Plantronics Manager Pro

User Guide, v 3.16

Contents

Setup

After you establish your Plantronics Manager Pro account, you must download and deploy Plantronics Hub, the client software, to your users. Plantronics Hub is the key to all activities.

Here are the required steps for setup.

1. Request and establish an account.
2. Complete a network assesment.
3. Choose pseudonymization level.
4. Configure your environment (whitelist URLs).
5. Download and deploy Plantronics Hub.

Request and establish an account

1. Contact your Plantronics reseller to request an account.
   When the tenant setup is completed by Plantronics, you will receive an email with account information.
   IMPORTANT *During this process, the information provided establishes the primary contact administrator. This can be changed later, as well as adding additional administrators, by going to Admin > Accounts > Administrators. For more information, see* Manage administrators
2. Login to the URL provided in the email to establish your account.

Network assessment

Assess and prepare your network. Test LDAP access, proxy configuration and PMP connectivity via SSL to ready your organization for both pre-deploy and ongoing operations.

In Plantronics Hub, go to the Help tab > Support > Network Assessment.

Choose username/ hostname pseudonymization level

With the release of Plantronics Manager Pro 3.13, by default both the username and computer hostname are hashed using SHA-512 encryption (at the client level), resulting in the generation of unique values. Because having the real user name and hostname adds significant context and value, pseudonymization can be disabled and is best done *before* you deploy Plantronics Hub.

With pseudonymization:

- username and hostname can be configured independently.
- user and host counts remain accurate.
- LDAP query and user attribute groups can be populated with the correct users but manual groups are more difficult.
- policies can be deployed with no issue but deploying to an individual user is more difficult.
- there is no loss of functionality with groups metadata collection

Pseudonymization can be disabled after Plantronics Hub is deployed but a mix of real and hashed values will be displayed until all Plantronics Hub clients "check in."

Pseudonymization enabled in PMPro*	Pseudonymization enabled in Plantronics Hub*	Pseudonymization disabled
user_<##########>	##########	jdoe
host_<##########>	##########	LabPC-1

**The username/hostname field is represented by the first ten characters of the new pseudonymization value.*

Enable/disable username/hostname pseudonymization

To enable/disable username/hostname pseudonymization at the Plantronics Hub client level, go to Admin > Plantronics Hub > User Data > Pseudonymization.

Configure your environment

Service operation requires secure access to the following URLs for the Plantronics Hub client and tenant administration.

It is recommended that you whitelist the URLs provided (based on region).

General URLs to whitelist	Region-specific URLs to whitelist
https:// df84x76lg9aky.cloudfront.net https:// d12903byg7ot3n.cloudfront.net https:// help.plantronicsmanager.com customer.success@plantronics.com	**US** https://duk8mtqrgwh9y.cloudfront.net https://auth.plantronicsmanager.com https://auth-na.plantronicsmanager.com https://api.plantronicsmanager.com https://system-api.plantronicsmanager.com https://reports.plantronicsmanager.com https://clientregistration.plantronicsmanager.com https://oda-api-na.plantronicsmanager.com **Europe** https://d2x2ehj0htq0t6.cloudfront.net https://auth.plantronicsmanager-eu.com https://auth-eu.plantronicsmanager-eu.com https://api.plantronicsmanager-eu.com https://system-api.plantronicsmanager-eu.com https://reports.plantronicsmanager-eu.com https://clientregistration.plantronicsmanager-eu.com https://oda-api-eu.plantronicsmanager.com **Asia** https://d1utxqry92nfl9.cloudfront.net https://auth.plantronicsmanager-ap.com https://auth-ap.plantronicsmanager-ap.com https://api.plantronicsmanager-ap.com https://system-api.plantronicsmanager-ap.com https://reports.plantronicsmanager-ap.com https://clientregistration.plantronicsmanager-ap.com https://oda-api-ap.plantronicsmanager.com **Australia** https://d1utxqry92nfl9.cloudfront.net https://auth.plantronicsmanager-au.com https://auth-au.plantronicsmanager-au.com https://api.plantronicsmanager-au.com https://system-api.plantronicsmanager-au.com https://reports.plantronicsmanager-au.com https://clientregistration.plantronicsmanager-au.com https://oda-api-au.plantronicsmanager.com

For URL descriptions, see the appendix.

Additional configuration when using APIs

Also whitelist the URLs provided when you are using a Partner API WebSocket app (including Nectar UC-Diagnostic app).

Region-specific URLs to whitelist
US
wss://plt-wss.plantronicsmanager.com
Europe
wss://plt-wss.plantronicsmanager-eu.com
Asia
wss://plt-wss.plantronicsmanager-ap.com
Australia
wss://plt-wss.plantronicsmanager-au.com

Download and deploy Plantronics Hub for Windows

Plantronics Hub, the client software, must be installed on your user's systems to populate your tenant.

1. Ensure that previous versions of Plantronics software such as Plantronics Spokes or PURE have been uninstalled.
2. With the Plantronics Manager Pro open, go to Admin > Plantronics Hub > Installing Client | WIN.
3. Following the instructions, generate your tenant-specific installer. This may take a few minutes.
   IMPORTANT *The installer generates an MSI using the latest version of Plantronics Hub.*

   NOTE *If you don't know if your user requires a 32- or 64-bit .msi file, there is an executable version of the Plantronics Hub installation file that incorporates both the 32- and 64-bit .msi files. See* Troubleshooting > Installation.
4. Download the installer with the link provided or alternatively, check Home > Notifications for an alert informing you that the package is ready.
5. Deploy Plantronics Hub manually or with a software distribution system.

- To deploy Plantronics Hub without a desktop shortcut, add the additional parameter **HIDEDESKTOPSHORTCUT=1** in the command line. Below is an example.

```
msiexec /i PlantronicsHubInstaller_x32.msi HIDEDESKTOPSHORTCUT=1
```

Language support (Windows only)

Plantronics Hub can be installed in over 20 different languages. It is installed in the language specified in the System Preferences "Language and Text" settings of the computer on which Plantronics Hub is being installed when the locale is supported. When the locale is not supported, Plantronics Hub is installed in English.

Run Plantronics Hub in a different locale

To specify a different locale for Plantronics Hub, use the "-lang" option with one of the supported locales. The supported locales are listed in the directory C:\Program Files (x86)\Plantronics\Spokes3G\locales on Windows.

From a Windows command line, follow these steps:

1. Change to the directory where the Plantronics Hub application is hosted. For example, use this command: cd C:\Program Files (x86)\Plantronics\Spokes3G\
2. Start the Plantronics Hub executable with the -language=<locale> option. For example: PLTHub.exe -language=fr-FR (for French). Plantronics Hub opens in the specified locale language.

