Primex Device Configuration Software

User Guide

Primex is the leading provider of solutions to automate and maintain facility compliance, increase efficiencies, enhance safety and reduce risk for enterprise organizations in the healthcare, education, manufacturing and government vertical markets. Primex delivers solutions that utilize a facility's existing network infrastructure to automate, monitor, document and report essential activities performed by facility staff. Our solutions include synchronized time, automated critical notifications and bell scheduling, and environmental and event monitoring.

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Primex Device Configuration Software

The Primex Device Configuration software is used to manually configure the network settings of a Primex network device and to troubleshoot device network connections.

First-time network configuration is required to be completed either during Device Preconfiguration or from the OWDC app. Use of the software is limited to those requiring to manually configure network settings, install EAP-TLS certificates, or to troubleshoot device network connections.

About the Primex Device Configuration software

The software's primary use is to configure or troubleshoot the network settings or install EAP-TLS certificates for a Primex network device.

Compatible devices include a Sense Sensor (all models), Notify Bell Controller, Sync Bluetooth Bridge, and Levo PoE Clocks/Timer.

When to use the software

- A network profile is not assigned to the Primex device or the assigned network settings are not correct and the device cannot establish a connection to the network.
- When troubleshooting a device's network connection. You may need to manually configure the network settings locally at the device, which will allow the device to connect to your OneVue account and migrate to a new network profile.
- When a device will use EAP-TLS authentication. The certificate file (.der file type) is uploaded to the device from the software.

Feature overview

The software's primary use is to configure or troubleshoot the network settings or install EAP-TLS certificates for a Primex network device.

- Manual network configuration: An an encrypted file (.pwg) is downloaded from a device's gateway profile and uploaded to the device.
- Install EAP-TLS Certificate: If the network requires EAP-TLS certificates, a certificate is required to be uploaded to each Primex network device using the software.
- Local network configuration: If the networks used by your Primex devices are not managed in OneVue, network updates are required to be made locally at each device. Network settings are then configured and updated through the standalone software.
- Scan for wireless access points: Determine the availability and signal strength of wireless access points at a given location.
- Connection test: Perform a connection test at a given location.
- Connection test: Perform a connection test to the device's configured wireless profile at a given location.
- Save local configuration profile: When performing manual configuration, a local configuration profile can be saved to allow the profile to be applied to subsequent manual configurations. The profile is an encrypted file that stores your OneVue account ID and network settings.
- Save local configuration profile: When performing manual configuration, a local configuration profile can be saved to allow the profile to be applied to subsequent manual configurations. The profile is an encrypted file that stores your OneVue account ID and network settings.
- Apply local configuration file: You can apply a local configuration profile to a Primex device. The file contains your OneVue account ID and the network settings saved in the profile.

- Manage software and device password: The Primex Device Configuration password is required to log in to the software and also view the network settings of a connected device (Read Configuration). The AES encrypted password is downloaded to the device during its configuration. For security purposes, it's recommended to change the password from the factory default password.
- Communication log: Primex devices generate communication activity logs into its internal buffer. This feature is solely used by Primex Technical Support staff. The communication log is be used in conjunction with test configuration feature to troubleshoot configuration and network issues.

Manually configure device network

Manually configuring the network settings of a Primex device can be performed with the Primex Device Configuration software. An encrypted file (.pwg extension) is downloaded from a gateway profile within your OneVue account. The file includes your OneVue account ID and the network profile(s) assigned to the device's gateway profile.

An alternative method is to use the OneVue Wired Device Configurator app (OWDC) to change a device's assigned network locally at the device.

Step 1 - Download manual configuration file

If you are performing this procedure due to the current assigned network settings were not correct, first create a new Network Profile with the correct settings and then set the device gateway's migration network to the new network profile before you begin this step.

The first step of manually configuring the network settings of a Primex device gateway is to download a manual configuration file from a device's gateway profile within your OneVue account. This file contains your OneVue account ID and the network profile(s) assigned to the device.

