



Appendix 2-A Toast System Requirements

Site Readiness Guide



Introduction

Welcome to the Toast family! Your restaurant location must be properly prepared to ensure a smooth and seamless Toast installation. This guide outlines the site requirements for your restaurant prior to the implementation of your system.

Since Marriott plans to be self-managed, please review our Self Managed Network requirements.

Since Marriott will be processing through FreedomPay, each property will need to purchase FreedomPay devices directly from FreedomPay, or verify with Toast that the quantity of existing devices is adequate.

To avoid cancellation fees and ensure a smooth installation or transfer to Toast POS, please follow this guide closely. It will be covered during your Site Survey with your Onboarding Consultant and they will make sure to provide you time for questions. Please note that *Toast does not provide mounting or cabling services* so that cost is not included in your implementation quote. You may need to consult or hire a third party to prepare your restaurant if you're not comfortable doing this yourself.

If you have any additional questions about networking requirements for Toast, reach out to your Onboarding Consultant. Please also feel free to review the video tutorial in this link: <https://central.toasttab.com/s/article/Site-Readiness-Guide>

Site Readiness Checklist

Toast will provide software and hardware support to the furthest extent possible without having access to the Property's network settings. Marriott will be responsible for troubleshooting, maintaining, and managing the network, which may include such things as terminal, print routing, and network functionality. Toast will not have access to Marriott's network dashboard and will not adjust any configuration settings related to the network in the event that it may affect other devices or settings managed by their MSP.

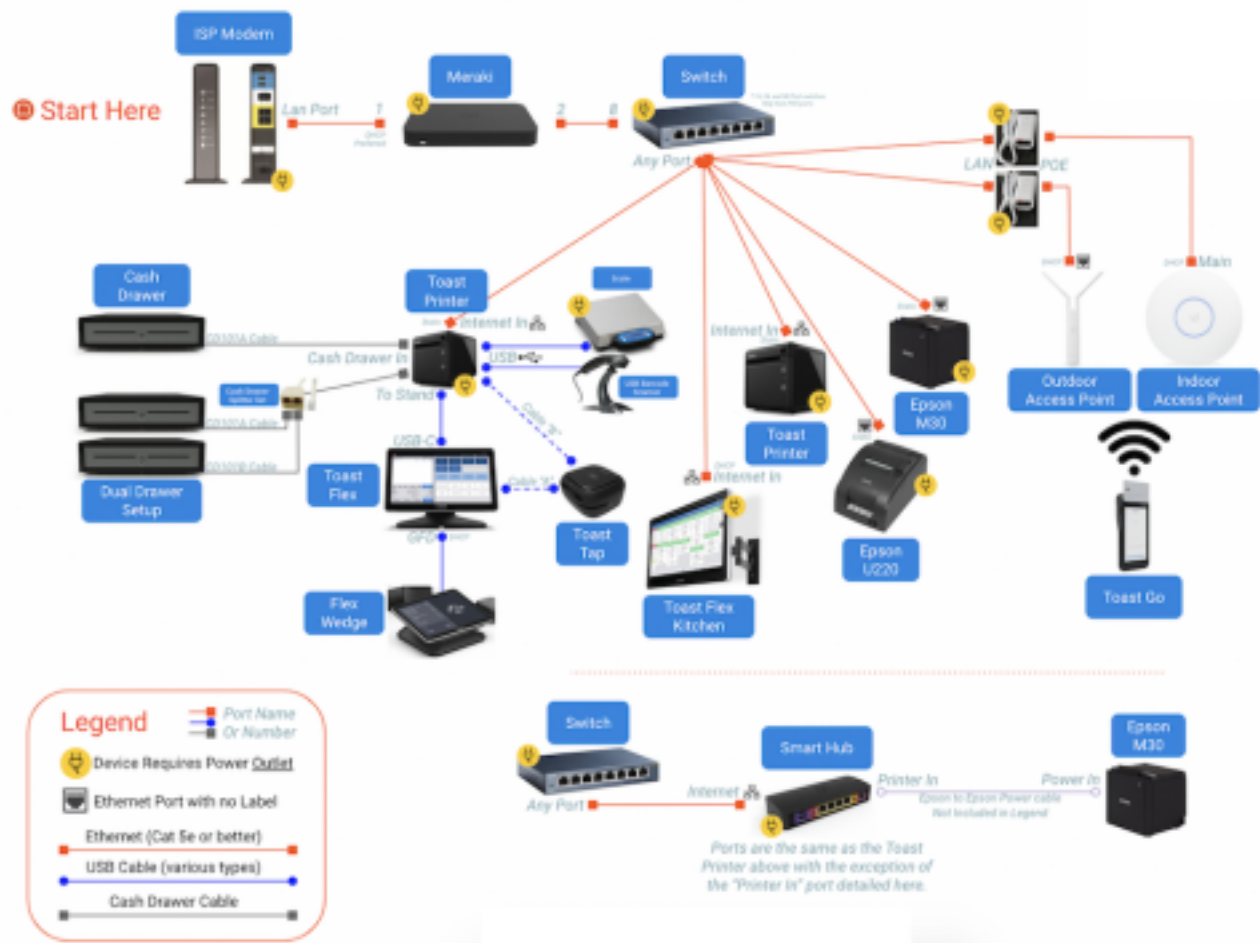
It is imperative that the Technician have the necessary information and/or access to a Marriott IT/MSP representative during the installation process to avoid delays or cancellations. Toast will rely on Marriott for the network infrastructure and to ensure optimal performance of the Toast POS system.

