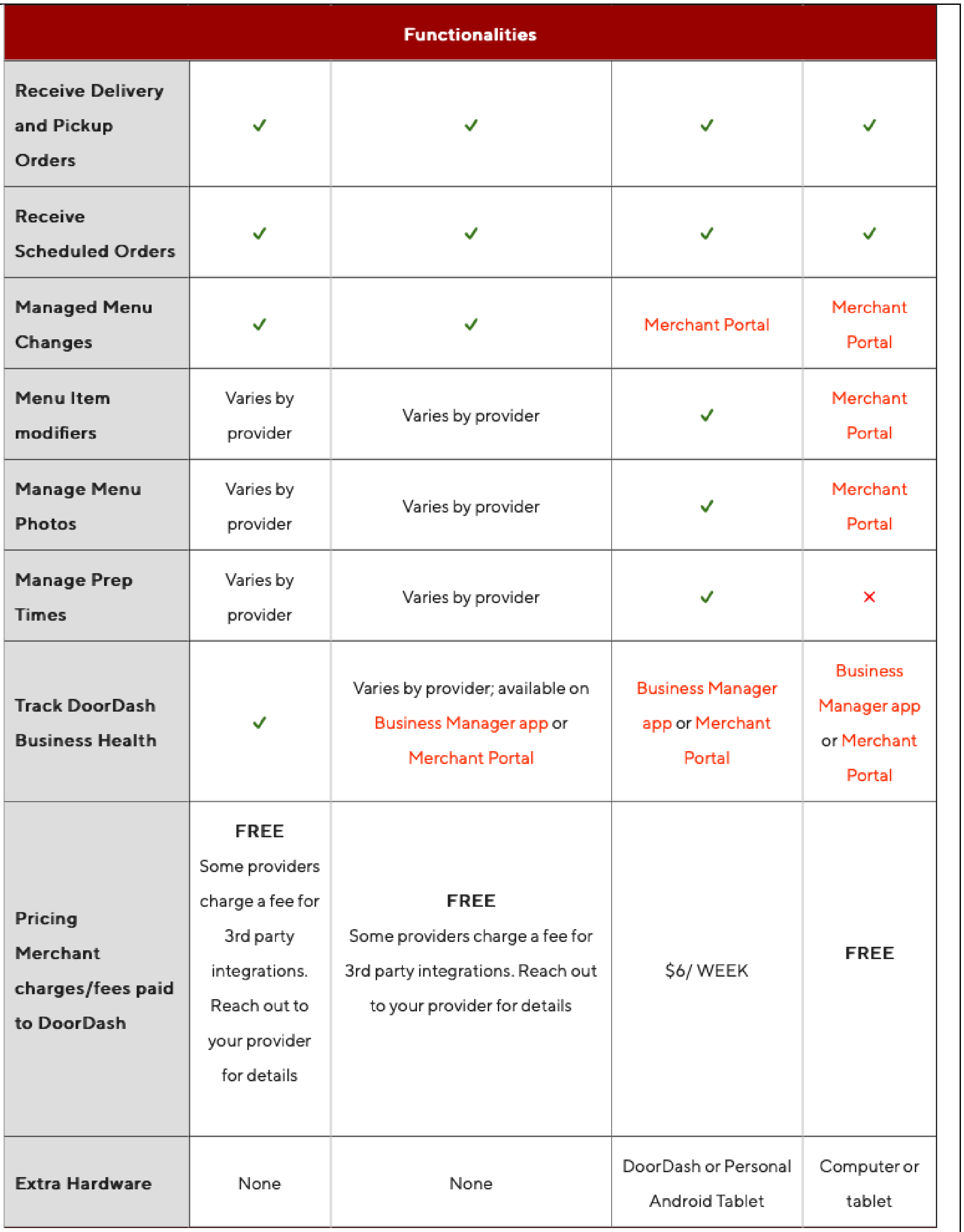
DoorDash affirms in the merchant support document "Which order protocol works best for your business" (see Exh 112) that DoorDash merchants/partners can receive orders through multiple modes of communication including:

- *"Your existing point-of-sale (POS) system via an integration*
- *A DoorDash tablet or your own Android tablet using the Order Manager app*
- *Email"*

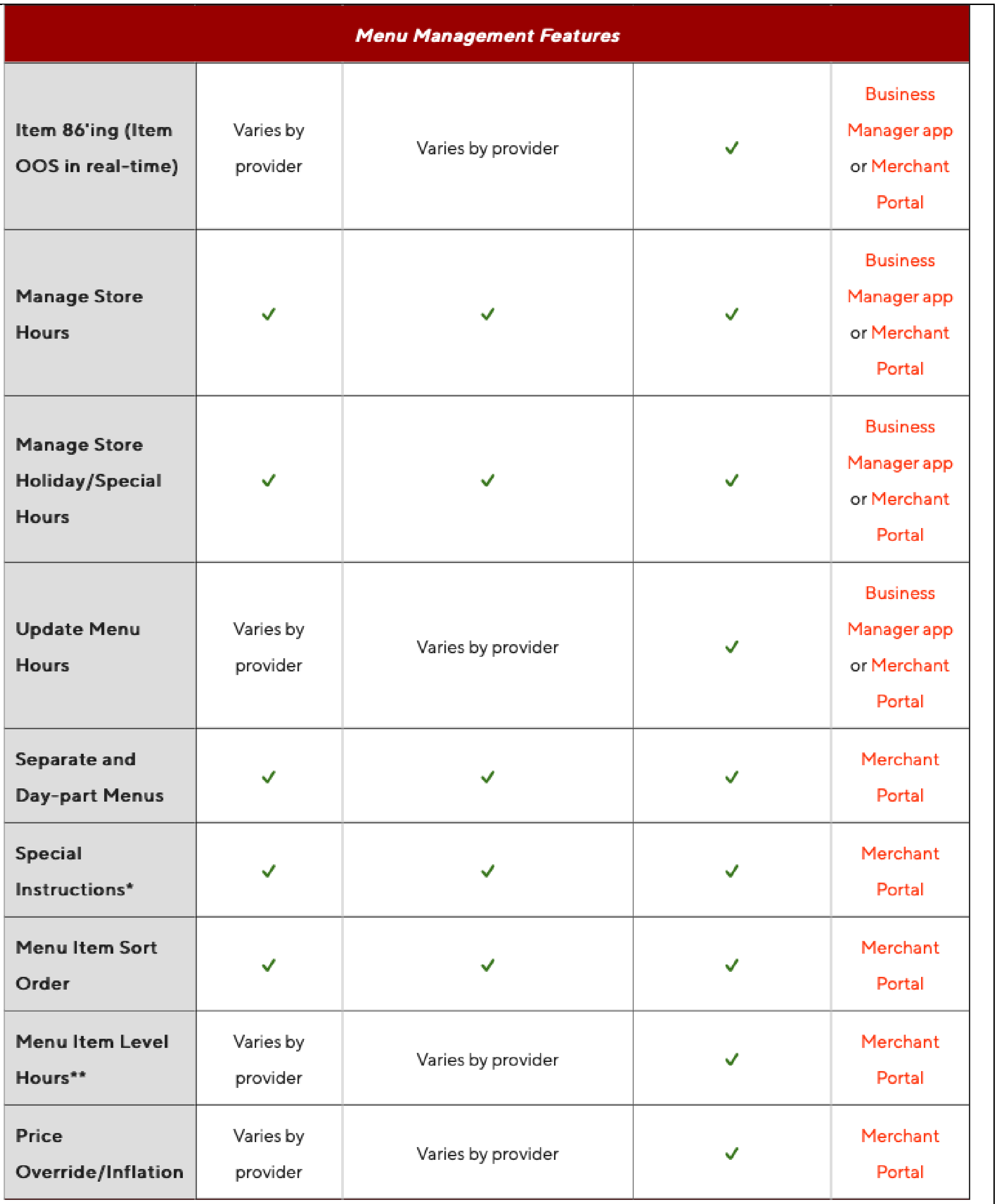
This document presents a table that specifies which mobile, tablet or web app is best to use for a given features. Below are screenshots of this specification (see Exh 112):



	Direct POS Integration (POS protocol)	Middleware Integration (POS protocol)	Tablet	Email
Summary	**Popular with high-medium volume stores (~300+ orders per month)** **Great operational efficiency** **Most preferred**		**Popular with medium-low volume stores (60-300 orders per month)** **Good operational efficiency**	**Suited for low volume stores (less than 60 orders per month)** **Lowest operational efficiency** **Least preferred**
Best For	Businesses of all sizes, from quick-service to full-service, with an existing POS system.	Businesses of all sizes, from quick-service to full-service, with an existing POS system that does not support integration. Also for businesses using multiple third-party delivery providers.	Businesses of all sizes without a POS system or where POS integration is not available.	Small businesses that do not have a POS system and/or efficient internet connectivity.
It Provides	An easy, seamless way to manage delivery and pickup orders using your POS.	An easy, seamless way to manage delivery and pickup orders using your POS.	Quick order management, access to Dasher status monitoring, item availability updates, and real-time prep time adjustment.	Manual work to receive, confirm, and update orders.
Country Availability	Varies by provider	Varies by provider	All markets	All markets

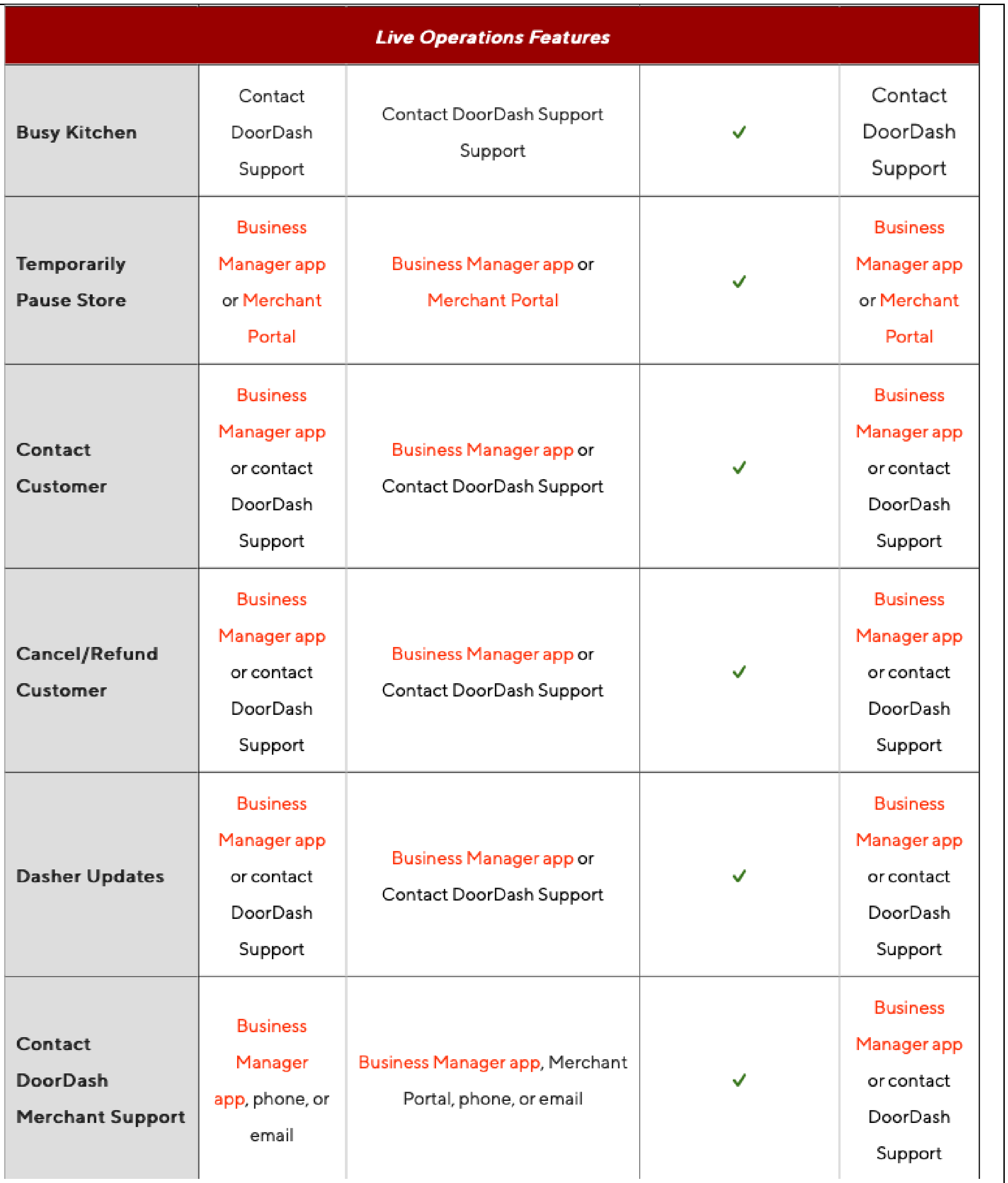


Functionalities				
Receive Delivery and Pickup Orders	✓	✓	✓	✓
Receive Scheduled Orders	✓	✓	✓	✓
Managed Menu Changes	✓	✓	Merchant Portal	Merchant Portal
Menu Item modifiers	Varies by provider	Varies by provider	✓	Merchant Portal
Manage Menu Photos	Varies by provider	Varies by provider	✓	Merchant Portal
Manage Prep Times	Varies by provider	Varies by provider	✓	✗
Track DoorDash Business Health	✓	Varies by provider; available on Business Manager app or Merchant Portal	Business Manager app or Merchant Portal	Business Manager app or Merchant Portal
Pricing Merchant charges/fees paid to DoorDash	**FREE** Some providers charge a fee for 3rd party integrations. Reach out to your provider for details	**FREE** Some providers charge a fee for 3rd party integrations. Reach out to your provider for details	$6/ WEEK	**FREE**
Extra Hardware	None	None	DoorDash or Personal Android Tablet	Computer or tablet



Menu Management Features

Item 86'ing (Item OOS in real-time)	Varies by provider	Varies by provider	✓	Business Manager app or Merchant Portal
Manage Store Hours	✓	✓	✓	Business Manager app or Merchant Portal
Manage Store Holiday/Special Hours	✓	✓	✓	Business Manager app or Merchant Portal
Update Menu Hours	Varies by provider	Varies by provider	✓	Business Manager app or Merchant Portal
Separate and Day-part Menus	✓	✓	✓	Merchant Portal
Special Instructions*	✓	✓	✓	Merchant Portal
Menu Item Sort Order	✓	✓	✓	Merchant Portal
Menu Item Level Hours**	Varies by provider	Varies by provider	✓	Merchant Portal
Price Override/Inflation	Varies by provider	Varies by provider	✓	Merchant Portal



Live Operations Features				
Busy Kitchen	Contact DoorDash Support	Contact DoorDash Support	✓	Contact DoorDash Support
Temporarily Pause Store	Business Manager app or Merchant Portal	Business Manager app or Merchant Portal	✓	Business Manager app or Merchant Portal
Contact Customer	Business Manager app or contact DoorDash Support	Business Manager app or Contact DoorDash Support	✓	Business Manager app or contact DoorDash Support
Cancel/Refund Customer	Business Manager app or contact DoorDash Support	Business Manager app or Contact DoorDash Support	✓	Business Manager app or contact DoorDash Support
Dasher Updates	Business Manager app or contact DoorDash Support	Business Manager app or Contact DoorDash Support	✓	Business Manager app or contact DoorDash Support
Contact DoorDash Merchant Support	Business Manager app, phone, or email	Business Manager app, Merchant Portal, phone, or email	✓	Business Manager app or contact DoorDash Support

Furthermore, in the merchant support document "How do I receive orders with DoorDash?" DoorDash affirms (see Exh 113):

> *"If you would prefer orders to come through a tablet, all orders will come through DoorDash's Order Manager App on Android tablets.*
>
> - *With the tablet, you can see:*
> - *Sections for each order stage lifecycle to easily identify where an order is*
> - *Scheduled order timing when it appears in-app is changing (used to show up/print immediately)*
> - *Cancellations won't just disappear anymore*

- *Tags for scheduled orders, large orders, canceled orders, modified orders, customer pickup*
- *Item count per order*
- *Large/clearer map and Dasher location information*

You can receive orders by POS, email, or email/fax*. However, you will not be able to receive orders from phone+tablet or email+fax.*

DoorDash can also place a follow-up automated call to ensure that all orders were received*.”*

The DoorDash Merchant support article “How to switch to POS order protocol” states that (see Exh 117):

> “As a DoorDash partner, you can choose to receive DoorDash orders through:
>
> - Your existing point-of-sale (POS) system via an integration (see the complete list of integration partners here)
> - A DoorDash tablet or your Android tablet using the Order Manager app
> - Email

DoorDash’s Unified Chat Experience

The DoorDash engineering team stated in an engineering blog post, tiled **Building a Unified Chat Experience at DoorDash**, how they successfully integrated chat into their overall system, addressing the challenges and strategies employed to create a unified chat experience. Their implementation aligns with MFCCS as it provides a centralized system layer architecture enhancing communication between the web server and multiple wireless handheld devices, each operating on distinct mobile systems thus allowing customers to communicate with customer support and dashers. (See Exh. 102)

DoorDash recognized the crucial need to address customer issues on a large scale, leading them to acknowledge the essential nature of a unified chat feature. Their initial challenge was a fragmented chat system, which was scattered across various user groups and platforms, causing duplicated efforts and central adoption of best practices to be challenging.

By leveraging the architecture MFCCS, DoorDash could centralize its chat functionalities, allowing for seamless interactions between consumers, Dashers, and merchants. The MFCCS would facilitate the web server's ability to communicate with diverse handheld devices, presenting mobile-compatible versions of the hospitality application. This integration is crucial for enabling user-initiated actions and subsequent selection of choices directly from the touchscreens of various devices, fostering a multi-modal, multi-protocol communication environment.

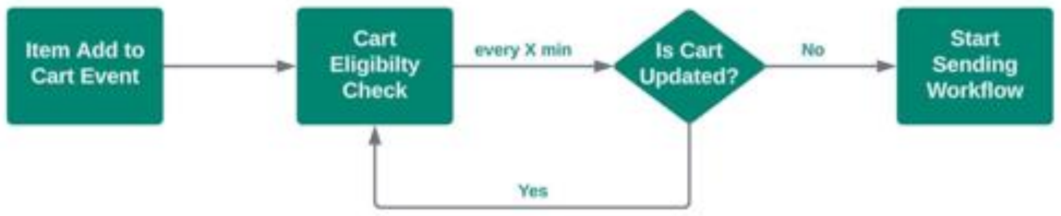
According to the engineering article, a significant objective for DoorDash was to streamline their support processes through automation, allowing customers to

	retrieve information through the app itself, thus minimizing the need for human support interaction. They aimed to develop a single chat support platform that would ensure consistent user experiences across different platforms and facilitate the reuse of components. In building this unified platform, DoorDash created a single chat implementation that functioned for both customer support and communication between consumers and Dashers. This system, powered by Sendbird, was directly integrated into the consumer and Dasher apps, providing a uniform experience across all DoorDash chats and allowing for shared enhancements across different chat flows. The backend system was strategically designed with multiple layers, distinguishing between internal services and third-party functionalities such as chat natural language processing. This separation expedited development by eliminating the need to create distinct, non-essential features. Integration with their Decision Engine platform was another crucial step, which enabled operations to be automated, such as order updates, issuing credits, and personalized messaging. This significantly decreased the dependency on manual operations. DoorDash also carefully monitored several key performance indicators, including feedback from agents and customers, error rates, customer satisfaction, average handle time, first contact resolution, and manual tasks per order. The outcomes of this updated chat support system, according to the article, were noteworthy, with reduced escalation rates and improved customer satisfaction. The automation led to a decrease in manual interactions per delivery, and customers were able to solve their problems more quickly, sometimes without the need for manual assistance. The time needed to implement additional automation was also reduced, owing to the common platform processing. Moreover, the common UI layers ensured that the chat feature was seamlessly integrated into the applications (iOS and Android), providing a consistent brand experience across all platforms. The advancements DoorDash has made in their chat system encapsulate the essence of the Middleware/Framework Communications Control Software (MFCCS) described in the patent claim. By creating a unified chat platform that seamlessly integrates with multiple user interfaces and operating systems, DoorDash has effectively embodied the centralized system layer architecture that MFCCS envisions. Their backend, which differentiates between core and third-party functionalities, mirrors the multi-layered approach of MFCCS, allowing for efficient, scalable communication across various devices. Moreover, the phased rollout and meticulous performance monitoring align with the adaptive, intelligent operational capabilities that MFCCS aims to provide. This demonstrates a real-world application of the patent's claim, showcasing a system that not only supports multi-mode communication but also enhances user experience and operational efficiency in a dynamic hospitality market. **Notifications** The MFCCS is evident through DoorDash’s strategic use of real-time notifications to engage consumers and enhance user experience as detailed by their engineering team in the blog article titled “**Leveraging Flink to Detect User Sessions and Engage DoorDash Consumers with Real-Time Notifications**”. By harnessing the capabilities of Apache Flink, DoorDash has been able to detect user sessions and

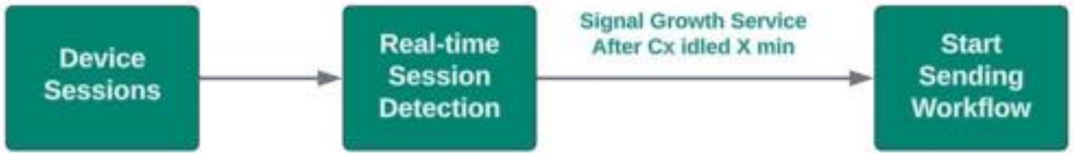
discern the critical moments to send push notifications, directly aligning with the objectives of the MFCCS to facilitate intelligent, timely communication between the server and the user's handheld devices. (See Exh. 127)

This approach to session detection and notification dispatch represents the essence of MFCCS. The sessions on DoorDash's platform are managed in a way that reflects the centralized control of MFCCS, grouping user activities into sessions and determining inactivity, thus optimizing the timing for sending out notifications. This reduces unnecessary communication attempts, which is a core feature of the MFCCS, aiming to enhance the efficiency of the server's operations.

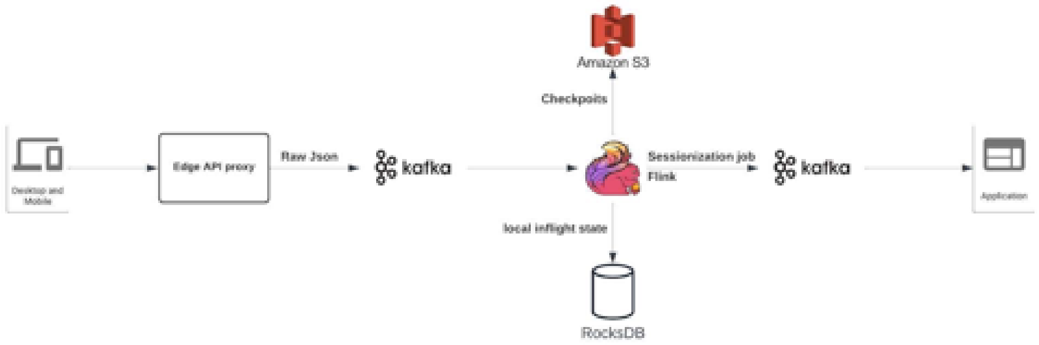
The previous notification system at DoorDash relied on a front-end triggered approach that lacked the precision of the current model, often resulting in untimely and less effective user notifications which did not reflect actual user engagement or session activity accurately, as shown below:



DoorDash's new backend-focused strategy (see diagram below) for triggering notifications ensures that the system accurately mirrors actual user activity, an essential aspect of the MFCCS's design to ensure relevance and personalization of user interactions. The sessionization platform developed by DoorDash utilizes in-memory streaming for processing events, further embodying the MFCCS principle of leveraging real-time data for improved service delivery.


Device Sessions
Real-time Session Detection
Signal Growth Service After Cx idled X min
Start Sending Workflow

The infrastructure supporting this system (see diagram below) mirrors the robustness required by MFCCS, capable of handling large-state computing and managing user events in a stateful manner until the appropriate action is determined. This is in line with MFCCS's aim to manage multiple communication modes and protocols, ensuring that the server selects the most efficient and effective form of user engagement.



The tangible results of integrating such an intelligent communication system is that DoorDash's cart abandonment notifications have not only increased order volume and revenue but also the speed of notification delivery by six-fold, leading to higher user engagement rates. This success is a testament to the MFCCS's capability to provide an adaptable.

Robocalls for Store Status

In the DoorDash customer support article "**Using Robocalls to Verify Store Hours**" DoorDash's states that it uses automated calls (or robocalls) to its customers locations to ensure the maintain efficient and reliable service of operations. As detailed in the support document, DoorDash implements robocalls to verify store hours and open status, especially during times of uncertainty such as holidays, severe weather, or unforeseen events. This automated system embodies the proactive and responsive communication strategy central to MFCCS. (See Exh. 128)

The document outlines how robocalls are placed from the DoorDash backend to merchants, requiring a simple keypad response to ascertain the store's status, thereby minimizing avoidable cancellations, and ensuring a seamless customer experience. In cases of non-response, a temporary deactivation is initiated, emphasizing the MFCCS's focus on intelligent and adaptable operational processes. Merchants can reactivate their service through DoorDash's Merchant Portal or by contacting support, showcasing a system designed for rapid recovery and continuity, which is intrinsic to the robust nature of MFCCS.

This proactive approach to merchant engagement via robocalls, as practiced by DoorDash, ensures that the service ecosystem remains agile and customer-focused, mirroring the MFCCS's goal of utilizing technology to enhance operational efficiency and user satisfaction.

The accused instrumentality meets this limitation under the doctrine of equivalents because the accused instrumentality performs substantially the same function, in substantially the same way to achieve substantially the same result. For example, DoorDash's system mirrors the functionalities described in the patent claim for Middleware/Framework Communications Control Software (MFCCS). Their architecture facilitates seamless interactions across different mobile operating systems and devices, meeting the claim's requirements for centralized communication. This system supports varied user interfaces and adapts to real-time data processing needs, which exemplifies the adaptable and efficient communication control integral to the claim under the principle of equivalence.

at least one external software application program interface (API), which enables the full integration of the one or more hospitality software applications via the MFCCS and its layer architecture with one or more non-hospitality applications;	DoorDash has strategically implemented at least one external API showcasing their advanced master database and their ability to synchronize and integrate their food and drink ordering software application with non-hospitality applications like Google Maps and texting. In their enhancement from a monolithic codebase to a microservices architecture, DoorDash has focused on refining API designs for better platform functionality. They emphasize the importance of APIs in providing information to apps and facilitating quick, storage-efficient, and failure-resistant operations. This commitment to API optimization has led to a significant reduction in latency and errors, improving both backend services and user experience, according to the DoorDash engineering team. The API for menu management is another aspect of DoorDash's commitment to integration and efficiency. It allows for synchronization from the POS system to DoorDash, with the capability for merchants to adjust imported items using DoorDash’s menu manager. The process of updating menus involves both pushing from the partner to DoorDash and pulling from DoorDash to the partner, ensuring that menus are current and accurate. DoorDash's Documentation highlights the selective access to Marketplace APIs, emphasizing the importance of managing menu, store, and order data. This approach aligns with their goal to offer a controlled and efficient API system that supports the seamless operation of their marketplace. Moreover, DoorDash’s integration with Google Maps via its API for real-time navigation in both iOS and Android apps showcases their ability to leverage external non-hospitality applications to enhance their service. This integration provides Dashers with precise delivery locations and navigation data, crucial for the delivery journey. The DoorDash engineering team's blog post about building a unified chat experience illustrates their successful integration of a chat system that aligns with the MFCCS, providing a centralized layer that enhances communication across different devices and platforms. This system, powered by Sendbird and integrated with the consumer and Dasher apps, ensures consistent user experiences and leverages automation to reduce the need for human support interaction. DoorDash’s advancements in integrating a chat system embody the centralized system layer architecture that MFCCS envisions. Their multi-layered backend, differentiated between core functionalities and third-party services, allows for efficient, scalable communication across various devices, demonstrating the practical application of the patent's claim in enhancing user experience and operational efficiency in the hospitality market. In the blog article “Platform Optimization Through Better API Design” by the Engineering Team (see Exh 22) they admit and confirm the DoorDash platforms framework and API optimizations. Specifically, the article states: *“As DoorDash migrated from a monolithic codebase to a microservices architecture, we found an opportunity to refine our API design. Beyond simple functionality, we determined best practices in making APIs that help our applications load quickly, use minimal storage, and, most importantly,*

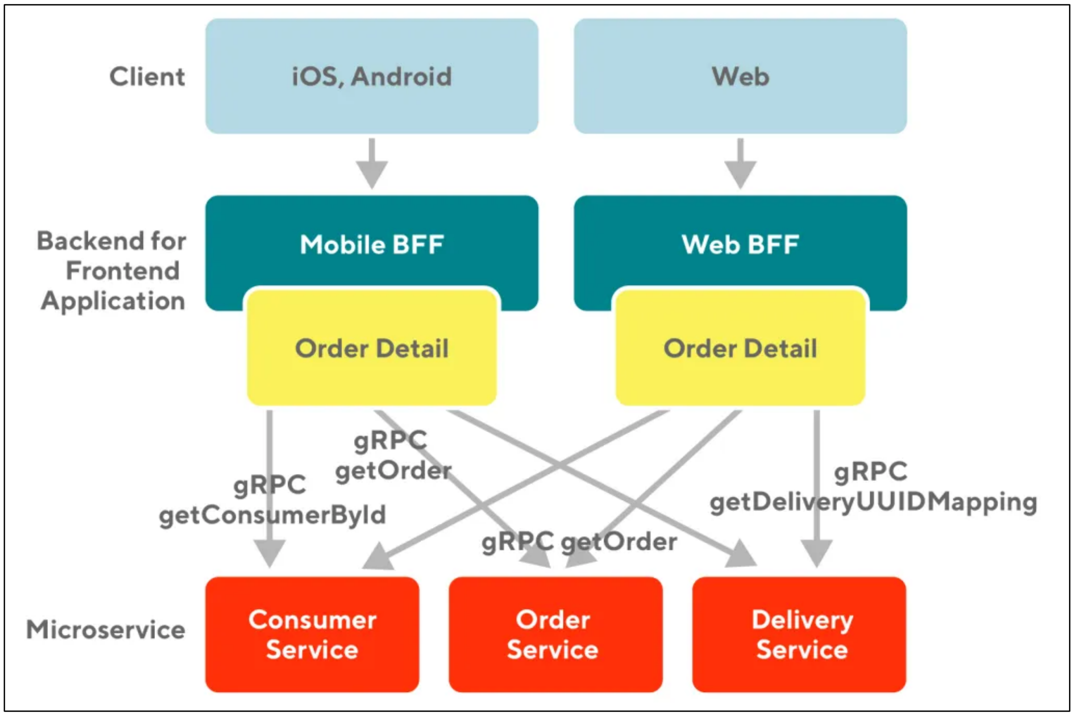
avoid failures.