1. Go to Devices > Gateways.
2. From the list, select the 12-character Gateway ID link of the gateway.
   You can optionally select any gateway that has an assigned network profile(s) that is to be manually configured into the device gateway.
3. Select Show Advanced Options.
4. Verify the primary network and alternate network (if applicable) displayed are correct. The network profiles are download to the gateway and used by the gateway to check-in to your OneVue account.
   If your security policies restrict network settings to be stored in your OneVue account, in which your OneVue account does not have network profiles, the network settings can be entered directly within the Primex Device Configuration software.
5. From the Manual Configuration File option, select Download.
6. From the Download Manual Configuration File window, enter the Configuration File Password. This password must match the password of the Primex Device Configuration software. If you have not changed the software password on your local computer, leave as is.
7. If you require that a user cannot view the details of the network profile settings within the Primex Device Configuration software, select the Hide Configuration option. When Hide Configuration is selected, the software restricts a user to only write network settings to the device.
8. Select OK.
9. From the system prompt, select Save. By default the file is saved to your computer's Downloads folder and is named device.pwg. To copy the file to another location, select Open Folder and copy the file to the desired location.

Step 2 - Upload manual configuration file to device

The second step of manually configuring the network settings is to upload the manual configuration file downloaded from the gateway profile to the device.

Requirements

• Primex Device Configuration software is installed on your computer.
• Primex device USB configuration cable (supplied with each device order)
• Manual configuration file (.pwg extension): Downloaded from the gateway profile. If the gateway profile did not have an assigned network, you will be required to enter the network settings during this procedure.
• For EAP-TLS authentication, the certificate .der file is required. This file is uploaded to the device during configuration.

1. Verify the device does not have battery power applied; remove the device cover and temporarily set the battery on/off switch to the Off (down) position or remove the batteries.
2. Plug the Primex USB configuration cable into a USB port on your computer.
3. Plug the configuration cable mini-USB connector into the device USB mini port.
   The device automatically powers up, detects the connection to your computer and enters configuration mode. The LCD displays the letters Con and the Config icon is displayed indicating the device is in configuration mode.
4. Open the Primex Device Configuration software. Go to All Programs > Primex > Primex Device Configuration or from your computer desktop, double-click on the Primex Device Configuration icon.
5. From the Enter Password window, enter the password.
   Factory default password (case sensitive): Primex1
6. Select Connect. A connection between your computer and the device is established.
7. Verify the notification area located in the lower-left of the screen, displays Connected to device on COMx, which indicates the connection has been established.
8. Next, you will open the .pwg file downloaded from the gateway profile. From the top menu, select File, browse to the file location and select the .pwg file. The default file name is device.pwg
9. Select Write Configuration. From the Confirmation Needed window, select Yes. The settings of the .pwg file have been uploaded to the device, including your OneVue account ID and the network profile(s).

   To install a Radius EAP-TLS certificate

   1. Select the RADIUS Certificate tab.
   2. For each of the certificates, select Open and select the certificate file (.der file required).
   3. Select Write Configuration. From the Confirmation Needed window, select Yes. The network settings have been uploaded to the device. Proceed to step 10.
10. Select Disconnect. The connection between the software and device is ended.
11. Remove the USB connection between the device and your computer.
12. Apply power to the device; set the battery on/off switch back to the UP (On) position or insert batteries if removed. When power was applied, the device automatically initiated a check-in to your OneVue account.

13. Verify the device LCD displays Signal OK, which indicates the device successfully checked-in to your OneVue account. If there were pending changes downloaded during its check-in, the device will reset and check- in a second time before the Signal OK icon is shown.

If you completed this procedure due to the settings of the network profile assigned during device preconfiguration were not correct and a migration network was assigned to the gateway profile, the migration network is downloaded to the device during its check-in. Upon a successful connection to the migration network, the system automatically sets the primary network to the migration network.

