Printer Profile Manager Enterprise

Version 3.1

Installation Guide

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Contents

About This Document

This section provides you with contact information, document structure and organization, and additional reference documents.

Who Should Use This Document

This Installation Guide is intended for use by any person who needs to perform routine maintenance, upgrade, or troubleshoot problems with the printer.

How This Document Is Organized

The Installation Guide is set up as follows:

Section	Description
Installation and Other Operations on page 6	This chapter includes the procedure to install Printer Profile Manager Enterprise (PPME), identify troubleshooting issues, and uninstall it.
License on page 41	This chapter provides general and specific information about the license.

Installation and Other Operations

This chapter includes the procedure to install Printer Profile Manager Enterprise (PPME), identify troubleshooting issues, and uninstall it.

System Requirements

Supported Operating Systems

Windows:

- Windows Server$^{\circledR}$ 2012, 64-bit processor
- Windows Server 2016, 64-bit processor
- Windows Server 2019, 64-bit processor
- Windows$^{\circledR}$ 10, 64-bit processor

Browsers

- Chrome Browser version 76 or higher

Minimum System Requirements

CPU cores: 4

Memory (RAM): 16GB

Minimum: 50GB available drive space

Using the printer analytics or battery management functions will require up to 1TB of disk space. Please refer to the Printer Profile Manager Enterprise User Guide for more information on these features.

Recommended System Requirements

CPU cores: 8

Memory (RAM): 16GB

Network Access Requirements

Internet Access

IMPORTANT: Internet access is required to complete the installation of PPME.

For the PPME licensing system to work, the server must have outgoing ports 80 and 443 open to the Internet, and must be able to reach my.nalpeiron.com and acs.zebra.com.

HTTPS and Websocket protocols must be enabled over port 443.

Internal Network Outgoing Ports

Zebra printers support a discovery process that utilizes UDP on port 4201.

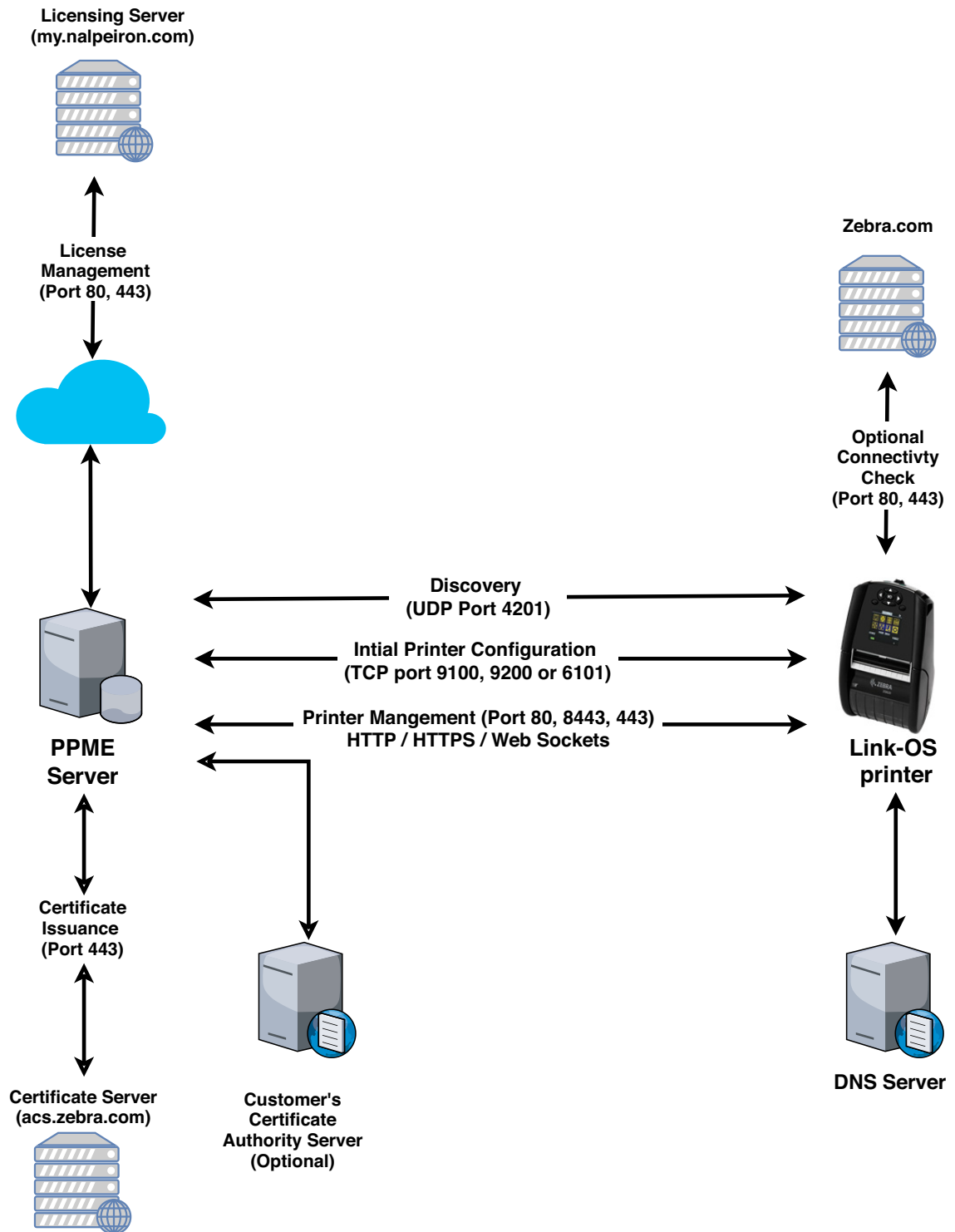Initial printer configuration may use TCP ports 9100, 9200, or 6101.

If using LDAP, additional ports may need to be opened.

Server Access (Incoming Ports)

The server firewall should be configured to only allow the following incoming ports:

- Port 8443: printer connections
- Ports 80 and 443: client connections

Figure 1 Data Flow Diagram

Before You Begin

Please ensure that your system clock and time zone are set properly **before** beginning the installation.

⚠️ **CAUTION:** If your server clock is not set to the current time, you will experience issues with installation, provisioning events, operations log, and licensing.

If you have a version of PPME currently installed, continue with Backup PPME on page 11, and then proceed to Upgrading PPME on page 33.

If you do not have a version of PPME installed, proceed to Installation on page 13.

Information Checklist for Installation

The following is a list of information that the user setting up the administrator (admin) account must have before he begins the installation. If you have made changes to these assumptions (location, user, or directory), substitute your changes in the steps, as needed.

1. Installation location: The default location is `C:\Program Files\Zebra Technologies\Printer Profile Manager Enterprise`

2. Local user: `Administrator`

3. Local PPME directory: The default location is `C:\Users\Administrator\PPME`

4. Administrator account information:

    a. Full Name

    b. Username

    c. Email Address

    d. Password

5. Server

    a. Fully Qualified Domain Name (FQDN)

    b. Do you wish to Use Detected FQDN? (Checkbox)

6. PPME License code or Use in Evaluation Mode (Checkbox for Use in Eval. Mode)

7. Network IP Addressing:

    a. DHCP or Static/Permanent IP addressing (Radio buttons)

    b. DNS Server List

    The DNS Server List is a space-delimited list of DNS Server IP addresses. Ensure that each IP address is a valid IPv4 address and that the addresses are separated by a space. The total list of addresses should not be longer than 255 characters.

    c. DNS Domain Name

    The DNS Domain Name needs to be a valid DNS name (e.g., no white space in the name and no longer than 255 characters).