Run the Plantronics Hub installer in a different language

1. To specify a language other than the default, en_US, when installing Plantronics Hub, use the "/lang" option with the Microsoft-defined locale identifier like this: PlantronicsHubInstaller.exe /lang <locale_id_dec>
   For example, to install Plantronics Hub in Spanish - Mexico, run the installer like this: PlantronicsHubInstaller.exe /lang 2058
   NOTE *Options for <locale_id_dec> are documented at* msdn.microsoft.com/en-us/goglobal/bb964664.aspx. *Use the decimal values, not the hexadecimal. Convert hexadecimal to decimal here:* https://www.binaryhexconverter.com/hex-to-decimal-converter.
2. If you want to run Hub in a different language other than OS, you can create a batch scripting and force it to run during system boot-up (as a part of login scripting)
   IMPORTANT *The language needs to be part of the 20 languages that Plantronics supports. Specify the language details in bold below.*

```
@echo off
```

taskkill /F /IM PLTHub.exe

cls

cd C:\Program Files (x86)\Plantronics\Spokes3G\

START PLTHub.exe -language=**es-ES** -m

Exit

Adding Plantronics Hub to a system image

The Plantronics Hub client should NOT be installed or captured in a *base* image. Instead, install Plantronics Hub during the imaging task sequence or a post-imaging step after the base image has been applied to the system.

Plantronics Hub for Windows installs a unique identifier (registry key) called the SystemID that prevents users from being duplicated when Plantronics Hub is removed and then reinstalled on the same system. If Plantronics Hub is installed on a base image, this SystemID will be duplicated on each system. In this case, all users are associated to the same SystemID causing inventory and insights to no longer be accurate.

Download and deploy Plantronics Hub for Mac

Plantronics Hub, the client software, must be installed on your user's systems to populate your tenant.

1. Ensure that previous versions of Plantronics software such as Plantronics Spokes or PURE have been uninstalled.
2. With the Plantronics Manager Pro open, go to Admin > Plantronics Hub > Installing Client | MAC.
3. Download the Mac.dmg by clicking on the button.
4. Copy the full path of the directory for the location of the .dmg.
5. To generate your tenant-specific installer script, click the "Create Installer Script" button. **IMPORTANT** *The installer generates a script using the latest version of Plantronics Hub.*
6. Paste the .dmg directory path into the script generator.
7. Copy, paste and run the generated installer script from Terminal (Go > Utilities > Terminal). This establishes the relationship between Plantronics Hub and your tenant.
8. Deploy Plantronics Hub manually or with a software distribution system.

Download and deploy Plantronics Hub for mobile devices

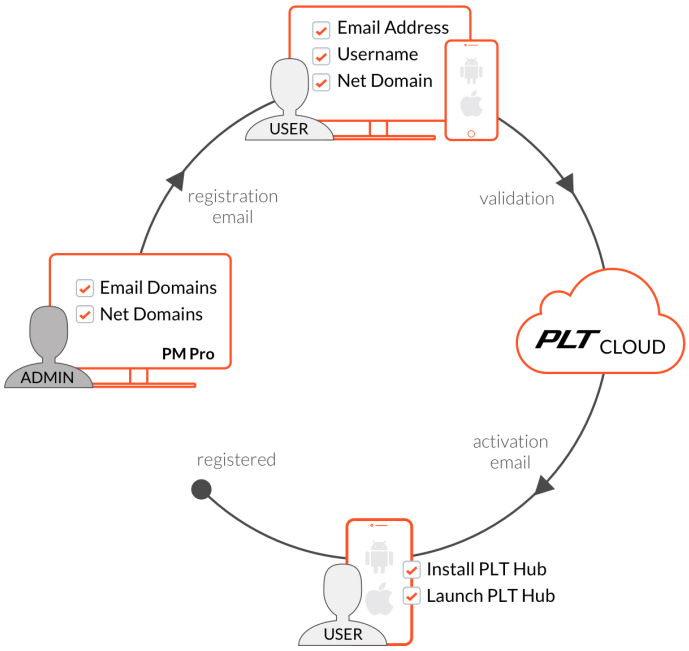
You can integrate Plantronics Hub for Android/iOS users into your enterprise tenant for Plantronics Manager Pro.

Requirements: Plantronics Hub 3.12 or higher

Supported devices Mobile phone inventory and firmware/settings management is supported for:

- Voyager 3200 UC
- Voyager 6200 UC
- Voyager 5200 UC
- Voyager 8200 UC
- Voyager Focus UC (firmware cannot be updated on mobile platform)

Mobile registration workflow



PMP configuration for mobile

Go to Admin > Plantronics Hub > Integrating Mobile Hosts. Populate the fields and copy and paste the registration URL into a registration email.

- **Valid Domains** Populate the domain information. Plantronics Hub attempts to discover and auto-populate this field (assuming Plantronics clients have been deployed). The domains entered appear in a drop-down box for user selection during the user registration process.
- **Valid Email Domains** Populate the valid email domains. This is used to validate the email address entered by users during the user registration process.
- **Copy the registration URL** and paste this link into an email to your users. Example email content is available by selecting the Email Template link in the UI. Send the email using your own email client, outside of the Plantronics Manager Pro environment. The registration URL does not expire and it can be revoked. To revoke the registration URL for all mobile users, go to ADMIN > Plantronics Hub > Integrating Mobile Hosts and select the "Revoke URL" button. For a single user, go to Inventory > Hosts, select the user and click "Revoke mobile access.

Mobile user registration process

1. Selecting the registration URL, users will provide *their* username and email and select a corporate domain. The email domain will be validated against the IT provided Valid Email Domains.
2. Upon successful validation, Plantronics Manager Pro auto-generates a second email to the user. Please note that the activation link included in this email expires 5 hours after generation. The user is required to complete the steps on their mobile device:
   - Download latest version of Plantronics Hub
   - Launch Plantronics Hub, accepting all prompts and permissions

- Click on the activation link

3 Plantronics Hub for Android/iOS connects to your tenant and creates an account if one does not already exist. Existing accounts will be identified by Plantronics Manager Pro and the mobile device is added as a new host in the user's profile.

Download and deploy Plantronics Hub for VDI environments

For Plantronics Hub installation support for Virtual Desktop Infrastructure (VDI) environments, visit this link: https://www.plantronics.com/content/dam/plantronics/documents-and-guides/en/user-guides/Plantronics_Support_for_VDI.pdf.

Unique display and reporting for Citrix VDI users

Enable the Citrix Receiver plugin if you are in a VDI environment and want to display Citrix StoreFront account names when they differ from your Windows thin client account names.

Example use case If your thin client username does *not* match the VDI username and the VDI username is preferred, you will need to configure Plantronics Manager Pro to exclude the thin client username. For example, if the login to your thin client is "user" and the login to VDI is the actual, unique username such as "jsmith," then you will need to configure Plantronics Manager Pro to exclude the account called "user." To ensure unique display and reporting, enable the Citrix Receiver plugin and exclude the shared account.