If No Signal is displayed, you can initiate a manual check-in to your OneVue account by pressing the device check-in button.

When the check-in button is pressed, the device LCD displays its connection sequence, indicated by the number sequence below.

If a network connectivity issue occurs, you can test the wireless connection with use of the Primex Device Configuration software.

Change software and device password

The Primex Device Configuration software and Primex devices are shipped with the factory default password. For security purposes, it's recommended to change the password. This procedure changes the password of the device connected to the software.

1. Log in to the Primex Device Configuration software. Go to All Programs > Primex > Primex Device Configuration or from your computer's desktop, double-click on the Primex Device Configuration icon.
    Factory default password (case sensitive): Primex1
2. Go to Actions > Set Application Password.
3. Enter the new password and confirm the new password (password is case sensitive).
4. Select OK.
    The next step is to download the new password to the connected device. Before completing this step, verify the current network settings are correct.
5. Once the network settings are verified, select Write Configuration.
    To log in to the software and view the settings of the device (Read Configuration), the use of the new password established during this procedure is required.

If the software password entered is different than the password of the connected device or if Hide Configuration was enabled when the manual configuration file was downloaded from the gateway profile, the software limits you to only configure the device network settings (Write Configuration) and does not allow you to view the network settings (Read Configuration).

Save local configuration profile

You can save a local configuration profile of the current device connected to the Primex Device Configuration software. The local configuration file contains your OneVue account ID and the network settings of the connected device. You can then apply the profile to additional devices.

Before you begin, verify the network settings of the connected device are correct and a manual configuration file of a gateway profile had previously been downloaded to the device. The gateway profile file contains your OneVue account ID.

1. From the top toolbar, select File.
2. From the drop-down menu, select Save.
3. Enter a file name and save the file. By default, the .pwg file is saved to the Primex folder or you can select another location on your local computer.

Apply local configuration profile

You can apply a local configuration profile to a Primex device. The local configuration file contains your OneVue account ID and the network settings saved in the profile. The profile settings are download to the device gateway during this procedure.

Requirements

• Primex Device Configuration software is installed on to your computer.
• Primex device USB configuration cable (supplied with device)
• A local profile (.pwg file type) is saved locally to your computer.

How to apply a local configuration profile to a device

1. Verify the device does not have battery power applied; remove the device cover and temporarily set the battery on/off switch to the Off (down) position or remove the batteries.
2. Plug the Primex USB configuration cable into a USB port on your computer.
3. Plug the configuration cable mini-USB connector into the device USB mini port.
   The device automatically powers up, detects the connection to your computer and enters configuration mode. The LCD displays the letters Con and the Config icon is displayed indicating the device is in configuration mode.
4. Open the Primex Device Configuration software. Go to All Programs > Primex > Primex Device Configuration or from your computer desktop, double-click on the Primex Device Configuration icon.
5. From the Enter Password window, enter the password.
   Factory default password (case sensitive): Primex1
6. Select Connect. A connection between your computer and the device is established.
7. Verify the notification area located in the lower-left of the screen, displays Connected to device on COMx, which indicates the connection has been established.
8. From the top toolbar, select File.
9. From the drop-down menu, select Open.
10. Select the local configuration profile (.pwg file type). When the profile was created, by default it is saved to the Primex folder.
11. Select Write Configuration.
12. From the Confirmation Needed window, select Yes. The profile settings are downloaded to the device.
13. Select Disconnect. The connection between the software and device is ended.
14. Remove the USB connection between the device and your computer.

1. Apply power to the device; set the battery on/off switch back to the UP (On) position or insert batteries if removed. When power was applied, the device automatically initiated a check-in to your OneVue account.

2. Verify the device LCD displays Signal OK, which indicates the device successfully checked-in to your OneVue account. If there were pending changes downloaded during its check-in, the device will reset and check-in a second time before the Signal OK icon is shown.