8. Outgoing Email Server (SMTP Server)

    a. SMTP Server Host Name

    b. Port

    c. From Address

    Spaces or other whitespaces in the email address is a common cause for failure when requesting a certificate.

9. Enable SSL and Require Authentication (Checkboxes)

10. (Optional) Do you wish to Send Test Email or skip to refrain from sending the test email.

11. Certificate Creation details:

    a. Company name

    b. Department

    c. Address

    d. City

    e. State

    f. Country

    g. Postal Code

    h. Email address

    i. Phone number

    j. Server Name (Fully Qualified Domain Name)

    k. Type of Server's SSL Certficate you plan to use

12. Type of Server's SSL Certificate

    a. SHA-1: Zebra-Signed Certificate

    b. SHA-2: Self-Signed Certificate

13. For SHA-1 certificate, you will need the Port number.

14. For SHA-2 certificate, you will need the Password and Port number.

Backup PPME

Key Assumptions

If you have made changes to these assumptions (location, user, or directory), substitute your changes in the steps, as needed.

- Assume the location of installation is `"C:\Program Files\Zebra Technologies\Printer Profile Manager Enterprise"`

- Assume the local user is `'Administrator'`

- Assume the local PPME directory is located at:

    `"C:\Users\Administrator\PPME"`

> **IMPORTANT**: If you are using the same server, printers will not connect after an uninstall or re-install. If you save the certificate, then you are able to re-use it. If you have not saved it, you will not be able to re-use it.

Stop Services

This section directs you to "stop an "xyz" service". You may stop a Microsoft service using several methods:

- Services Window
- net Command
- Sc Command
- Task Manager
- PowerShell

To stop services using the Task Manager, perform the following steps:

1. Open the Task Manager (**CTRL+SHIFT+ ESC**).

    - Click on the **Services** tab at the top of the Task Manager window.

2. To stop the 'Printer Profile Manager Enterprise' service:

    a. Select the name of the service.

    b. Right-click on the service.

    c. Select **STOP** to stop the specific service.

3. To stop the 'Printer Profile Manager Enterprise Database' service:

    a. Select the name of the service.

    b. Right-click on the service.

    c. Select **STOP** to stop the specific service.

4. To stop the 'Printer Profile Manager Enterprise Elasticsearch' service.

   a. Select the name of the service.

   b. Right-click on the service.

   c. Select **STOP** to stop the specific service.

5. Close the Task Manager window.

To backup your installation, perform the following steps:

1. Backup the '`C:\Users\Administrator\PPME`' directory.

NOTE: If the default directory was not used during the installation, the directory to backup will be what you selected rather than `C:\Users\Administrator\PPME.`

2. Backup the '`C:\Program Files\Zebra Technologies\Printer Profile Manager Enterprise`' directory.

3. Start the 'Printer Profile Manager Enterprise Elasticsearch' service using Task Manager.

4. Start the 'Printer Profile Manager Enterprise Database' service using Task Manager.

5. Start the 'Printer Profile Manager Enterprise' service using Task Manager.

Installation

The PPME Installation consists of two parts: the File Deployment and the Application Setup Wizard. Both parts must be completed to use and access the PPME application.

🛈 **IMPORTANT:** Internet access is required to complete the installation of PPME.

File Deployment

This section shows the screens you will see during the file deployment portion of the installation.

1. Log into the server (where you wish to install PPME) as Administrator.

2. To launch the Printer Profile Manager Enterprise (PPME) installer, double-click on PPME.3.xx.xx.exe.

   (where **xx.xx** indicates the version number of the software)

Figure 2   Welcome Dialog
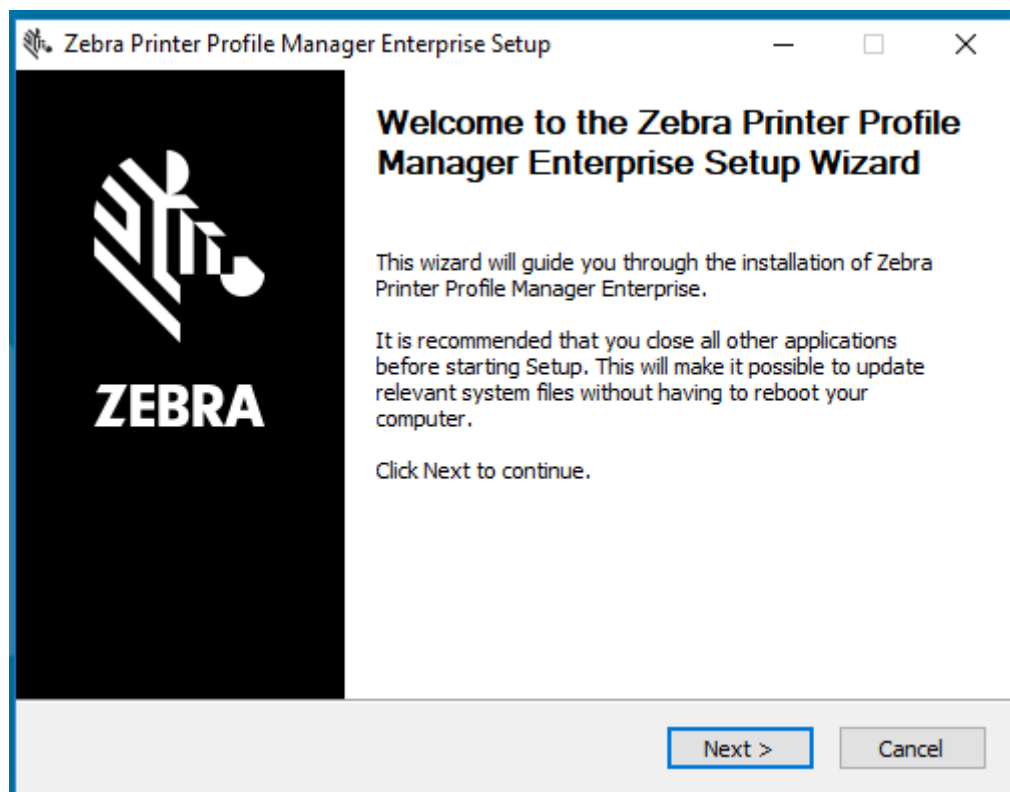
3. Click **Next** to continue.

   The License Agreement dialog appears.