1 Go to Admin > Plantronics Hub > Client Account Management > Citrix Receiver Plugin (Windows only) and enable the plugin.

2 Add the shared account to Excluded Accounts by going to Admin > Plantronics Hub > Client Account Management > Excluded Accounts , select "Add Account" and enter the thin client username and provide a description (optional).

Create groups

The purpose of defining user groups is to make it easy to deploy firmware/software/settings updates to the appropriate users in your organization (groups defined as "deployment groups" are limited to 127). In Plantronics Manager Pro, groups are created automatically, based on LDAP group queries or manually that you define. Each installation of Plantronics Hub polls the deployment server on a regular basis and compares with the group definitions to determine to which groups a user is assigned.

Check device inventory

The "Company Snapshot" on the Home page is a quick way to view devices.

When you first open Plantronics Manager Pro, the Home page displays. At the bottom of this page is a snapshot of devices registered by users in your organization. When a user starts Plantronics Hub and plugs in a device, that device is added to the others and the data in this section will be updated to reflect the new inventory. For a more in-depth device inventory report, see Reports.

Configure your LDAP server

LDAP server configuration is required based upon the LDAP query methodology of group creation. When configuring your LDAP server, you only need to specify fields that are not standard. You can leave the LDAP server information blank if your LDAP server is auto-discoverable, uses standard ports and doesn't use SSL (because Plantronics Hub auto-discovers your LDAP server and queries the nearest domain controller).

1. To configure your LDAP server, go to ADMIN > Plantronics Hub > LDAP and click on "Edit settings" on the top right of the screen.
2. **If your LDAP server is not auto-discoverable** Enter your LDAP server address. For example, *xyz.yourcompany.com*.
3. **If your LDAP server does not use standard ports** Enter your LDAP server port. Typically LDAP servers run on port 389 for regular connections and on port 636 for secure connections.
4. Select the type of Directory Service you are using.
   NOTE *"Active Directory" and "Open LDAP" queries use different names for some fields.*
5. Enter your LDAP version.
6. **If your LDAP server uses SSL** Enable a secure connection in the "SSL" field.
7. Click SAVE. Changes are deployed when the next polling cycle occurs.

Create a group using predefined attributes

You can create an LDAP group from a list of predefined attributes that automatically creates groups for enhanced reporting and policy management. If you require different groupings, create groups with LDAP queries.

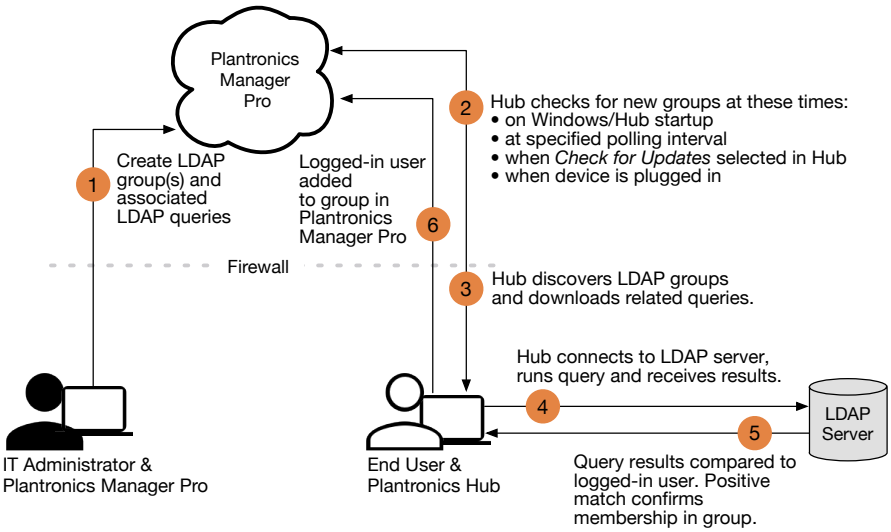
1. To create an LDAP group from predefined attributes, go to ADMIN > Plantronics Hub > User Data > LDAP User Attribute and click the button "Add LDAP User Attribute.
2. Select the attributes and click "Add." Selecting the box to auto-create groups creates a group for each unique value.
   IMPORTANT *Avoid group auto-creation for attributes that contain unique values for each user.*

   NOTE *If "auto-create" is not selected and you want a group based on that attribute, manually add a group by going to INVENTORY > Groups > Create groups.*

   The selected attributes will show up in the User Profile (Inventory > Users and click on user) and are also available for API usage. Adding attributes does not add them to the Plantronics Manager Pro UI nor to the reports.

Create a group using an LDAP query

Use an LDAP query for group creation when you require a group based on attributes that are not available in User Attributes. LDAP query groups automatically include users that satisfy the stated LDAP query. Clients are updated the next time there is a client poll or when they stop and restart Plantronics Hub. Both of these events authenticate the user. At that point, the Inventory > Users listing will be updated to reflect the group with the highest priority to which the user belongs.



1 From the Inventory > Groups > All Groups page, click "Create Group."

2 To create an LDAP group, select "LDAP," and then click the "Create Group" button.

3 Enter "Group Details."
Here are a few examples you might wish to use as a basis for creating your LDAP queries. Check your company's LDAP documentation for help writing LDAP queries.
TIP *Plantronics Hub for iOS/Android users must have Plantronics Hub for desktop installed in order to be associated with an LDAP group.*

1 For Open LDAP:

Group: Users in the Sales Force: (&(objectCategory=person)(objectClass-s=inetOrgPerson)(uid=$user$)(department=*sales*))
Group: Users in Human Resources: (&(objectCategory=person)(objectClass-s=inetOrgPerson)(uid=$user$)|(department=*hr*) (department=*Human Resources*))
Group: Users Located in Building 345, Santa Cruz, CA: (&(objectCategory=person) (objectClass-s=inetOrgPerson)(uid=$user$)(physicaldeliveryofficename=US-SantaCruz) (streetaddress=345*))
Group: Users in "Sales" located in office "US-SantaCruz": (&(objectCategory=person) (objectClass- s=inetOrgPerson)(uid=$user$)(department=*sales*) (physicaldeliveryofficename=US-SantaCruz))
Group: Users either in "Sales" or located in Santa Cruz: (&(objectCategory=person) (objectClass-s=inetOrgPerson)(uid=$user$)(|(department=*sales*) (physicaldeliveryofficename=US-SantaCruz)))

2 For Active Directory:

Group: Users in the Sales Department: (&(objectCategory=person)(objectClass=user) (sAMAccountName=$user$)(memberof=CN=Sales, OU=Groups, DC=domain, DC=com))
Group: Users in "Sales" located in office "US-SantaCruz": (&(objectCategory=person)(objectClass=user)(sAMAccountName=$user$)

(memberOf=CN=Sales, OU=Groups, OU=US-SantaCruz, OU=Americas, DC=domain, DC=com))

IMPORTANT *The (sAMAccountName=$user$) field is required for all LDAP queries. Plantronics Hub replaces this pattern with the user's account name and checks to determine if the user belongs to a particular group.*

4 Click the "Save" button to create the group.
No further action is needed to add members to the group. When Plantronics Hub applications poll for updates, users will be added to the group if they meet the criteria.