APIs, the connective tissue of a software platform, can offer performance improvements when properly designed. At DoorDash, the APIs relay front end client requests to backend services and provide the information that users see in our apps, such as the estimated time when a food order will be delivered. If the APIs perform at maximum efficiency, client requests and responses all process more quickly

The migration to a microservice architecture gave DoorDash the opportunity to revisit our API design, specifically determining how to optimize the information flows. We came up with best practices around targeted endpoint requests, resulting in significantly reduced latency and errors.

As shown in Figure 2, below, when the BFF receives the order details request, it orchestrates the calls to the consumer service, order service, and delivery service, ultimately assembling the response details into a consolidated order detail response. Building APIs using domain-specific services, orchestrated by the BFF, makes it easier to understand which RPCs are called and how they are executed."

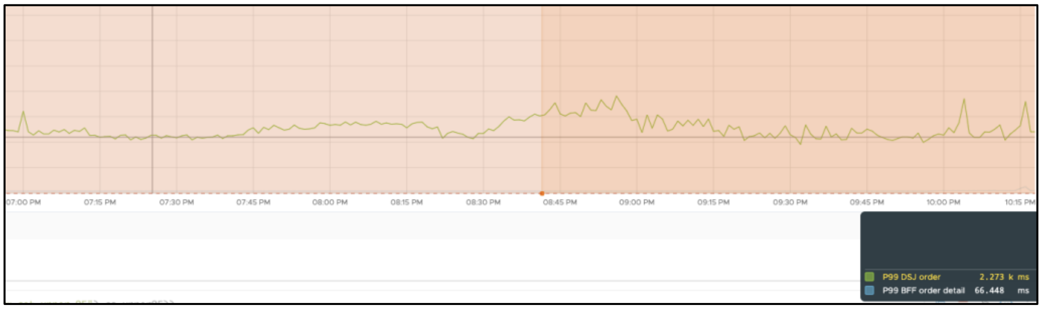
"[The figure below shows] …our microservices architecture, APIs orchestrated by a BFF are targeted towards specific services, making it easier to design precise calls and appropriate execution."



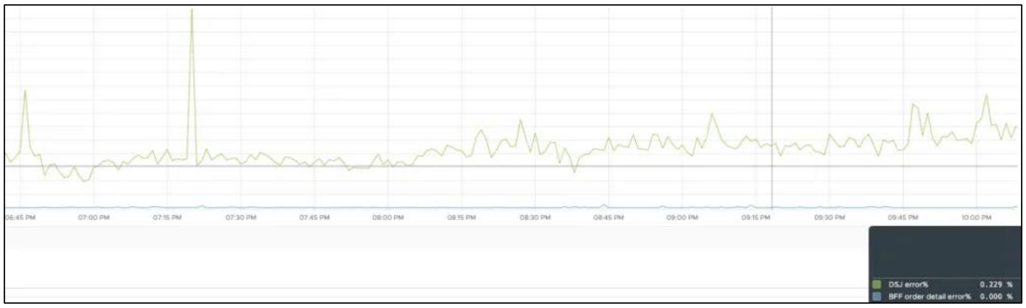
"At DoorDash, our APIs primarily support information on food orders, whether that's an order placed by a consumer and sent to a restaurant, a delivery request sent to a Dasher, or a Dasher's progress in bringing a food order to a consumer.

Redesigning our APIs to focus on their specific roles yielded significantly reduced latency and error rates. For the use cases cited above, both the order *detail endpoint and order history endpoint process a high volume of traffic. Our API improvements show that:*

- *For the order detail endpoint, we reduced endpoint latency by over 90%, a 30 times improvement. For P99, as shown in Figure 6, the latency has been reduced from greater than 2,000ms to less than 100ms. In terms of error rate, shown in Figure 7, we achieved a 60 times improvement, going from 0.3% on average to 0.005% (actually, the new endpoint often shows 0% error).”*

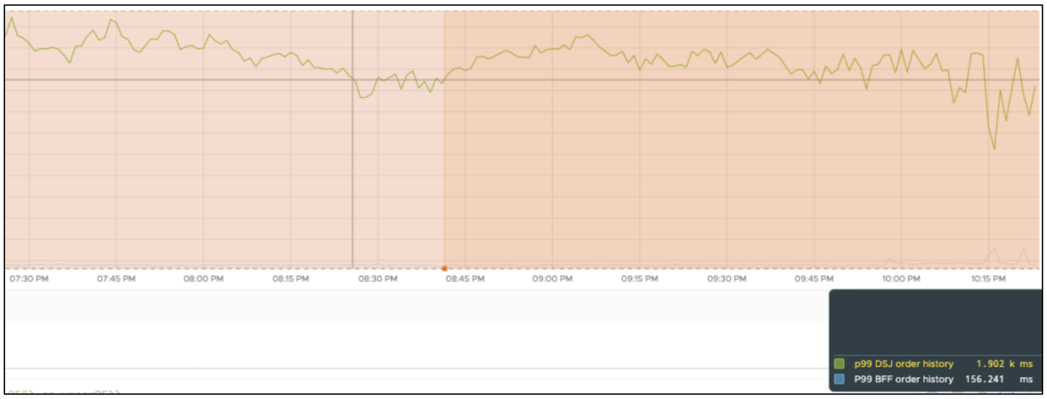


“[The figure above shows] … redesigning our order detail API to better focus on its role led to a 30 times reduction in latency.”

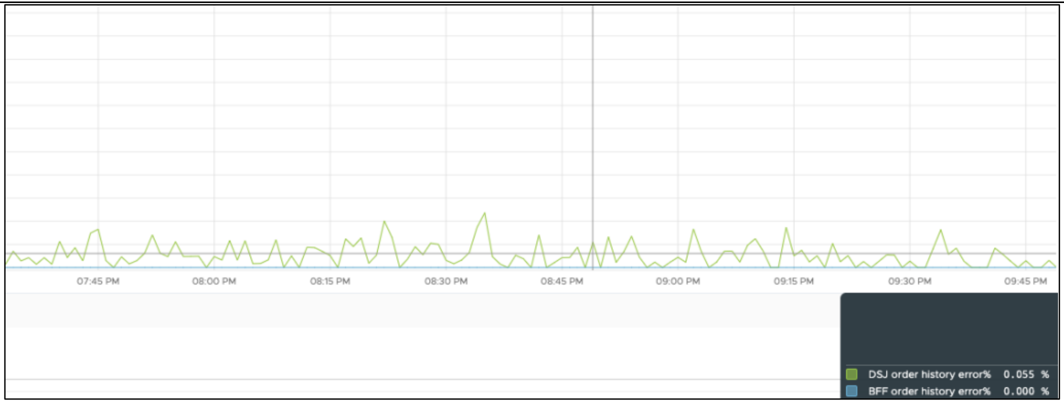


“[The figure above shows the] …order detail error rate went down significantly with the redesigned API, and it frequently runs flawlessly.”

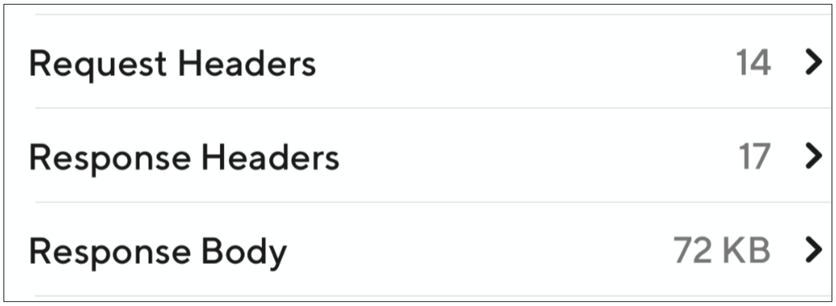
- *“For the order history endpoint, we achieved a 10 times reduction in endpoint latency, as shown in Figure 8, and an error rate for the new API of 0% for almost all the time, as shown in Figure 9.”*



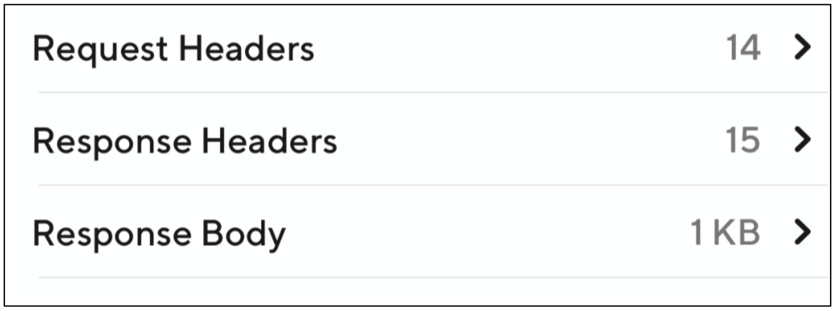
“[The figure above shows] … [t]he order history endpoint shows a 10 times reduction in latency with our new design.”



> *"[The figure above shows metrics] ...for the redesigned order history API rarely show any errors.*
>
> *"These API improvements led to a perceivable improvement on the client side. When we place a test order with a couple of items the response size of the old API was 72kb (71.4kb exactly), while it is 1kb (1.1kb exactly) using the new API, as shown [these figures below]:"*



Request Headers	14 >
Response Headers	17 >
Response Body	72 KB >



Request Headers	14 >
Response Headers	15 >
Response Body	1 KB >

In a video by DoorDash's engineering team title "Databases at DoorDash | How DoorDash manages 1.9 PB of data & 1.2M QPS on CockroachDB", DoorDash showcases their utilization of Cockroach DB as the "master database" for managing massive amounts of data, demonstrating their implementation of a master database. The video begins with Mike Czabator, an engineer with both DoorDash and Cockroach Labs experience, providing insights into DoorDash's database practices. DoorDash's core infrastructure team is responsible for a range of databases, including CockroachDB, showcasing a dedicated approach to database management. (See Exh. 122 -123)

DoorDash's deployment strategy spans a single AWS region, supported by multiple Availability Zones (AZs), highlighting their scalability. The substantial growth metrics, including a 55% node increase and nearly doubling data size to two petabytes (PBs), highlight the extensive scope of their data management. Furthermore, DoorDash promotes a self-service model, allowing users to create applications and users for their clusters. They emphasize automation and feedback-driven improvement, enhancing the efficiency and reliability of their database operations. DoorDash's commitment to performance optimization and continuous enhancement aligns with the concept of a master database, reinforcing their capability in handling vast amounts of data.

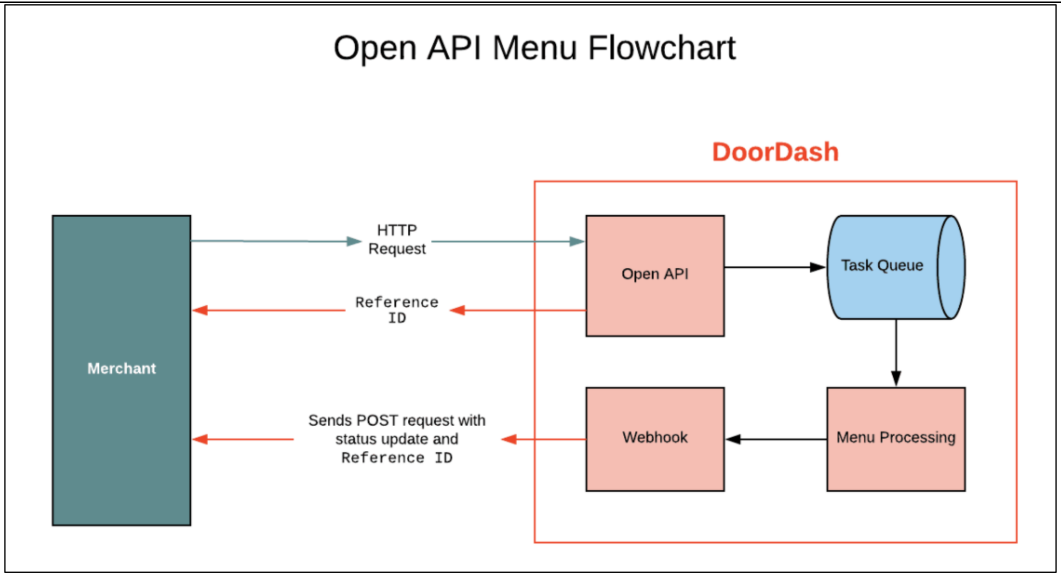
In another video by the DoorDash Engineering team titled "DoorDash's Journey from Aurora Postgres to CockroachDB", they shared insights into their data management practices, particularly their utilization of CockroachDB for handling extensive data volumes with the "master database". DoorDash's primary challenge was managing high traffic loads, which often led to database crashes during peak usage. To address this, the team recognized the need for a database solution that could provide horizontal scalability through multiple writers. (See Exh 124 -125)

During the COVID-19 lockdown, DoorDash faced a pivotal moment when their main database cluster experienced a peak query per second (QPS) load of 1.6 million, resulting in system downtime. To tackle this issue, they opted to migrate to CockroachDB, a distributed database system known for its scalability and fault tolerance. Their migration strategy involved the extraction of 54 tables to seven new database clusters, significantly reducing the QPS load on the main database cluster. To facilitate this migration, DoorDash developed a versatile data migration tool. This tool was designed to minimize manual intervention, support schema transformations, and streamline data synchronization. Key features of the tool included the ability to customize runtime behavior, accommodate schema changes, and perform data chunking for parallel processing. DoorDash also leveraged foreign data wrappers, intelligent traffic routing, and data chunking to optimize the migration process.

Menu Management/Open API

The Open API of Menu management automatically synchronizes the merchant's menu with the DoorDash platform. This is a one-way synchronization from the POS system to DoorDash. Not all features of DoorDash's menu manager are supported for all merchants. In some cases, the menu items will sync over but the sort order will not. The merchant is still able to utilize the menu manager to adjust imported items. Order fulfillment can happen through one of four different order protocols: direct POS integration, middleware integration, tablet (DoorDash Order Manager app), or email (see Exh. 31, 32).

Updating menus on the DoorDash platform involves both Push (partner to DoorDash) and Pull (DoorDash to partner). When a partner is first added to the DoorDash platform, a request is issued to the partner's server to retrieve a merchant's menu. The partner's server must respond will the full menu in its body. Whenever there are changes to a merchant's menu, the partner can then issue a request to DoorDash's server, pushing the new menu. In both push and pull scenarios, once the menu has been processed by the DoorDash platform, a request is issued to the partner server indicating the success or fail (see Exh. 38).



In the DoorDash Developer Documentation site, they state the following on the About DoorDash Marketplace page (see Exh 106):

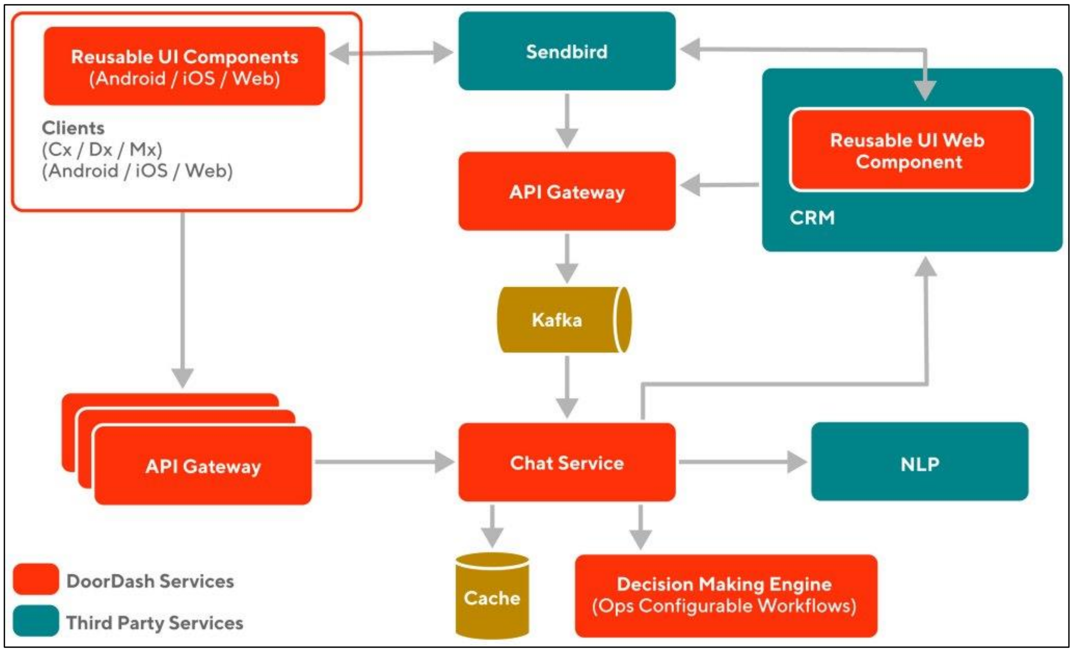
> *"MARKETPLACE APIS ARE LIMITED ACCESS, The 2022 Marketplace API integration pipeline is closed. New integration requests will not be accepted. Please record interest for 2023 builds here, and we'll reach out when capacity opens.*
>
> *The DoorDash Marketplace API enables partners to manage their menu, store, and order data. You can use the Menu API to create and update the menus you wish to display to consumers on DoorDash. With the Order Webhook, you can receive live order data from DoorDash directly to your system. And through our Store webhook, you're able to control store level data such as store availability and item availability.*
>
> *DoorDash Merchant API is an asynchronous API organized around REST. JSON is returned by all API responses, and we use conventional HTTP response codes to indicate the success or failure of a request. All requests must be made using HTTPS or they will fail."*

In the blog article "Building a Unified Chat Experience at DoorDash" by the Engineering Team, they provide further admissions of DoorDash's layered architecture approach and integration with non-hospitality (third party) applications (see Exh 102):

> ***"Building an extensible backend system***
>
> *The backend system was built with multiple layers, allowing us to split responsibilities between internal services and third parties. Utilizing third parties for functionality such as chat, natural language processing (NLP), and agent ticket management allowed us to move quicker without having to build functionality that does not differentiate ourselves directly.*
>
> *To allow the platform to handle processing at common layers, we created anew API gateway for all the different callbacks from third parties. Since the processing does not need to be synchronous, we are able to push the messages*

> *to a messaging queue for processing to ensure we process the messages reliably. The downstream processing is then agnostic of the source and data-driven based upon the different events."*

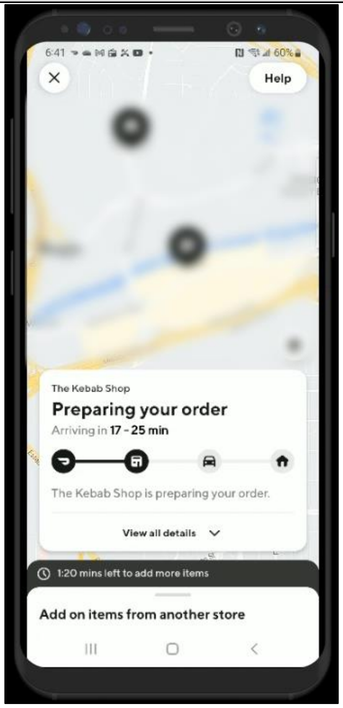
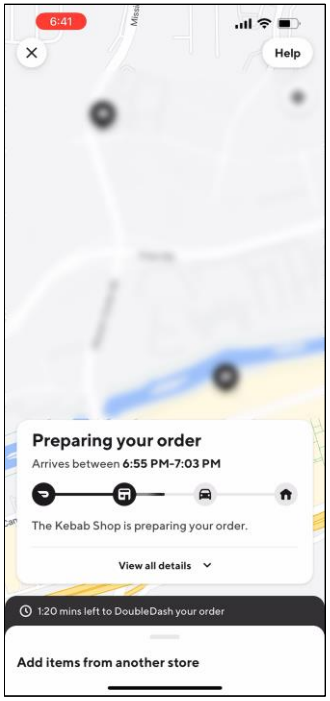
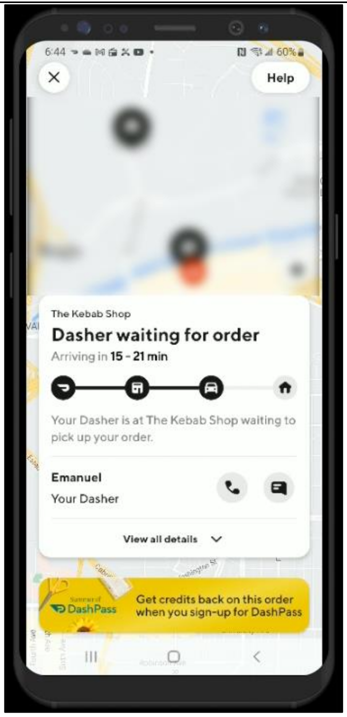
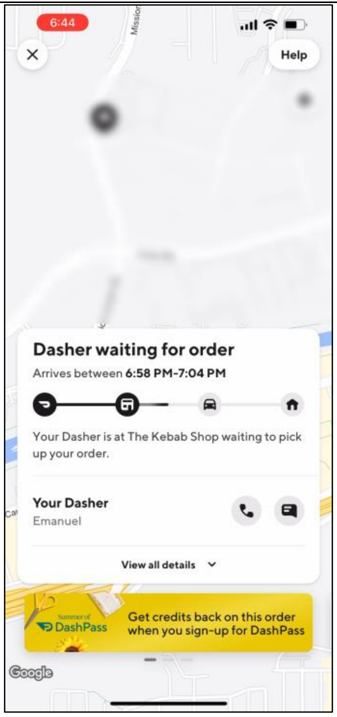
The figure below shows: "*… [data] flow through centralized chat service, integrating with 3rd parties"*

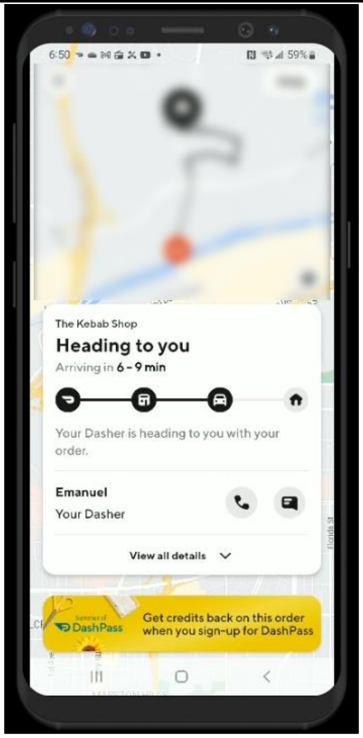
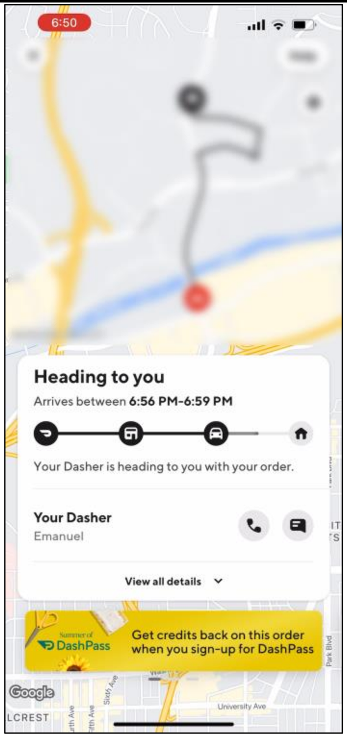
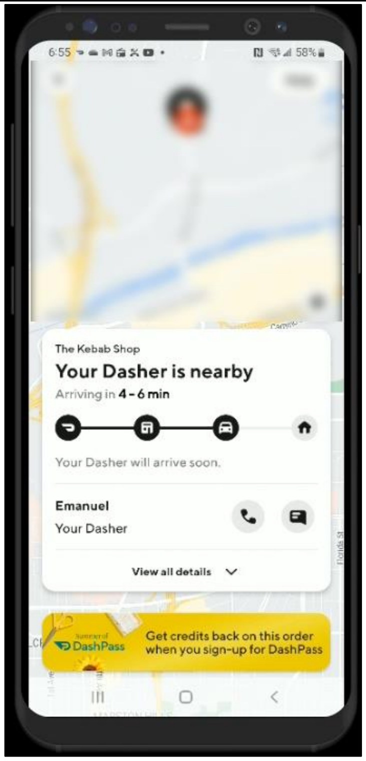
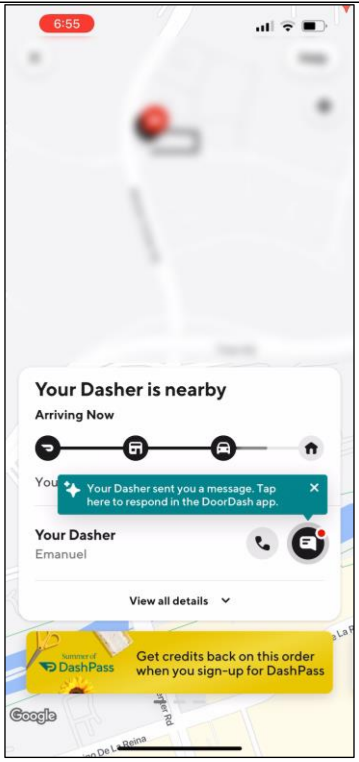


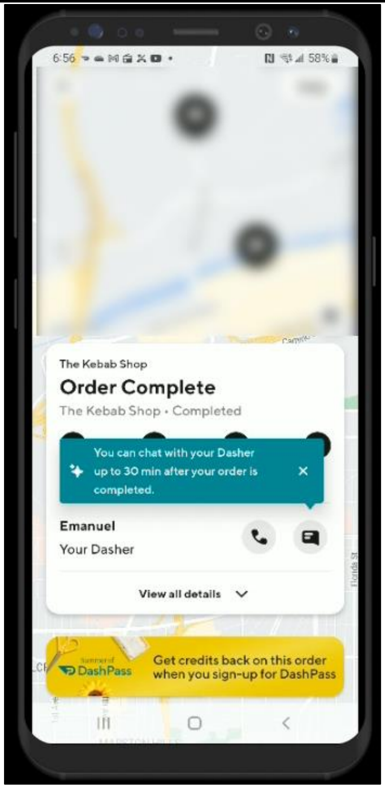
DoorDash also integrates via its API's its website, webapp, DoorDash iOS app, DoorDash Android app, Dasher iOS App and Dasher Android app with Google Maps through the Google Maps API.

Google Maps and DoorDash Mobile Apps

In both the iOS and Android DoorDash apps we see real time delivery information displayed in an embedded Google Map after the user has placed an order with a DoorDash partnered restaurant, and the order has been sent out for delivery. As the dasher gets closer to their destination, the DoorDash Android and iOS apps update the embedded Google Maps (through the Google Maps API) in real time from data from the DoorDash platform, through communication with the webserver and DoorDash Platform.

	Android DoorDash App	iOS DoorDash App
	 6:41 60% Help The Kebab Shop Preparing your order Arriving in 17 - 25 min The Kebab Shop is preparing your order. View all details 1:20 mins left to add more items Add on items from another store	 6:41 Help Preparing your order Arrives between 6:55 PM-7:03 PM The Kebab Shop is preparing your order. View all details 1:20 mins left to DoubleDash your order Add items from another store
	 6:44 60% Help The Kebab Shop Dasher waiting for order Arriving in 15 - 21 min Your Dasher is at The Kebab Shop waiting to pick up your order. Emanuel Your Dasher View all details Summer of DashPass Get credits back on this order when you sign-up for DashPass	 6:44 Help Dasher waiting for order Arrives between 6:58 PM-7:04 PM Your Dasher is at The Kebab Shop waiting to pick up your order. Your Dasher Emanuel View all details Summer of DashPass Get credits back on this order when you sign-up for DashPass Google

	 6:50 59% The Kebab Shop Heading to you Arriving in **6 - 9 min** Your Dasher is heading to you with your order. Emanuel Your Dasher View all details Summer of DashPass Get credits back on this order when you sign-up for DashPass	 6:50 Heading to you Arrives between **6:56 PM-6:59 PM** Your Dasher is heading to you with your order. Your Dasher Emanuel View all details Summer of DashPass Get credits back on this order when you sign-up for DashPass
	 6:55 58% The Kebab Shop Your Dasher is nearby Arriving in **4 - 6 min** Your Dasher will arrive soon. Emanuel Your Dasher View all details Summer of DashPass Get credits back on this order when you sign-up for DashPass	 6:55 Your Dasher is nearby Arriving Now You Your Dasher sent you a message. Tap here to respond in the DoorDash app. Your Dasher Emanuel View all details Summer of DashPass Get credits back on this order when you sign-up for DashPass



6:56 58%

The Kebab Shop

Order Complete

The Kebab Shop • Completed

You can chat with your Dasher up to 30 min after your order is completed. ✕

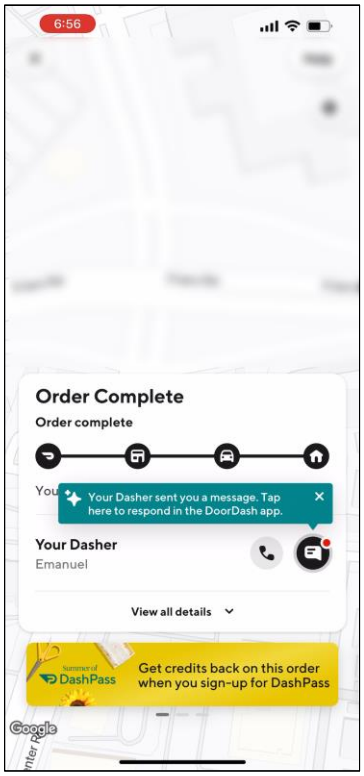
Emanuel

Your Dasher

View all details

Summer of DashPass

Get credits back on this order when you sign-up for DashPass



6:56

Order Complete

Order complete

You

Your Dasher sent you a message. Tap here to respond in the DoorDash app. ✕

Your Dasher

Emanuel

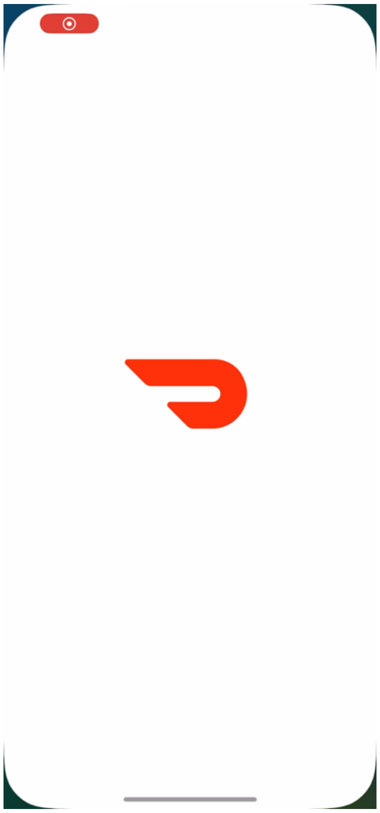
View all details

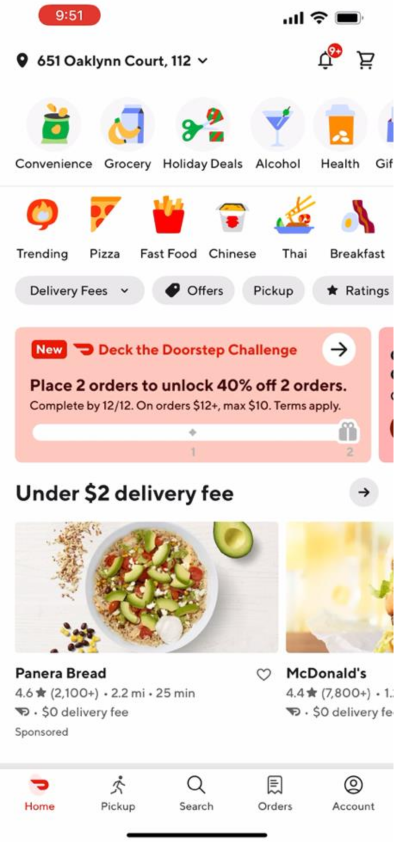
Summer of DashPass

Get credits back on this order when you sign-up for DashPass

Google

Below are screenshots of an DoorDash order for a customer located in Pittsburgh PA, ordering from Eat ‘N Park on the iOS app.