Marriott properties must submit their firewall request four to six weeks prior to going live on Toast. Marriott properties must also provide their PMS IP Address and Ports to Toast 4 weeks in advance of their go live. For properties that require new FreedomPay payment devices, orders will be fully managed between Marriott and FreedomPay and must be placed 4 - 6 weeks prior to go live.

Your location is ready for a successful Toast install when the following is true:

- ☐ You've procured a broadband internet connection. For most properties, this will be a landline internet service (Cable or Fiber. DSL is not recommended).
- ☐ Toast requires that all Ethernet cables be rated at 100MBs or higher. You can run the Toast devices on Ethernet cables rated between 10MBs and 100MBs, although it is NOT recommended. Cables rated between 10MBs and 100MBs often lead to system inconsistencies.
- ☐ The internet modem has a designated port for Toast (single port modems are not recommended). The Toast network should be as isolated as possible containing only Toast hardware for PCI Compliance and network stability.
- ☐ Network cabling is run and terminated to each place where a Toast terminal, printer, kitchen display screen, or kiosk will be located. All wiring should be Cat5e or higher cabling and properly terminated in the EIA/TIA568B wiring standard.
- ☐ Network cabling should be home run back to the area near the internet modem (ex: cabling from your bar to your kitchen isn't recommended. Cable should go from modem to kitchen and modem to bar).
- ☐ Power is available within 6 ft of each place where a Toast terminal, printer, kitchen display screen, and kiosk will be located. Access points are installed in the ceilings or on the outside of the building.
- ☐ Wall mounts are installed (or ready to be installed).
- ☐ The property is NOT in active construction that may impede the installation. All heavy construction is complete and no additional construction will be necessary that could compromise the hardware being installed or cause it to be moved.
- ☐ The bar(s)/counter(s) are finished and holes are cut to accommodate the terminals' cabling. If applicable, all countertops are installed at service stations.

Toast Best Practice Networking Diagram



Internet Connectivity Requirements

The internet requirements for the Toast installation are as follows:

- A broadband internet account must be established prior to the Toast installation.
 - Proper internet connectivity equipment must be purchased and installed ahead of your installation.
- Cabling must be run from your internet connection point to the different terminals, printers, and Access Points.
 - Toast prefers that the ISP modem is configured as DHCP. However, if your modem is configured with Static IP addresses, you will need to provide the following information to your technician during your installation day: Static IP Address for Toast, Default Gateway, Subnet Mask, DNS 1 and DNS 2.

