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# 1 HP Direct Connect overview

HP Poly Direct Connect, introduced with Poly VideoOS 4.7, removes the need to sign in to both the Poly VideoOS system and the Poly touch controller.

With HP Direct Connect, Microsoft Teams runs only on the Poly VideoOS system, and the Poly touch controller acts as a direct, local control surface for that system.

With HP Direct Connect:

- Microsoft Teams runs only on the Poly VideoOS system and not on the Poly touch controller
- The Poly touch controller does not require a separate Microsoft Teams sign-in
- Pairing and control occur locally over the network, not through the cloud
- The Poly touch controller behaves like a directly connected control panel, similar to a USB-connected device, while still operating over Ethernet.

From an end-user perspective, there is no visible difference between HP Direct Connect and previous pairing architectures:

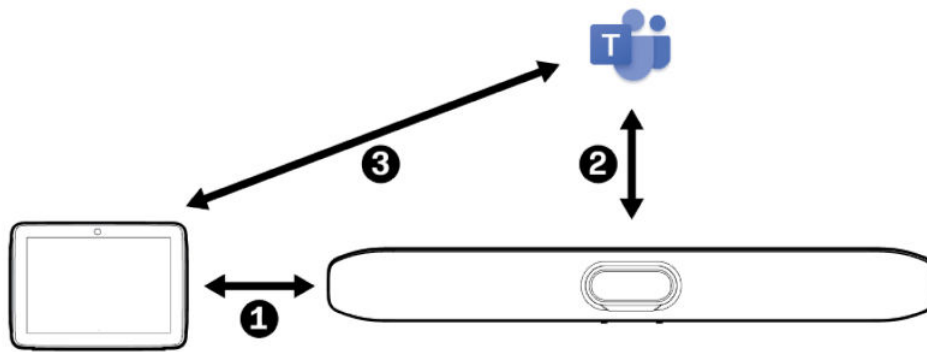
- The Microsoft Teams user interface looks the same
- Meeting controls and room behavior are unchanged
- Users do not need additional training

All improvements are architectural and operational, not user-facing.

## **Microsoft Teams app-based pairing mode**

Microsoft Teams app-based pairing mode is the traditional Microsoft Teams App Based Pairing Mode. This method uses the Poly Modular Room protocol for hardware-level pairing and requires Microsoft Teams to be installed on both the system and touch controller for software-level pairing.

Microsoft Teams app-based pairing requires the touch controller and the Poly VideoOS system to both log in to Microsoft Teams and then pair through the cloud. This pairing model requires additional setup and login during the out-of-box process, management of the Poly touch controller device through Intune Management, and additionally managing the Microsoft apps and APKs loaded to the TC to make sure they are aligned with the Poly VideoOS system.



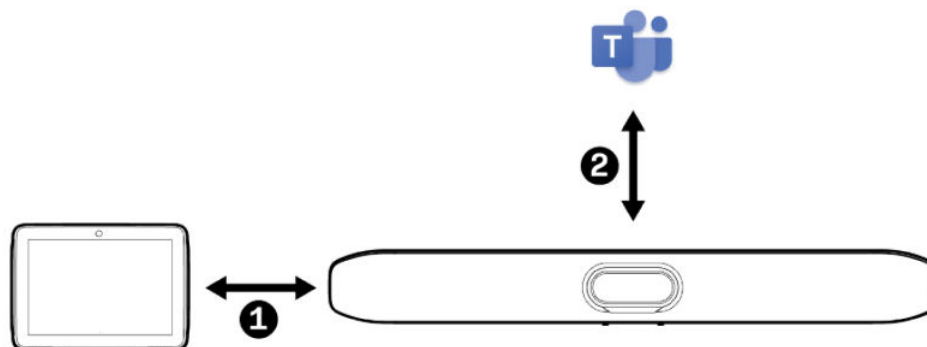
**Table 1-1** Microsoft Teams app-based pairing mode

| Item |                                      |
|------|--------------------------------------|
| 1    | Modular room hardware-level pairing. |
| 2    | Microsoft Teams software pairing.    |
| 3    | Microsoft Teams software pairing.    |

## HP Direct Connect for Microsoft Teams

HP Direct Connect uses the Poly Modular Room Protocol for hardware level pairing and software level pairing. The touch controller communicates with the front of room system like a USB connected touch panel and only the front of room system must login to Microsoft Teams.

This simplifies the out of box process, management, and network requirements for the Poly touch controller along with removing the requirements for Intune management, Microsoft APP's and APK's to be updated on the Poly touch controller and minimizes the points of failure resulting in device sign outs.