5 To confirm that the correct users are added to the group after the polling cycle has completed, select the group from the Inventory > Groups list and view "Group Membership."

Create a manual group

Create groups of users that are not defined in your LDAP database.

1 From the Inventory > Groups > All Groups page, click "Create Group."

2 To create a manually-defined group, select "Manual," and then click the "Create Group" button.

3 Enter and save "Group Details."

4 Click "All Groups" or Inventory > Groups to go to the Inventory > Groups > All Groups page.
A listing of all groups displays. Select the manual group you just created to add members to that group.

5 Click the "Add User" button.
The "Assign to Group" dialog displays with a listing of all users in your organization.

6 Select users by clicking the checkbox beside their name.
To narrow the list, you can use the "Search" feature to search for users based on their name, status or priority group.

7 Click the "Assign to Group" button to select members for this group.

Manage user accounts

Create shared user accounts

Shared user accounts help you manage environments where multiple users sign into a single, shared account.

By adding one or more shared accounts for your tenant, individual users signing in with a single, shared username will be identified as a combination of the username + hostname. This permits management of settings/updates and accurate data collection on a per user basis.

To create an individual user account when an account login is shared with multiple users, go to Plantronics Hub > Shared User Accounts and click "Add Account."
The computer name is appended to the account name to allow Plantronics Manager Pro to accurately report and deploy updates.

Exclude user accounts

Use excluded accounts to have Plantronics Manager Pro ignore selected network accounts for all related activities and data collection.This feature is intended to support Virtual Desktop (VDI) environments as well as system management accounts that you may wish to exclude from Plantronics Manager Pro management.

To exclude an account, go to Plantronics Hub > Client Account Management > Exclude Account and click "Add Account."

Revoke mobile access and delete data

Mobile access can be revoked for user/hosts that are no longer valid as well as data can be deleted.

1. To revoke mobile access for a single user, go to Inventory > Hosts. Click on the desired host and click "Revoke mobile access."
   All tenant connection information will be deleted and Plantronics Hub for Android/iOS will revert to a consumer version of Plantronics Hub.
2. To delete data for a particular user, go to Inventory > Users. If necessary, use the filters to search and select the user, choosing "Delete User."

Manage firmware and software

Device firmware, software and settings are configured with firmware and software policies.

A firmware or software policy:

- applies to all users, until customized for a specific group
- is active once it is enabled and saved (it is initiated the next time the polling cycle occurs)
- can be edited, deleted or copied

Policies: How to

Create a new firmware or software policy

Create a new policy by going to Policy > Firmware/Software > Create New Policy (button in the upper right) and select either Firmware/Software or Settings.

You can automatically create **a firmware version policy** for all newly detected products in your environment by going to Policy > Firmware > Auto-Create New Policy (button in the upper right). In the pop-up window, select ON and deployment type.

Copy a firmware or software policy

To copy a policy, go to Policy > Firmware/Software and hover over the target policy. Click the Copy icon at the far right. Updates to copied policies do not affect the original polices.

Preconfigure a device (firmware only)

To preconfigure a device that has not been deployed, go to Policy > Firmware > Create New Policy . Unclick the "Show my tenant's devices only" box to choose from devices that are not in your current environment.

Edit a policy

To edit a policy, go to Policies > Firmware/Software and click on the policy.
NOTE *Policy compliance is determined by comparing what is specified in a policy compared to what is being reported by Plantronics Hub.*

Delete a policy

To delete a policy, hover over the policy to reveal the Remove icon at the far right.

Deploy a firmware or software policy

There are three types of firmware and software deployment, as well as silent deployment for firmware.

- **Optional** Users are notified of an available firmware update and reminded every 24 hours, but may elect to turn off reminders in Plantronics Hub
- **Persistent** Users are notified of an available firmware update and reminded every hour without the ability to turn off reminder
- **Automatic** The update occurs automatically the next time Plantronics Hub is launched
- **Silent (firmware only)** A silent update for this device is a scheduled, recurring action that requires minimal end-user involvement

To deploy a policy, go to Policy > Firmware/Software > Policy Name/Policy and review the details of the policy. Click **Save Policy/Save** in the upper right. Changes will be initiated when the next polling cycle occurs
NOTE ***"Automatic" updates*** *If "Automatic" is selected for Deployment Type, the target device must be attached via USB at Plantronics Hub restart. See the appendix for products that support Automatic and Silent updates.*

Deployment tips: Silent updates

Silent updates allow firmware updates to be applied after hours without requiring the user to initiate the update. Silent updates can have two different behaviors depending upon the type of device being updated.

IMPORTANT *Silent updates should only be scheduled after-hours. Deploying a silent update while the user is actively using the system could have irreparable results.*

Behavior 1 | Devices that require "unplug/replug" after a silent update In order to register an update (and, in some cases, to be recognized by Windows), some devices contain chipsets that must be "reset" following a firmware update which can only be accomplished by unplugging and replugging the device. Silent firmware updates for these devices are applied during the upgrade window as expected **(it is *not* recommended to perform silent updates during working hours as it could have irreparable results)** and the active user (if applied during working hours) or next user to log into that computer (if the update is not applied during working hours) is prompted to unplug and replug the device. If the user does not do this, the update will not be registered. A list of the devices that have this requirement is listed in the Appendix.

Behavior 2 | Devices that do NOT require "unplug/replug" after a silent update The majority of Plantronics devices do not have the "reset" requirement. For these devices, updates occur during the specified window and upon completion, the update is registered. Users will not be required to do anything to the device at next login. This is applicable to all devices other than those listed in the Appendix.

Preparing for Success Regardless of the device being updated, a successful update requires that the policy has been in place long enough (typically one polling cycle) to ensure all applicable Plantronics Hub systems have "checked in" and polled the server to find the update. Once the update has been found, it is stored on the system, waiting for all conditions to be met. The update attempts to run during the configured window daily until successful.

Host System Requirements

- Leave systems powered on and not in hibernation or sleep mode.