If No Signal is displayed, you can initiate a manual check-in to your OneVue account by pressing the device check-in button ⊼ . The device emits a series of audio beeps indicating its connection sequence.

If a network connectivity issue occurs, you can test the wireless connection [15].

- 1 beep: device booted
- 2 beeps: device connected to network
- 3 beeps: device connected to OneVue

Scan for wireless access point

From the Primex Device Configuration software, you can scan for wireless access points. This feature can be used to determine the availability and signal strength of wireless networks at a given location.

Before you begin this procedure, the Primex device must be connected to the Primex Device Configuration software.

1. Verify the device connection is established; the notification area located in the lower-left of the screen, displays Connected to device on COMx, which indicates the connection has been established.
2. Select the Tools tab.
3. Select Scan for Wireless Access Points.

The wireless access points found are displayed.

Perform network connection test

From the Primex Device Configuration software, you can test the configured wireless network profile of a Primex device to validate its configured network settings or troubleshoot device network connectivity issues.

During the connection test, the device gateway attempts to do the following:

- Establish a network connection to the configured wireless access point (wireless profile 1)
- Obtain an IP address from the DHCP server
- Perform a discovery of the configured OneVue account ID

Failure points along this sequence of testing can help to identify the cause of a network connectivity issue. If the testing resulted in an error, the error message can help your determine if the issue is due to an incorrect or incomplete setting or a network server or wireless access point issue.

How to to perform a connection test

Before you begin this procedure, the Primex device is required to be connected to the Primex Device Configuration software.

1. Verify the device connection is established; the notification area located in the lower-left of the screen, displays Connected to device on COMx, which indicates the connection has been established.
2. Select the Tools tab.
3. Select Connection Test -Profile 1. This is the primary network profile (Wireless 1) that is configured into the device gateway.
4. Once the test completes, a success message or an error message is displayed. If the issue is an intermittent network issue, you may have to perform the Connection Test up to five times to receive an error message.

5. The following table lists the details of each error message and cause.

Error Message	Cause
The device failed to connect to Server 1 via Profile 1, because no access point matches the SSID written to the device for Profile 1.	The device cannot find the SSID. Either the SSID is mistyped or the wireless signal may not be strong enough. • Validate the SSID entered is correct; SSID is case sensitive.
The device failed to connect to Server 1, because association failed for the SSID written to the device for Profile 1.	The wireless network was found, but the device could not authenticate to the wireless network. This is commonly due to a network setting has been entered incorrectly (i.e., Security Type, Security Key/passphrase). • Validate the Wireless 1 settings are correct. The Security Key/passphrase is case sensitive.
The device failed to connect to Server 1 via Profile 1, because no DHCP lease could be obtained after associating with the SSID written to the device for Profile 1	A network configuration error. This may be due to the type of the wireless access point or the configuration of the DHCP server. Contact your IT department and verify: • DHCP server is available on the network • DHCP pool has addresses available • If MAC filtering is used, verify the device's MAC address is entered into the filter If the issue cannot be resolved, contact your Primex support representative.
The device failed to connect to Server 1 via Profile 1, because DNS lookup failed for the Server 1 domain (hostname) address written to the device. However, the device successfully associated with the SSID written to the device for Profile 1, and successfully obtained a DHCP lease or used static address per Profile 1.	A DNS failure error. Contact your IT department and verify: • The device has a route to the DNS server • If MAC filtering is used, verify the device's MAC is entered into the filter
The device failed to connect to Server 1 via Profile 1, because the device could not establish a TCP connection to port 443 at the Server 1 domain IP address written to the device. However, the device successfully associated with the SSID written to the device for Profile 1, and successfully obtain a DHCP lease or used static addresses per Profile 1, and successfully performed a DNS lookup for the server's domain (hostname) address if required.	A connection failure error. Contact your IT department and verify: • The network the device is connecting to has access to the Internet (port 443 open) • If MAC filtering is used, verify the device's MAC address is entered into the filter