**Table 1-2** HP Direct Connect for Microsoft Teams

| Item |                                      |
|------|--------------------------------------|
| 1    | Modular room hardware-level pairing. |
| 2    | Microsoft Teams software signaling.  |

# HP Direct Connect Poly VideoOS system Microsoft Teams

The following table outlines the differences between the previous Microsoft Teams pairing architecture and the HP Direct Connect pairing architecture.

**Table 1-3 Out of box management**

| Out of Box and Management                                               | Microsoft App Based Pairing | HP Direct Connect |
|-------------------------------------------------------------------------|-----------------------------|-------------------|
| Microsoft Teams Apps and APK's run on Poly touch controller             | Yes                         | No                |
| Microsoft Teams Apps and APK's must be managed on Poly touch controller | Yes                         | No                |
| Microsoft Teams Apps and APK's Must be managed on Poly VideoOS system   | Yes                         | Yes               |
| Poly touch controller must be separately signed in to Microsoft Teams   | Yes                         | No                |
| Microsoft Teams Login required with Poly VideoOS system device          | Yes                         | Yes               |
| Additional Microsoft Teams pairing required                             | Yes                         | No                |
| Microsoft TAC/Pro Portal Firmware Management                            | Yes *                       | Yes *             |
| Microsoft TAC/Pro Portal Visibility                                     | Yes                         | Yes               |
| Microsoft Intune Management of Poly touch controller device             | Yes                         | No                |
| Microsoft Intune Management of Poly VideoOS system device               | Yes                         | yes               |

\* You can manage software through Poly Lens or Microsoft Management systems

**Table 1-4 Network requirements**

| Network Requirements                                                                 | Microsoft App-Based Pairing | HP Direct Connect |
|--------------------------------------------------------------------------------------|-----------------------------|-------------------|
| Poly touch controller requires access to the internet                                | Yes                         | Yes ***           |
| When proxy is used, Poly touch controller must pass through Proxy                    | Yes                         | Yes ***           |
| When Proxy is used on Poly VideoOS system, Poly touch controller requires a PAC file | Yes **                      | Yes**             |
| Poly touch controller requires special Firewall rules                                | Yes                         | Yes ***           |
| Poly touch controller requires direct network access to Poly VideoOS system device   | Yes                         | Yes               |
| Poly touch controller must be on the same subnet as the Poly VideoOS system device   | Yes                         | Yes               |
| Poly touch controller supported over LLN (Studio Net)                                | No                          | No                |

\* You can manage software through Poly Lens or Microsoft Management systems

\*\* If you use a proxy network, you must use a PAC file to enable direct communication between the Poly touch controller and Poly VideoOS system device.

\*\*\* Poly touch controller devices must have access to the internet Poly VideoOS system software updates through Microsoft TAC or Poly Lens. Alternatively, you can host a local FTP server to update your system and touch controller.

# HP Direct Connect deployment

Initial deployment of the Poly touch controller for Microsoft Teams defaults to the HP Direct Connect model.



**NOTE:** For out-of-box set up, if you choose to deploy Teams Rooms with the Microsoft app-based pairing you'll need to change the settings in the Poly VideoOS system web interface.

Follow the standard out-of-box procedure to set up your system. Make sure the Poly touch controller and Poly VideoOS system are both connected to the same local subnet and can communicate.

Once the initial pairing is completed and you choose Teams as the provider, the system reboots and starts the Microsoft Teams Rooms setup process. Set up is completed from the Poly touch controller interface

The system displays the note, "See console for device setup". The Poly touch controller displays the options to login and register the system with Microsoft Teams.

## Enable HP Direct Connect

Use HP Direct Connect to allow the Poly touch controller to share a Microsoft Teams sign in with the Poly VideoOS system.

Enabling HP Direct Connect restarts the Poly VideoOS system and Poly touch controller.

1. Sign in to the system web interface.
2. Go to **General Settings > System Settings** and enable **Enable HP Direct Connect**.

## Poly touch controller management with HP Direct Connect

With HP Direct Connect, once your system is deployed and registered, you can manage your room solutions using the same management tools as before, including Microsoft TAC/Pro Portal and Poly Lens.

Continue to manage your Poly VideoOS system using Microsoft TAC/Pro Portal or Poly Lens.

The Poly touch controller does not register with Microsoft Intune and does not appear as a separate touch controller in Microsoft TAC. Instead, it appears under **Peripherals** as *Touch Console Recording Display*.

### Behavior if the Poly touch controller is disconnected

If the Poly touch controller is not connected, room controls are displayed on the primary room display. Microsoft TAC and Pro Portal do not report an error when the touch controller is disconnected. In Poly Lens, the Poly touch controller is shown as offline, and this status can be used to trigger notifications.

### Poly Touch controller software updates

Poly VideoOS and Poly TCOS software updates for the Poly touch controller and the Poly VideoOS system follow standard software update processes. Updates can be managed through Microsoft TAC, Poly Lens, or a locally hosted FTP server.