9:51

651 Oaklynn Court, 112

New Deck the Doorstep Challenge

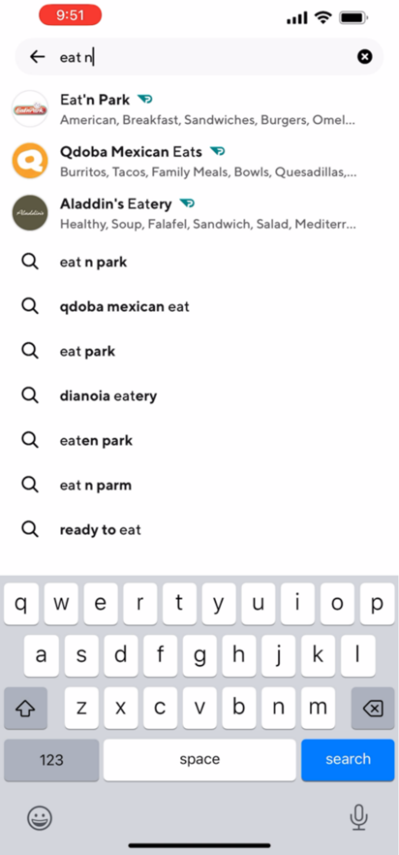
Place 2 orders to unlock 40% off 2 orders.

Complete by 12/12. On orders $12+, max $10. Terms apply.

Under $2 delivery fee

Panera Bread
4.6 ★ (2,100+) • 2.2 mi • 25 min
• $0 delivery fee
Sponsored

McDonald's
4.4 ★ (7,800+) • 1.
• $0 delivery fe



9:51

eat n

Eat'n Park
American, Breakfast, Sandwiches, Burgers, Omel...

Qdoba Mexican Eats
Burritos, Tacos, Family Meals, Bowls, Quesadillas,...

Aladdin's Eatery
Healthy, Soup, Falafel, Sandwich, Salad, Mediterr...

eat n park

qdoba mexican eat

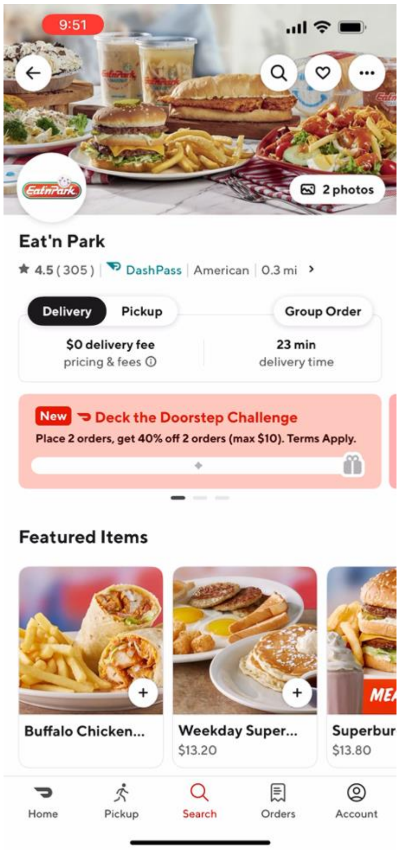
eat park

dianoia eatery

eaten park

eat n parm

ready to eat



9:51

2 photos

Eat'n Park

★ 4.5 (305) | DashPass | American | 0.3 mi

$0 delivery fee
pricing & fees

23 min
delivery time

New Deck the Doorstep Challenge

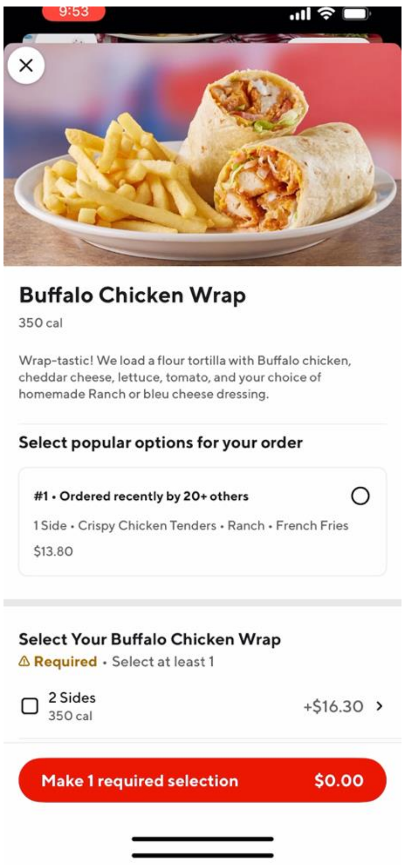
Place 2 orders, get 40% off 2 orders (max $10). Terms Apply.

Featured Items

Buffalo Chicken...

Weekday Super...
$13.20

Superbur
$13.80



Buffalo Chicken Wrap

350 cal

Wrap-tastic! We load a flour tortilla with Buffalo chicken, cheddar cheese, lettuce, tomato, and your choice of homemade Ranch or bleu cheese dressing.

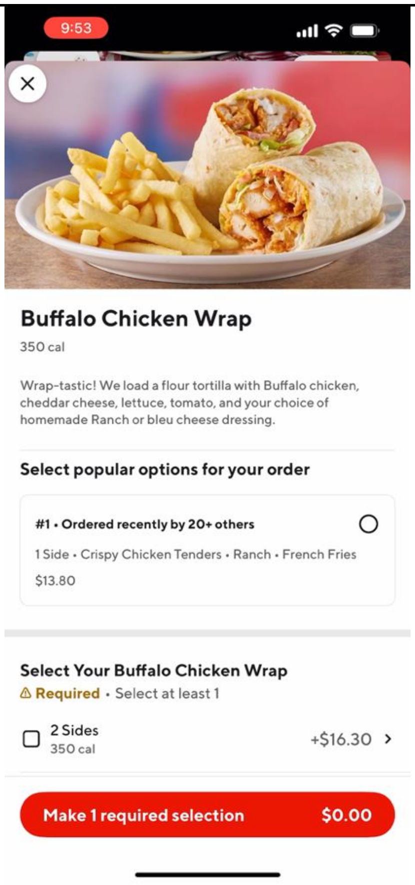
Select popular options for your order

#1 • Ordered recently by 20+ others ○
1 Side • Crispy Chicken Tenders • Ranch • French Fries
$13.80

Select Your Buffalo Chicken Wrap
⚠ **Required** • Select at least 1

□ 2 Sides
350 cal
+$16.30 ›

Make 1 required selection $0.00



Buffalo Chicken Wrap

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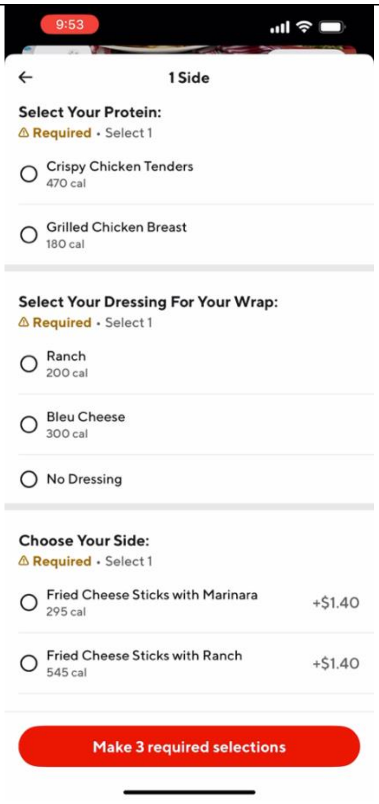
Select popular options for your order

#1 • Ordered recently by 20+ others ○
1 Side • Crispy Chicken Tenders • Ranch • French Fries
$13.80

Select Your Buffalo Chicken Wrap
⚠ **Required** • Select at least 1

□ 2 Sides
350 cal
+$16.30 ›

Make 1 required selection $0.00



← **1 Side**

Select Your Protein:
⚠ **Required** • Select 1

○ Crispy Chicken Tenders
470 cal

○ Grilled Chicken Breast
180 cal

Select Your Dressing For Your Wrap:
⚠ **Required** • Select 1

○ Ranch
200 cal

○ Bleu Cheese
300 cal

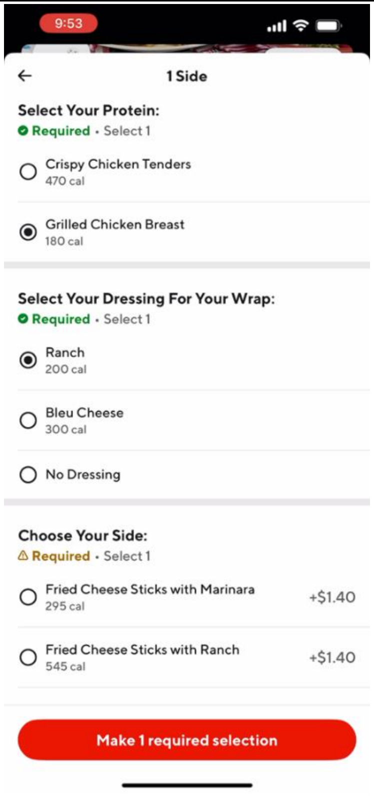
○ No Dressing

Choose Your Side:
⚠ **Required** • Select 1

○ Fried Cheese Sticks with Marinara +$1.40
295 cal

○ Fried Cheese Sticks with Ranch +$1.40
545 cal

Make 3 required selections



← **1 Side**

Select Your Protein:
✓ **Required** • Select 1

○ Crispy Chicken Tenders
470 cal

● Grilled Chicken Breast
180 cal

Select Your Dressing For Your Wrap:
✓ **Required** • Select 1

● Ranch
200 cal

○ Bleu Cheese
300 cal

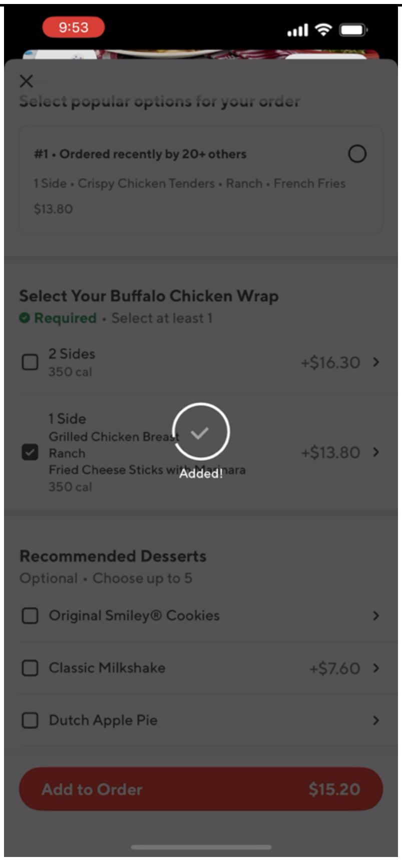
○ No Dressing

Choose Your Side:
⚠ **Required** • Select 1

○ Fried Cheese Sticks with Marinara +$1.40
295 cal

○ Fried Cheese Sticks with Ranch +$1.40
545 cal

Make 1 required selection



9:53

Select popular options for your order

#1 • Ordered recently by 20+ others ○

1 Side • Crispy Chicken Tenders • Ranch • French Fries

$13.80

Select Your Buffalo Chicken Wrap

Required • Select at least 1

□ 2 Sides 350 cal +$16.30 ›

☑ 1 Side Grilled Chicken Breast Ranch Fried Cheese Sticks with Marinara 350 cal +$13.80 ›

Added!

Recommended Desserts

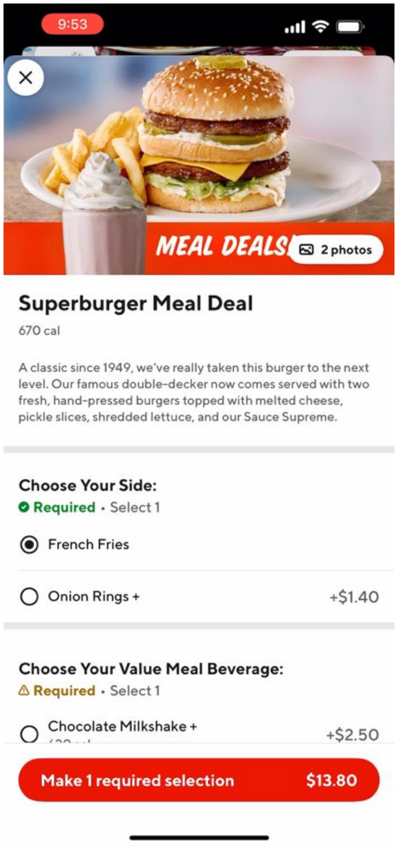
Optional • Choose up to 5

□ Original Smiley® Cookies ›

□ Classic Milkshake +$7.60 ›

□ Dutch Apple Pie ›

Add to Order $15.20



9:53

Superburger Meal Deal

670 cal

A classic since 1949, we've really taken this burger to the next level. Our famous double-decker now comes served with two fresh, hand-pressed burgers topped with melted cheese, pickle slices, shredded lettuce, and our Sauce Supreme.

Choose Your Side:

Required • Select 1

● French Fries

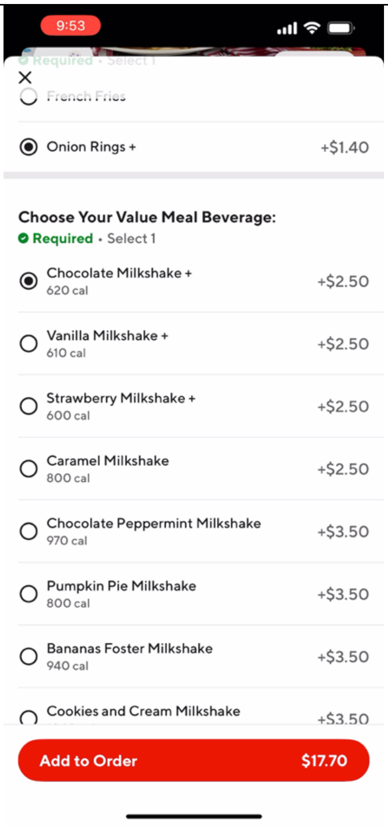
○ Onion Rings + +$1.40

Choose Your Value Meal Beverage:

Required • Select 1

○ Chocolate Milkshake + +$2.50

Make 1 required selection $13.80



9:53

Required • Select 1

○ French Fries

● Onion Rings + +$1.40

Choose Your Value Meal Beverage:

Required • Select 1

● Chocolate Milkshake + 620 cal +$2.50

○ Vanilla Milkshake + 610 cal +$2.50

○ Strawberry Milkshake + 600 cal +$2.50

○ Caramel Milkshake 800 cal +$2.50

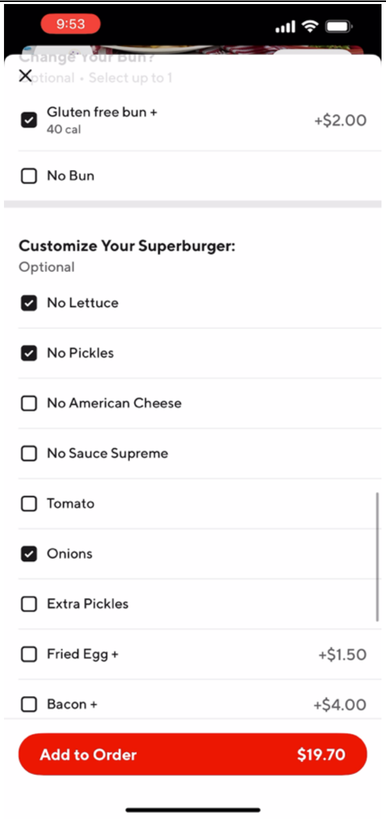
○ Chocolate Peppermint Milkshake 970 cal +$3.50

○ Pumpkin Pie Milkshake 800 cal +$3.50

○ Bananas Foster Milkshake 940 cal +$3.50

○ Cookies and Cream Milkshake +$3.50

Add to Order $17.70



9:53

Change Your Bun?

Optional • Select up to 1

☑ Gluten free bun + 40 cal +$2.00

□ No Bun

Customize Your Superburger:

Optional

☑ No Lettuce

☑ No Pickles

□ No American Cheese

□ No Sauce Supreme

□ Tomato

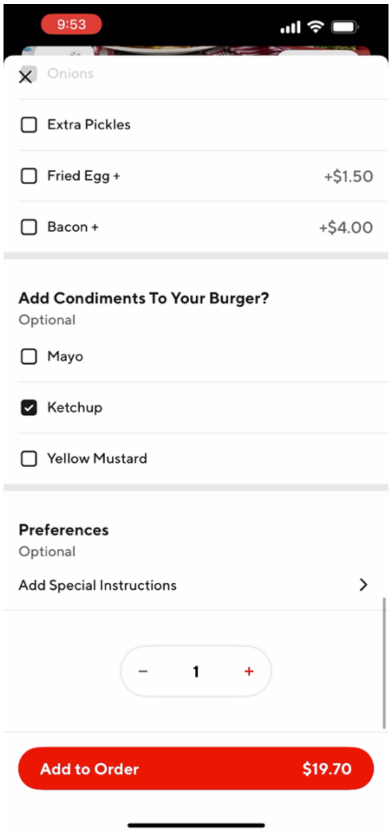
☑ Onions

□ Extra Pickles

□ Fried Egg + +$1.50

□ Bacon + +$4.00

Add to Order $19.70



9:53

Onions

□ Extra Pickles

□ Fried Egg + +$1.50

□ Bacon + +$4.00

Add Condiments To Your Burger?
Optional

□ Mayo

☑ Ketchup

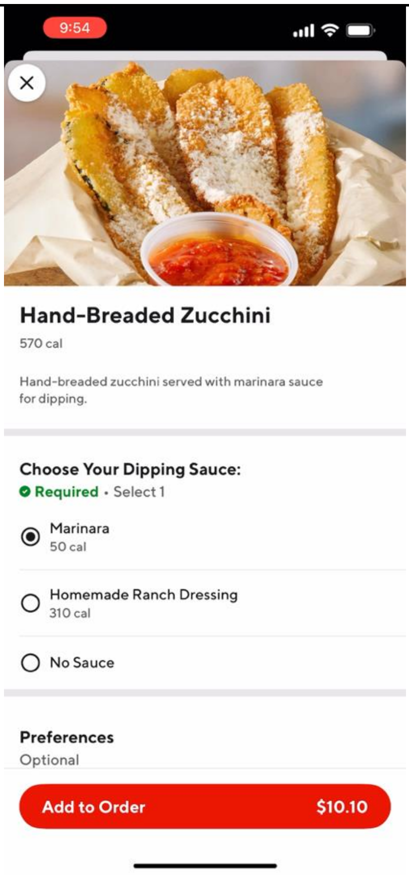
□ Yellow Mustard

Preferences
Optional

Add Special Instructions >

− 1 +

Add to Order $19.70



9:54

Hand-Breaded Zucchini

570 cal

Hand-breaded zucchini served with marinara sauce for dipping.

Choose Your Dipping Sauce:
Required • Select 1

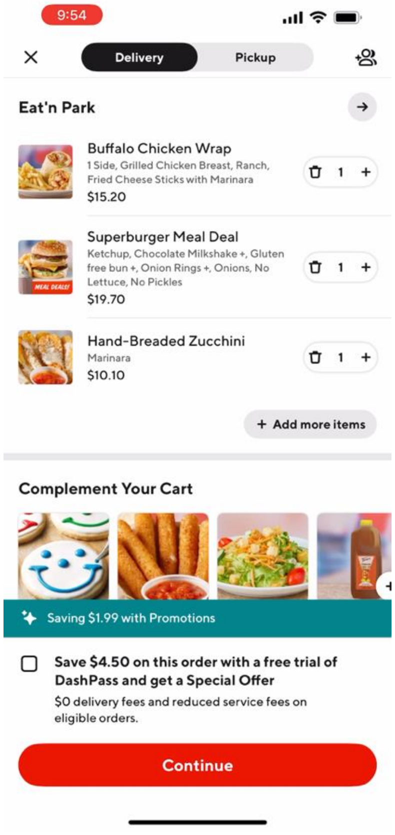
● Marinara
50 cal

○ Homemade Ranch Dressing
310 cal

○ No Sauce

Preferences
Optional

Add to Order $10.10



9:54

Delivery Pickup

Eat'n Park

Buffalo Chicken Wrap
1 Side, Grilled Chicken Breast, Ranch, Fried Cheese Sticks with Marinara
$15.20 — 1 +

Superburger Meal Deal
Ketchup, Chocolate Milkshake +, Gluten free bun +, Onion Rings +, Onions, No Lettuce, No Pickles
$19.70 — 1 +

Hand-Breaded Zucchini
Marinara
$10.10 — 1 +

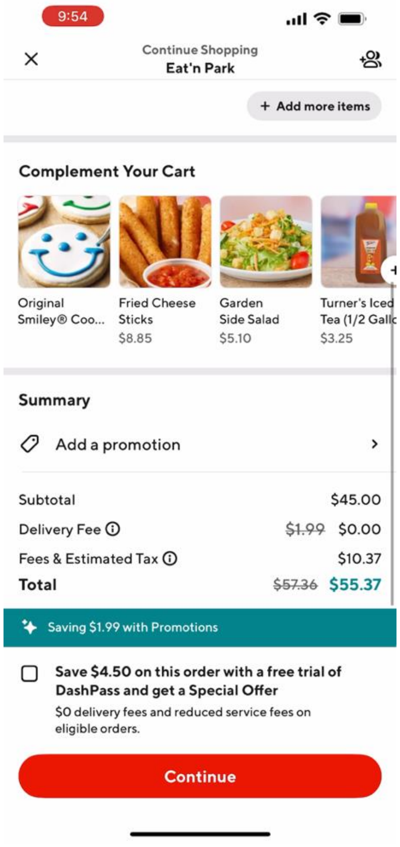
+ Add more items

Complement Your Cart

Saving $1.99 with Promotions

□ **Save $4.50 on this order with a free trial of DashPass and get a Special Offer**
$0 delivery fees and reduced service fees on eligible orders.

Continue



9:54

Continue Shopping
Eat'n Park

+ Add more items

Complement Your Cart

Original Smiley® Coo...
Fried Cheese Sticks $8.85
Garden Side Salad $5.10
Turner's Iced Tea (1/2 Gall $3.25

Summary

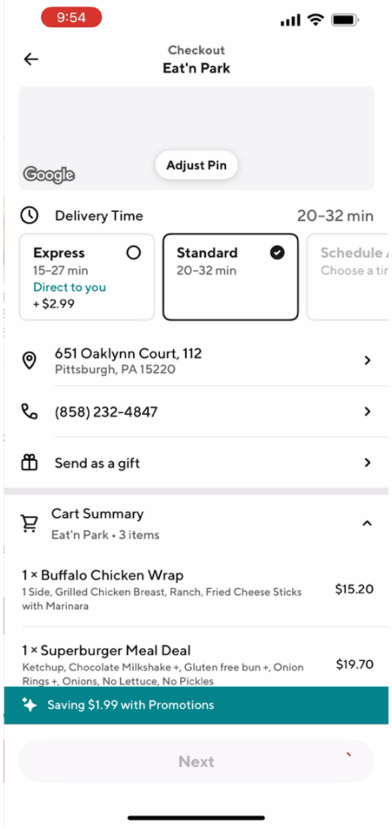
Add a promotion >

Subtotal		$45.00
Delivery Fee ⓘ	~~$1.99~~	$0.00
Fees & Estimated Tax ⓘ		$10.37
Total	~~$57.36~~	$55.37

Saving $1.99 with Promotions

□ **Save $4.50 on this order with a free trial of DashPass and get a Special Offer**
$0 delivery fees and reduced service fees on eligible orders.

Continue



9:54

Checkout
Eat'n Park

Delivery Time 20–32 min

Express ○ 15–27 min Direct to you +$2.99

Standard ● 20–32 min

Schedule Choose a ti

651 Oaklynn Court, 112
Pittsburgh, PA 15220 ›

(858) 232-4847 ›

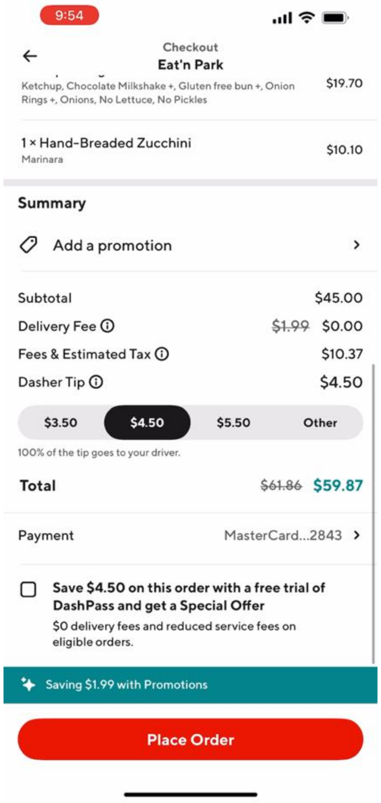
Send as a gift ›

Cart Summary
Eat'n Park • 3 items

1 × Buffalo Chicken Wrap 1 Side, Grilled Chicken Breast, Ranch, Fried Cheese Sticks with Marinara	$15.20
1 × Superburger Meal Deal Ketchup, Chocolate Milkshake +, Gluten free bun +, Onion Rings +, Onions, No Lettuce, No Pickles	$19.70

Saving $1.99 with Promotions

Next



9:54

Checkout
Eat'n Park

Ketchup, Chocolate Milkshake +, Gluten free bun +, Onion Rings +, Onions, No Lettuce, No Pickles	$19.70
1 × Hand-Breaded Zucchini Marinara	$10.10

Summary

Add a promotion ›

Subtotal	$45.00
Delivery Fee ⓘ	~~$1.99~~ $0.00
Fees & Estimated Tax ⓘ	$10.37
Dasher Tip ⓘ	$4.50

$3.50 | **$4.50** | $5.50 | Other

100% of the tip goes to your driver.

Total	~~$61.86~~ $59.87
Payment	MasterCard...2843 ›

□ Save $4.50 on this order with a free trial of DashPass and get a Special Offer
$0 delivery fees and reduced service fees on eligible orders.

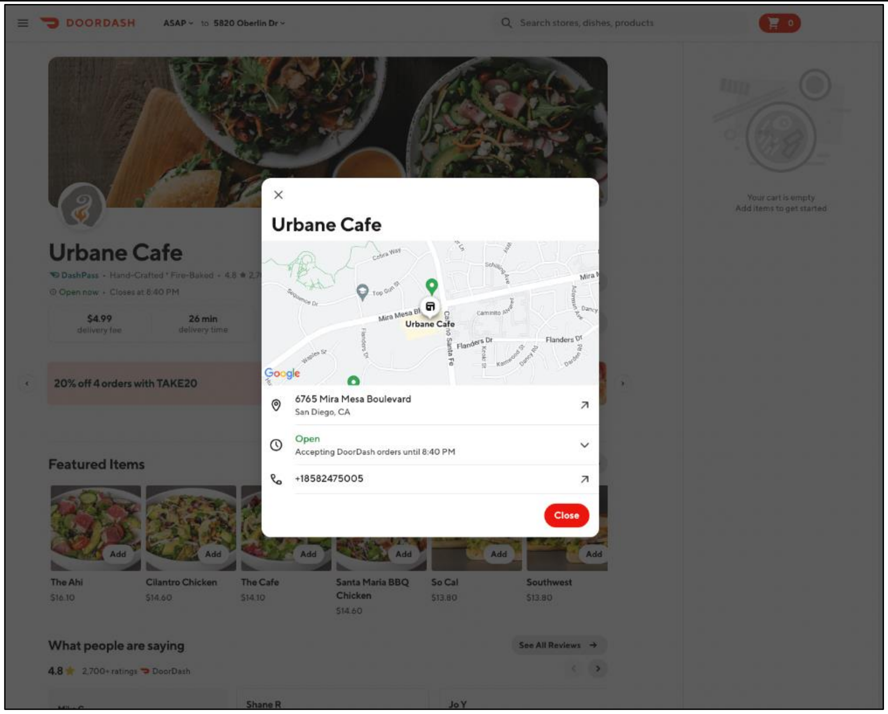
Saving $1.99 with Promotions

Place Order

The Dasher App (iOS and android) integrate with Google Maps, through the Google Maps API (see Exh. 66, 67, 68, 69) to provide in app real time navigation to delivery drivers (Dashers). As stated in the google documentation:

> *"...with the Maps SDK for iOS, you can add maps based on Google maps data to your application. The SDK automatically handles access to the Google Maps servers, map display, and response to user gestures such as clicks and drags. You can also add markers, polylines, ground overlays and info windows to your map. These objects provide additional information for map locations and allow user interaction with the map."*

On the website the user can see where a particular restaurant from which they might order is located from the restaurants page on DoorDash.com. After sign-in, selecting the delivery address, and clicking on a restaurant from which to possibly order, takes the user to that restaurants page. There, the user clicks the more info icon, and the restaurant info popup appears displaying the exact location on a google map (that's integrated into the DoorDash webapp) like so:

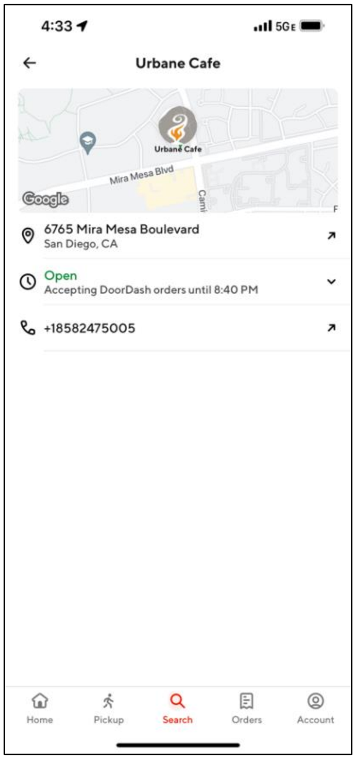

Urbane Cafe

6765 Mira Mesa Boulevard
San Diego, CA

Open
Accepting DoorDash orders until 8:40 PM

+18582475005

The same holds true for the iOS and Android app. In the iOS app, once the user has navigated to the restaurant page, clicking the more info icon yields the following popup.