Figure 3 License Agreement Dialog
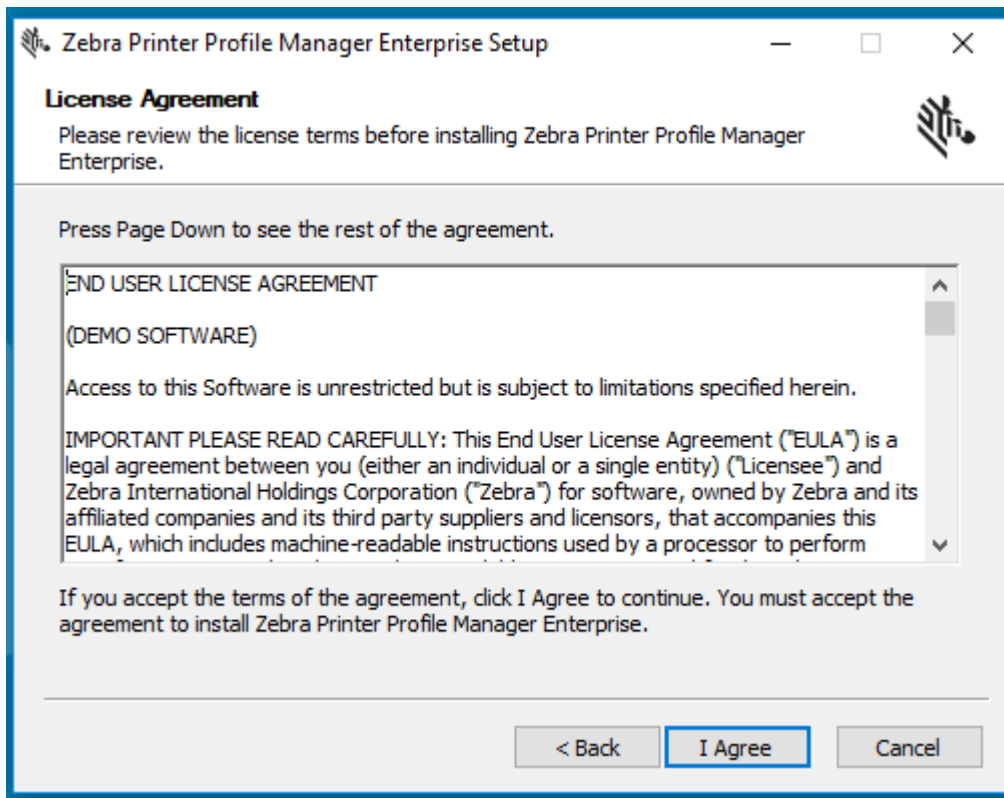
4. Click **I Agree** to accept the terms of the license agreement.

5. Ensure that your system clock is synced with a time server.

Figure 4   Time Server Dialog
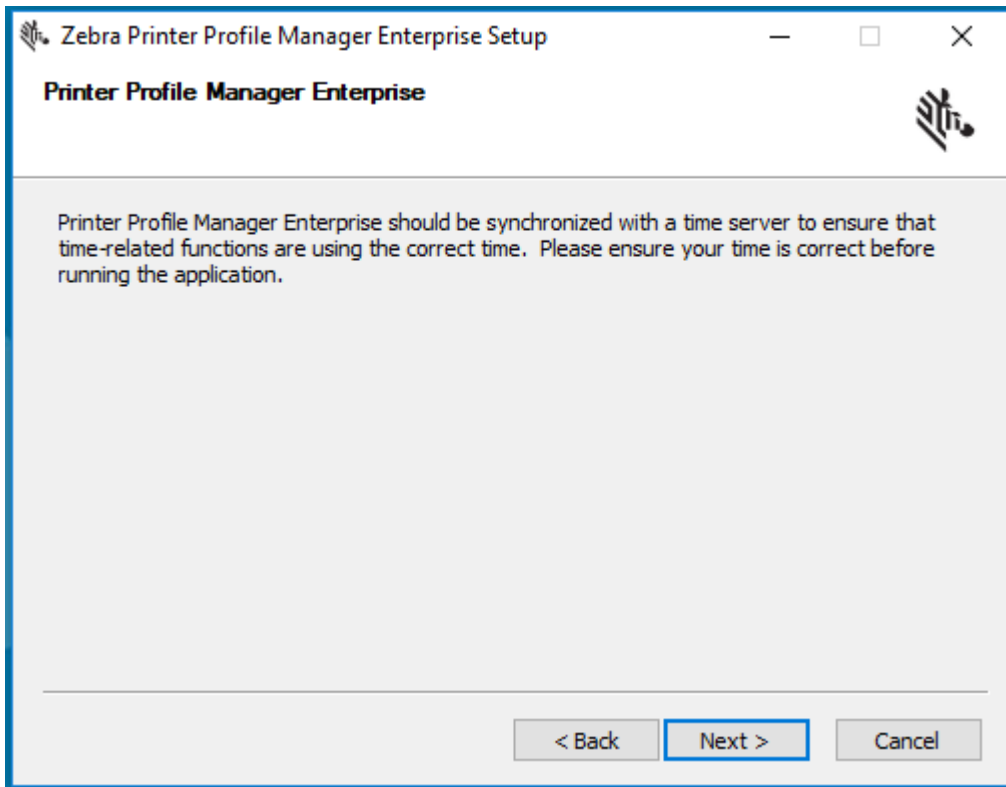
6. Click **Next** to continue.

The Printer Profile Manager Enterprise Settings dialog appears.

Figure 5   Printer Profile Manager Enterprise Settings Dialog
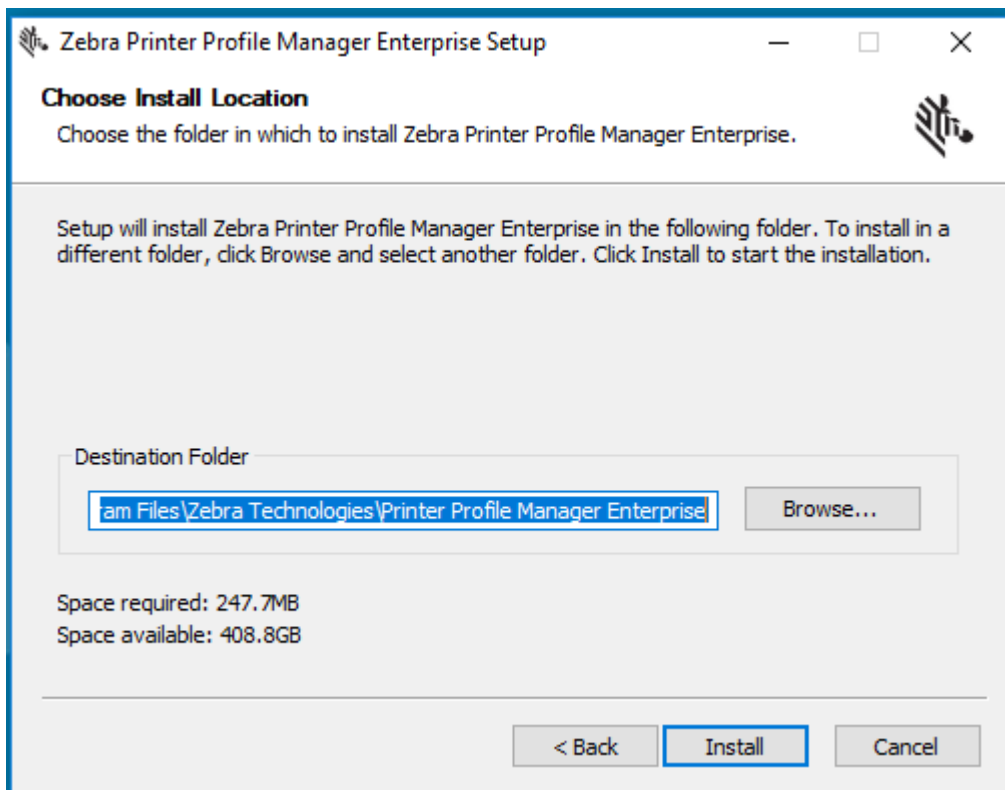
7. Click **Install** to begin the installation.