Additional considerations

- **Multi-piece devices** The silent update will not be successful if any other Plantronics device is plugged in. For example, with the Voyager Focus UC, if the Voyager Focus charging station is plugged into computer via USB and headset is docked and the BT600 USB Bluetooth adapter is also plugged in, this constitutes two devices. The device not being updated needs to be removed during a silent update. It is recommended that for these devices you deploy the policies so the schedules do not overlap (for example, deploy BT600 during week 1 and Voyager Focus during week 2)
- **Proxy** In a proxy environment, Plantronics Hub doesn't register a firmware update until the next user logs in.

Tips for firmware and software policies

- **Previous version limitations** If a user has a later version of Plantronics Hub than what is specified in a policy, the user is kept at the later version and not restored to an earlier version. Silent updates will not work for Hub clients prior to 3.10.2.
- **Apply latest version from Plantronics** With this version setting, updates are passed directly from Plantronics to the user.

- **Unlock a setting** Any setting changed from the default is locked, greyed out from the user's view in Plantronics Hub, with a note "Managed by IT administrator." To unlock the setting, edit the policy, change the value setting to "Retain User's Setting/Retain Device Setting." (This unlocks the setting but does not change it back to the original default value.)
- **Special mode settings** There are special mode settings for several products that can only be configured by the user, not by a policy. See the Appendix for details.
- **Notifications for updates** You are notified via email or in Home > Notifications when firmware/software updates are available.
- **Test an update** Create a new policy for a specific group or user to test a firmware or software update. You can later edit the policy to extend to other groups or simply deactivate it.
- **Automatic file format detection** Three Windows formats (32-bit and 64-bit .msi and .exe files) are deployed with a software update; Plantronics Hub detects and downloads the correct format.

Basics

Change the polling cycle

The default Plantronics Hub polling cycle is six hours. During the first six months of installation, the recommended polling cycle is once every hour.

To change the polling cycle, go to Policy > Software. Click into a policy and open Policy Overview. Click the drop-down menu under TYPE and choose **Software Settings.** Within the **Policy Configuration** section, scroll to the bottom of the page and select Administrator Settings > Polling Frequency.

Manage administrators

There are two administrative roles within this application: an admin with full privileges and an admin with read-only privileges. By default, the primary contact is the first admin to contact Plantronics. Administrators can be added locally or via Single Sign-On.

1. **To change the primary contact** go to Admin > Accounts > Administrators and clicking on the radio button under the Primary Contact column. There can only be one primary contact. This contact is initially setup to receive Plantronics Manager Pro email notifications.
2. **To change Plantronics Manager Pro email notification settings**, go to Home > Notifications > Settings icon (the icon to the right on the Notifications bar).
3. **To add/delete an administrator locally** go to Admin > Accounts > Administrators. You can also change admin roles and view account status.

Single Sign-On (SSO)

Once configured, Plantronics Manager Pro can be accessed by selecting the Single Sign-on (SSO) button in the Plantronics Manager Pro login dialog (Service Provider-initiated) or can be accessed by selecting Plantronics Manager Pro from your list of IdP applications (IdP-initiated).

Both IdP-initiated SSO via SAML 2.0 and SP-initiated SSO are supported.

Supported IdPs

We have tested and confirmed that Ping, Okta, ADFS and Azure IdP's can be successfully used with Plantronics Manager Pro. Other IdP's may work but have not been tested and therefore are not officially supported. Contact your Plantronics account representative or your Plantronics reseller to request support for a specific IdP.

NOTE *For additional support, view* our KB article on ADFS.

Configure SSO

In order to leverage enterprise SSO, first establish the necessary "circle of trust" between the Service Provider (e.g. Plantronics Manager Pro) and your organization's Identity Provider (IdP). To configure Azure, see below "Configure Azure SSO."

1. Go to SSO > SSO Configuration > Service Provider (SP) Parameters to download your Service Provider (SP) metadata file, then upload it to your IdP and set up the required attributes (alternatively, copy and paste the parameters).
2. Go to SSO > SSO Configuration > Identity Provider (IdP) Parameters Upload the metadata file from your IdP. Your SSO configuration updates accordingly.
3. Once IdP details are populated, go to SSO > SSO Configuration > SSO status and enable SSO.
   IMPORTANT *Notification that a user has been added to the IdP group associated to Plantronics Manager Pro is the responsibility of IT. SSO users will not receive an email from Plantronics Manager Pro. SSO users only appear in Plantronics Manager Pro after the first successful login.*

Configure Azure SSO

A read-only admin account is created the first time a user logs in with SSO. This functionality does not work for Azure SSO unless some modifications are made to the default values created when the metadata file is uploaded.

1. Upload the Plantronics Manager Pro metadata file.
2. In the Plantronics Manager Pro application that was created (as a result of uploading the metadata file), go to Section 2 > User Attributes and Claims > Edit.
3. Make the following changes:

Claim name	Default	Open and replace with:
email	http://schemas.xmlsoap.org/ws/2005/05/identity/claims/email	email
firstName	http://schemas.xmlsoap.org/ws/2005/05/identity/claims/firstName	firstName
lastName	http://schemas.xmlsoap.org/ws/2005/05/identity/claims/lastName	lastName
nameIdentifier	http://schemas.xmlsoap.org/ws/2005/05/identity/claims/nameIdentifier	Leave default value for nameIdentifier intact. Use the dropdown box for "Choose name identifier format" select Unspecified for the value.

4. Save your changes, download the updated Federation Metadata XML file and upload to Plantronics Manager Pro.

Manage SSO accounts

Manage SSO user accounts in IdP but manage user roles and view account status in Admin > Accounts > Administrators.

- SSO accounts are READ-ONLY initally.
- Changing an SSO-only user to a PMP/SSO user will generate an email to that user requesting they establish an account. If the user had previously created a local account, an email will not be sent.
- If a user is deactivated from IdP, the user account remains visible in Plantronics Manager Pro until deleted.

Change password

Click the drop-down menu next to your name at the top right of any page and go to My Account > Account Password to change your password.

Configure your data retention policy

Plantronics Manager Pro stores all events and metrics for a given administrator, user, or device.

To configure your data retention policy, go to ADMIN > Preferences > Data Retention Policy. It could take 24-48 hours for the impact of a retention schedule change to be seen in the UI.
Elimination of data from the database can take up to ten minutes when deleting one or more years of data and then it is maintained on a daily basis.
IMPORTANT *Modifying the default retention period of "Retain Indefinitely" will automatically and permanently purge all data collected outside the specified period with the exception of the product name, serial number, and device first used date which will be retained in cold storage and will be retrieved in the event the device is reintroduced to the environment. This is done to ensure accuracy of the device first used date.*

Reports, subscriptions and data

Plantronics Manager Pro provides a variety of reports and tools to help you analyze and manage Plantronics devices.