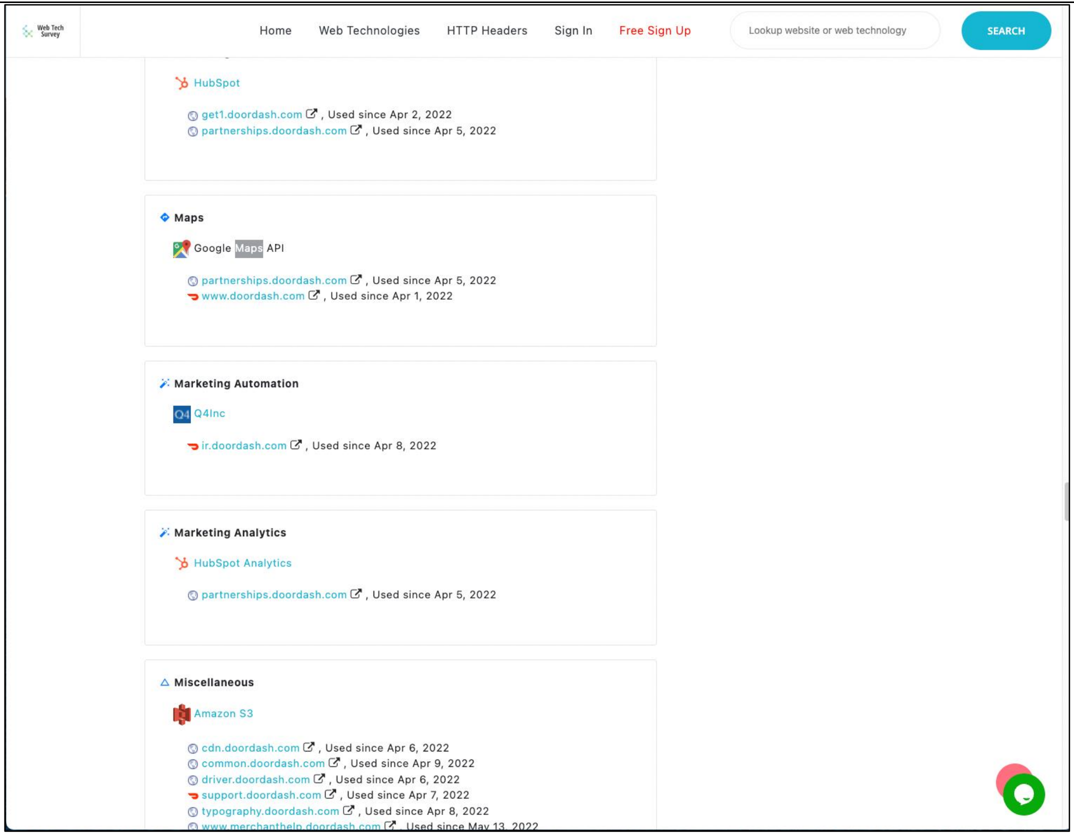

Urbane Cafe

6765 Mira Mesa Boulevard
San Diego, CA

Open
Accepting DoorDash orders until 8:40 PM

+18582475005

Google Maps API is part of the technology stack integrated with the DoorDash platform as indicated by the analysis at webtechsurvey.com (see Exh. 42)



HubSpot

get1.doordash.com, Used since Apr 2, 2022
partnerships.doordash.com, Used since Apr 5, 2022

Maps

Google Maps API

partnerships.doordash.com, Used since Apr 5, 2022
www.doordash.com, Used since Apr 1, 2022

Marketing Automation

Q4Inc

ir.doordash.com, Used since Apr 8, 2022

Marketing Analytics

HubSpot Analytics

partnerships.doordash.com, Used since Apr 5, 2022

Miscellaneous

Amazon S3

cdn.doordash.com, Used since Apr 6, 2022
common.doordash.com, Used since Apr 9, 2022
driver.doordash.com, Used since Apr 6, 2022
support.doordash.com, Used since Apr 7, 2022
typography.doordash.com, Used since Apr 8, 2022
www.merchanthelp.doordash.com, Used since May 13, 2022

In the blog article by the DoorDash Engineering team titled "Augmenting Google Maps to Power Local Commerce Delivery" (See Exh 69) dated July 6, 2022, they describe how the DoorDash system is integrated with the Google Maps API. The premise of the article is that they had to augment:

> *"…Google Maps [integration] by capturing correct addresses and micro-routing Dashers with precise delivery locations and contextual navigation data during every step in the delivery journey."*

In the video interview "SFBigAnalytics_20220920: DoorDash: Building Scalable Real Time Event Processing with Kafka and Flink" by Allen Wang "[the] lead engineer at Doordash working on real-time data infrastructure" (see Exh 120), he admits the following:

> *"…and therefore we fine-tuned our topic and the proxy producers configuration to achieve high efficiency and throughput on the topic level we use replication factor of two with one minimum in sync replica and compare with the typical configuration of three replicas and this saved this disk space and reduces the broker's CPU utilization on replication while still providing adequate data redundancy."*

DoorDash's Unified Chat Experience

The DoorDash engineering team stated in an engineering blog post, tiled **Building a Unified Chat Experience at DoorDash**, how they successfully integrated chat into their overall system, addressing the challenges and strategies employed to create a unified chat experience. Their implementation aligns with MFCCS as it provides a centralized system layer architecture enhancing communication between the web server and multiple wireless handheld devices, each operating on distinct mobile

	systems thus allowing customers to communicate with customer support and dashers. (See Exh. 102) DoorDash recognized the crucial need to address customer issues on a large scale, leading them to acknowledge the essential nature of a unified chat feature. Their initial challenge was a fragmented chat system, which was scattered across various user groups and platforms, causing duplicated efforts and central adoption of best practices to be challenging. By leveraging the architecture MFCCS, DoorDash could centralize its chat functionalities, allowing for seamless interactions between consumers, Dashers, and merchants. The MFCCS would facilitate the web server's ability to communicate with diverse handheld devices, presenting mobile-compatible versions of the hospitality application. This integration is crucial for enabling user-initiated actions and subsequent selection of choices directly from the touchscreens of various devices, fostering a multi-modal, multi-protocol communication environment. According to the engineering article, a significant objective for DoorDash was to streamline their support processes through automation, allowing customers to retrieve information through the app itself, thus minimizing the need for human support interaction. They aimed to develop a single chat support platform that would ensure consistent user experiences across different platforms and facilitate the reuse of components. In building this unified platform, DoorDash created a single chat implementation that functioned for both customer support and communication between consumers and Dashers. This system, powered by Sendbird, was directly integrated into the consumer and Dasher apps, providing a uniform experience across all DoorDash chats and allowing for shared enhancements across different chat flows. The backend system was strategically designed with multiple layers, distinguishing between internal services and third-party functionalities such as chat natural language processing. This separation expedited development by eliminating the need to create distinct, non-essential features. Integration with their Decision Engine platform was another crucial step, which enabled operations to be automated, such as order updates, issuing credits, and personalized messaging. This significantly decreased the dependency on manual operations. DoorDash also carefully monitored several key performance indicators, including feedback from agents and customers, error rates, customer satisfaction, average handle time, first contact resolution, and manual tasks per order. The outcomes of this updated chat support system, according to the article, were noteworthy, with reduced escalation rates and improved customer satisfaction. The automation led to a decrease in manual interactions per delivery, and customers were able to solve their problems more quickly, sometimes without the need for manual assistance. The time needed to implement additional automation was also reduced, owing to the common platform processing. Moreover, the common UI layers ensured that the chat feature was seamlessly integrated into the applications (iOS and Android), providing a consistent brand experience across all platforms. The advancements DoorDash has made in their chat system encapsulate the essence of the Middleware/Framework Communications Control Software (MFCCS)

	described in the patent claim. By creating a unified chat platform that seamlessly integrates with multiple user interfaces and operating systems, DoorDash has effectively embodied the centralized system layer architecture that MFCCS envisions. Their backend, which differentiates between core and third-party functionalities, mirrors the multi-layered approach of MFCCS, allowing for efficient, scalable communication across various devices. Moreover, the phased rollout and meticulous performance monitoring align with the adaptive, intelligent operational capabilities that MFCCS aims to provide. This demonstrates a real-world application of the patent's claim, showcasing a system that not only supports multi-mode communication but also enhances user experience and operational efficiency in a dynamic hospitality market. The accused instrumentality meets this limitation under the doctrine of equivalents because the accused instrumentality performs substantially the same function, in substantially the same way to achieve substantially the same result. For example, the doctrine of equivalence, in the context of the provided information regarding DoorDash's integration of external software APIs and optimization of their platform, refers to the principle that even if specific elements or technologies used may vary from those mentioned in a patent claim, the overall function, purpose, and outcome achieved by DoorDash remain substantially equivalent to what is described in the claim. In other words, DoorDash has implemented technologies and strategies that may not be identical to those explicitly outlined in the claim but still achieve the same essential objectives. This doctrine acknowledges that variations in implementation are acceptable as long as they maintain the core principles and goals described in the patent claim. DoorDash's integration of external APIs, optimization of API designs, and creation of a centralized chat system all align with this doctrine by achieving substantially equivalent results to the claim elements related to integration and efficiency in their platform.
additionally, the network is further enabled to automatically communicate alerts to the handheld/mobile equipped management staff when corresponding criteria are met;	DoorDash’s system architecture presents a compelling example of an intelligent network as described in Claim 7 of the patent, designed to foster seamless communication between its technological components and management staff. The company's use of Apache Flink enables real-time detection of user sessions and the strategic delivery of notifications, reflecting the intelligent and responsive nature of the network. This capability ensures that alerts are not only timely but also relevant, enhancing the decision-making processes and operational efficiency of management staff. The architecture’s backend-focused approach to notifications ensures that communication is reflective of actual user engagement. This sophisticated handling of session data reduces unnecessary communications and targets the precise moments for interaction, a core feature of the intelligent network described in the patent. Such precision in communication exemplifies the patent’s emphasis on the efficiency of server operations and the importance of real-time data processing. DoorDash's implementation of Machine Learning further underscores the network's intelligent design. The system learns from vast datasets, optimizing the matching of orders with delivery personnel and predicting preparation and delivery times. This continuous learning process, integral to the network's intelligence, facilitates swift adjustments to operational parameters, ensuring a high level of service and responsiveness to changing conditions in the delivery environment.

The transition to a microservices architecture has enabled DoorDash to enhance the reliability and scalability of its platform. By compartmentalizing functions into domain-specific services, DoorDash has reduced errors and latency, a testament to the network's robust design. This architectural shift not only supports the scalability required for a growing platform but also embodies the resilience and efficiency envisioned by the patent.

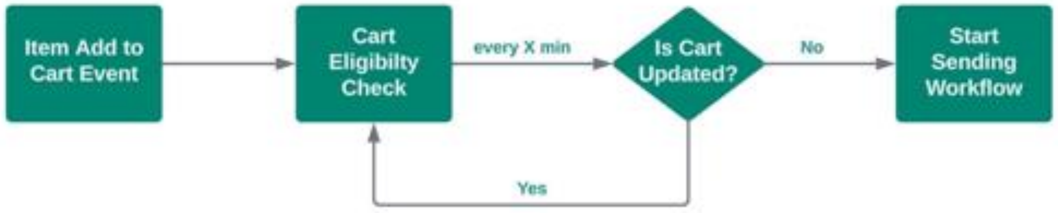
The central data platform and ML Workbench are the linchpins of DoorDash's intelligent network. They act as the operational core, where data is not just stored but intelligently processed to inform decisions across the platform. This centralized data handling and the application of Machine Learning algorithms for predictive analytics are in direct alignment with the intelligent network capabilities set forth in the patent. DoorDash's system architecture thus presents a clear real-world embodiment of the patent's visionary communication network, driving efficiency and intelligence in the domain of hospitality services.

Notifications

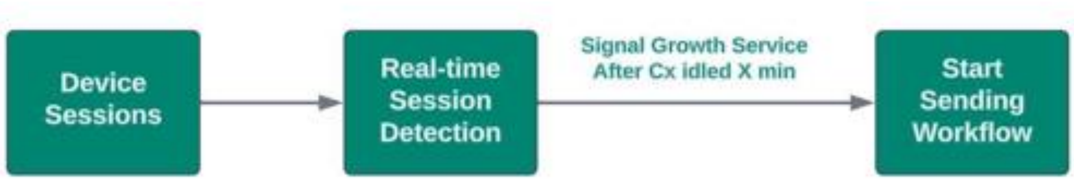
The MFCCS is evident through DoorDash's strategic use of real-time notifications to engage consumers and enhance user experience as detailed by their engineering team in the blog article titled "**Leveraging Flink to Detect User Sessions and Engage DoorDash Consumers with Real-Time Notifications**". By harnessing the capabilities of Apache Flink, DoorDash has been able to detect user sessions and discern the critical moments to send push notifications, directly aligning with the objectives of the MFCCS to facilitate intelligent, timely communication between the server and the user's handheld devices. (See Exh. 127)

This approach to session detection and notification dispatch represents the essence of MFCCS. The sessions on DoorDash's platform are managed in a way that reflects the centralized control of MFCCS, grouping user activities into sessions and determining inactivity, thus optimizing the timing for sending out notifications. This reduces unnecessary communication attempts, which is a core feature of the MFCCS, aiming to enhance the efficiency of the server's operations.

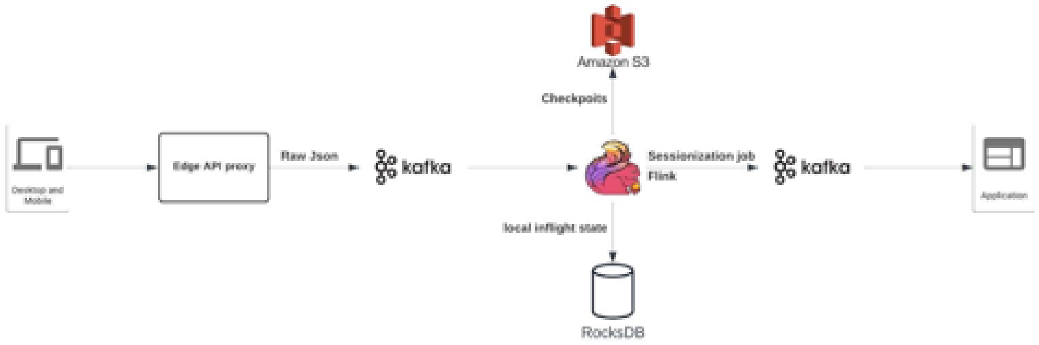
The previous notification system at DoorDash relied on a front-end triggered approach that lacked the precision of the current model, often resulting in untimely and less effective user notifications which did not reflect actual user engagement or session activity accurately, as shown below:



DoorDash's new backend-focused strategy (see diagram below) for triggering notifications ensures that the system accurately mirrors actual user activity, an essential aspect of the MFCCS's design to ensure relevance and personalization of user interactions. The sessionization platform developed by DoorDash utilizes in-memory streaming for processing events, further embodying the MFCCS principle of leveraging real-time data for improved service delivery.


Device Sessions
Real-time Session Detection
Signal Growth Service After Cx idled X min
Start Sending Workflow

The infrastructure supporting this system (see diagram below) mirrors the robustness required by MFCCS, capable of handling large-state computing and managing user events in a stateful manner until the appropriate action is determined. This is in line with MFCCS's aim to manage multiple communication modes and protocols, ensuring that the server selects the most efficient and effective form of user engagement.



The tangible results of integrating such an intelligent communication system is that DoorDash's cart abandonment notifications have not only increased order volume and revenue but also the speed of notification delivery by six-fold, leading to higher user engagement rates. This success is a testament to the MFCCS's capability to provide an adaptable.

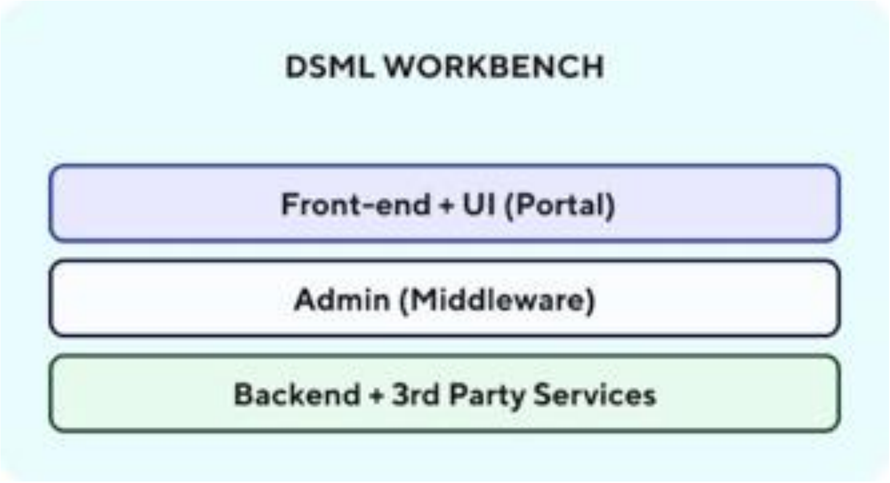
Machine Language

In the blog article by the DoorDash Engineering team title “Transforming MLOps at DoorDash with Machine Learning Workbench”, states how DoorDash has developed an internal Machine Learning (ML) Workbench to enhance data operations and support their data scientists, analysts, and AI/ML engineers. The importance of ML at DoorDash is emphasized, given its applications across the platform's ecosystem involving customers, Dashers, and merchants. The ML Workbench serves as a centralized hub for tasks in the machine learning lifecycle, including building, training, tuning, and deploying machine learning models. (See Exh. 121)

DoorDash's ML Workbench streamlines the machine learning process by providing a space for data collection, organization, and use in ML algorithms. It was designed with user-centered principles, aiming to create a best-in-class internal tool that is functional, usable, aesthetically pleasing, and integrates well with DoorDash's internal tools ecosystem. The development strategy was iterative, focusing on understanding user pain points, designing solutions, running user tests, and optimizing for better velocity and productivity.

Key components of the ML Workbench include front-end UI (Portal), Admin

(Middleware), and Backend + 3rd Party Services. Through user research and interviews, DoorDash categorized users into admins, end users, and operators, tailoring the Workbench's features to their needs. Features such as model viewing, testing predictions, and model performance monitoring were added to streamline daily workflows and accelerate model development velocity.



The implementation of the ML Workbench has led to significant improvements in the efficiency and user experience of DoorDash's engineering and data science teams. The tool facilitated better observability of features and models, and the future vision includes diversifying adoption, improving feature and model observability, and continuing a user-centric development approach.

This ML Workbench and its capabilities align well with Claim 7 of the patent, as it is an embodiment of an interconnected, intelligent web server network with multi-modes of contact, multi-communications protocols, and multi-user and parallel operational capabilities. The master database's role within this framework is also showcased, where it integrates with the network of web servers and is accessible via a database API, which intelligently learns, updates, and stores data. The Workbench's integration with various ML lifecycle stages and its emphasis on efficiency and reliability reflect the innovations described in Claim 7, particularly in the context of improving network efficiency and reliability.

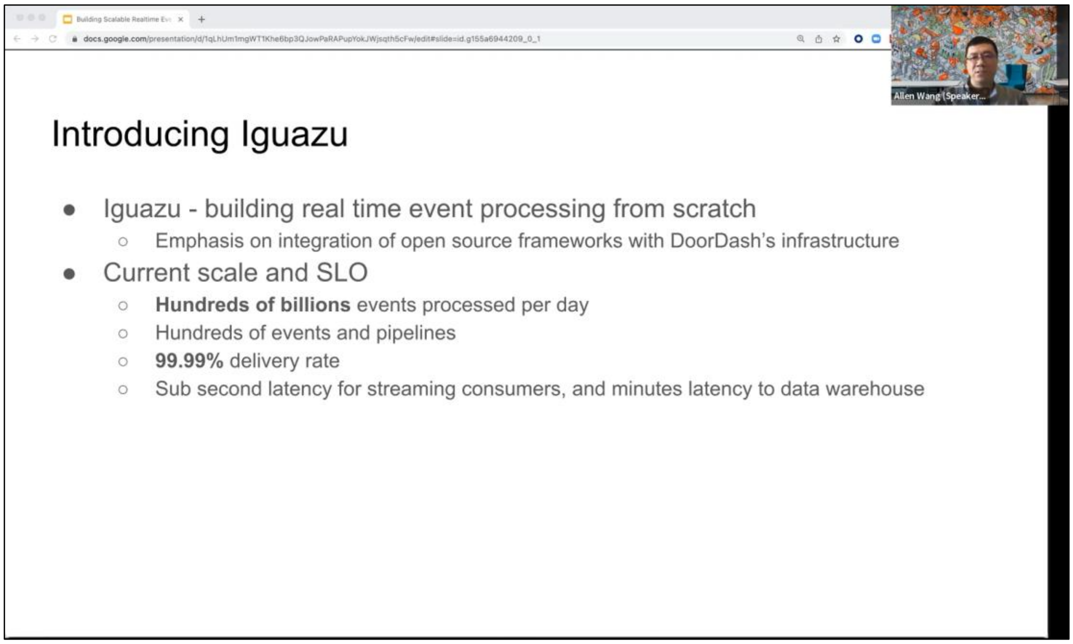
DoorDash Iguazu Event Processing System

In the technical presentation video "Building Scalable Real Time Event Processing with Kafka and Flink" by the DoorDash Engineering team (see Exh 91) they present that

> *"…[t]wo years ago, DoorDash started the journey of creating a real time event processing system to replace the legacy data pipelines and address our event processing needs to scale our business. We created a scalable system that could handle heterogeneous data sources and destinations, was easily accessible with different levels of abstractions and had end to end schema enforcement. We were able to accomplish this by shifting our strategy from heavily relying on AWS and third-party data services to leveraging open source frameworks that can be customized and better integrated with our infrastructure.*

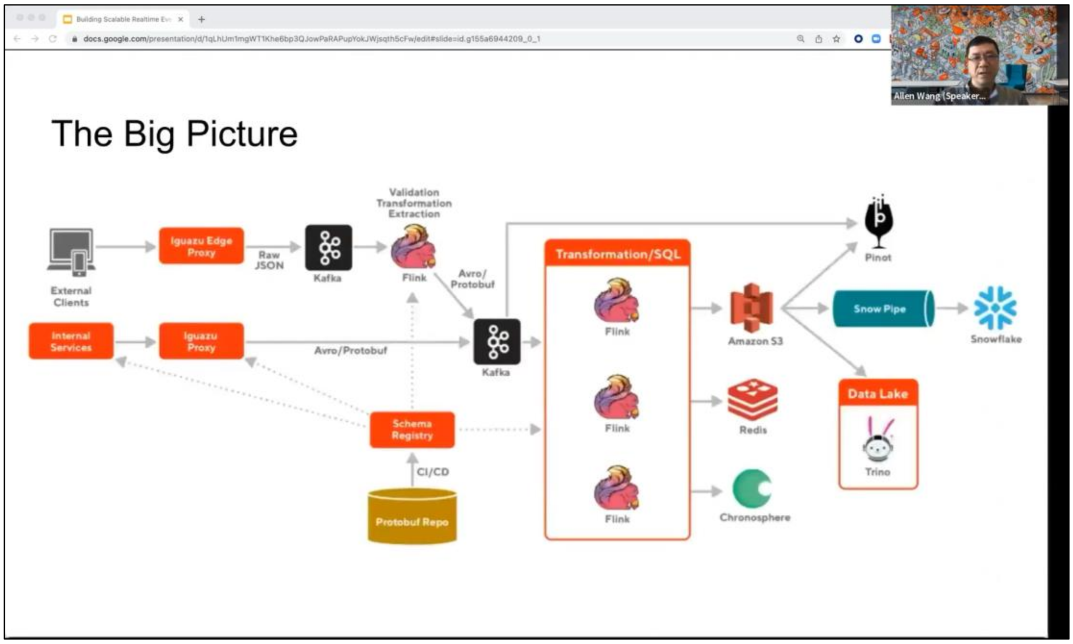
In this session, I will share what we learned and how we put together this system with Apache Flink, Kafka as well as Kubernetes."

They discuss the Iguazu real time event processing system they development from scratch and it's architecture."


Building Scalable Realtime Ev
docs.google.com/presentation/d/1qLhUm1mgWT1Khe6bp3QJowPaRAPupYokJWjsqth5cFw/edit#slide=id.g155a6944209_0_1
Allen Wang (Speaker...

Introducing Iguazu

- Iguazu - building real time event processing from scratch
  - Emphasis on integration of open source frameworks with DoorDash's infrastructure
- Current scale and SLO
  - **Hundreds of billions** events processed per day
  - Hundreds of events and pipelines
  - **99.99%** delivery rate
  - Sub second latency for streaming consumers, and minutes latency to data warehouse



The diagram above depicts the layered system architecture of Iguazu, DoorDash's event processing system. It depicts the inner functioning of Iguazu taking from the DoorDash engineering blog article "Building Scalable Real Time Event Processing with Kafka and Flink" (see Exh 53) and the DoorDash technical video "Scaling our Data Platform" (see Exh 47).

In the DoorDash engineering blog article (see Exh 53) "Building Scalable Real Time Event Processing with Kafka and Flink", they state that:

"…[t]wo years ago, we started the journey of creating a real time event processing

system named Iguazu to replace the legacy data pipelines and address the following event processing needs we anticipated as the data volume grows with the business:

*• **Heterogeneous data sources and destinations:** Data ingest from a variety of data sources including the legacy monolithic web application, microservices and mobile/web devices, and delivery to different destinations including third-party data services. Reliable and low latency data ingest into the data warehouse is a high priority.*

*• **Easily accessible:** A platform that makes it easy for different teams and services to tap into the streams of the data and build their own data processing logic.*

*• **End-to-end schema enforcement and schema evolution**: Schema only improves data quality, but also facilitates easy integration with data warehouses and SQL processing.*

*• **Scalable, fault-tolerant, and easy to operate for a small team**: We want to build a system that can easily scale to the business need with minimal operational overhead."*

Kafka is an open-source platform from Apache, excels in stream processing and data management. It adeptly handles the reception, storage, organization, and distribution of voluminous data streams to a diverse array of end-users and applications. However, the influx of substantial data payloads—spanning hundreds to thousands of messages—into Kafka's servers can precipitate challenges such as data overloading and duplication. These issues, in turn, can result in the data within Kafka servers becoming disorganized and obscured, complicating effective data management and utilization.

Apache Kafka's architecture includes a key structural element known as Topics, which serve as the primary unit for organizing events or messages. Essentially, Kafka Topics function as virtual groups or logs, systematically storing messages and events in a sequential manner. This organization facilitates the seamless transmission of data between Kafka servers. Each topic acts as a dynamic repository, where messages sent by producers are chronologically appended, forming an evolving log file.

In practice, producers inject messages into these topics, adding to the tail end of the log, while consumers extract messages from specified topics, ensuring a streamlined flow of data. This methodology enables logical segregation of messages and events, akin to how distinct tables in a database hold varied types of data. In the Kafka ecosystem, the creation of multiple topics is permitted, catering to diverse use cases. Crucially, each topic must bear a unique, identifiable name to maintain clear distinction among various Kafka brokers within a Kafka cluster, thereby ensuring efficient data management and retrieval.

The article from DoorDash Engineering Blog titled "API-First Approach to Kafka Topic Creation" discusses how DoorDash's Engineering teams have improved their Kafka Topic creation process. They replaced a Terraform/Atlantis-based approach with an in-house API Infrastructure Service, which has led to a 95% reduction in real-time pipeline onboarding time and has saved numerous developer hours. (See Exh. 126)

DoorDash's Real-Time Streaming Platform (RTSP) team, part of the Data Platform organization, manages over 2500 Kafka Topics. Kafka functions as the publication-subscription layer of the Iguazu pipeline and processes around six billion messages per day.

The article explains the challenges with the legacy architecture, where provisioning Kafka Topics was slow due to on-call engineer approval and prone to failures, increasing the on-call load. The RTSP team worked with storage and cloud teams to automate Kafka resource creation, which allowed for a more streamlined process and reduced manual intervention.

DoorDash has introduced super-user accounts to resolve merge conflicts that occurred in ACL files for Iguazu users, which has significantly sped up applications by Atlantis. The new architecture integrates with the Storage Self-Serve Platform within Infra Service, which provides an API to perform CRUD operations on infrastructure components. This new approach allows for provisioning approximately 100 new topics every week without manual intervention and significantly faster onboarding times for customers.