    The Installing dialog appears.

Figure 6   Installing Dialog
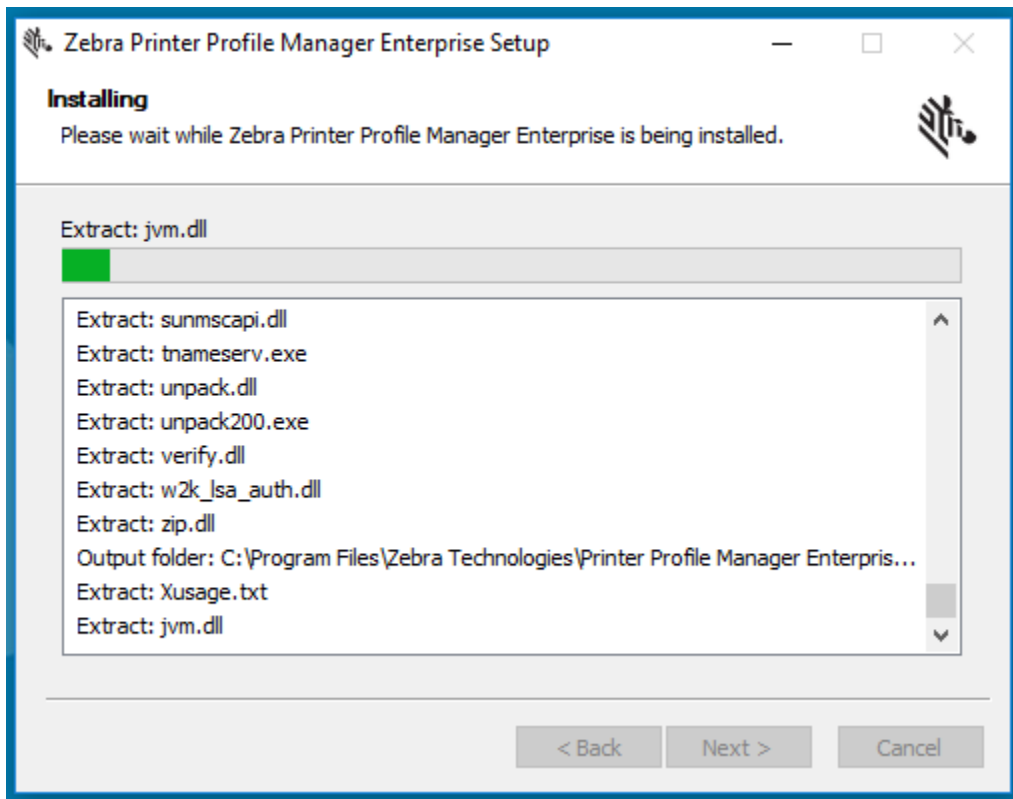
The Installation Complete dialog appears.

Figure 7 Installation Complete Dialog
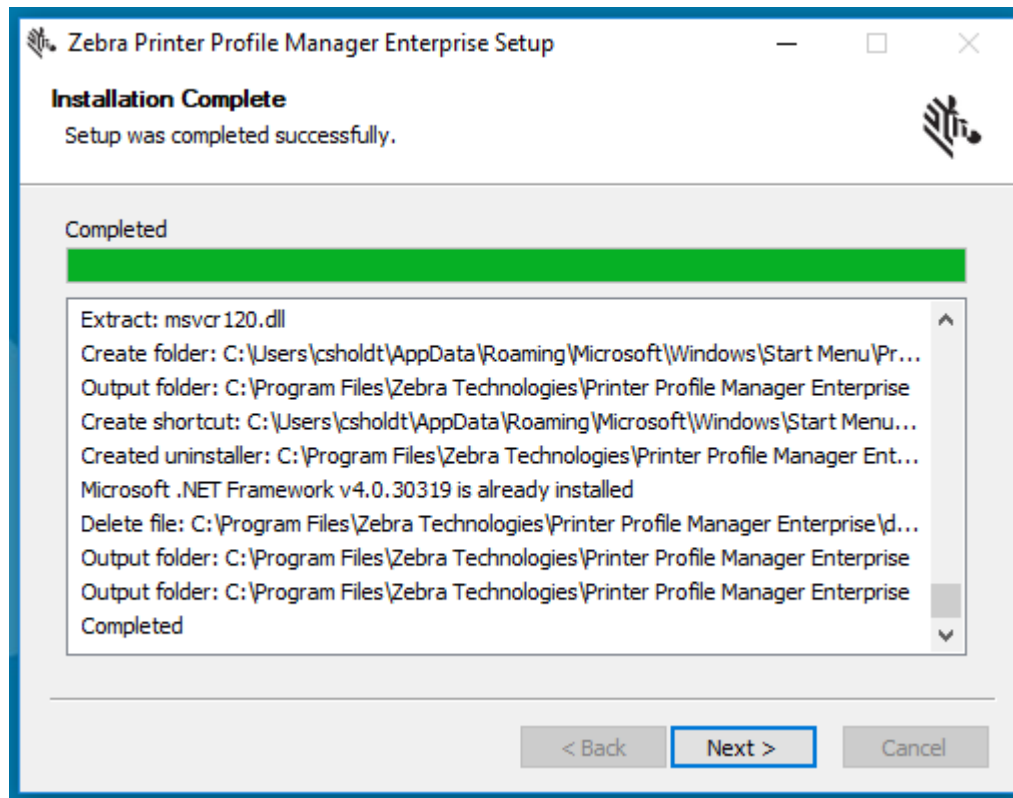
8. Click **Next** to continue.

The Starting Required Services dialog appears.