Analysis Suite reports

Report	Description	Subscription
Asset Management and Adoption		**Provided**
Device Adoption	Examine adoption patterns of Plantronics products across your organization	
Device Distribution	View the distribution of devices among users, including Plantronics and non-Plantronics devices, and users without a detected device.	
Device Inventory	View total count and known status for all headset audio devices in your organization.	
Incompatible Products	Identify configurations of devices, softphones and Plantronics Hub versions with known compatibility conflicts.	
Policy Compliance	Monitor users' compliance with the firmware and software policies you have defined.	
Softphone Adoption	Examine adoption patterns of softphones across your organization.	
User Activity	Understand users' headset activity patterns, including headset calls made/received and call duration.	
Version Status	View the distribution of firmware and software across your enterprise as they relate to the latest versions available from Plantronics.	
Call Quality and Analytics		**Subscription required**
Common Actions	Identify user behavior patterns related to mute, volume and Quick Disconnect functionality that may hold insights for training and performance.	
Conversational Analytics	Improve the quality of conversations by identifying individuals and/or physical locations where the % time of overtalk during conversations is higher than normal.	
Radio Link Quality	Analyze and troubleshoot radio link quality with Bluetooth headset to USB adapter connection metrics.	
Health and Safety		**Subscription required**
Acoustic Events**	Review history of acoustic events that occurred during conversations using Plantronics products.	
Noise Exposure	Identify Time-Weighted Average (TWA) configurations that may be causing user experience issues.	

* **For a list of headsets that support the various reports, visit** Supported Devices on Plantronics.com**.**

** **Acoustic events v Acoustic Startle** An acoustic event can be described as a high level signal that meets certain pre-defined parameters. An acoustic startle is generally a sudden loud sound that surprises or startles a person. The difference between the two is frequently subtle and not always immediately apparent. For instance, if someone begins speaking loudly from a moment of silence, it may startle the listener initially but the listener would not be continually startled. However, the signal containing the continual loud speaking may be captured and reported nevertheless as an acoustic event. Other examples might include very short electric bursts (a/k/a clinches) and digital data clichés, both of which may be captured and reported as acoustic events but in reality may not cause acoustic startles. *The pre-limit and post-limit levels reported in Plantronics Manager Pro are both estimates. In the event of an out-of-range value, refer the headset to an audio laboratory for G616 compliance evaluation.*

Subscribe

Plantronics Manager Pro and its suites are subscription-based. The Analysis Suite reports are provided with the installation of Plantronics Manager Pro as a one- or three-year foundational license; all other reports require subscription.

Contact your Plantronics reseller for information.

Access reports

Generate reports

Depending on the report, pie, bar, column and table charts are available to view and filter data.

1. To generate a predefined report go to Library > Predefined Report and select the report you would like to generate.
   NOTE ***Acoustic Events report*** *To generate an Acoustic Events report, the device must support acoustic events and it must be enabled in the policy. To enable a supported device, go to Policy > Firmware (for that device) > Product Settings > Admin Reporting .*

   NOTE *If a sample report is generated, you are not subscribed to that dataset. Contact your Plantronics reseller for subscription details.*
2. Click directly on the graph for additional graphical and tabular views of the data.

Apply filters

There are a variety of ways to filter and sort the data. Choose:

- Click directly on the graphical views
- Apply the filters on the left pane of each report
- Click on/off the graph legend (if available)

Download results

In general, views can be downloaded in the format of .doc, .pdf and .csv.

To download graphical and tabular views of the data, click on the Download dropdown below the graph or table.

Save, schedule and distribute a custom report

You can customize, save, schedule and deliver a predefined report.

1. Select a predefined report by going to Reports > Predefined.
2. Configure and save the report. It appears in the Reports > Saved. Click on the report to schedule and distribute it to team members.

NOTE *When emailing reports to over 50 people, use distribution lists rather than individual emails.*

3 Run or edit any report in Saved reports.

- Hover over the report name to view filter selection
- Click on Last Run to view report
- Click on Edit Details to edit filter selection
- Saved reports can be only modified by full-privilege admins

API access

API access is granted with your foundational subscription to Plantronics Manager Pro. View Plantronics Developer Connection (PDC) site for details at developer.plantronics.com/.

App Center

Partner applications can integrate with Plantronics Manager Pro via streaming or REST APIs to permit retrieval and sharing of data for supported Plantronics products within your organization. By enabling data sharing with selected applications, you are able to gain additional insights into your organization's usage and behaviors related to Plantronics products. Applications only appear if available in the region of the tenant.

There are two types of apps: public and private. **Public apps** are available to all Plantronics customers. You decide when and why to enable them in your Plantronics Manager Pro tenant. **Private apps** are available only to your organization. You decide what they do and control how they work.

NOTE *Additional configuration setup may be required based on the application partner. Contact the application partner or your reseller for more information on the application software license and Plantronics Manager Pro suite license required for solution interoperability.*

To enable public apps or authorize private apps:

- **Public** Go to App Center > Public, click the name of the application and click the toggle to enable data sharing.
- **Private** Go to App Center > Private click the name of the application and click the ACCEPT to enable data sharing.

Troubleshooting

Installation

Some or all users are not showing up in the Plantronics Manager Pro tenant.	1 Ensure that Plantronics Hub has been downloaded and deployed. 2 Ensure active internet connection. 3 Ensure port 443 is not blocked. Got to Plantronics Hub > Help > Support > Network Assessment and run a test. 4 Ensure Plantronics Hub is connecting to the correct tenant. From the Plantronics Hub client, select Help > Support and expand the Troubleshooting Details section. All connection information can be found in this location. If the TenantID has a value of System, then Plantronics Hub is attempting to connect to our Consumer tenant, not your enterprise tenant. Once the Plantronics Hub software connects to a tenant, a user specific configuration file is created. If a connection to a tenant had happened previously then this file would exist and Plantronics Hub could get confused. Close Plantronics Hub, locate and delete the file called spokesuser.config found in C:\Users\<username>\AppData\Local\Plantronics or %appdata%. Restart Plantronics Hub.
How can I easily tell if Plantronics Hub has successfully connected to a tenant?	From the Plantronics Hub client select Help > Support and expand the troubleshooting details section. All connection information is housed in this area.
How does Plantronics Hub know which tenant to connect to?	Ensure you install the version of Plantronics Hub that is provided from within your tenant. Using the clients available from within your tenant will ensure the correct tenant connectivity.
What services/processes run at start up on the Windows operating system?	PLTHub.exe is the Plantronics Hub process that runs at start up providing all of the functionality expected from Plantronics Hub. PlantronicsUpdate.exe is also a process that runs at start up. This process allows Windows users without administrative permissions to upgrade Plantronics Hub.
Does Plantronics Manager/ Plantronics Manager Pro need to connect to my LDAP server?	Plantronics Manager/Plantronics Manager Pro does not directly connect to your LDAP or Active Directory servers. This information is passed to, and used by, the Plantronics Hub application for the purpose of user group identification. If the LDAP information is not populated, the Plantronics Hub application will attempt to auto-discover your LDAP server. User groups in both Plantronics solutions are based upon LDAP queries. The creation of these user groups require a group name and a corresponding LDAP query. These LDAP queries are copied to the end users system in the form of JSON files. The Plantronics Hub application uses this LDAP information to run a query on the logged in user to determine that users LDAP attributes and to which group they might belong.
How often does the Hub client query LDAP?	LDAP is queried each time the Plantronics Hub software starts up. Also, during the normal poll cycle, if changes to any of the LDAP groups in Plantronics Manager has been detected, an LDAP query is initiated.