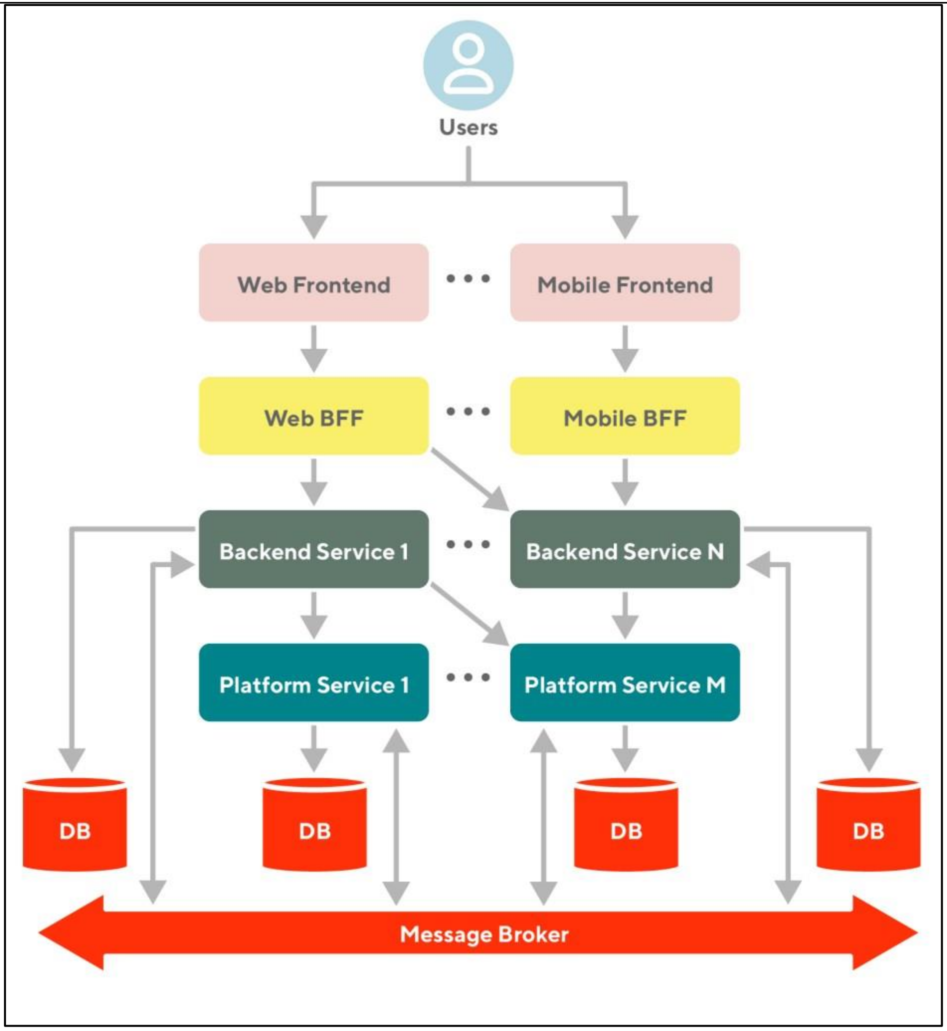
The article concludes by outlining the future direction of Kafka Automation and Storage Self-Serve, aiming to improve guardrails and customer experience. Acknowledgments are given to the various teams and engineers who contributed to this engineering win. This article demonstrates DoorDash's commitment to improving their operational efficiency and infrastructure management, ensuring faster onboarding times, and reducing the need for manual interventions, which contributes to a better overall experience for their customers and partners.

Microservices Layered Architecture

The original DoorDash platform was originally a monolithic application written in Python using the Django web framework with a PostgreSQL database. As the platform grew, they started to have problems with reliability and scaling. Around 2018 they institute a code freeze and began migrating to microservices. At this time, they also migrated to the Kotlin language, and their services now run on the java virtual machine (JVM) (see Exh 20, 21, 22).

DoorDash was able to improve the efficiency and reliability of their platform using a microservices architecture. By breaking up their application into domain-specific parts they were able to reduce errors and latency. They state in the article "Future-proofing: How DoorDash Transitioned from a Code Monolith to a Microservice Architecture" (see Exh. 20) that:

"... final design for our new microservice architecture consisted of five different layers, ranging from the user experience to the core infrastructure. Each layer provides functionality to the upper layer and leverages the functionality exposed by the lower layer [as shown below]":



These layers include: (see Exh 20):

"Frontend layer: Provides frontend systems (like the DoorDash mobile app, Dasher web app, etc.) for the interaction with consumers, merchants, and Dashers that are built on top of different frontend platforms.

BFF layer: The frontend layer is decoupled from the backend layer via BFFs. The BFF layer provides functionality to the frontend by orchestrating the interaction with multiple backend services while hiding the underlying backend architecture.

Backend Layer: Provides the core functionality that powers the business logic (order cart service, feed service, delivery service, etc.).

Platform layer: Provides common functionality that is leveraged by other backend services (identity service, communication service, etc.).

Infrastructure layer: Provides the infrastructural components that are required to build the site (databases, message brokers, etc.) and lays the foundation to abstract the system from the underlying environment (cloud service provider)."

In their new architecture they introduced the backend-for-frontend (BFF) "… an application connecting the consumer-facing client and the services providing general

	purpose APIs. Client requests go to the BFF, which then orchestrates the aggregation of information needed by the client.”. The BFF is a software architecture pattern (see Exh 40) used by microservices which “…shifted from thick-client applications to **interfaces delivered via the web, a trend that has also enabled the growth of SAAS-based solutions in general**”. As such BFF can be considered as “…the user-facing application as being two components - a client-side application living outside your perimeter, and **a server-side component (the BFF**) inside your perimeter”. The perimeter of the BFF is the webserver. The accused instrumentality meets this limitation under the doctrine of equivalents because the accused instrumentality performs substantially the same function, in substantially the same way to achieve substantially the same result. For example, DoorDash's network utilizes a sophisticated algorithmic framework that mirrors the intelligent operational capabilities of the patented system. It dynamically adjusts to real-time data for delivery logistics, employs predictive analytics for operational efficiency, and incorporates a centralized data management system for streamlined communication, much like the patent's description of an intelligent network. This implementation achieves the same overarching goal of efficient service delivery, adhering to the principles of the doctrine of equivalents.
wherein the network is integrated with the MFCCS and the backend servers are programmed with instructions executable to choose and apply varying modes of contact during the same remotely initiated hospitality task, for and with the handheld/mobile customers and/or handheld/mobile equipped entity staff, to intelligently execute and support completion of the hospitality application task requests.	This claim element focuses on the importance of a backend servers’ ability to efficiently manage communications within the hospitality industry. This system is particularly relevant to DoorDash, which requires a robust and flexible communication channel to operate its systems and apps smoothly. The claim element describes a server that intelligently selects the best way to communicate with users and can switch methods if the primary one fails. This capability ensures that DoorDash can maintain consistent contact with both customers and restaurants, even when technical issues arise ensuring seamless operations through smart communication management. DoorDash effectively uses an external API to integrate its food and drink ordering system with other applications like Google Maps and Freebird. This intelligent integration via the internet enriches the master menu database with imported data, thereby boosting system efficiency in catering to user requests. The web server network described in the patent claim is a sophisticated system designed to facilitate smooth communication between hospitality entities and users during various tasks. DoorDash employs this system to dynamically manage communications and to efficiently reallocate requests to alternate entities when inventory issues occur, optimizing resource use and computing time. DoorDash's integration with third-party POS systems like Redcat and ItsaCheckmate enhances operational simplicity by directly importing orders to kitchen systems, reflecting menu changes on DoorDash's platform, and reducing the likelihood of out-of-stock orders. Their Vice President of Analytics and Data Science, Jessica Lachs, has highlighted the comprehensive data integration across their platform, which centralizes information to deliver a cohesive operational picture. Furthermore, DoorDash's migration to a microservices architecture has allowed for domain-specific applications that reduce errors and latency, as detailed in their

"Future-proofing" article. This approach is exemplified by their Backend for Frontend (BFF) architecture, which efficiently aggregates client information requests.

DoorDash has also integrated an in-app texting feature between customers and Dashers, which is detailed in their engineering blog post "Building Chat Into the DoorDash App to Improve Deliveries." This feature is powered by SendBird's technology, illustrating the integration of third-party functionalities into DoorDash's platform.

DoorDash has developed a Business Manager app for real-time order tracking, issue resolution, and performance monitoring, further emphasizing their commitment to enhancing the operational efficiency and user experience within the dynamic hospitality industry.

Redact POS

DoorDash integrates with the Redcat point-of-sale (POS) "…[seamlessly] integrate orders from DoorDash, Caviar, and Storefront" (see Exh 95). In this DoorDash Merchant Support document concerning Redcat integration, it states the following overview of this integration:

> *"Integrating DoorDash with your POS through Redcat simplifies order management and operations with:*
>
> - *Streamlined orders - No need to manually enter orders from a tablet, email, or phone to your POS. Orders will go right to the kitchen, minimizing room for error and freeing up your staff to focus on your in-person guests.*
> - *Automatic menu updates - Any changes you make to your POS menu will be automatically reflected on your DoorDash menu.*
> - *Increased order accuracy - Because menu changes are synced through Redcat, customers are less likely to order an out-of-stock item.*
> - *Consolidated accounting & reporting on your POS - DoorDash orders are tagged to a unique payment type and dining option to let you view your business's performance on your POS."*

ItsaCheckmate POS

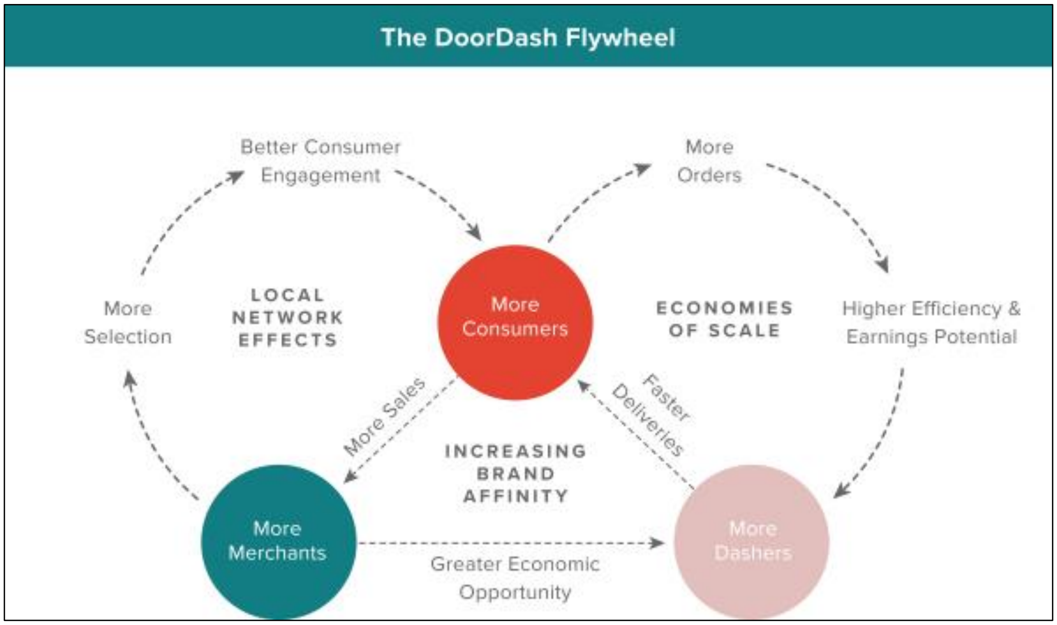
DoorDash integrates with the ItsaCheckmate point-of-sale (POS) "…"…[seamlessly] integrate orders from DoorDash, Caviar, and Storefront" (see Exh 96). In this DoorDash Merchant Support document concerning Redcat integration, it states the following overview of this integration:

> *"Integrating DoorDash with your POS through ItsaCheckmate simplifies order management and operations with:*
>
> - *Streamlined orders - No need to manually enter orders from a tablet, email, or phone to your POS. Orders will go right to the*

kitchen, minimizing room for error and freeing up your staff to focus on your in-person guests.

- *Automatic menu updates - Any changes you make to your POS menu will be automatically reflected on your DoorDash menu.*
- *Fewer order cancellations - Menu changes, including 86'd items, are synced as needed through ItsaCheckmate which saves customers from ordering an out-of-stock item.*
- *Consolidate accounting & reporting on your POS - DoorDash orders are tagged to a unique payment type and dining option to let you view your business's performance on your POS."*

As confirmed by DoorDash Vice President Jessica Lachs, (above/below) as part of its '360 degree picture' and framework approach, DoorDash integrates its intelligent web servers, with its MFCCS, and hospitality food/drink ordering application, (while including programming to intelligently choose and apply multiple modes of communications and/or different protocols if applicable) to enable the completion of the user requested hospitality food/drink, ordering tasks for delivery or pick up and as part of its Flywheel marketplace. The DoorDash Flywheel diagram, shown below, makes evident that the DoorDash operates in accordance with its overall series of linked services and via its "360-degree picture" central ("Flywheel") and technology platform framework:



DoorDash's Vice President of Analytics and Data Science Jessica Lachs in an August 17, 2022, interview on "Leveraging Data to Delight Customers Despite a Challenging Supply Chain" in which she states (see Exh #98):

> *"And so for us, it's really about collecting as much information as we can about all sides of the marketplace, bringing all of that data together into a central data platform, where all of that data is accessible no matter the source. Whether it is coming from our production systems, transactional data, whether it is event data in our apps, whether that's the consumer app, the dasher app, the merchant app… whether it is coming from our CRM systems.*

> *All of that data needs to come in to one central place so that we can tie it together and use the insights together to create a 360 degree picture of what's happening on our platform and off our platform so that we can use that information not just to provide accurate menus and inventory for consumers but also so we can send the right email communications to consumers, to dashers, so that we really have a full picture of what's happening and can use that for personalization and to help all three sides of our marketplace really optimize that they are at their peak efficiency."*

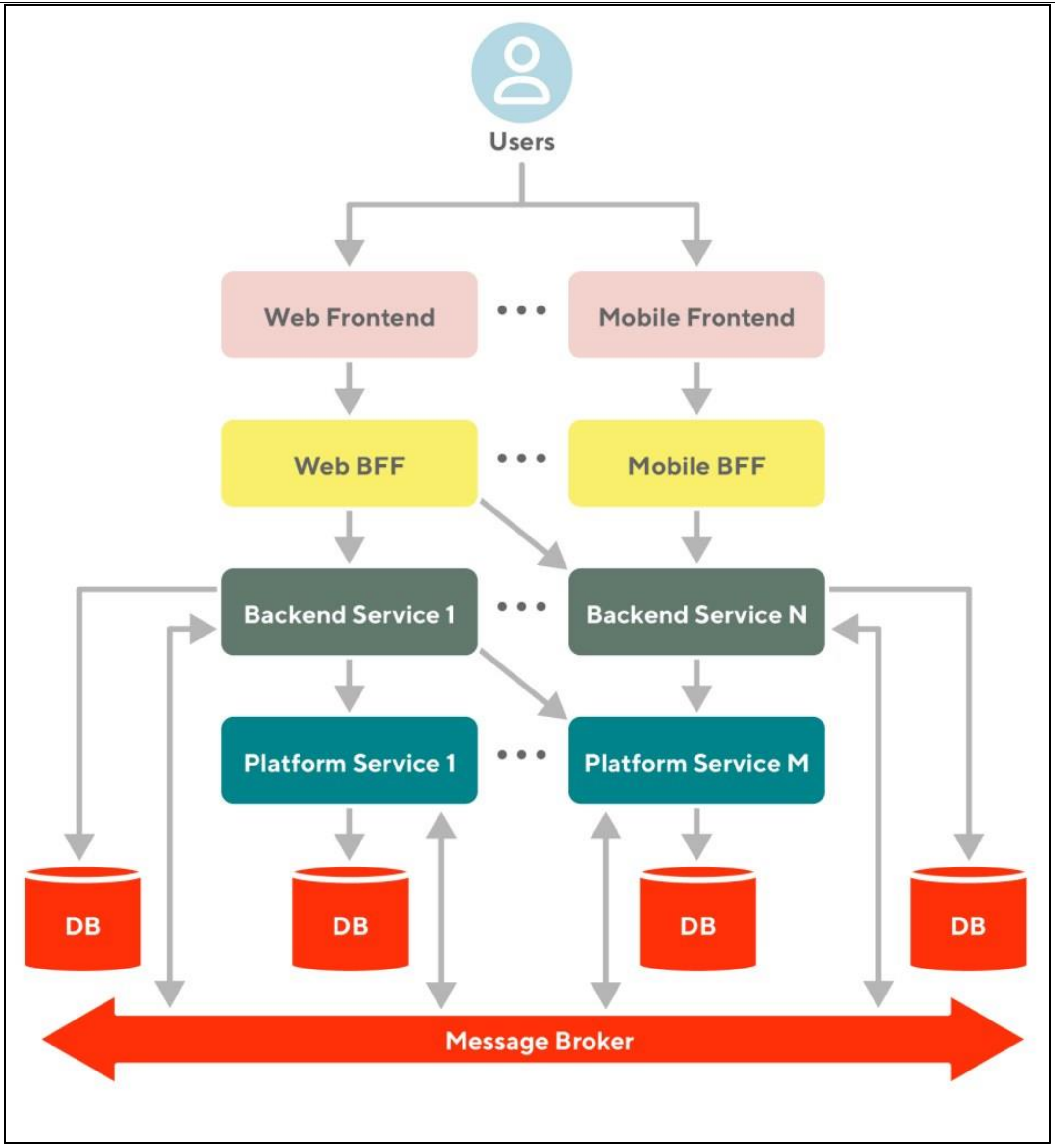
> *"So, for us, we want data to be easily accessible to all the different teams that need access to it. Analytics, being one of the largest customers of data at DoorDash, of course, but the way we think about our data models is really about increasing accessibility and consistency to that data. So, having all of our data in one central place and making sure that it is high in performance and so like query speeds are fast and that data models are thoughtful, so that it makes it a lot easier for data scientists, analysts, operators, product managers to be able to query the data that is needed and use the data in our production, in our production systems as well. So, we try to be thoughtful about how we structure our data models and how we ensure that all of the different production systems tie together into that central, as you mentioned, that central data lake."*

Microservices Architecture

The original DoorDash platform was originally a monolithic application written in Python using the Django web framework with a PostgreSQL database. As the platform grew, they started to have problems with reliability and scaling. Around 2018 they institute a code freeze and began migrating to microservices. At this time, they also migrated to the Kotlin language, and their services now run on the JVM (see Exh 19, 20, 21, 22).

DoorDash was able to improve the efficiency and reliability of their platform using a microservices architecture. By breaking up their application into domain-specific parts they were able to reduce errors and latency. They state in the article "Future-proofing: How DoorDash Transitioned from a Code Monolith to a Microservice Architecture" (see Exh. 20) that

> *"… final design for our new microservice architecture consisted of five different layers, ranging from the user experience to the core infrastructure. Each layer provides functionality to the upper layer and leverages the functionality exposed by the lower layer [as shown below]":*



These layers include (see in Exh 20):

> *"Frontend layer: Provides frontend systems (like the DoorDash mobile app, Dasher web app, etc.) for the interaction with consumers, merchants, and Dashers that are built on top of different frontend platforms.*
>
> *BFF layer: The frontend layer is decoupled from the backend layer via BFFs. The BFF layer provides functionality to the frontend by orchestrating the interaction with multiple backend services while hiding the underlying backend architecture.*
>
> *Backend Layer: Provides the core functionality that powers the business logic (order cart service, feed service, delivery service, etc.).*
>
> *Platform layer: Provides common functionality that is leveraged by other backend services (identity service, communication service, etc.).*
>
> *Infrastructure layer: Provides the infrastructural components that are required to build the site (databases, message brokers, etc.) and lays the foundation to abstract the system from the underlying environment (cloud*

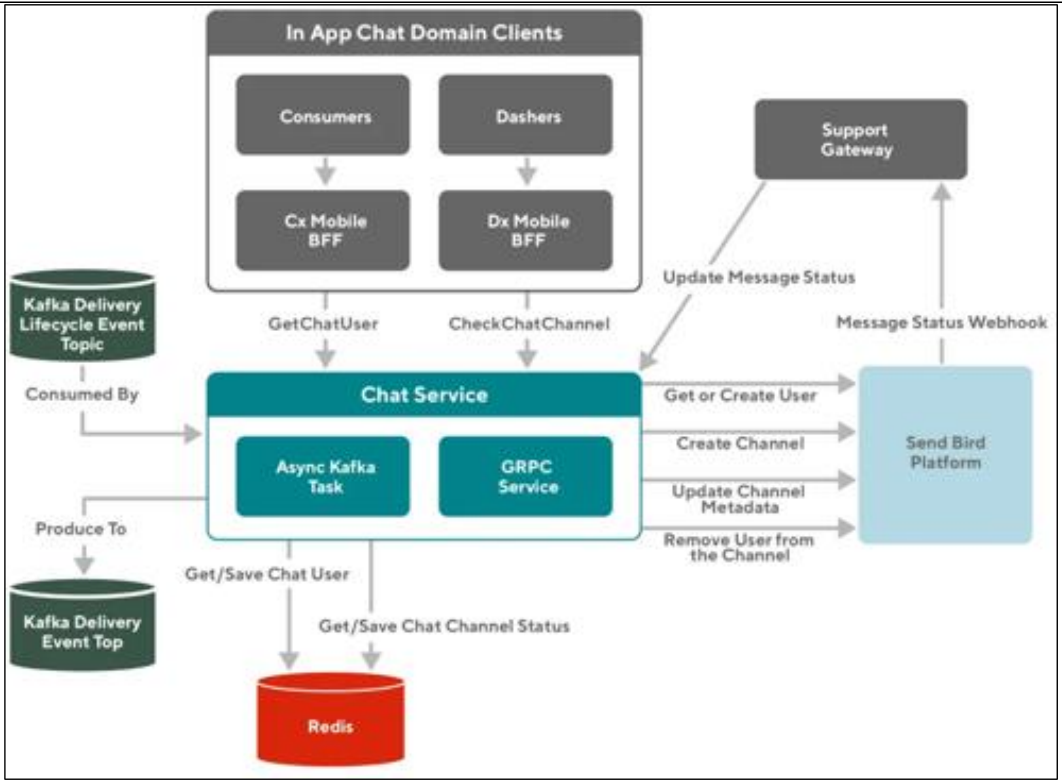
> *service provider).”*

In their new architecture they introduced the backend-for-frontend (BFF) “… an application connecting the consumer-facing client and the services providing general purpose APIs. Client requests go to the BFF, which then orchestrates the aggregation of information needed by the client.”. The BFF is a software architecture pattern (see Exh 40) used by microservices which “…shifted from thick-client applications to **interfaces delivered via the web, a trend that has also enabled the growth of SAAS-based solutions in general**”. As such BFF can be considered as “…the user-facing application as being two components - a client-side application living outside your perimeter, and **a server-side component (the BFF**) inside your perimeter”. The perimeter of the BFF is the webserver.

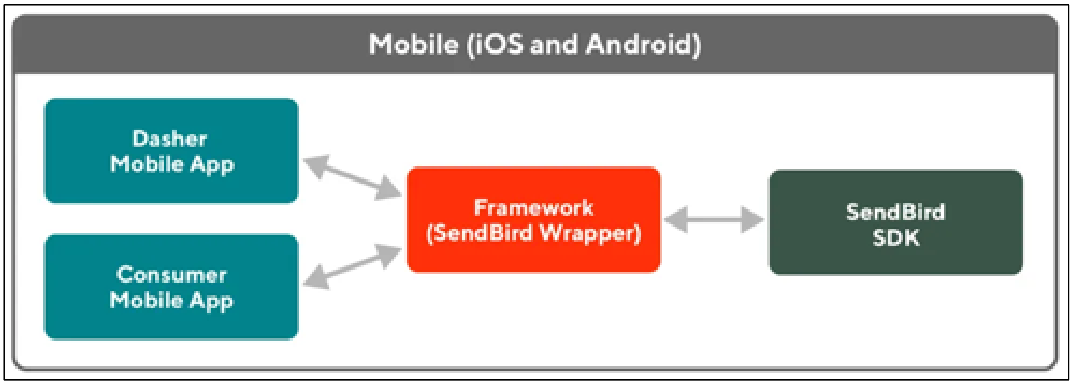
Integrated In-App Texting

DoorDash integrates texting between customers and Dashers into its iOS and Android app. In the blog article by the DoorDash engineering team “Building Chat Into the DoorDash App to Improve Deliveries” they state “… *[b]uilding chat into our apps may seem redundant, as smartphones already support calling and texting. However, building our own chat client has several advantages over these external channels. Our chat client creates a buffer between Dashers and customers, ensuring privacy for both parties, and lets us better resolve customer support issues*.” The problem with using external communication channels to connect Delivery Drivers with customers is that “…a Dasher attempting a delivery might try to call or text the customer if finding the location proved difficult or other issues arose. Although this method may be effective, it requires the Dasher to switch away from the app, which shows the delivery address and other important details” (see Exh 71, 72).

DoorDash integrates SendBird’s chatting technology into its platform by implementing their Chat API and native Chat SDK to solve these problems. They state that the system consists of *“...four main components: mobile clients, chat service, data store, and SendBird SDKs. The in-app chat entry points have been added to all of DoorDash’s mobile clients. Mobile clients connect to the chat service to get the chat user and chat channels. The chat service handles communications between the data store and SendBird platform APIs. In the data store we maintain users and channels that get created by SendBird. The chat service uses SendBird to create users, chat channels, and channel metadata, and then stores that data”,* as illustrated by the diagram below:



The DoorDash Mobile Apps, iOS and Android are integrated with SendBird's SDK a depicted in this diagram:



In the blog article "Building Chat Into the DoorDash App to Improve Deliveries" by the DoorDash Engineering team (see Exh 71) they state that DoorDash integrated chat into their apps as opposed to relying in the built-in chat/texting of the smartphones because *"…creates a buffer between Dashers and customers, ensuring privacy for both parties, and lets us better resolve customer support issues."* The article states:

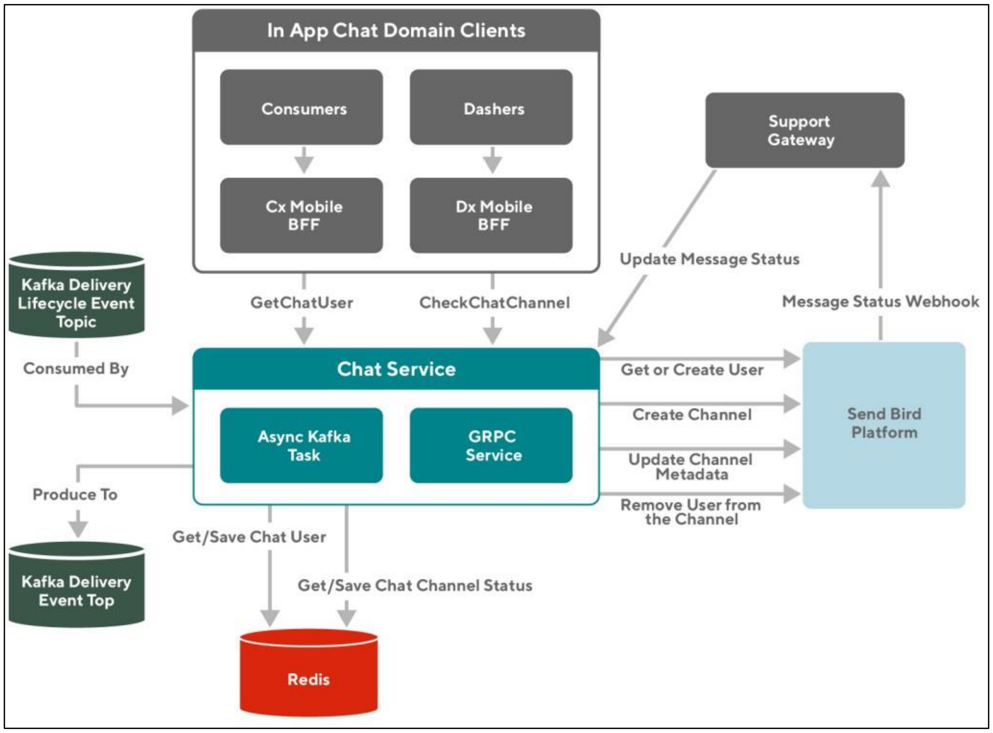
Every delivery enabled by the DoorDash platform is different. Dashers (our term for delivery drivers) meet customers in a wide range of contexts, from apartment and office building lobbies to suburban homes. This variety of circumstances and the timely nature of contact makes communication essential, which is why we built chat into the DoorDash apps.