Figure 8   Starting Required Services Dialog
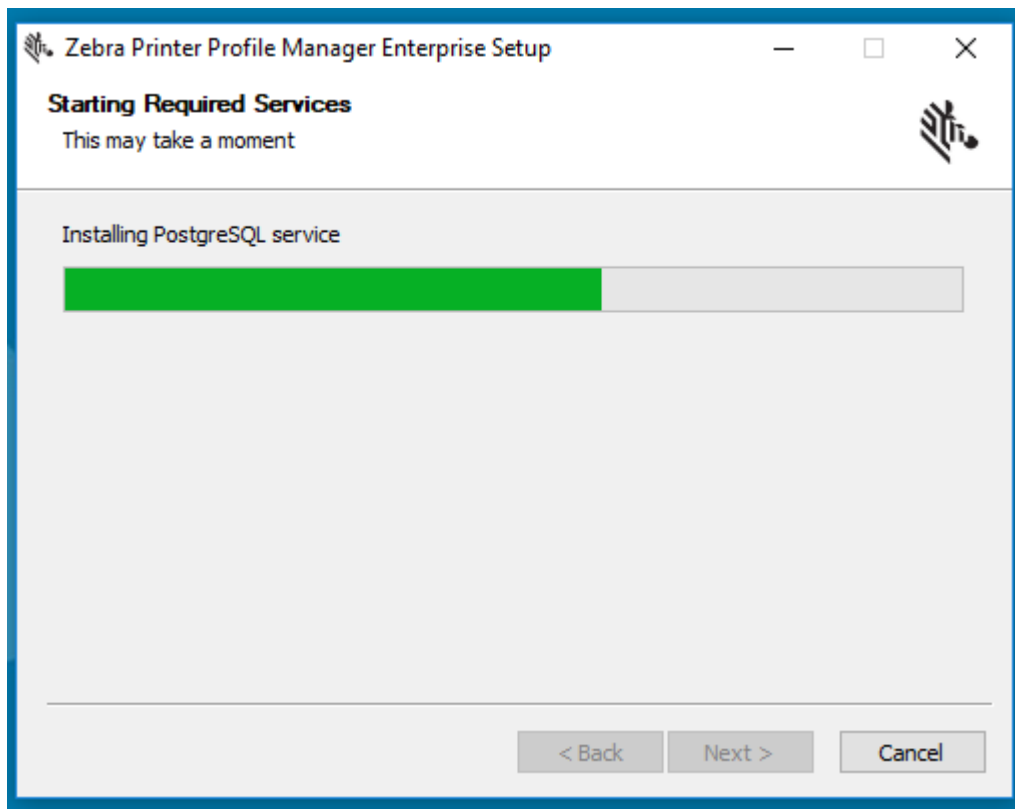
Figure 9   Starting Required Services Installation Complete Dialog
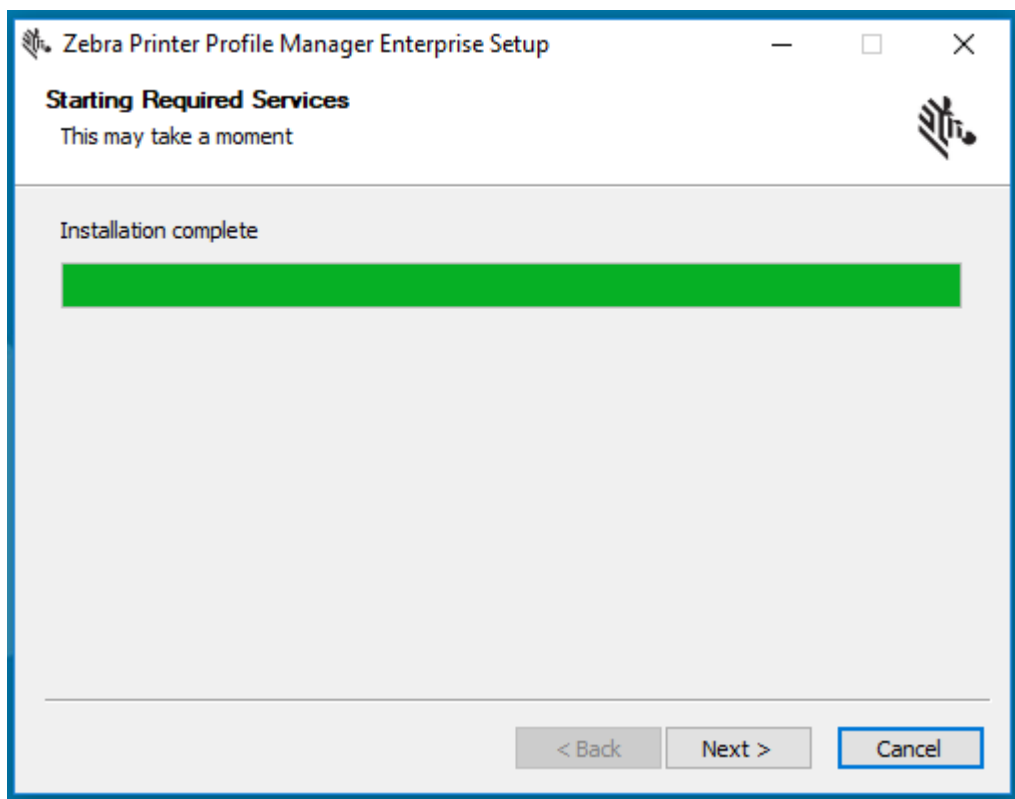
Once the Required Services are complete, the Setup Wizard Complete dialog appears.

Figure 10   Setup Wizard Complete Dialog
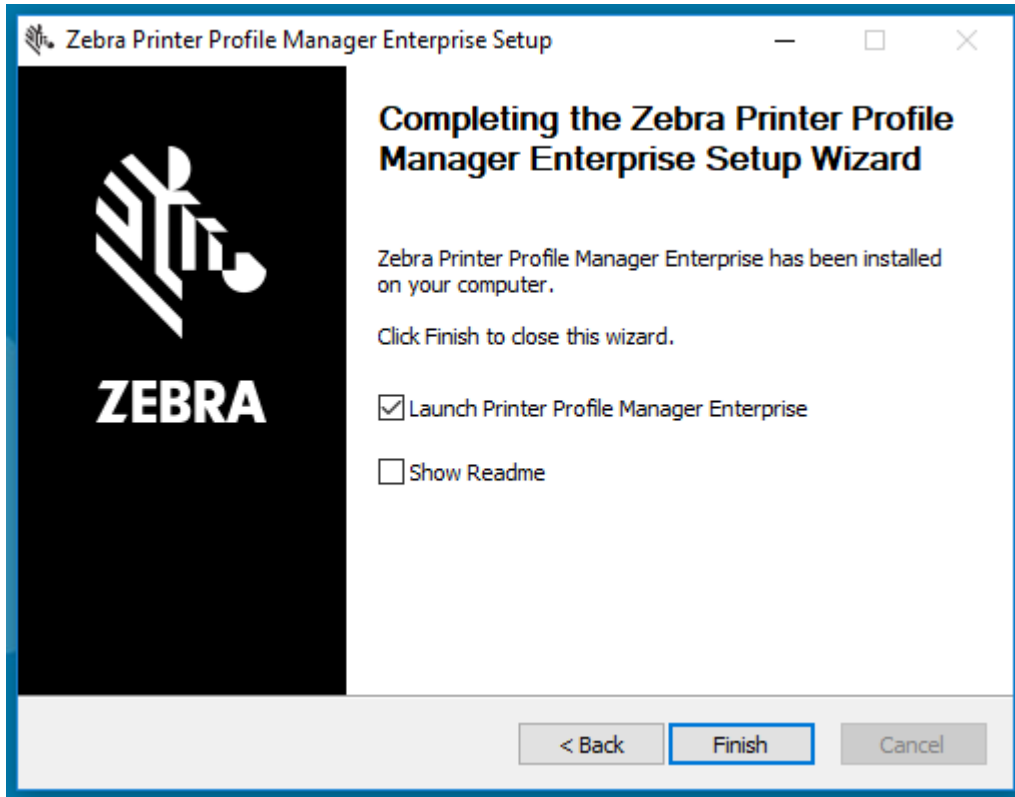
9. Click **Finish** to close the Setup Wizard.

    Ensure that the checkbox is checked.

    A browser window will appear.

    NOTE: If the browser window doesn't connect immediately, be patient, refresh your screen as PPME services may still be starting.

Chrome Browser

If this is the first time you are logging into PPME and you use Chrome as your browser, you may see the Privacy Error warning. The notification appears because PPME generates a self-signed certificate to secure your initial connection.