Where are the configuration files located?	**Windows** ~\AppData\Local\Plantronics**SpokesUser.config** \ProgramData\Plantronics\Spokes3G**Spokes.config** **Mac** ~/Library/Application Support/Plantronics/Plantronics Hub/Plantronics/**SpokesUser.config** /Applications/Plantronics Hub.app/Contents/Frameworks/Spokes3G.framework/Versions/A/Resources/**Spokes.config**
How is the Plantronics Hub installation language determined?	Plantronics Hub is installed in the language specified in the Windows "Regions and Languages" settings. When the locale is not supported, Plantronics Hub is installed in English.
How often does Plantronics Hub check for configuration changes?	This is called the polling interval and can be found in the Software Settings area of both solutions. This interval can be configured differently for each user group if needed. The default is every 6 hours.
What is the timeout for Plantronics Manager and Manager Pro?	The timeout is set to one hour. After one hour re-authentication is required.
Do I have to use Plantronics Manager Pro to host the update for my firmware and software? Can I use my own internal tools instead?	Yes and no. Updates to Plantronics Hub can be deployed completely independently of Plantronics Manager Pro. You can download the version of the .msi you need, and use your own internal deployment tools to push the update to your users. Firmware updates must be discoverable by Plantronics Hub and therefore Plantronics Manager Pro must be involved. But, during the configuration of a policy, you can change the default Deployment Source from "Plantronics Server" to be your own network share or web server. The path to this location must be entered into Plantronics Manager Pro. Plantronics Manager Pro will then inform Plantronics Hub that it must source this update from this new location.
Can Plantronics Hub be used in a proxy server environment?	Yes it can. If you are experiencing issues, please contact support.
Can I pass parameters to the .exe version of the Hub installer? I don't know if my user requires 32- or 64-bit.	We do provide an executable version of the Plantronics Hub installation file that incorporates both the 32- and 64-bit .msi. Unfortunately, this file is not available preconfigured with your tenant parameters. To install using this .exe, you will need to pass these custom parameters as arguments to the PlantronicsHubInstaller.exe. Examples are shown below. You will need to identify the proper values for your tenant by reviewing Plantronics Manager/Pro > Admin > Accounts > Company Profile. PlantronicsHubInstaller.exe TENANT_ID="Timbuktu" SERVER_URL="https://system-api.plantronicsmanager.com" TENANT_TOKEN="G1r6rM-xz7aV3oIM6fX89K5-RbnadmH2SkYZmd3S3aM26s1RxHT7YWeuzAjdNrPL"
Why does Plantronics Hub install a certificate for 127.0.0.1 into the trusted root store?	The self-signed certification that Plantronics Hub deploys is for REST SDK support. REST allows applications to interface with Plantronics Hub SDK using simple HTTP request.

	For this HTTP request to be done in a secure fashion and to avoid browser errors for mixed content, HTTPS and SSL needs to be enabled. The self-signed certification is for SSL communication.
Troubleshooting assistance	To assist with critical issue troubleshooting, four model logs are installed. 1. PLTCloudConnector.log • Authentication failures and their corresponding curl/ssl error information • LDAP Query /LDAP server info and any failure related to that • Device events/Call events any failures related to reporting them • Any failures related to SW and FW HTTP file download • Any failures related to Soundscape theme HTTP file download 2. DeviceManager.log • Any failure related to HID communication with USB headset • Information related to loading device handlers and filtering devices • RAW input and output reports send and received from the device 3. DFUManager.log • Any failure related to unzipping a FW archive and validating the rules.json file • Information related to DFU handler for each updatable FW component • Information related to DFU failures and retries • Information related to DFU progress for each updatable FW component 4. SessionManager.log • Information related to loading and unloading SP/MP plugins • Information related to sessions created with the SessionManager by various plugins • Information related to SessionManager level events
Now that usernames are psuedonymized, I can't find the user.	When psuedonymization is enabled for the username, the real username is no longer is visible in Plantronics Hub (Help > Support > Connection Status > Username). The value for the username field has been replaced by the first ten characters of their new pseudonymized value. To find the user in Plantronics Manager Pro, enter this ten-character value into the username filter in PMP. Username Plantronics Manager Pro = user_<##########> Username Plantronics Hub= ##########

I have enabled username/ hostname pseudonymization but I am getting a mix of results.	Yes. If you pseudonymize an existing tenant, the results will be mixed until all user check in as Plantronics Hub completes polling cycles.

Upgrading and updates

Is there any way to allow Plantronics to directly notify my users of any available updates so that I don't have to be the gatekeeper?	Yes, select "Apply latest version from Plantronics" as the value for the Version field when defining your firmware policy. Selecting this option will allow Plantronics to notify your users directly when an update to their device becomes available.
How often does Plantronics release new software updates for Plantronics Manager Pro/ Plantronics Manager and Plantronics Hub?	We release two major updates a year and maintenance releases every 9 weeks as needed.
Is it possible that all the users could receive an update notification and attempt to download at the same time?	It is highly unlikely. Plantronics Hub looks for updates based upon the Polling Frequency which is every 6 hours by default. The "countdown" is initiated based upon the start time of the Plantronics Hub process.
I am no longer using Plantronics Manager/Plantronics Manager Pro. Now my users are not getting firmware/software update notifications.	Uninstall the enterprise Plantronics Hub version, install the consumer (.exe) version (plantronics.com/software) and users will continue to get notifications.

Functionality

How does Plantronics Hub identify non-PLT devices?	Plantronics Hub will look at all HID devices that expose the Telephony Page (0xB). Devices that are determined to be a Telephony device with a VID (Vendor ID) not equal to Plantronics (0x47F) are inventoried and data sent to Plantronics Manager Pro.
How does battery life get reported in Plantronics Hub? Some devices show talk time remaining while others show a percentage	There are hardware/firmware limitations across device families that don't currently allow Hub to report battery status in the same way for all products. Most of our bluetooth products have a calculated "coulomb counter" that reports remaining talk time in minutes. The DECT products currently report in very rough percentages only (e.g. 0, 25, 50, 75, 100).
I've created a custom group and I noticed the users I added to this group are also in the "All Users" group. Which group will take precedence?	Custom groups will take precedence over the "All Users" group.
Do firmware updates vary by region/country?	It could be that a firmware update contains a modification that only applies to a particular region/country but the update is made available to everyone.
If I delete a User from Plantronics Manager Pro, is their Host and device deleted as well?	This answer varies based upon the device. Please review the following scenarios and the corresponding database implications: **Plantronics devices** Please note the following rules are true for all PLT devices:

- Devices with a serial number are never deleted physically (never deleted from database). Instead, these devices are "marked" as deleted
- Devices without a serial number are always deleted physically

IT deletes a user in Plantronics Manager Pro. What happens to the device and the host?