## HP Direct Connect security

HP Direct Connect incorporates security at the core of the architecture.

HP Direct Connect incorporates security at the core of the architecture:

- During setup, the Poly touch controller and Poly VideoOS system exchange randomly generated authentication tokens.
- Only the paired Poly touch controller can access the Teams user interface feed.
- Device validation uses whitelisted IP addresses and encrypted serial numbers within Poly OS.
- Communication between the Poly touch controller and Poly VideoOS system is encrypted end-to-end.

These protections prevent unauthorized devices from capturing the Teams interface or injecting control traffic on the network.

# Networking requirements for HP Direct Connect for Microsoft Teams Rooms

HP Direct Connect relies on direct local communication between the Poly touch controller and the Poly VideoOS system

- The Poly VideoOS system and the Poly touch controller must be connected to the same local network
- The Poly VideoOS system and the Poly touch controller must be on the same subnet
- Traffic between the devices must not be routed
- Traffic must not pass through a firewall, gateway, or proxy
- Wi-Fi is not supported as the primary network connection

These requirements ensure low latency and reliable control behavior.

## Connections inside the LAN

If the local network uses port-level access controls, you must allow the required communication between the Poly touch controller and the Poly VideoOS system for Modular Room Pairing to function correctly.

This requirement applies only to pairing-related traffic and does not include services such as NTP, LLDP, SCEP, or other dependencies used in complex network environments.

For best results, Poly strongly recommends allowing unrestricted communication on the local network between the Poly touch controller and the Poly VideoOS system.

If you are restricting access at the local port level on the same subnet, you must enable the following for Modular Room Pairing to work. This does not include services such as NTP, LLDP, SCEP, or other requirements for complex networks. It is highly recommended to allow unrestricted access between the Poly touch controller and the Poly VideoOS system on the local subnet.

- Multi-cast address 224.0.0.200 UDP Port 2000 TCP Port 18888
- UDP Port 8000-8100 PTP UDP 319-320
- UDP Dynamic 49152 - 65535 TCP 443

## Connections outside the LAN

The Poly touch controller requires access to the internet for software updates, either from Microsoft TAC or Poly Lens.

If you use a locally hosted FTP server to update your system and the Poly touch controller, the touch controller does not require access to the internet.

- If you use Poly Lens for software updates, see [Ports and Protocols](#) on the Poly Lens documentation website.
- If you use MS TAC for Poly OS Firmware updates, see [Prepare your environment for Teams Rooms](#) on the Microsoft website.
- If you use a local FTP server inside the firewall, the Poly touch controller does not require access outside the firewall.

## Complex network considerations

HP Poly defines complex networks as any network that requires additional network security beyond a typical firewall.

These components can include proxy solutions, 802.1X authentication requirements, SCEP certificate requirements, and/or local switch ACL restrictions.

In these environments, it is crucial to understand traffic flow and timing when using Microsoft Teams Rooms. With traditional Microsoft Teams Rooms app-based pairing, the Poly touch controller and the Poly VideoOS system must interact with the cloud and refresh tokens with minimal latency. If token timing is not aligned, the system may be signed out.

The HP Direct Connect architecture is designed to reduce complexity while lowering exposure to security risks by removing the need for additional outbound connections.

### Proxy servers

When using HP Direct Connect in environments with a proxy server, several requirements must be considered.

The Poly touch controller must have direct access to the Poly VideoOS system. This means that traffic on the local LAN subnet should not be filtered through the proxy server, as this would increase latency and cause additional issues. This has always been a requirement for HP Poly hardware pairing but is even more crucial with this new architecture.

- Customers should use a PAC file to define local traffic between the Poly touch controller and the Poly VideoOS system so that it is excluded from the proxy solution's network flow.
- When this solution is deployed, the system creates an automatic PAC file that includes default operational requirements and excludes local traffic between the Poly touch controller and the Poly VideoOS system.
- If you use your own PAC files, you can replace the default file; however, be sure to re-create the entries from the default file, including those for Poly touch controller local traffic.
- The Poly touch controller still requires access to the internet to update firmware. You must allow this traffic to pass through the proxy server, whether updates are coming from Poly Lens or Microsoft TAC.
- Details for those specific setups and destinations can be found in *Network documentation additional resources*.

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## 2 Network documentation additional resources

See the following documentation for additional information on networking required for connecting a Poly touch controller to a Poly VideoOS system in Microsoft Teams Rooms mode.

1. [Microsoft Teams Network Requirements](#)
2. [HP Poly Lens Network Requirements](#)
3. [HP Poly Remote Access from Poly Lens](#)
4. [HP Poly Administrators Guide](#)
5. [HP Poly OS Release Notes](#)
6. [HP Poly Configuring Network Settings TC](#)
7. [HP Poly OS Proxy Server Setup](#)