> *"Building chat into our apps may seem redundant, as smartphones already support calling and texting. However, building our own chat client has several advantages over these external channels. Our chat client creates a*

> *buffer between Dashers and customers, ensuring privacy for both parties, and lets us better resolve customer support issues.*
>
> *Creating a chat client requires quite a bit of engineering and, given our past success integrating existing solutions, we began this project by evaluating third-party software. After settling on a chat technology, we integrated it into our platform and apps."*

Regarding the integration of SendBird (see Exh 72) into the DoorDash iOS and Android apps, the article specifies the main aspects of the technical system design, how they integrated the SendBird UI into their custom apps, and the final results, stating specifically the following:

> *"Our system design consists of four main components: mobile clients, chat service, data store, and SendBird SDKs. The in-app chat entry points have been added to all of DoorDash's mobile clients. Mobile clients connect to the chat service to get the chat user and chat channels. The chat service handles communications between the data store and SendBird platform APIs. In the data store we maintain users and channels that get created by SendBird. The chat service uses SendBird to create users, chat channels, and channel metadata, and then stores that data."*



> *"[In the above figure, the DoorDash] …in-app chat system design consists of four main components: mobile clients, chat service, data store, and SendBird SDKs. The chat service receives chat user and channel requests from the mobile clients, sending them to the SendBird platform. SendBird creates channels and users and updates the message status. The chat service also stores the chats in a Redis data store."*

Note: Redis is an *"…open source, in-memory data store used by millions of developers as a database, cache, streaming engine, and message broker"* (see Exh

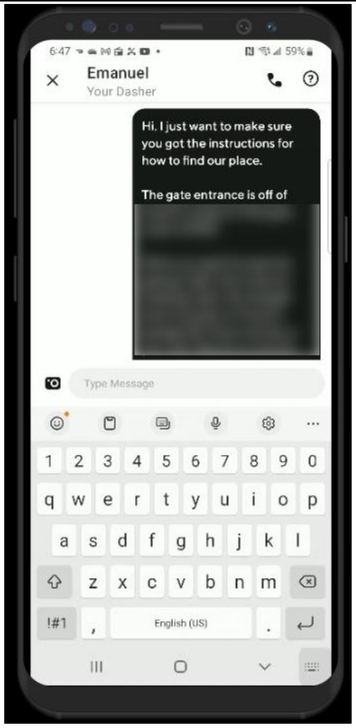
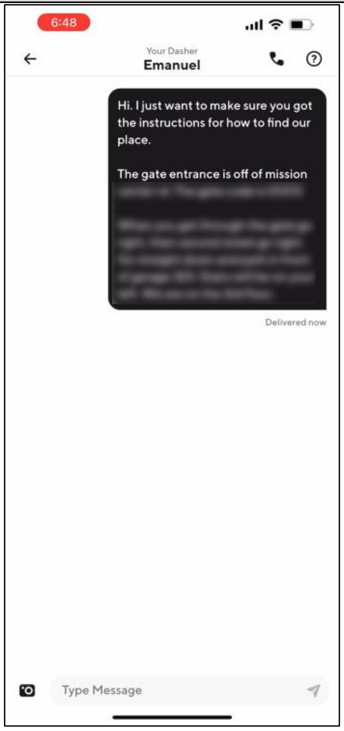
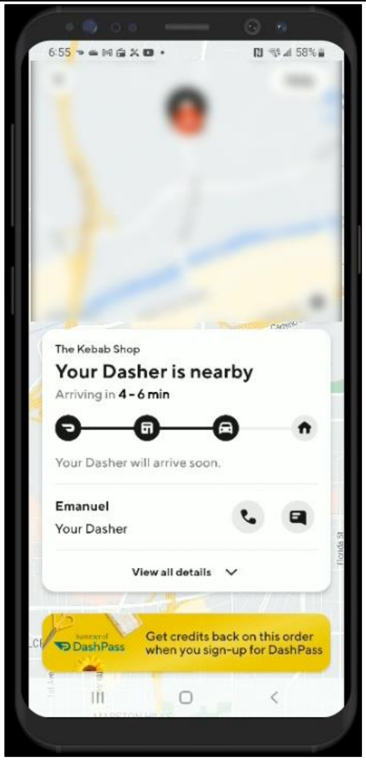
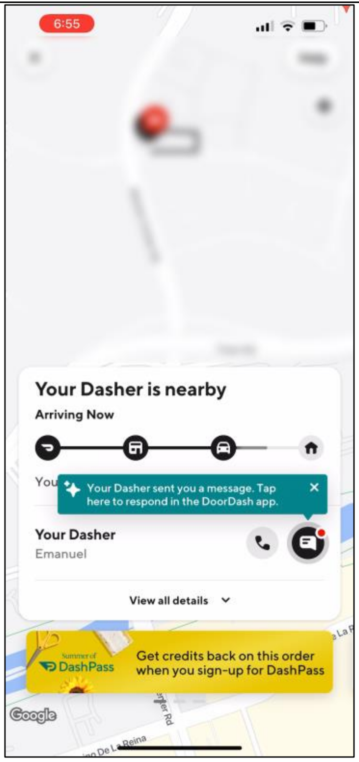
90).

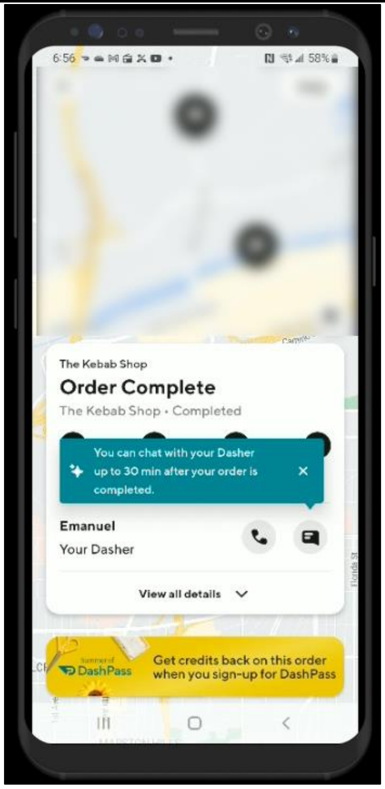
For the DoorDash mobile apps (iOS and Android), the article explains how they built a *“…a framework that serves as a wrapper around the SendBird UI SDK”* and states the following:

> *“On the mobile side we built a framework that serves as a wrapper around the SendBird UI SDK. The framework adds UI styling and configuration on top of the chat SDK UI. The framework is integrated in both consumer and Dasher mobile apps. Building the framework helped us to isolate the chat-related logic and maintain it in one place.*
>
> *Integrating chat into our mobile apps required work on four separate codebases. We have the consumer and Dasher apps, with Android and iOS versions of each.*
>
> *Because chat sessions are temporary events, we chose Redis as our data store, using it as a cache layer for the user info and chat channel status. Redis was also an easy choice, as it is already available in our cloud infrastructure.*
>
> *SendBird stores the actual chat text on its platform, which is SOC 2 certified and GDPR compliant, ensuring security and privacy. A pipeline between SendBird and our customer service system lets authorized users view chat histories to help resolve support issues.”*
>
> *The article includes with very interesting results integrating a custom chat technology into their mobile apps:*
>
> *“Adding in-app chat to our consumer and Dasher apps decreased the number of orders showing as Never Delivered, a metric we use to measure how many deliveries were missed. One of the most common causes of Never Delivered is poor communication between a consumer and Dasher.”*

Order Tracking and Notification

The same holds true for order notifications, order tracking and texting/chatting between the dasher and user. Below are a series of screens taken from one iPhone and one Android each tracking the same order placed by a user in the Android App. They depict the notifications and updates in the app for the user to be able to track their order. In this case, we show see text messages placed and sent by the user to the Dasher on the android app, being reflected the iOS app on an iPhone that is tracking the order. When the Dasher responds to the chat from the user, the user is notified on the android phone and on the iOS phone.

	Android DoorDash App	iOS DoorDash App
	 6:47 Emanuel Your Dasher Hi. I just want to make sure you got the instructions for how to find our place. The gate entrance is off of [redacted] Type Message 	 6:48 Your Dasher Emanuel Hi. I just want to make sure you got the instructions for how to find our place. The gate entrance is off of mission [redacted] Delivered now Type Message
	 6:55 The Kebab Shop Your Dasher is nearby Arriving in 4 - 6 min Your Dasher will arrive soon. Emanuel Your Dasher View all details Summer of DashPass Get credits back on this order when you sign-up for DashPass	 6:55 Your Dasher is nearby Arriving Now You Your Dasher sent you a message. Tap here to respond in the DoorDash app. Your Dasher Emanuel View all details Summer of DashPass Get credits back on this order when you sign-up for DashPass


6:56 58%

The Kebab Shop

Order Complete

The Kebab Shop • Completed

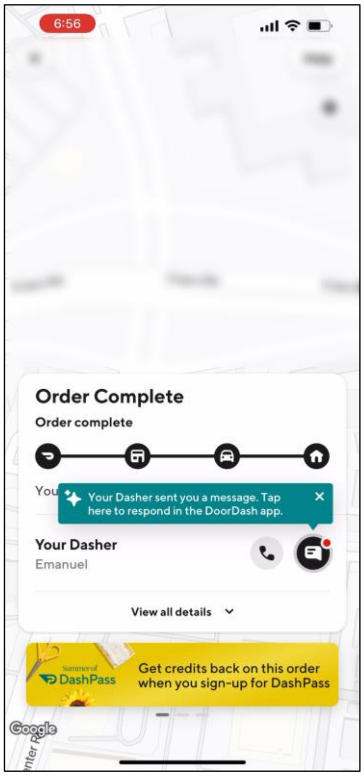
You can chat with your Dasher up to 30 min after your order is completed.

Emanuel

Your Dasher

Summer of DashPass

Get credits back on this order when you sign-up for DashPass


6:56

Order Complete

Order complete

You

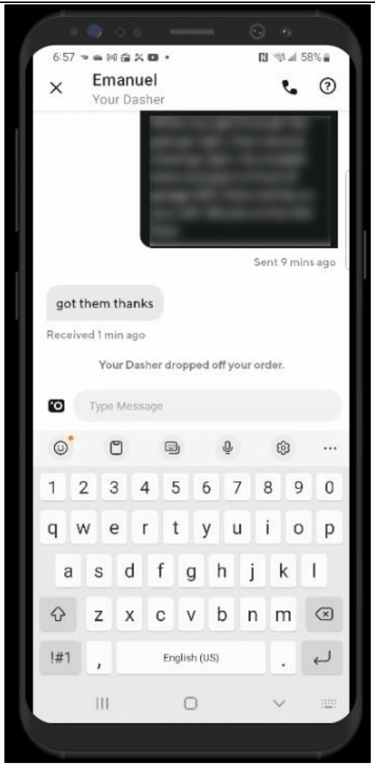
Your Dasher sent you a message. Tap here to respond in the DoorDash app.

Your Dasher

Emanuel

Summer of DashPass

Get credits back on this order when you sign-up for DashPass


6:57 58%

Emanuel

Your Dasher

[redacted]

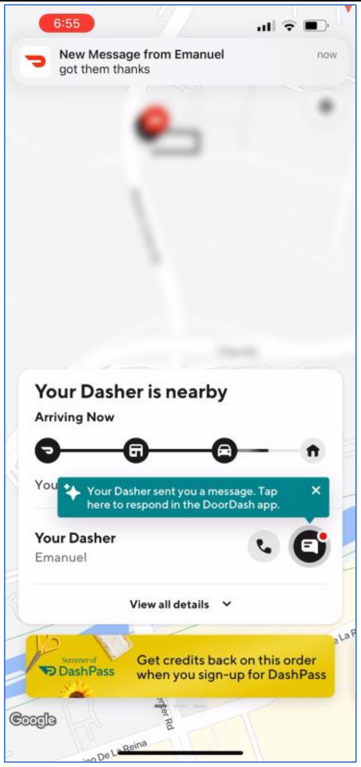
Sent 9 mins ago

got them thanks

Received 1 min ago

Your Dasher dropped off your order.

Type Message


6:55

New Message from Emanuel now

got them thanks

Your Dasher is nearby

Arriving Now

You

Your Dasher sent you a message. Tap here to respond in the DoorDash app.

Your Dasher

Emanuel

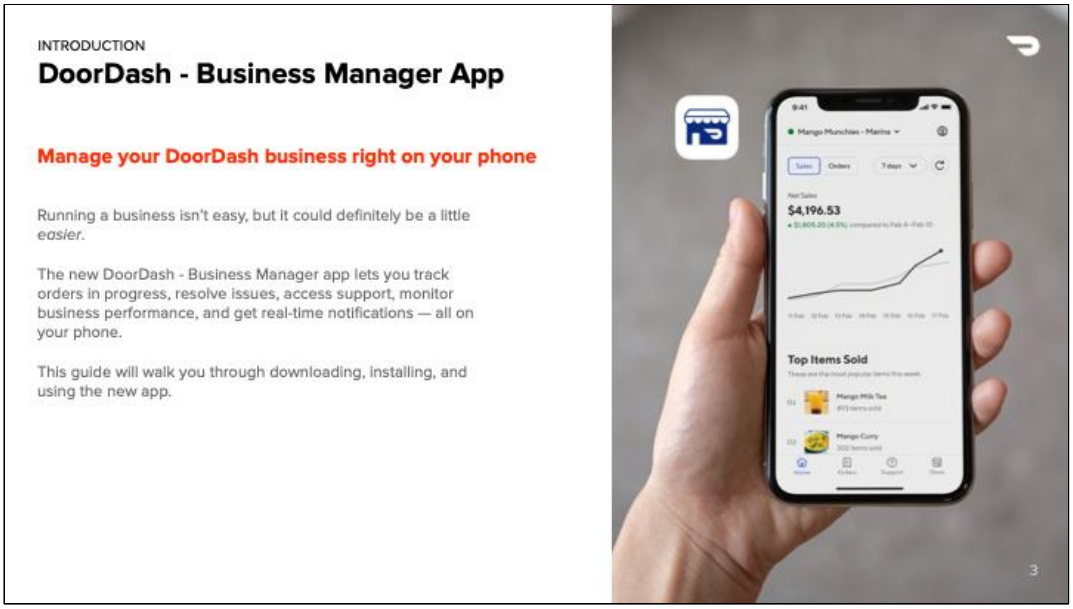
Summer of DashPass

Get credits back on this order when you sign-up for DashPass

Business Manager App

DoorDash offers the Business Manager app for iOS and Android. It lets restaurants "…track orders in progress, resolve issues, access support, monitor business performance, and get real-time notifications — all on your phone." Selective screenshots from the DoorDash Business Manager App Guide describes the app, and it’s features as below (See Exh 59, 62, 65). With the Business Manager App, managers can in real-time:

- “track sales, orders, and trends, for one or multiple stores
- change store status
- update menu hours
- view active orders
- call the customer or Dasher
- contact DoorDash Support
- mark items out of stock
- cancel an order”



INTRODUCTION

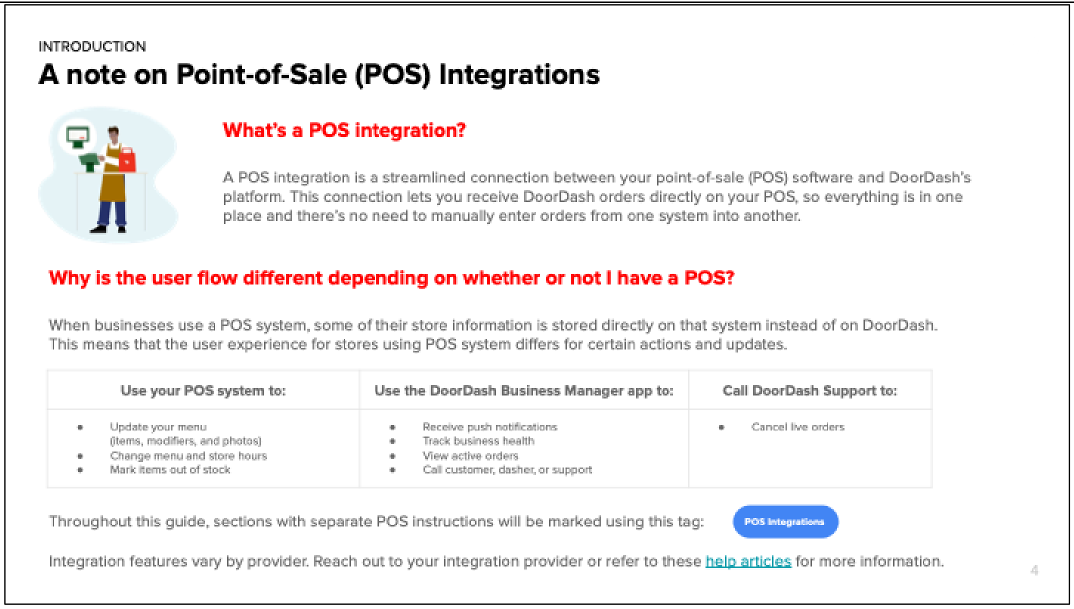
DoorDash - Business Manager App

Manage your DoorDash business right on your phone

Running a business isn’t easy, but it could definitely be a little *easier.*

The new DoorDash - Business Manager app lets you track orders in progress, resolve issues, access support, monitor business performance, and get real-time notifications — all on your phone.

This guide will walk you through downloading, installing, and using the new app.



INTRODUCTION

A note on Point-of-Sale (POS) Integrations

What's a POS integration?

A POS integration is a streamlined connection between your point-of-sale (POS) software and DoorDash's platform. This connection lets you receive DoorDash orders directly on your POS, so everything is in one place and there's no need to manually enter orders from one system into another.

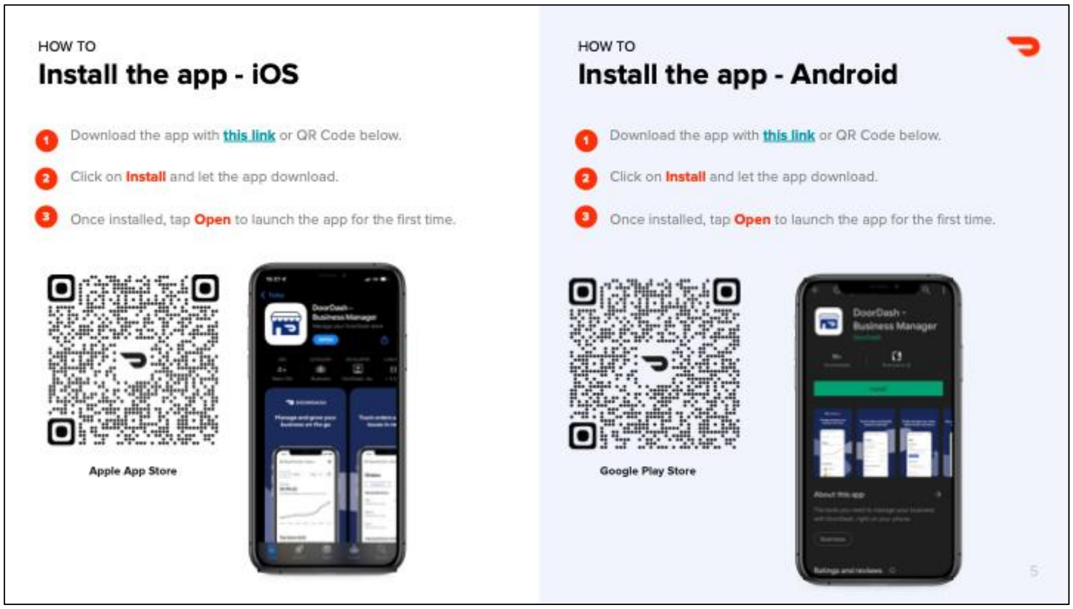
Why is the user flow different depending on whether or not I have a POS?

When businesses use a POS system, some of their store information is stored directly on that system instead of on DoorDash. This means that the user experience for stores using POS system differs for certain actions and updates.

Use your POS system to:	Use the DoorDash Business Manager app to:	Call DoorDash Support to:
• Update your menu (items, modifiers, and photos) • Change menu and store hours • Mark items out of stock	• Receive push notifications • Track business health • View active orders • Call customer, dasher, or support	• Cancel live orders

Throughout this guide, sections with separate POS instructions will be marked using this tag: POS Integrations

Integration features vary by provider. Reach out to your integration provider or refer to these help articles for more information.



HOW TO

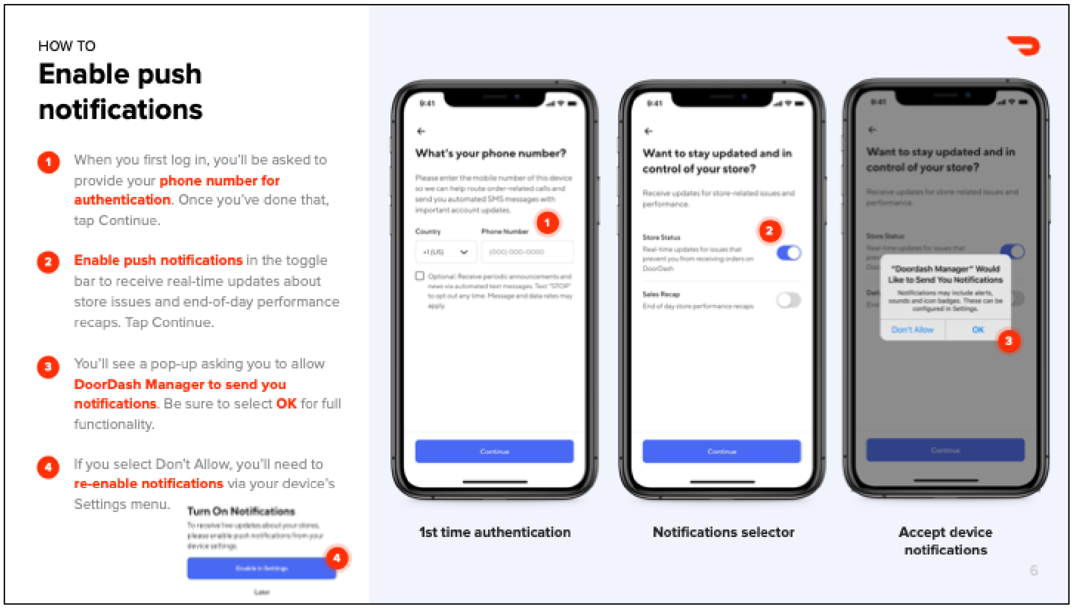
Install the app - iOS

1. Download the app with this link or QR Code below.
2. Click on **Install** and let the app download.
3. Once installed, tap **Open** to launch the app for the first time.

HOW TO

Install the app - Android

1. Download the app with this link or QR Code below.
2. Click on **Install** and let the app download.
3. Once installed, tap **Open** to launch the app for the first time.



HOW TO

Enable push notifications

1. When you first log in, you'll be asked to provide your **phone number for authentication**. Once you've done that, tap Continue.
2. **Enable push notifications** in the toggle bar to receive real-time updates about store issues and end-of-day performance recaps. Tap Continue.
3. You'll see a pop-up asking you to allow **DoorDash Manager to send you notifications**. Be sure to select **OK** for full functionality.
4. If you select Don't Allow, you'll need to **re-enable notifications** via your device's Settings menu.

Turn On Notifications

To receive live updates about your stores, please enable push notifications from your device settings.

What's your phone number?

Please enter the mobile number of this device so we can help route order-related calls and send you automated SMS messages with important account updates.

Country: +1 (US)
Phone Number: (000) 000-0000

□ Optional: Receive periodic announcements and news via automated text messages. Text "STOP" to opt out any time. Message and data rates may apply.

1st time authentication

Want to stay updated and in control of your store?

Receive updates for store-related issues and performance.

Store Status: Real-time updates for issues that prevent you from receiving orders on DoorDash

Sales Recap: End of day store performance recaps

Notifications selector

"Doordash Manager" Would Like to Send You Notifications

Notifications may include alerts, sounds and icon badges. These can be configured in Settings.

Accept device notifications

HOW TO

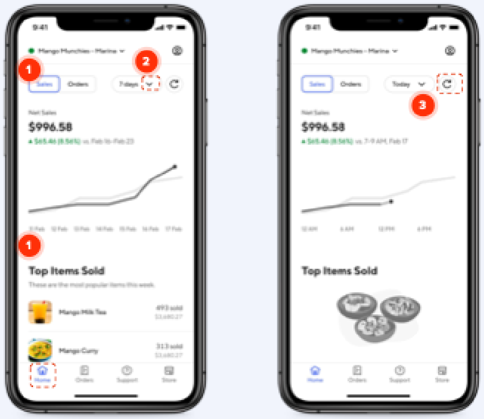
Track business health (single store)

1. The Home tab of your Dashboard allows you to see **sales, orders, trends and top items sold** in a specific time range.

2. You'll have the option to choose from today, yesterday, 7 days, 30 days. Just tap the dropdown arrow.

3. If you select **today**, you'll be able to:
   - Monitor sales and orders in real time by tapping the refresh arrow
   - Analyze partial-day trends

   Menu item performance is calculated at 7 days and 30 days, so to view that data just change the time range.



View top-line metrics and trends

Monitor day-of performance

HOW TO

Track business health (multiple stores)

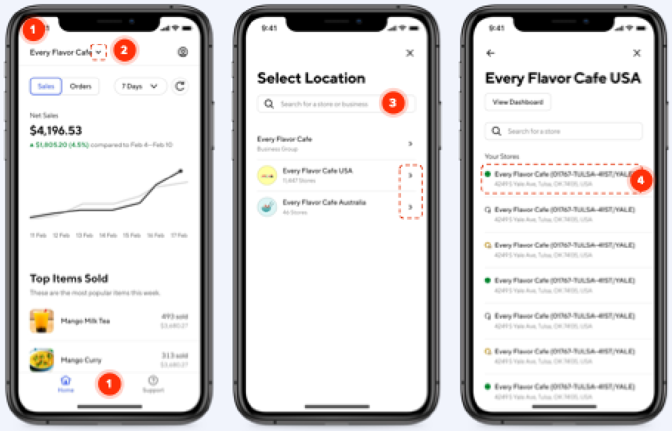
1. If you own **multiple locations**, the home screen will display metrics across all stores by default. You can confirm this by noting:
   - The business (or group) name at the top left
   - Your bottom navigation bar will only show 2 tabs (Home and Support)

   To view **store-level metrics and features**,

2. tap the arrow in the top navigation bar.

3. Depending on how your business was set up on DoorDash, it may take 1-2 taps to get to an individual store (tap the **arrow to navigate**). You can also locate the store in the **search bar**.

4. **Tap the store** you'd like to view and both the app dashboard and metrics will automatically refresh.



Business-level Dashboard

Select a business (if applicable)

Select a store

HOW TO

Change store status

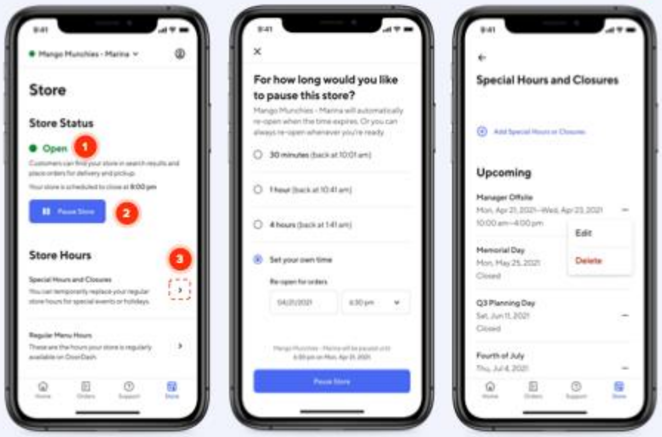
POS Integrations

1. You can view and change your store status (**open, paused, closed**) in the Store tab. If you have access to multiple stores, select the specific store from the dropdown menu.

2. Tap **Pause Store** to pause an open store and choose when it reopens (in an hour, the next day, etc).

3. View or add special hours or closures by tapping the right-hand arrow next to **Special Hours and Closures**.*

When you change your store status in the app, it will be reflected on the Tablet and Portal (and vice versa).



Mango Munchies - Marina
Store
Store Status
Open
Pause Store
Store Hours
Special Hours and Closures
Regular Menu Hours
For how long would you like to pause this store?
30 minutes (back at 10:01 am)
1 hour (back at 10:41 am)
4 hours (back at 1:41 am)
Set your own time
Pause Store
Special Hours and Closures
Add Special Hours or Closures
Upcoming
Manager Offsite
Memorial Day
Q3 Planning Day
Fourth of July
Edit
Delete
1
2
3

View status

Pause store

Special hours

*If you use a POS protocol, we recommend making special hours updates and closures using your POS. When you make these changes via the app, they may be overwritten during a POS sync.

HOW TO

POS Integrations

Update menu hours*

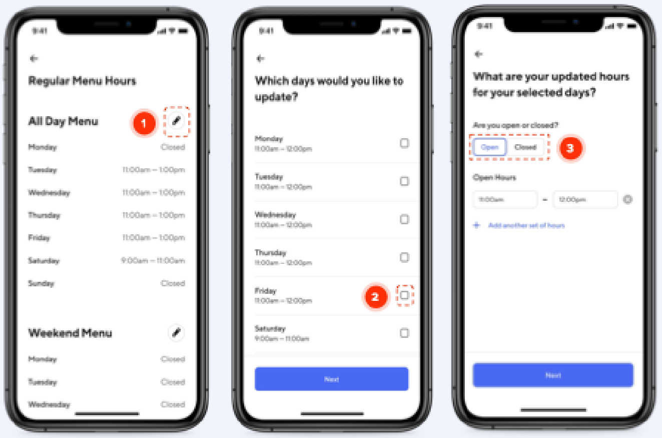
1. From the Store tab (refer to previous page for a screenshot) you can update your menu hours by tapping the right-hand arrow next to **Regular Menu Hours**.

2. If you have multiple menus for your store, scroll down to find the specific menu. Then tap the **pencil to edit**.

3. **Check the box** next to the day(s) of the week you'd like to update the menu hours for and tap **Next**.

   Indicate whether the new hours reflect when you're open or closed by clicking on the top toggle. Then **tap on the start or end time** and select the desired time from the dropdown. Tap **Next** and then **Confirm**.

*If you use a POS protocol, we recommend updating menu hours using your POS. When you make these changes via the app, they may be overwritten during a POS sync.



Edit menu hours

Day of week

Start and end time

HOW TO

View active orders

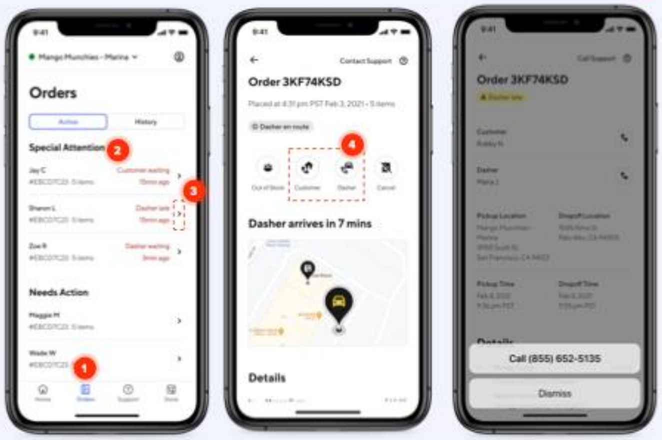
1. **Tap on the Orders button** in the bottom navigation to view active orders. For already completed orders, you can also toggle to History.

2. **Note the order status** on the right-side to see if an order needs attention.

   - Dasher late
   - Dasher en route
   - Dasher arriving
   - Customer pickup
   - Dasher waiting
   - Customer arriving
   - Delivered
   - Customer picked up

3. **See order details** by tapping on the right-hand arrow by the individual order.

4. **Call a customer or Dasher directly** by tapping the phone icon.



Orders

Order details

Call customer or Dasher

HOW TO

POS Integrations

Call the customer or Dasher*

If you use a Tablet protocol, you can continue to call customers or Dashers for in-progress orders by tapping the phone icon or Issue with Order.

Now you can also call from the app by **clicking on the phone icon by the customer's or Dasher's name**.