- If the device (with serial number) is registered to multiple users, it will not be deleted.
- If the device was only associated to the deleted user, then the host will be deleted as well.
- A device with no serial number will be deleted since there is no way to uniquely identify it and therefore no way of knowing if multiple users are sharing the device.
- If the host is registered to multiple users, it will not be deleted.
- If the host was only associated to the deleted user, then the host will be deleted as well.

IT deletes a Host in Plantronics Manager Pro. What happens to the PLT Device and the user?

- Deleting the host, does not delete the device nor the user.

IT deletes a PLT device in Plantronics Manager Pro. What happens to the device and the Host?

- If the device is deleted from Inventory > Plantronics page, the device will be deleted (following rules above) regardless of how many users have the device registered.
- If the device is deleted from Inventory > Users page, the device will be deleted (following rules).
- The deletion of a device will not delete its associated host.

Non-Plantronics Devices

IT deletes a user with a non-Plantronics device from Plantronics Manager Pro. What happens to the non-Plantronics device and the host?

- The host will be deleted

IT deletes the Host, what happens to the Non-Plantronics device?

- The host will be deleted

IT deletes the Host, what happens to the Non-Plantronics Device and User A?

- Neither the host or the device will be deleted.

Reports

I paid for the Call Quality and Analysis/Health and Safety reports but the reports do not have any data.	To activate Call Quality and Analysis/Health and Safety reports, the device must be enabled to generate events and reports. To enable the device, go to POLICY > Firmware (for that device) > Product Settings > Admin Reporting and enable the specific report.

I don't see any of the headsets that are plugged into a DA70 or DA80.	Headsets plugged into a DA70 or DA80 will not show up in Inventory reports.
How frequently does Plantronics Hub send data to PMP?	Events are batched and sent at Plantronics Hub startup, then every two minutes thereafter. All other items, such as device registration, update status, etc., are sent immediately.

Infrastructure

Who is the hosting provider?	Amazon Web Services
Where is the primary data being stored?	Data could potentially be stored in one of four AWS regions. Our AWS regions currently include US, Singapore, Australia and Ireland. The various regions provide us the ability to store Spokes data in locations that comply with local regulations. We are always looking to expand into new regions so please check our website for the most accurate information.
How is the multi-tenant application architected?	Due to privacy and security concerns, we cannot provide much information without a signed NDA. Using these MSDN definitions, our MySQL is "shared database, separate schemas", but our MongoDB is "shared DB, shared schema."
What language is Plantronics Manager, Plantronics Manager Pro, and Plantronics Hub written in?	Plantronics Manager and Plantronics Manager Pro are written in Java, Javascript and HTML. The Plantronics Hub client is written in C, C++, HTML and Javascript.

Security

Is the data encrypted in transit between my company and AWS? Is the data encrypted when stored in AWS?	Data is encrypted in transit and at rest.
Can I get a list of the IP Addresses used so I can create firewall rules?	The Elastic Load Balancing (ELB) used by our cloud service provider scales as traffic load increases. It does this by increasing the number of interfaces (i.e. IP addresses) associated with the load balancer. Therefore we cannot provide a range or a set of IP addresses. It is recommended that you whitelist the URLs provided in our documentation. See "Configure your environment" in the Setup.
What data is collected by Plantronics Hub and sent to Plantronics Manager Pro?	This is covered in our privacy policy.

Appendix

Update support

	Not supported	Supported
Automatic updates	Blackwire 3xx Blackwire 435 Blackwire 5xx Blackwire 725 Blackwire 52xx Calisto 6xx MDA100 MDA2xx MDA4xx	All other devices
Silent updates		All devices (Windows only) Blackwire 3xx* Blackwire 435* Blackwire 5xx* Blackwire 725* Blackwire 52xx* Calisto 6xx* MDA100* MDA2xx* MDA4xx*

Requires unplug/replug after update

In order to register an update (and, in some cases, to be recognized by Windows), these devices contain chipsets that must be "reset" after a firmware update which can only be accomplished by unplugging and replugging the device. ***Silent updates should only be scheduled after-hours. Deploying a silent update while the user is actively using the system could have irreparable results.*** *Silent firmware updates for these devices are applied during the predetermined upgrade window but the next user to log into that computer is prompted to unplug and replug the device. If the user does not do this, the update will not be registered.*

Events and supported devices

For an entire list of events and supported devices, visit Supported Devices on Plantronics.com.

"Special mode" settings that can only be configured by the user

The products below support "special mode" settings. These settings can only be configured by a user and not by a policy.

TIP *The latest firmware version must be deployed for settings to be configurable by the user.*

Blackwire 710/720

- Mute reminder
- Language

Voyager Legend

- Answer/Ignore
- Caller ID
- Mute Off alert
- Mute reminder
- Language
- Wearing sensor
- HD voice
- Streaming audio

Voyager Pro UC

- Mute off alert
- Language
- Wearing sensor
- Streaming audio

Whitelist URL descriptions

Service operation requires secure access to the following URLs for the Plantronics Hub client and tenant administration.

URL descriptions

- **https://<tenant>.plantronicsmanager-[region].com** tenant URL
- **https://df84x76lg9aky.cloudfront.net** used to download firmware updates
- **https://d12903byg7ot3n.cloudfront.net** used to download custom MSI installers
- **https://help.plantronicsmanager.com** used to view help documentation
- **https://auth.plantronicsmanager-[region].com** used to authenticate Hub clients
- **https://api.plantronicsmanager-[region].com** used for events and Hub client data transmission
- **https://system-api.plantronicsmanager-[region].com** used for older client authentication and client data transmission
- **https://reports.plantronicsmanager-[region].com** used to access reports
- **https://clientregistration.plantronicsmanager-[region].com** used to register mobile clients
- **https://duk8mtqrgwh9y.cloudfront.net** used for FW sub-component downloads in NA
- **https://d2x2ehj0htq0t6.cloudfront.net** used for FW sub-component downloads in EU

- **https://d1utxqry92nfl9.cloudfront.net** used for FW sub-component downloads in AU

Support

NEED MORE HELP?

http://www.plantronics.com/

LET US KNOW!

Find an error? Something unclear? Want a new feature? swrequests@plantronics.com

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