Click on **Advanced** to continue to the Setup Wizard where you will be guided to set up PPME.

Warning: Do not click on **Back to Safety** or close the browser window without saving the PPME URL.

Figure 11   Privacy Error Warning
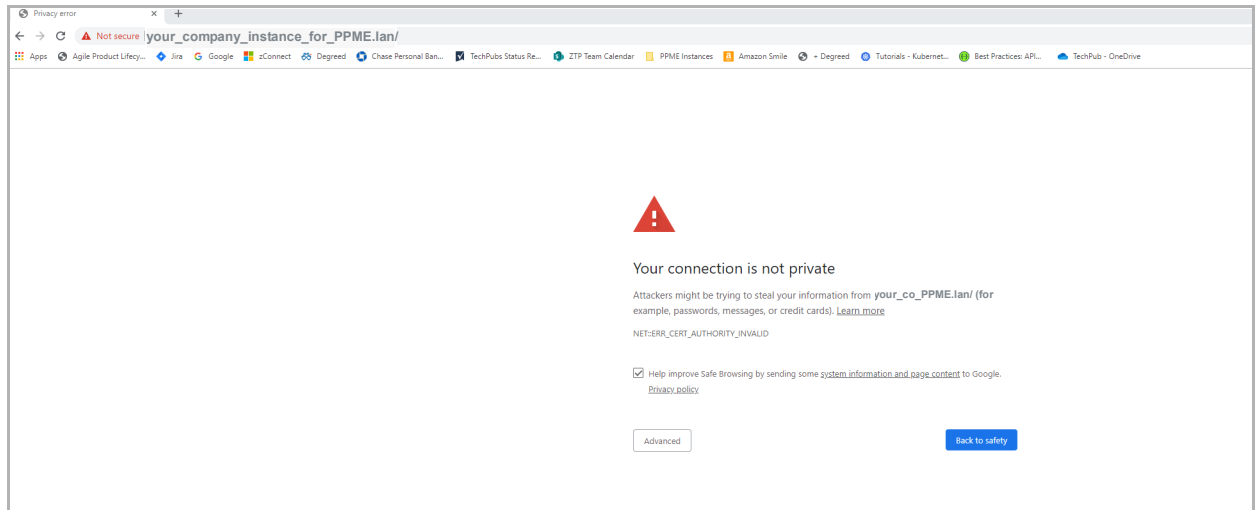
Application Setup Wizard

Introduction to the Setup Wizard

Figure 12 is a complete screenshot of the PPME Application Setup Wizard. To improve readability, all other screens for the Application Setup Wizard are cropped and the size has been increased.

Figure 12 Full Screenshot of PPME Application Setup Wizard

1	Progress bar		5	Fields to fill in
2	Purpose (or main focus) of this screen		6	Continue button advances to the next screen
3	Zebra logo		7	Help button
4	Information button provides additional information. (Click on the icon to open it.)		8	Back button returns to the previous screen

Setup Wizard

The Welcome dialog appears.

Figure 13   Welcome Dialog
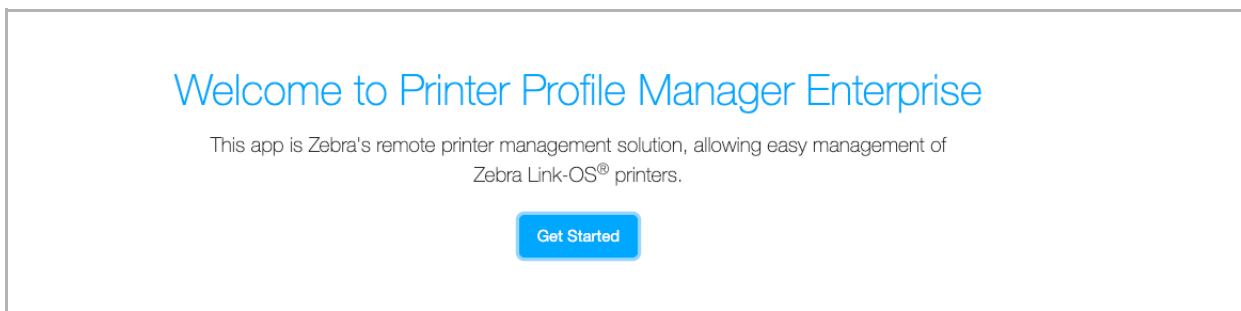
1. See Figure 13. Click **Get Started** to continue.

   The Administrator Account dialog appears.

2. See Figure 14. Fill in the fields to create your Admin account.

NOTE: The Admin username is the role with a complete set of permissions and functionality.

- Enter the **Full Name**, **Username**, **Email Address,** and **Password** fields.

3. Click **View EULA**, and then click **Accept EULA and Continue**.

Figure 14   Administrator Account Dialog

The Server Accessibility dialog appears.

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4. See Figure 15. Enter the **Fully Qualified Domain Name** (FQDN) or click the checkbox to **Use Detected FQDN**.

5. Click **Continue**.

Figure 15   Server Accessibility Dialog
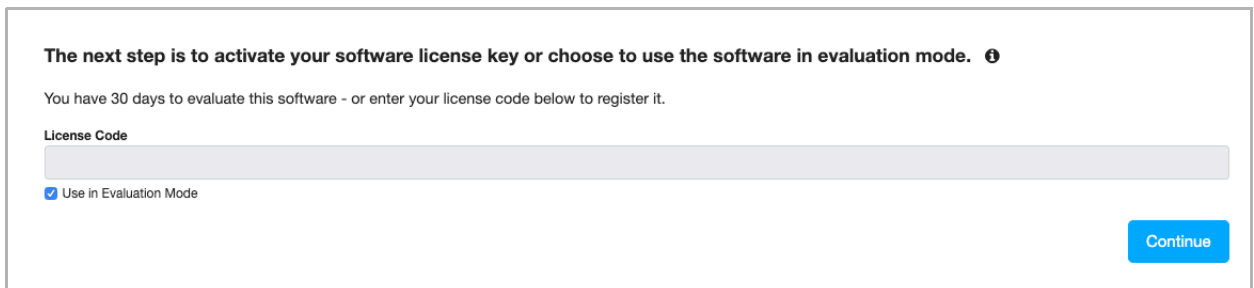

The Server License dialog appears.

6. See Figure 16. Enter your license code register it or **Use in Evaluation Mode**.

7. Click **Continue**.

Figure 16   Server License Dialog

The Network Addressing dialog appears.

8. See Figure 17. Click the radio button for **DHCP** or **Static/Permanent** IP addressing.

9. Enter the **DNS Server List** and **DNS Domain**.

NOTE: The DNS Server List is a space-delimited list of DNS Server IP addresses. Ensure that each IP address is a valid IPv4 address and that the addresses are separated by a space. The total list of addresses should not be longer than 255 characters.

NOTE: The DNS Domain Name needs to be a valid DNS name (e.g., no white space in the name and no longer than 255 characters).

10. Click **Continue**.

Figure 17   Network Addressing Dialog

The Outgoing Email Server dialog appears.

11. See Figure 18. Enter the SMTP server **Host Name**, **Port**, and **From Address**.

NOTE: Spaces or other whitespaces in the email address is a common cause for failure when requesting a certificate.

12. Click the checkboxes to **Enable SSL** and **Require Authentication.**

13. (Optional) Click **Send Test Email**.