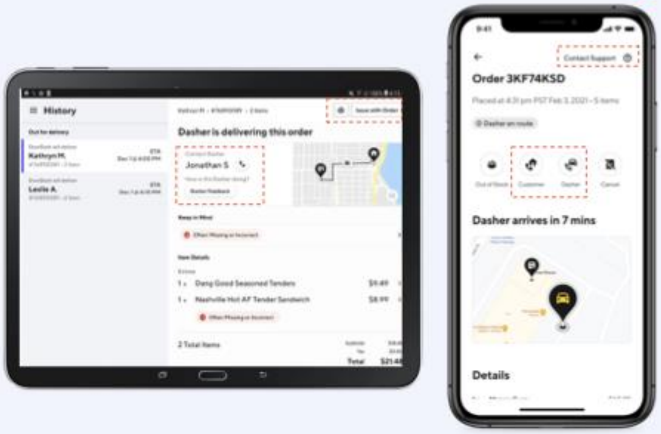
Common reasons to call a customer or Dasher:

- Out-of-stock item
- Clarification on special instructions
- Order running late
- Dasher arrives early
- Dasher waiting but not coming inside

Afterwards, if you need to make any requested **order changes**, you can do so by chatting with our Support team — just tap **Contact Support** at the top right.

Your Tablet is still the best way to adjust prep time or mark an order ready for pickup.*

*If you use a POS integration, there's no need to mark orders ready for pickup, they will be confirmed and assigned a Dasher automatically.



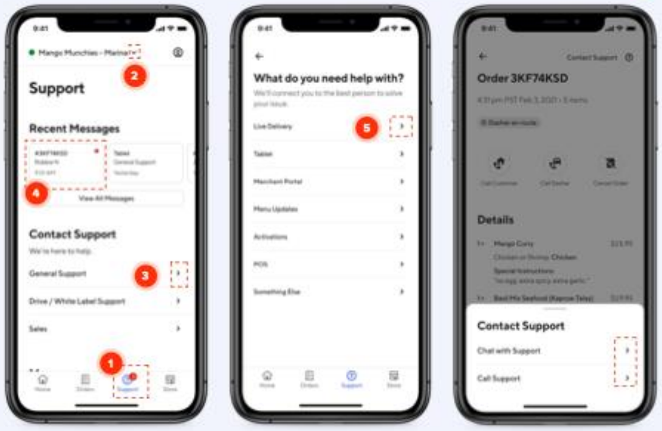
Using Tablet to call customer or Dasher

Call customer or Dasher

HOW TO

Contact Support

1. The **Support icon** is always accessible on the bottom navigation.
2. If you have access to multiple stores, be sure to select the right store from the dropdown.
3. To start a new request, tap **General Support** and then select the nature of your question in the next screen.
4. If you'd like to reopen a previous conversion, you can do so by tapping one of the Recent Messages.
5. For any issues with in-progress orders, tap **Live Delivery**. You can then choose if you'd like to **call Support** or **chat with Support.**



Support

Live delivery

Chat or call

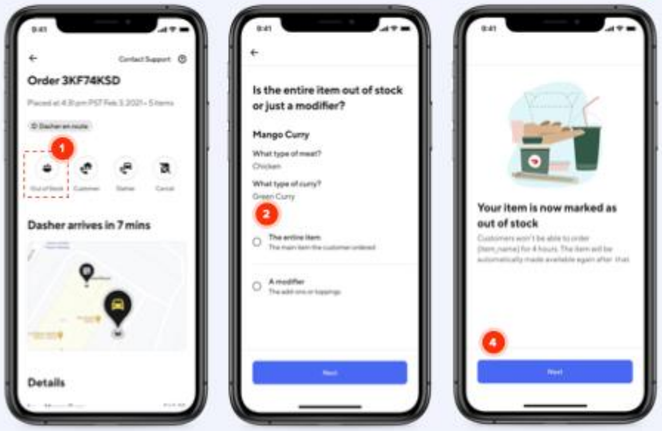
HOW TO

POS Integrations

Mark out of stock

1. Click on an active order to note when an item is **out of stock**.
2. Based on the order details, you'll select which **item or modifier** is out of stock.
3. Click on Next to **choose how long it will be out of stock** — hours, until the end of the day, or indefinitely. The item will automatically be made available after the selected time. You are also able to mark the item back in stock manually on your Tablet or POS.
4. Handle the **active order** in question by tapping Next to **chat with Support**. They'll get in touch with the customer to confirm if they want to replace the out-of-stock item or remove the item.

*If you use a POS protocol, we recommend marking items out of stock using your POS. When you make these changes via the app, they may be overwritten during a POS sync.



9:41
Contact Support
Order 3KF74KSD
Placed at 4:31pm PST Feb 3, 2021 · 5 items
Dasher en route
1
Out of Stock
Customer
Dasher
Cancel
Dasher arrives in 7 mins
Details
Is the entire item out of stock or just a modifier?
Mango Curry
What type of meat?
Chicken
What type of curry?
Green Curry
2
The entire item
The main item the customer ordered
A modifier
The add-ons or toppings
Next
Your item is now marked as out of stock
Customers won't be able to order (item_name) for 4 hours. The item will be automatically made available again after that.
4
Next

Active order

Select item or modifier

Chat for live order help

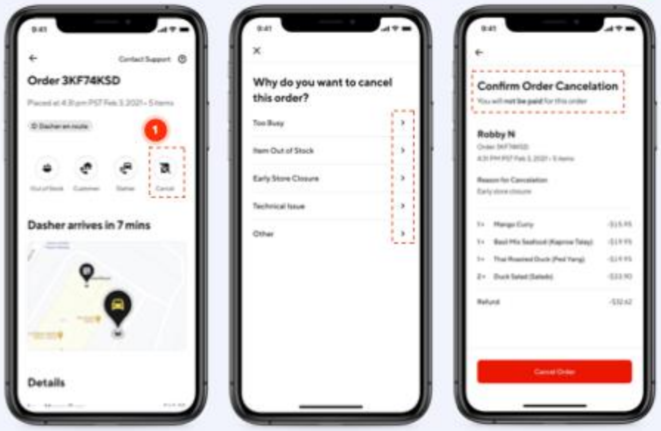
HOW TO

POS Integrations

Cancel a live order*

1. If you're not able to fill an active order, you can choose to **cancel** it from the order details.
2. **Provide more detail** on why you can't fill the order so we can help you with next steps.
3. If you choose to cancel the order, we'll **confirm** this with you and let the customer know. As a reminder, cancellations that you initiate will **not be paid** for, even if you already prepared the food.

*This feature is not available on POS order protocol. If you're using a POS system and need to cancel a live order, contact DoorDash Support.



Cancel a live order

Tell us what's going on

Confirmation

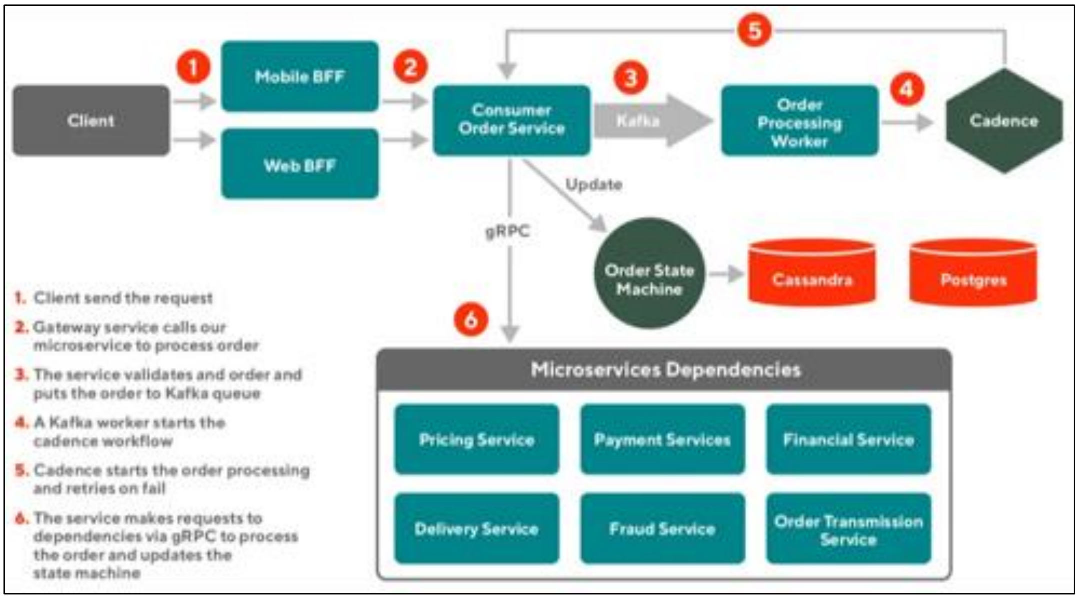
Checkout Process Architecture

In the engineering blog article "Building a More Reliable Checkout Service at Scale with Kotlin" (see Exh. 78) the DoorDash development team explains how they reimplemented the customer checkout process into a new Kotlin microservices architecture to increase the DoorDash platforms performance, reliability, and scalability. As they state:

> *"…[t]he consumer checkout flow is one of the most critical flows on the DoorDash food ordering platform. The flow is responsible for submitting consumers' order carts, processing payments, and connecting the order to our logistics system.".*

They describe this new architecture with this detailed diagram stating that:

> *"…[our] re-engineered checkout flow takes advantage of our new microservice architecture's components. Cassandra, a distributed database, has replaced Postgres, and become our primary data storage. Kafka is used to decouple the complex workflow. Cadence helps us build fault-oblivious business logic" (see Exh. 78).*


1
Mobile BFF
2
5
Client
Web BFF
Consumer Order Service
3
Kafka
Order Processing Worker
4
Cadence
Update
gRPC
Order State Machine
Cassandra
Postgres
6
1. Client send the request
2. Gateway service calls our microservice to process order
3. The service validates and order and puts the order to Kafka queue
4. A Kafka worker starts the cadence workflow
5. Cadence starts the order processing and retries on fail
6. The service makes requests to dependencies via gRPC to process the order and updates the state machine
Microservices Dependencies
Pricing Service
Payment Services
Financial Service
Delivery Service
Fraud Service
Order Transmission Service

This diagram depicts the master database through the Order State Machine which gets its data from the Casandra database. The order lifecycle flow depicted in the above diagram is as follows according to the article:

> 1. *"The clients (web/mobile) send requests to our gateway microservice to checkout an order.*
>
> 2. *The gateway microservice calls the newly built order service.*
>
> 3. *The order service fetches data associated with the order and validates the item, merchant, and delivery availability. Then it materializes the order into a Cassandra database and drops off a Kafka message in the queue,*

indicating the order has been submitted.

4. *The Kafka consumers poll order submission events and create a Cadence workflow to initialize the order processing.*

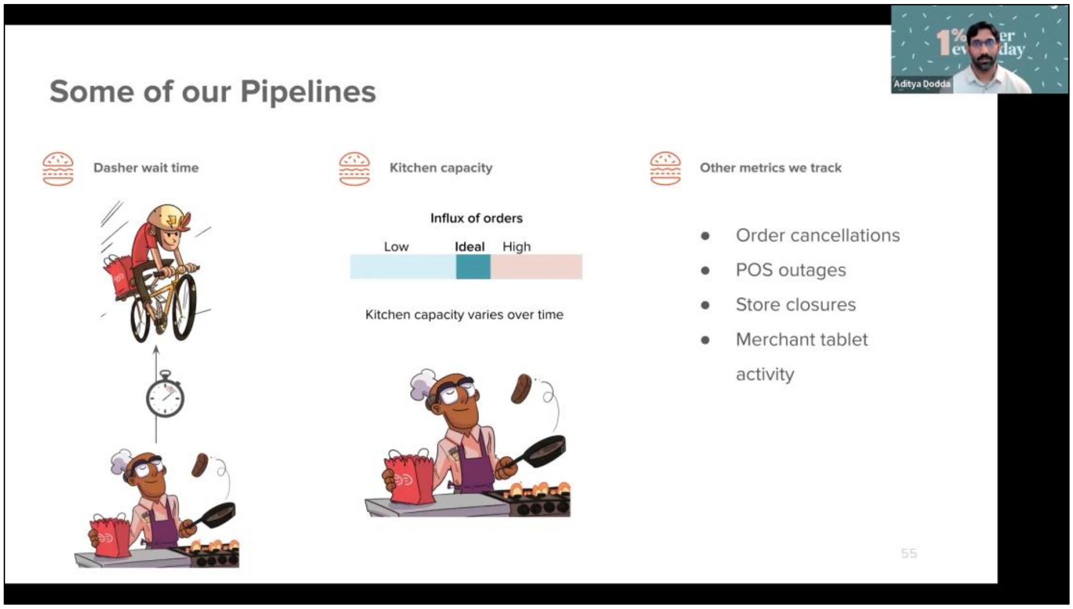
5. *Cadence calls an order service endpoint to start the order processing.*

6. *The consumer order service starts its state machine to process the order. In each state machine step, such as performing a payment or creating a delivery within our logistics systems, the consumer order service interacts with a related microservice using gRPC and updates the order we stored in the Cassandra database.*

7. *The client checks the order processing state using a pull model. The client polls an endpoint on the order service, which looks up the order state in the Cassandra table and returns a success if the order processing has finished all of the state machine's steps. If the order processing fails, Cadence retries it."*

Dasher Dispatch Engine with Intelligent Machine Learning Technology

Pipelines for order completion logic is confirmed and admitted in these screenshots take from the video presentation "DoorDash Technical Showcase Event: Logistics Team" (see Exh #49) and as stated in this video as below.



Some of our Pipelines

Dasher wait time

Kitchen capacity

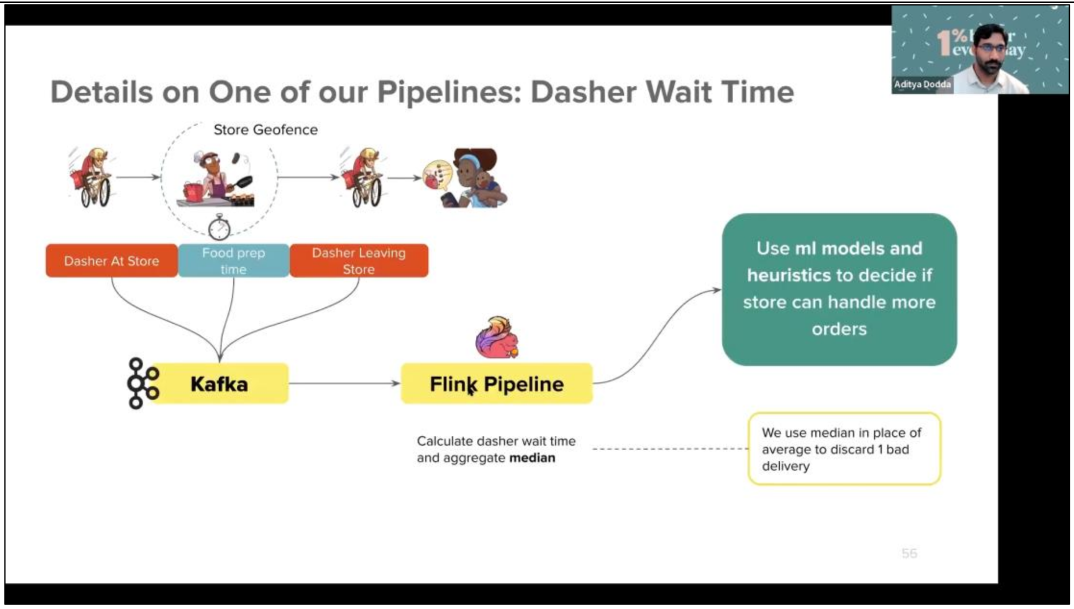
Influx of orders

Low Ideal High

Kitchen capacity varies over time

Other metrics we track

- Order cancellations
- POS outages
- Store closures
- Merchant tablet activity



Details on One of our Pipelines: Dasher Wait Time

Store Geofence

Dasher At Store

Food prep time

Dasher Leaving Store

Kafka

Flink Pipeline

Use ml models and heuristics to decide if store can handle more orders

Calculate dasher wait time and aggregate **median**

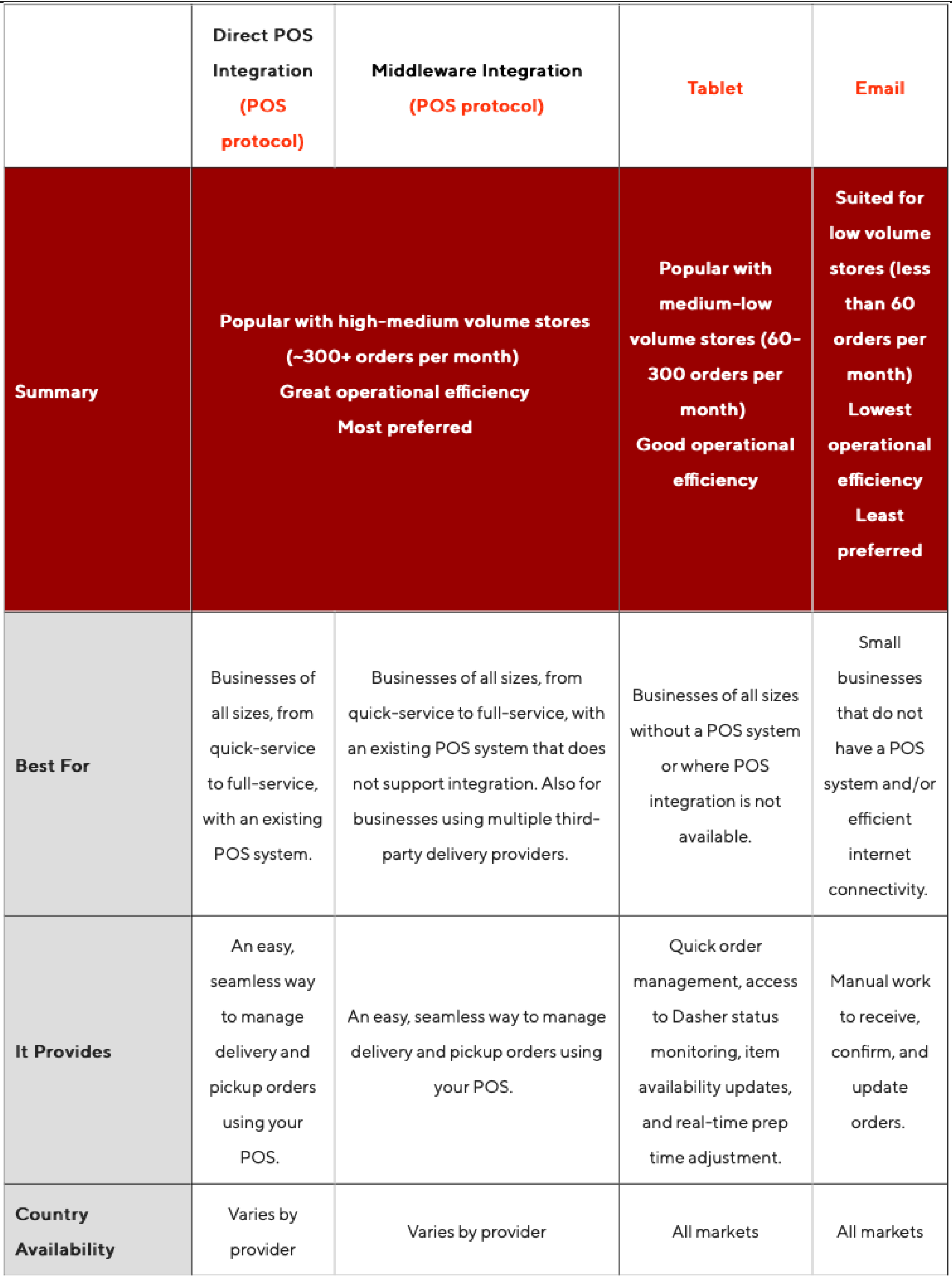
We use median in place of average to discard 1 bad delivery

Multi-Modes of Communication

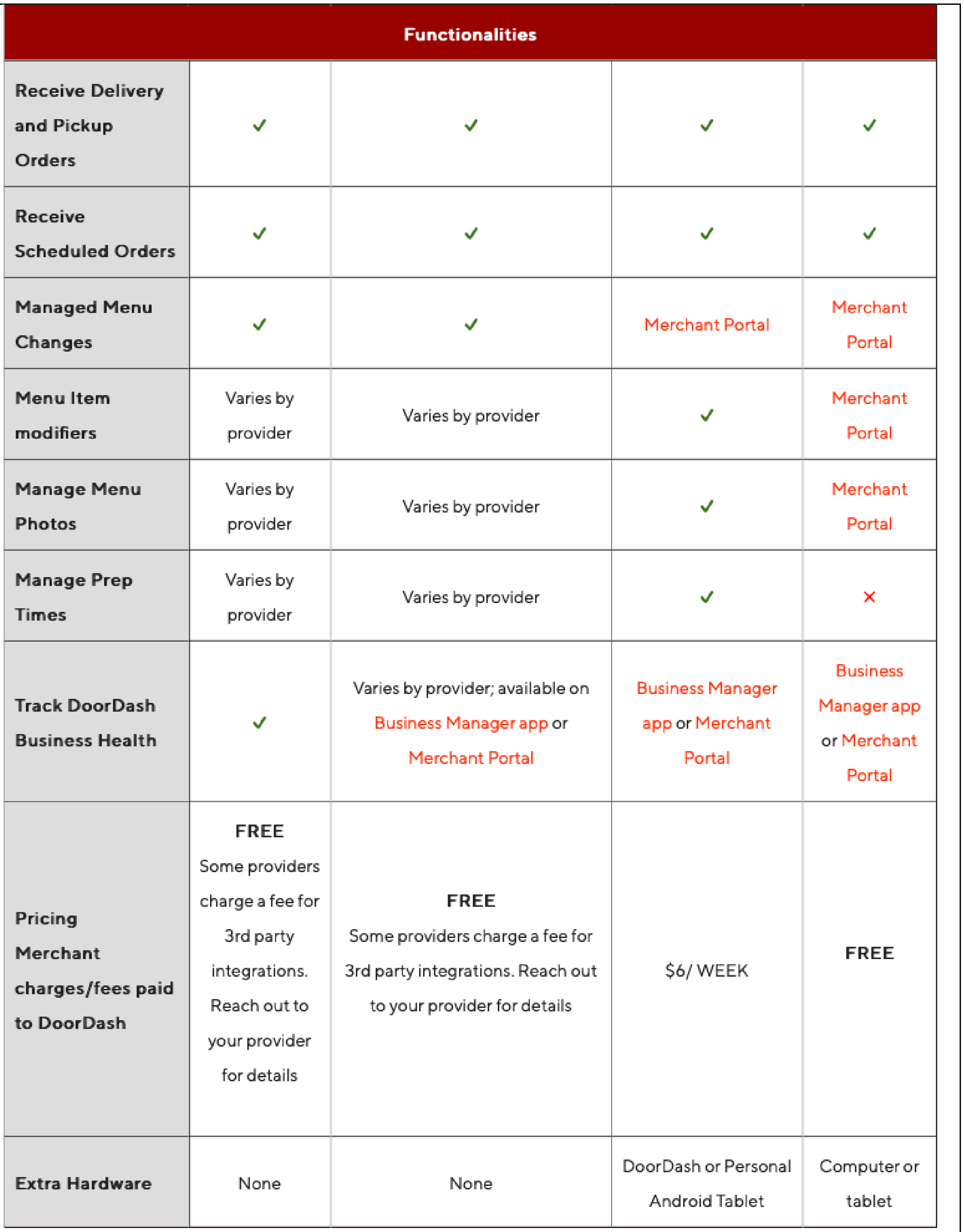
DoorDash affirms in the merchant support document “Which order protocol works best for your business” (see Exh 112) that DoorDash merchants/partners can receive orders through multiple modes of communication including:

- *“Your existing point-of-sale (POS) system via an integration*
- *A DoorDash tablet or your own Android tablet using the Order Manager app*
- *Email”*

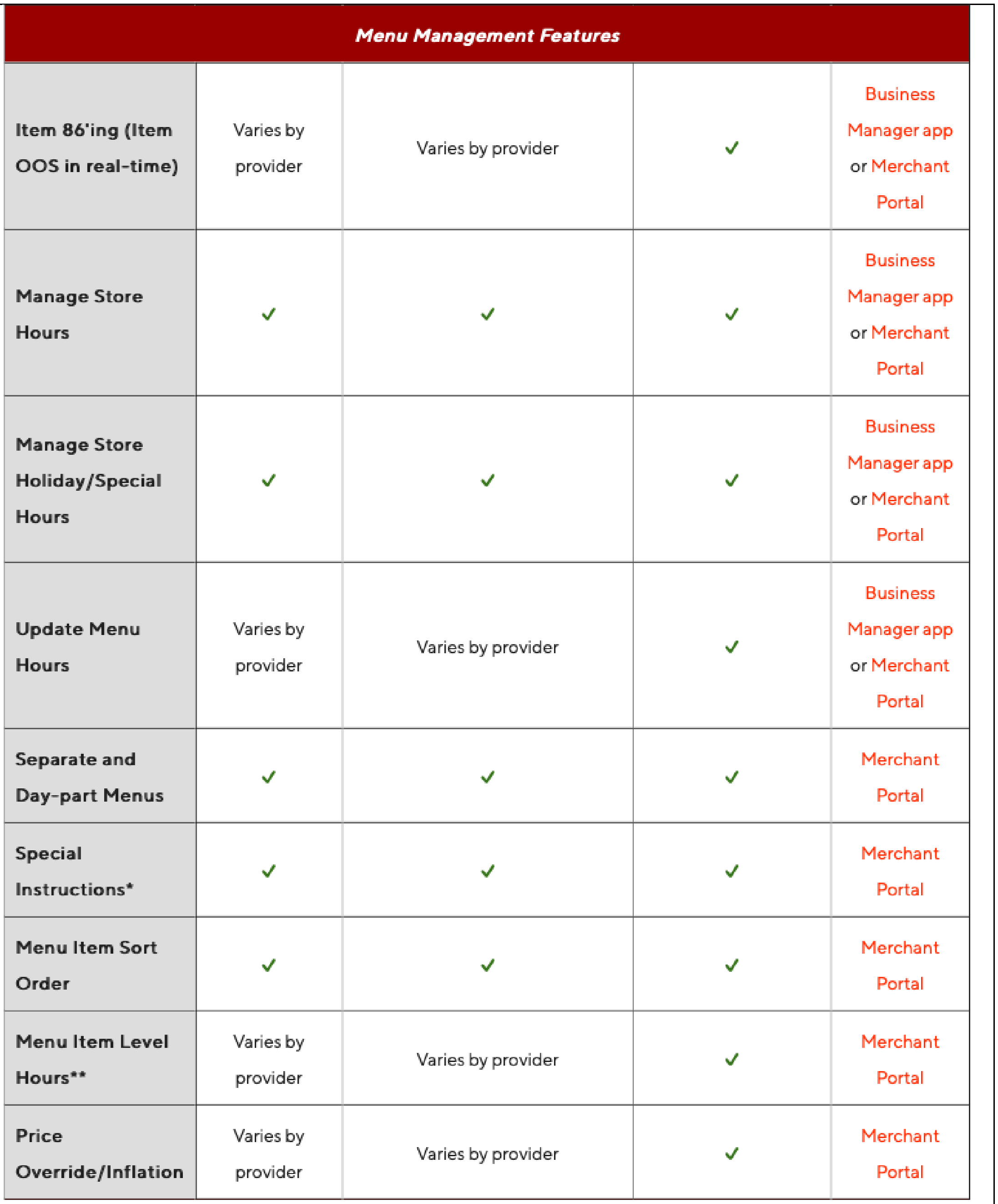
This document presents a table that specifies which mobile, tablet or web app is best to use for a given features. Below are screenshots of this specification (see Exh 112):



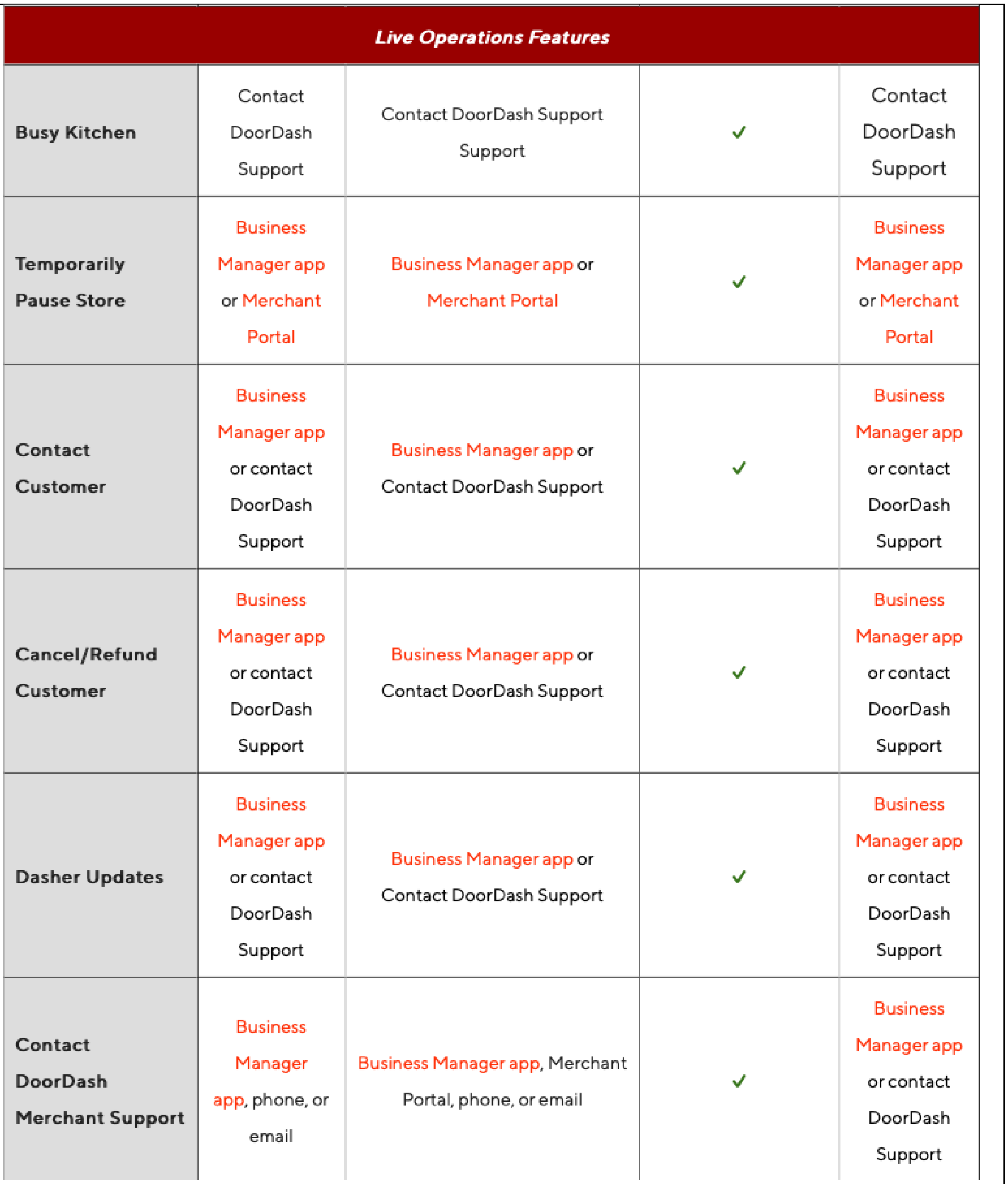
	Direct POS Integration (POS protocol)	Middleware Integration (POS protocol)	Tablet	Email
Summary	Popular with high-medium volume stores (~300+ orders per month) Great operational efficiency Most preferred		Popular with medium-low volume stores (60-300 orders per month) Good operational efficiency	Suited for low volume stores (less than 60 orders per month) Lowest operational efficiency Least preferred
Best For	Businesses of all sizes, from quick-service to full-service, with an existing POS system.	Businesses of all sizes, from quick-service to full-service, with an existing POS system that does not support integration. Also for businesses using multiple third-party delivery providers.	Businesses of all sizes without a POS system or where POS integration is not available.	Small businesses that do not have a POS system and/or efficient internet connectivity.
It Provides	An easy, seamless way to manage delivery and pickup orders using your POS.	An easy, seamless way to manage delivery and pickup orders using your POS.	Quick order management, access to Dasher status monitoring, item availability updates, and real-time prep time adjustment.	Manual work to receive, confirm, and update orders.
Country Availability	Varies by provider	Varies by provider	All markets	All markets