This video reviews the site requirements for wireless access points and Wi-Fi coverage in your restaurant, in order to support our Toast Go handheld devices. [Install Site Readiness: Requirements for Wireless Connectivity](#)

Ethernet & Power

Prior to system installation, your site must be cabled properly to support the Toast terminals, printers, and access points. Toast recommends that the following only be connected via Ethernet cabling:

- Terminal & Printer setups (server, bar, cashier stations)
- Standalone Printers (both receipt printers and kitchen printers)
- Kitchen Display Screens
- Access Points (in ceiling)
- Kiosks

The only Toast devices that support wireless connectivity are the Toast Go's.

Toast requires that all Ethernet cables be rated at 100MBs or higher. You can run the Toast devices on Ethernet cables rated between 10MB and 100MBs, although it is NOT recommended. Cables rated between 10MBs and 100MBs often lead to system inconsistencies. Any cable rated below 10MBs should not be used. If Toast is performing the installation, we will not install a device on a cable rated below 10MBs.

Home Runs

A single Cat5e or Cat6 cable must be run from the desired location of each of the above pieces of hardware to the location of the Internet modem or DEMARC. Terminal cable drops need to be terminated with a RJ45 FEMALE jack to the T568B wiring scheme, ideally into a wall plate or a surface mount box. Six to ten feet of slack should be left on each end of each cable to accommodate last minute adjustments. Each cable must be labeled with a matching identifier on each end. Use a different identifier on each cable to facilitate troubleshooting.

The home runs next to the Internet modem or DEMARC should be terminated to a patch panel as shown in the image below (left) for organization and labeling purposes. However, if only a few cables are being run, they can be terminated to a wall mounted plate as shown in the image below (right). Or in some cases the Internet modem might not be located in a networking area (ex: under the counter, host station, up on the shelf). In this case, the cables should terminate near the modem and just be labeled as clearly as possible (ex: POS1, POS2, Kitchen, KDS, Dining Room AP, etc).



Cabling Organization

To align with PCI compliance, Toast's network should be isolated. Only Toast hardware should be connected to the Toast Router/Switch. It will be the responsibility of the restaurant to keep Toast's network isolated. If you have purchased Onsite installation, our technicians will assist with organization as much as possible, however, they can only organize Toast's network. If the restaurant's other systems are disorganized, this may impede Toast's ability to install your system.

If your existing cabling is unorganized, it can lead to a number of challenges:

- Increased installation times not accounted for in your quote
- Difficult troubleshooting with Toast Support and other service providers
- Communication problems leading to system instability

If your cabling is disorganized, we can recommend contractors to provide help with organizing your network.

Electrical/Power

The electrical requirements for the Toast installation are as follows: • There must be one standard outlet within six feet of each terminal or terminal bundle. Unless you've purchased a scale which requires its own power outlet. • There must be a standard outlet within six feet of each printer.

- Access Points do not need an outlet in the ceiling. They operate on PoE (power over ethernet) so they'll need an available outlet by the Modem/DEMARC.

While Toast does not require isolated ground circuits at this time, it is always a best practice to avoid plugging terminals into any outlet with appliances such as microwaves, refrigerators or blenders. Motorized devices cause power fluctuations that can negatively impact Toast devices and lead to hardware instability.

Physical Alterations

Ladders/Ceilings

The Toast technicians do not travel with ladders. We require that customers provide ladders or step stools if necessary. Common installation activities that require ladders or step stools are:

- Access Point installation
- KDS installation
- Network installation

Check out Best Practices for Installing Wireless Access Points for some great pointers when installing your Access Point(s).