Or, click **Skip** to refrain from sending the test email.

14. Click **Continue**.

Figure 18   Outgoing Email Server Dialog

15. If you chose **Skip** on the previous screen, you must confirm the choice.

The Warning dialog appears.

16. See Figure 19. Click **Confirm** to skip the SMTP server setup or click **Cancel** to return to the previous screen.

Figure 19　Warning Dialog

The Certificate Creation dialog appears.

17. See Figure 20. Enter the requested company information, for example, your company name, etc.

18. Click **Continue**.

Figure 20   Certificate Creation Dialog
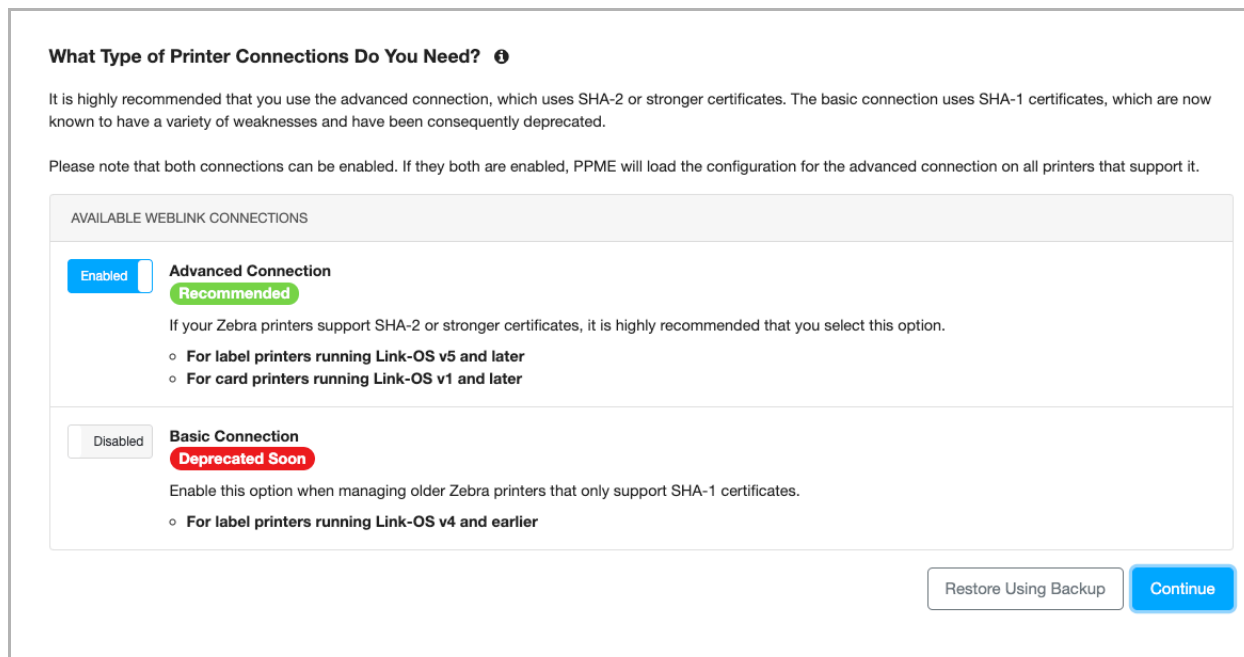
The Printer Connections dialog appears.

19. See Figure 21. Select the type of printer connection.

Figure 21   Printer Connections Dialog

20. Which type of connection did you choose?

If you chose...	Then do the following...
Advanced Connection/SHA-2 or stronger certificates	• Go to Advanced Connection/SHA-2 Certificate on page 29.
Basic Connection/SHA-1 certificates	• Go to Basic Connection/SHA-1 Certificate on page 30.
Both	• Go to Advanced Connection/SHA-2 Certificate on page 29. • At the end of this procedure in step 6 on page 30, you will also be directed to complete the Basic Connection/SHA-1 Certificate on page 30. Note: If you enable both certificates, you must ensure that they are both set to different ports.

Advanced Connection/SHA-2 Certificate

If you selected a SHA-2 Certificate, the Advanced Connection dialog appears.

1. See Figure 23. Click **Generate** to create a SHA-2 Certificate or click **Back** to return to the previous screen.

Figure 22   Advanced Connection Dialog

The Passwords for Locally Generated Certificates dialog appears.

2. See Figure 23. Enter the **Server Certificate Password** and **Printer Certificate Password** number.

3. Click **Continue**.

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Figure 23 Locally Generated Certificates Dialog

The Finalizing the Advanced Connection dialog appears.

4. See Figure 24. (Optional) Click **Download** to save a copy of the printer settings in case you need to manually connect your printer to PPME.

5. Click **Continue**.

Figure 24 Advanced Connection Dialog

The Backup Your Connection Settings and Certificates dialog appears.

6. If you selected the Advanced Connections (only), go to Setup Complete on page 31.

   If you selected Both connections (Advanced <u>and</u> Basic Connections), go to Basic Connection/SHA-1 Certificate on page 30.

Basic Connection/SHA-1 Certificate

Note: If you have enabled the Advanced Connection (SHA-2 certificate), you must ensure that the Basic/SHA-1 certificate uses a different port.

If you selected a Basic Connection/SHA-1 Certificate, the Port and Certificates for the Basic Connection dialog appears.

1. See Figure 25. Click **Generate** to create a SHA-1 Certificate or click **Back** to return to the previous screen.

2. Enter the **Port** number.

Figure 25   Port and Certificates for the Basic Connection Dialog

The Finalizing the Basic Connection dialog appears.

3. See Figure 26. (Optional) Click **Download** to save a copy of the printer settings in case you need to manually connect your printer to PPME.

4. Click **Continue**.

Figure 26   Certificate Creation Dialog

The Backup Your Connection Settings and Certificates dialog appears.

5. Go to .

Setup Complete

1. See Figure 27. Click **Continue** to create the backup archive and save the certificates and configurations for the Weblink connections (Advanced and Basic connections).

    The backup archive does not contain any other settings, tags, profiles, or resources.

    IMPORTANT: Please save this file and the password in a safe and secure location in case you ever need to re-install your PPME instance.