Functionalities				
Receive Delivery and Pickup Orders	✓	✓	✓	✓
Receive Scheduled Orders	✓	✓	✓	✓
Managed Menu Changes	✓	✓	Merchant Portal	Merchant Portal
Menu Item modifiers	Varies by provider	Varies by provider	✓	Merchant Portal
Manage Menu Photos	Varies by provider	Varies by provider	✓	Merchant Portal
Manage Prep Times	Varies by provider	Varies by provider	✓	✕
Track DoorDash Business Health	✓	Varies by provider; available on Business Manager app or Merchant Portal	Business Manager app or Merchant Portal	Business Manager app or Merchant Portal
Pricing Merchant charges/fees paid to DoorDash	**FREE** Some providers charge a fee for 3rd party integrations. Reach out to your provider for details	**FREE** Some providers charge a fee for 3rd party integrations. Reach out to your provider for details	$6/ WEEK	**FREE**
Extra Hardware	None	None	DoorDash or Personal Android Tablet	Computer or tablet



Menu Management Features				
Item 86'ing (Item OOS in real-time)	Varies by provider	Varies by provider	✓	Business Manager app or Merchant Portal
Manage Store Hours	✓	✓	✓	Business Manager app or Merchant Portal
Manage Store Holiday/Special Hours	✓	✓	✓	Business Manager app or Merchant Portal
Update Menu Hours	Varies by provider	Varies by provider	✓	Business Manager app or Merchant Portal
Separate and Day-part Menus	✓	✓	✓	Merchant Portal
Special Instructions*	✓	✓	✓	Merchant Portal
Menu Item Sort Order	✓	✓	✓	Merchant Portal
Menu Item Level Hours**	Varies by provider	Varies by provider	✓	Merchant Portal
Price Override/Inflation	Varies by provider	Varies by provider	✓	Merchant Portal



Live Operations Features				
Busy Kitchen	Contact DoorDash Support	Contact DoorDash Support	✓	Contact DoorDash Support
Temporarily Pause Store	Business Manager app or Merchant Portal	Business Manager app or Merchant Portal	✓	Business Manager app or Merchant Portal
Contact Customer	Business Manager app or contact DoorDash Support	Business Manager app or Contact DoorDash Support	✓	Business Manager app or contact DoorDash Support
Cancel/Refund Customer	Business Manager app or contact DoorDash Support	Business Manager app or Contact DoorDash Support	✓	Business Manager app or contact DoorDash Support
Dasher Updates	Business Manager app or contact DoorDash Support	Business Manager app or Contact DoorDash Support	✓	Business Manager app or contact DoorDash Support
Contact DoorDash Merchant Support	Business Manager app, phone, or email	Business Manager app, Merchant Portal, phone, or email	✓	Business Manager app or contact DoorDash Support

Furthermore, in the merchant support document "How do I receive orders with DoorDash?" DoorDash affirms (see Exh 113):

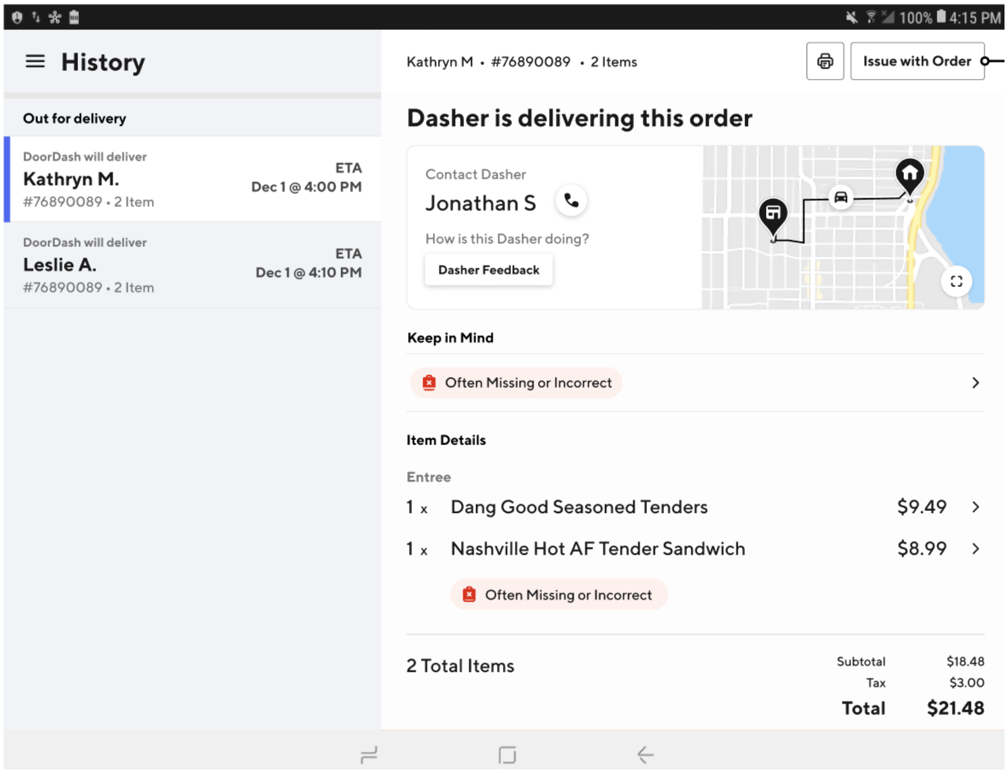
> *"If you would prefer orders to come through a tablet, all orders will come through DoorDash's Order Manager App on Android tablets.*
>
> - *With the tablet, you can see:*
> - *Sections for each order stage lifecycle to easily identify where an order is*
> - *Scheduled order timing when it appears in-app is changing (used to show up/print immediately)*
> - *Cancellations won't just disappear anymore*

- *Tags for scheduled orders, large orders, canceled orders, modified orders, customer pickup*
- *Item count per order*
- *Large/clearer map and Dasher location information*

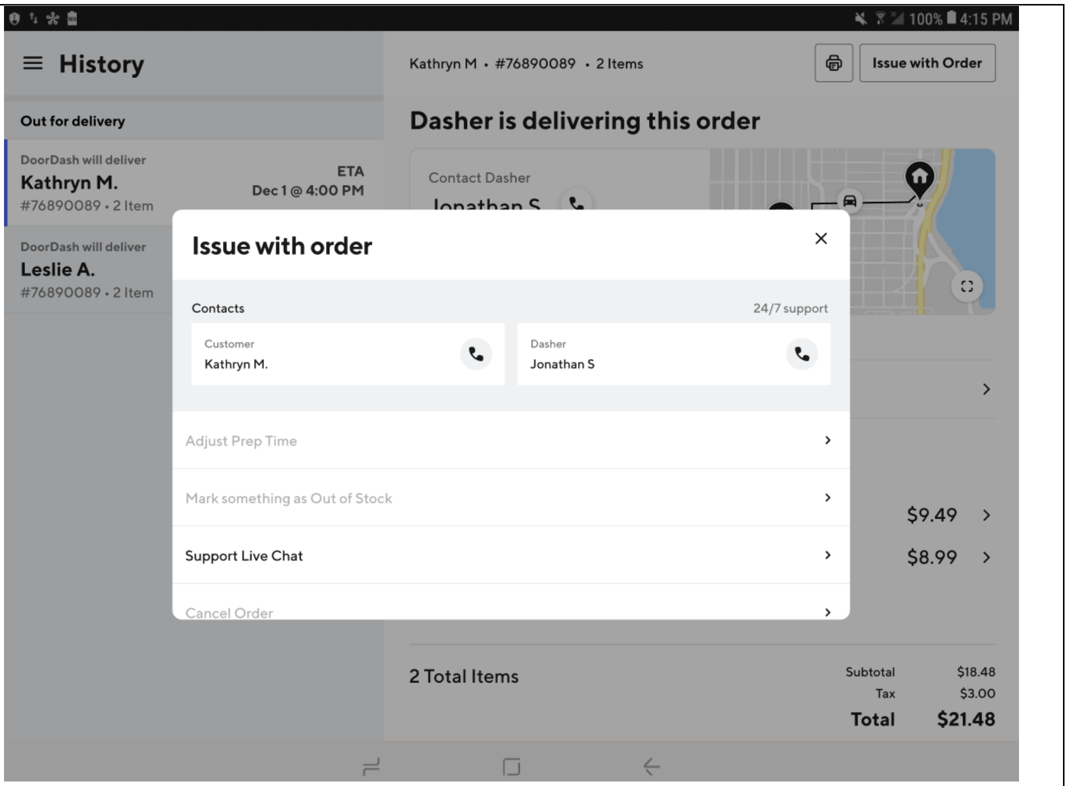
> ***You can receive orders by POS, email, or email/fax****. However, you will not be able to receive orders from phone+tablet or email+fax.*
>
> ***DoorDash can also place a follow-up automated call to ensure that all orders were received****."*

The DoorDash Support article "How can I contact the Customer or Dasher through the tablet" (see Exh 114) instructs the DoorDash merchant how to communicate with a Dasher (delivery driver) or Customer for an order that's in process or has been picked up, should any questions arise. According to the article, the merchant uses the tablet and:

> *"...On the Order History page, tap on the Issue with Order button in the top right corner."*



> *"Next, tap on either the Customer or Dasher that you would like to contact. "*



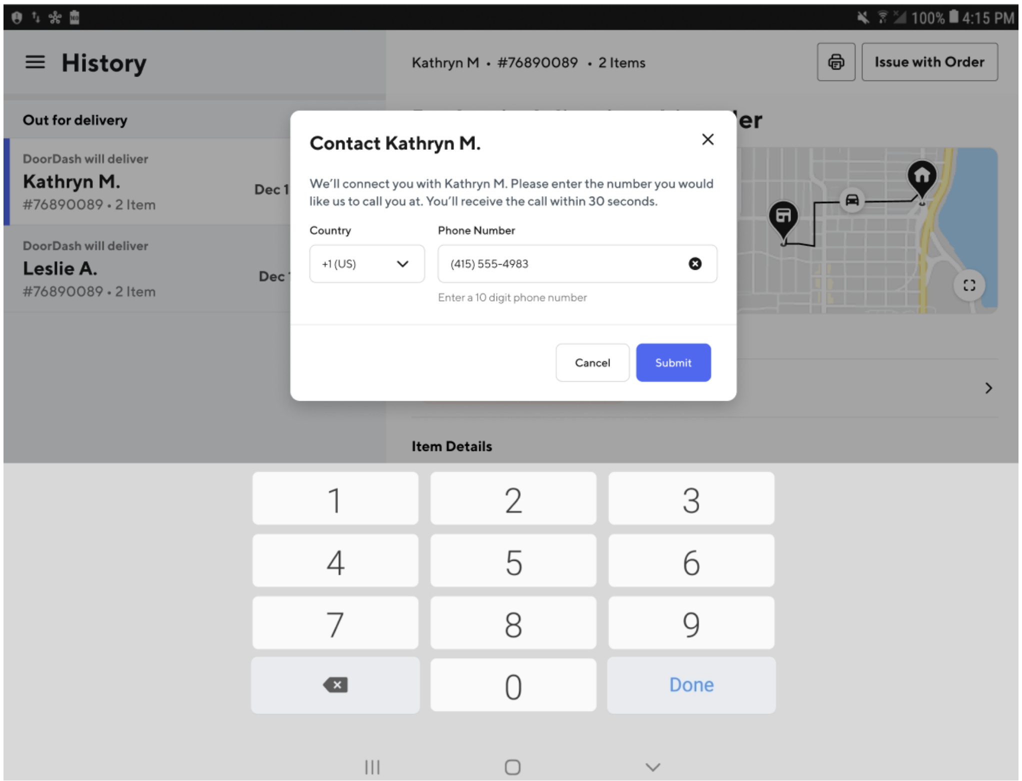
Issue with order

Contacts | 24/7 support

Customer: Kathryn M.

Dasher: Jonathan S

"Next, enter the phone number you would like to use to be connected to either the customer or Dasher. Tap Submit and we will call you on the number you enter within 30 seconds to connect your call!"



Contact Kathryn M.

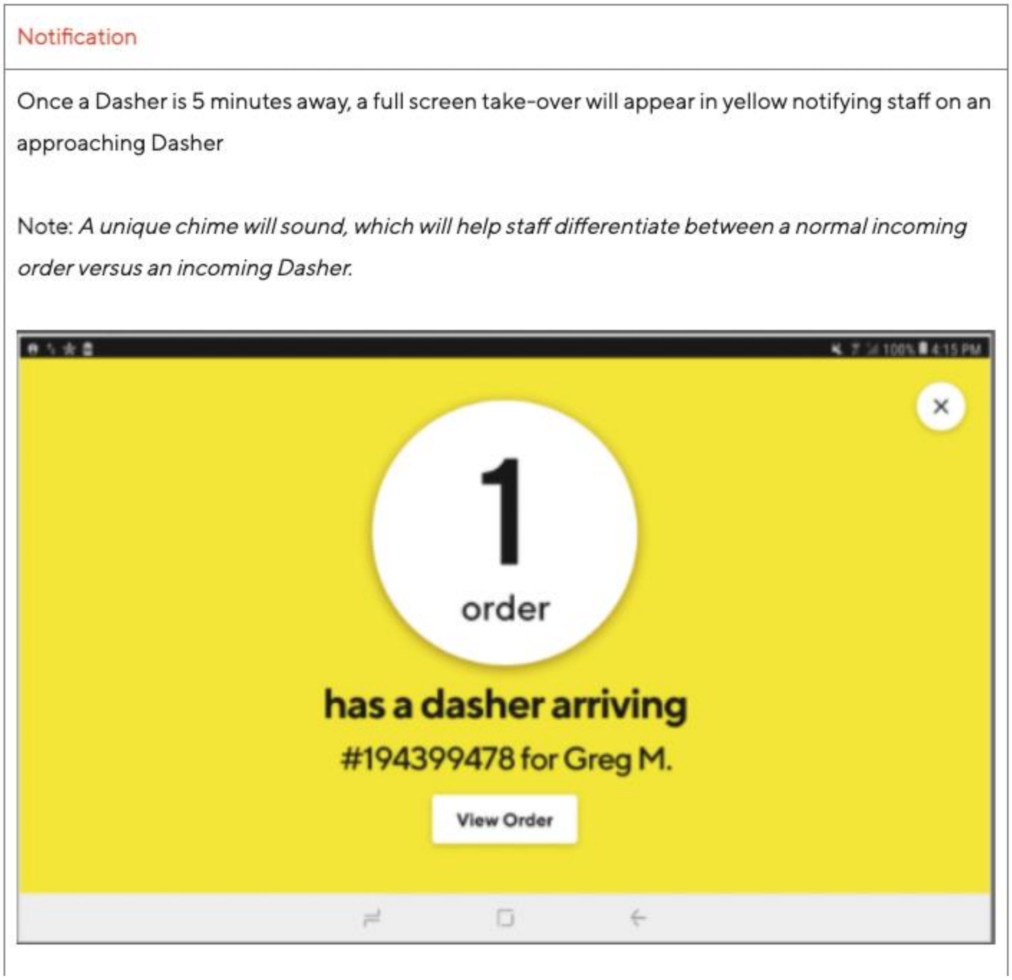
We'll connect you with Kathryn M. Please enter the number you would like us to call you at. You'll receive the call within 30 seconds.

Country: +1 (US)

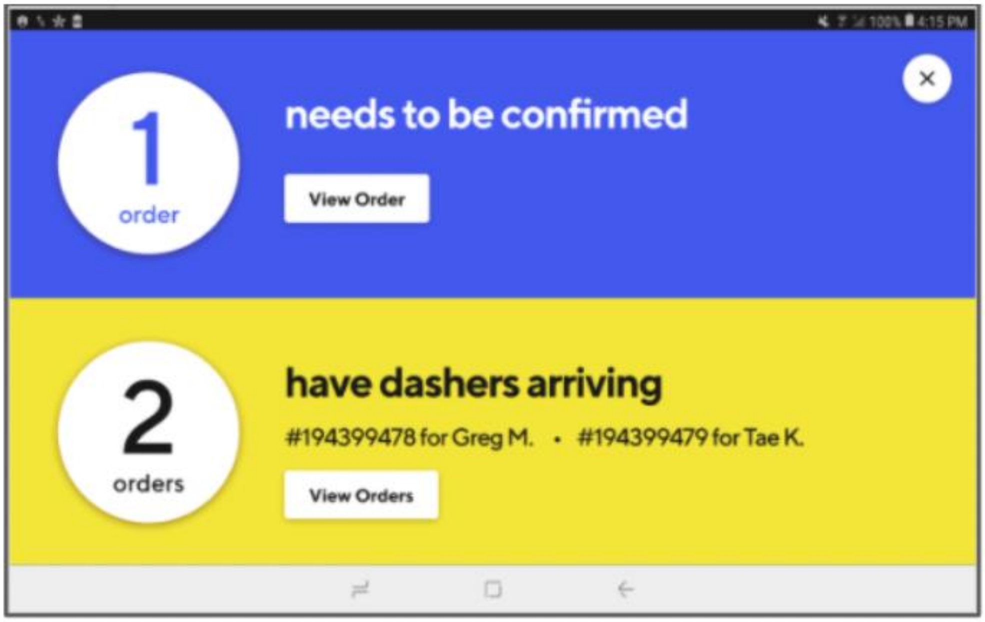
Phone Number: (415) 555-4983

Enter a 10 digit phone number

The DoorDash Merchant Support article *"How can I tell if my Dasher is arriving or waiting"* (see Exh 115), discusses how merchants receive real-time notifications on their DoorDash Tablet:

	"...when a Dasher is nearby to pickup an order! The new Dasher Arriving feature will send you a secondary chime and visual cue that will alert when a Dasher is 5 minutes away. With this feature, Merchants will now know exactly when to start preparing and bagging those final items (cold drinks, ice cream, fries, etc) right before a Dasher's arrival, preserving food quality and also reducing overall wait times!"  Notification Once a Dasher is 5 minutes away, a full screen take-over will appear in yellow notifying staff on an approaching Dasher Note: *A unique chime will sound, which will help staff differentiate between a normal incoming order versus an incoming Dasher.* 100% 4:15 PM × 1 order has a dasher arriving #194399478 for Greg M. View Order

If there are new orders and Dashers arriving at the same time, the screen will appear as below, and the chime for "new order" will alarm. You will also be able to see which orders have Dashers coming for them (Customer name(s) shown).



1 order

needs to be confirmed

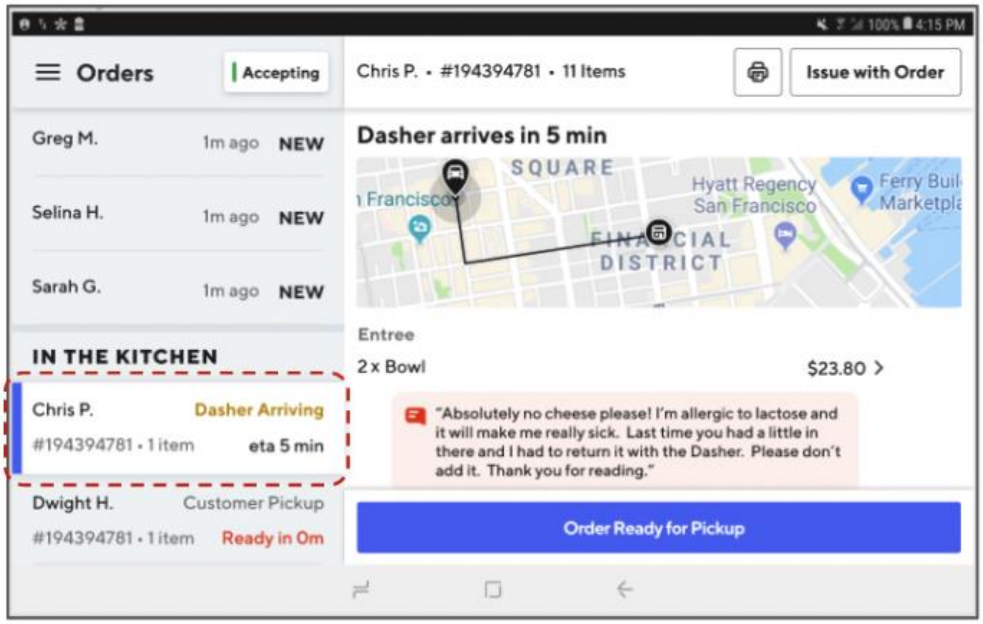
2 orders

have dashers arriving

#194399478 for Greg M. • #194399479 for Tae K.

Dasher Arriving Label

Within each order, there will be a Dasher Arriving label with eta x min shown, counting down until the Dasher arrives.



Orders | Accepting

Greg M.	1m ago	NEW
Selina H.	1m ago	NEW
Sarah G.	1m ago	NEW

IN THE KITCHEN

Chris P. Dasher Arriving
#194394781 • 1 item eta 5 min

Dwight H. Customer Pickup
#194394781 • 1 item Ready in 0m

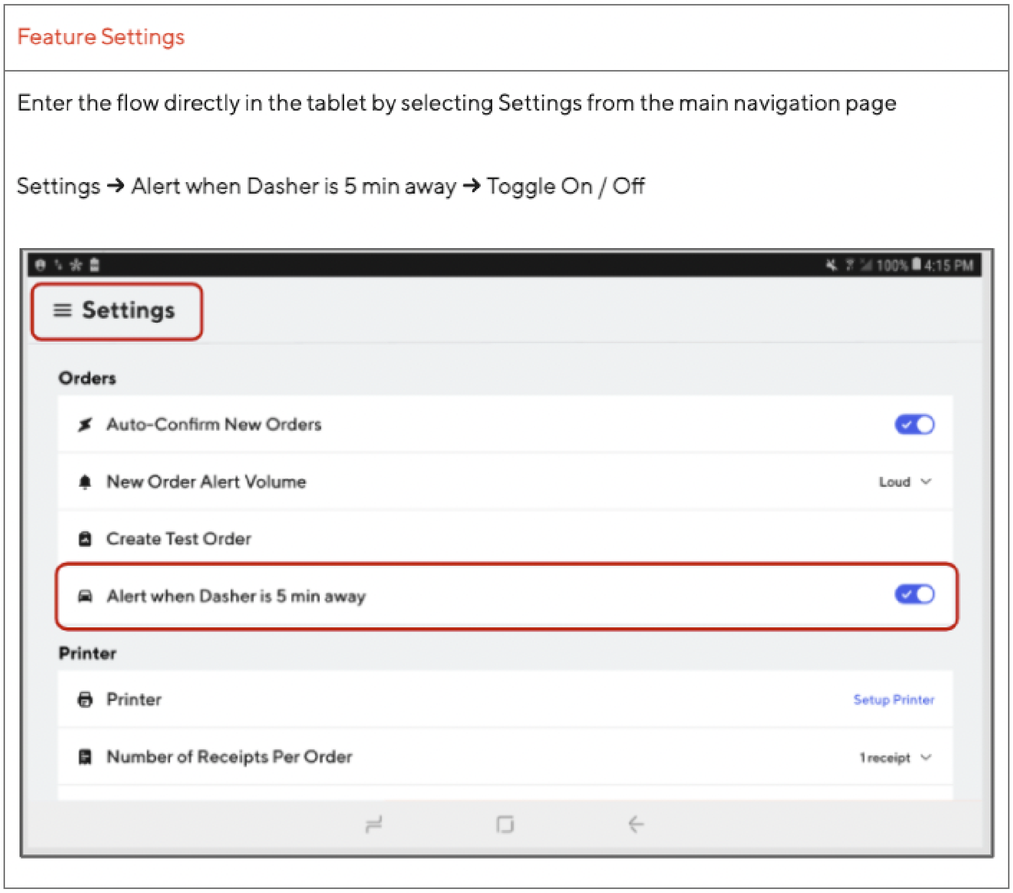
Chris P. • #194394781 • 11 Items

Dasher arrives in 5 min

Entree

2 x Bowl $23.80 >

"Absolutely no cheese please! I'm allergic to lactose and it will make me really sick. Last time you had a little in there and I had to return it with the Dasher. Please don't add it. Thank you for reading."



Feature Settings

Enter the flow directly in the tablet by selecting Settings from the main navigation page

Settings → Alert when Dasher is 5 min away → Toggle On / Off

≡ Settings

Orders

Auto-Confirm New Orders ●

New Order Alert Volume Loud

Create Test Order

Alert when Dasher is 5 min away ●

Printer

Printer Setup Printer

Number of Receipts Per Order 1 receipt

In the DoorDash merchant support article "Can I have a tablet and also still get orders through email/fax/phone calls" (see Exh 118), DoorDash states the following:

> *"[The Merchant] ...can receive DoorDash orders on a tablet and get orders through email or fax at the same time. As long as your tablet is logged in, you will continue to receive orders."*

DoorDash's Unified Chat Experience

The DoorDash engineering team stated in an engineering blog post, tiled **Building a Unified Chat Experience at DoorDash**, how they successfully integrated chat into their overall system, addressing the challenges and strategies employed to create a unified chat experience. Their implementation aligns with MFCCS as it provides a centralized system layer architecture enhancing communication between the web server and multiple wireless handheld devices, each operating on distinct mobile systems thus allowing customers to communicate with customer support and dashers. (See Exh 102)

DoorDash recognized the crucial need to address customer issues on a large scale, leading them to acknowledge the essential nature of a unified chat feature. Their initial challenge was a fragmented chat system, which was scattered across various user groups and platforms, causing duplicated efforts and central adoption of best practices to be challenging.

By leveraging the architecture MFCCS, DoorDash could centralize its chat functionalities, allowing for seamless interactions between consumers, Dashers, and merchants. The MFCCS would facilitate the web server's ability to communicate with diverse handheld devices, presenting mobile-compatible versions of the hospitality application. This integration is crucial for enabling user-initiated actions and subsequent selection of choices directly from the touchscreens of various devices, fostering a multi-modal, multi-protocol communication environment.

According to the engineering article, a significant objective for DoorDash was to streamline their support processes through automation, allowing customers to retrieve information through the app itself, thus minimizing the need for human support interaction. They aimed to develop a single chat support platform that would ensure consistent user experiences across different platforms and facilitate the reuse of components.

In building this unified platform, DoorDash created a single chat implementation that functioned for both customer support and communication between consumers and Dashers. This system, powered by Sendbird, was directly integrated into the consumer and Dasher apps, providing a uniform experience across all DoorDash chats and allowing for shared enhancements across different chat flows.

The backend system was strategically designed with multiple layers, distinguishing between internal services and third-party functionalities such as chat natural language processing. This separation expedited development by eliminating the need to create distinct, non-essential features.

Integration with their Decision Engine platform was another crucial step, which enabled operations to be automated, such as order updates, issuing credits, and personalized messaging. This significantly decreased the dependency on manual operations. DoorDash also carefully monitored several key performance indicators, including feedback from agents and customers, error rates, customer satisfaction, average handle time, first contact resolution, and manual tasks per order.

The outcomes of this updated chat support system, according to the article, were noteworthy, with reduced escalation rates and improved customer satisfaction. The automation led to a decrease in manual interactions per delivery, and customers were able to solve their problems more quickly, sometimes without the need for manual assistance. The time needed to implement additional automation was also reduced, owing to the common platform processing. Moreover, the common UI layers ensured that the chat feature was seamlessly integrated into the applications (iOS and Android), providing a consistent brand experience across all platforms.

The advancements DoorDash has made in their chat system encapsulate the essence of the Middleware/Framework Communications Control Software (MFCCS) described in the patent claim. By creating a unified chat platform that seamlessly integrates with multiple user interfaces and operating systems, DoorDash has effectively embodied the centralized system layer architecture that MFCCS envisions. Their backend, which differentiates between core and third-party functionalities, mirrors the multi-layered approach of MFCCS, allowing for efficient, scalable communication across various devices. Moreover, the phased rollout and meticulous performance monitoring align with the adaptive, intelligent operational capabilities that MFCCS aims to provide. This demonstrates a real-world application of the patent's claim, showcasing a system that not only supports multi-mode communication but also enhances user experience and operational efficiency in a dynamic hospitality market.

	The accused instrumentality meets this limitation under the doctrine of equivalents because the accused instrumentality performs substantially the same function, in substantially the same way to achieve substantially the same result. For example, the claim language pertains to the integration of at least one web server network with the MFCCS in a hospitality scenario. This integration enables the network to execute hospitality application task requests with handheld users using multiple communication modes. Notably, the system can seamlessly transition to alternative hospitality entities when inventory unavailability is detected. This operational efficiency is achieved through rule-based intelligence, preventing repeated attempts with unresponsive entities. As a result, the interconnected web server network conserves computing resources and reduces computing time by avoiding futile communication efforts with known-to-fail hospitality entities, addressing the core elements of the claim language effectively.