Counter Tops

If terminals or terminal bundles will be placed on counters or bars, especially customer visible surfaces, then 2-3 inch holes must be cut into the surfaces prior to installation to allow the cables to run underneath. These holes must be located within 2 feet of the location of each terminal. Keep in mind that a cash register may be placed directly underneath the terminal. Make sure not to drill holes too close to the exact location of the terminal. Check out this Product Spec Guide for more information on your hardware.

Wall Mounting

Toast requires that all wall mounts be installed by customers prior to installation. You can purchase and install any wall mount that meets the VESA standards. If you have purchased a Kitchen Display Screen, you will receive a wall mount with your hardware. You are still required to install it. Learn more about mounting your KDS Wall Mount.

Construction

Toast does not recommend installing your POS hardware while there is, or will be, active construction.

Active Construction means heavy construction is not fully complete; (ii) construction machinery may be in use; (iii) construction is required that could compromise the hardware or cause it to be moved; (iv) Toast employees need to wear hard hats or other safety gear; or (v) any other construction that may put Toast employees in danger.

Here are common problems we find with systems installed before or during construction:

- Dust from the construction gets into the terminals or handhelds and breaks them. Hardware broken by dust will not be replaced.
- The Toast network setup is interfered with as your other contractors are working in the restaurant space. This leads to increased installation hours to fix any problems that may arise. Problems can be something as basic as a contractor unplugging a network device to charge their cell phone or something more complicated like a contractor re-working the whole network to accommodate a security or music system. If Toast has to investigate or correct the network before your implementation date, it may lead to implementation overages.

Customer Experience Survey

At the conclusion of the onboarding process, the Pilot Property POC's will be asked a series of questions regarding their experience & satisfaction with the Toast Onboarding and Installation team.

Glossary

| Term | Definition |
|-------------------------|---|
| Broadband Internet | The high-speed internet connection you pay for from your cable or telephone provider. |
| Cat5e/6 Ethernet Cables | The network cabling that connects the Toast devices. <ul style="list-style-type: none">● Cat5e cables are typically 24 gauge twisted pair wires, which can produce a Gigabit network at distances up to 328 ft.● Cat6 cables give you the ability to have a 10 Gigabit network. The 10 Gigabit network on Cat6 cables is limited to 164 ft. After that distance its ultimate speed is 1. |
| Terminating Cables | Terminating cables generally refers to ensuring the Ethernet cables in your walls are attached to wall plates with female connections. Toast requires RJ45 connections using T568B wiring scheme. |
| Switch | A device that connects devices together on a computer network. It uses packet switching to receive, process, and forward data to the destination device. |
| Access Point | In a wireless local area network, an Access Point is a station that transmits and receives data. Each Access Point can serve multiple users within a defined network area. As people move beyond the range of one Access Point, they are automatically handed over to the next one. |
| Cable Drop | A connection point in a network. Cable drops are typically wall outlets with an Ethernet jack that a computer or other network device can plug into. |

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|------------------------------|---|
| dBm (decibel-milliwatt) | An abbreviation for the power ratio in decibels (dB) of the measured power referenced to one milliwatt (mW). DBm is an absolute measure of signal strength relative to electrical power level. |
| VLAN | A group of devices on one or more LANs that are configured to communicate as if they were attached to the same wire, when in fact they are located on a number of different LAN segments. Because VLANs are based on logical instead of physical connections, they are extremely flexible. VLANs are typically used with larger networks where traffic needs to be. |
| Internet Modem vs. Router | <p>The two major components in a small computer network are a modem (cable or DSL) and a wireless router. The router is wired to the modem, and the modem is wired to the cable company's coaxial cable or the telephone company's DSL phone line.</p> <p>The modem establishes and maintains the connection with the Internet provider's service and converts the signals to and from the router appropriately. The router forwards traffic destined for the Internet to the modem, while keeping internal traffic (computer to computer, computer to printer, etc...) from leaving the network.</p> <p>Cable modems typically provide some routing capabilities, but the Toast system requires a separate routing device.</p> |