Figure 27 Backup Your Connection Settings and Certificates Dialog
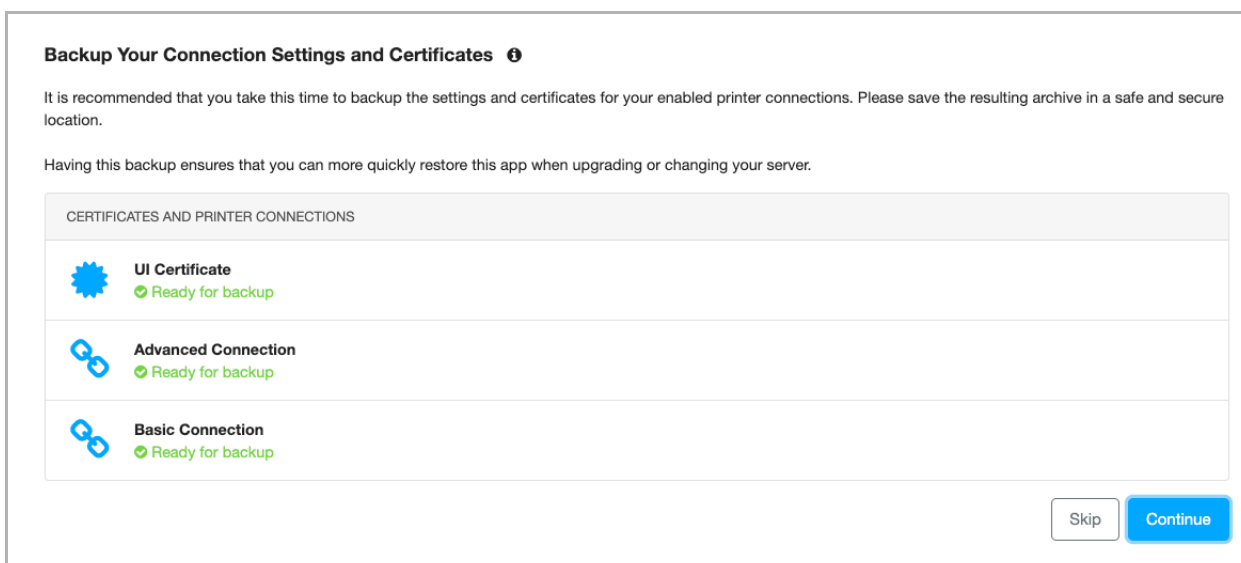
The Backup Your Connections dialog appears.

2. See Figure 29. Enter the **Backup Archive Password**.

3. Click **Backup**.

Figure 28 Backup Your Connections Dialog
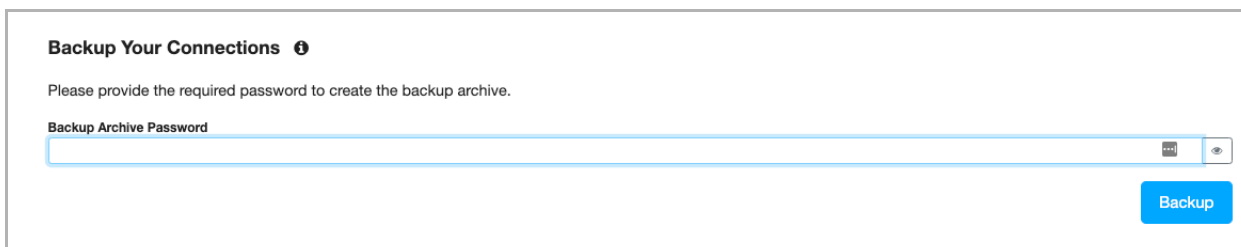
The Setup Complete dialog appears.

4. See Figure 29. Click **All Done!** to complete the PPME application setup and close the Setup Wizard.

Figure 29 Setup Complete Dialog

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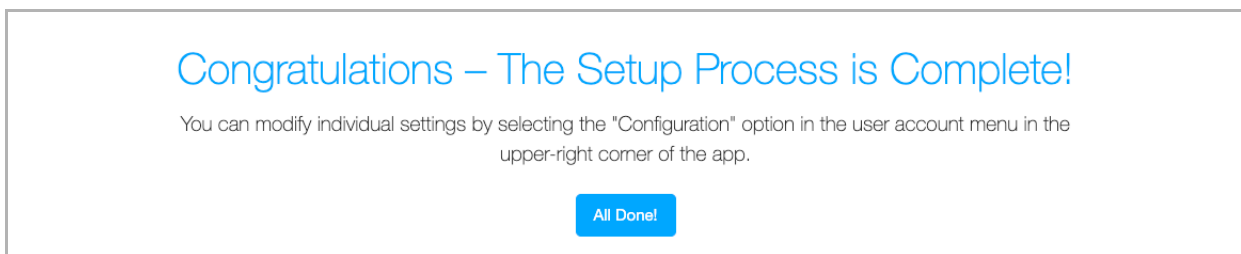
Upgrading PPME

Before continuing with the upgrade, it is recommended that you backup your current installation. See Backup PPME on page 11 for more information.

Any printer management events, or users logged into the software at the time of this upgrade will experience a disruption in service while the upgrade is in progress.

This update is only to be used on older, successful, installations. If an installation is newer or was incomplete, the product should first be completely uninstalled. See Uninstall PPME on page 40 for more information.

NOTE: Downgrading to an earlier version of PPME is not recommended since new features, data, and recent fixes will be lost in the downgrade process.

To upgrade your installation, perform the following steps:

1. Log in as Administrator.

2. To launch the Printer Profile Manager Enterprise (PPME) installer, double-click on PPME.2.xx.xx.exe.

   (where **xx.xx** indicates the version number of the software)

3. You will start with the same first three screens as the installation. These screens include:

   • Welcome

   • End User License Agreement

   • System clock synchronization

   The Printer Profile Manager Enterprise Upgrade dialog appears.
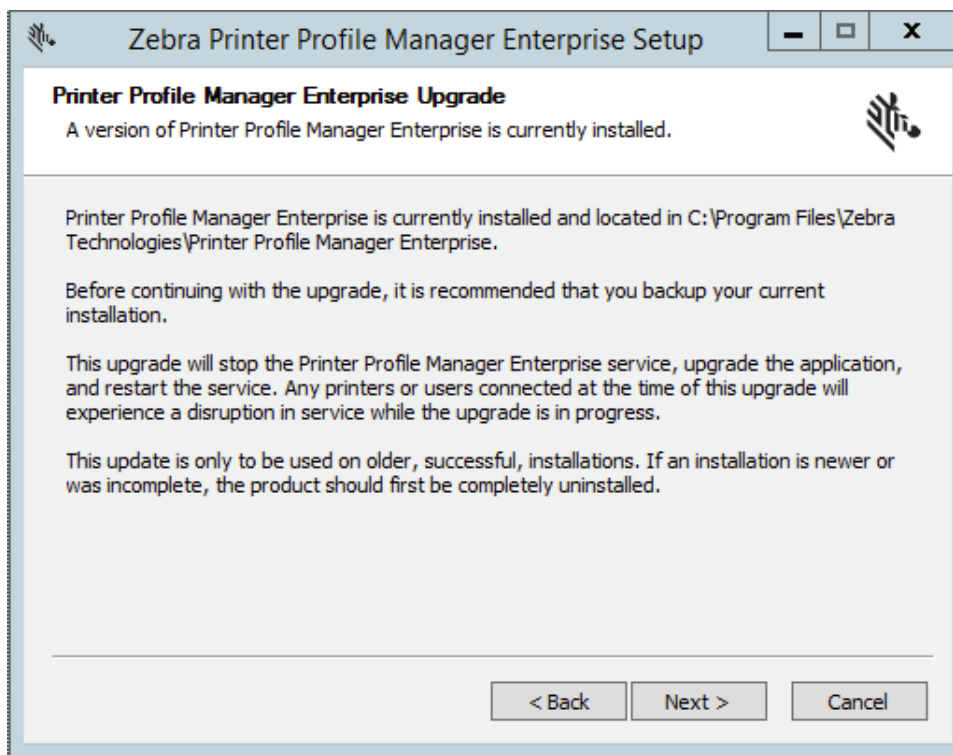
4. Click **Next.**

   The Printer Profile Manager Enterprise Upgrade (Base Directory) dialog appears.

5. Select the **New Data Storage Location.**
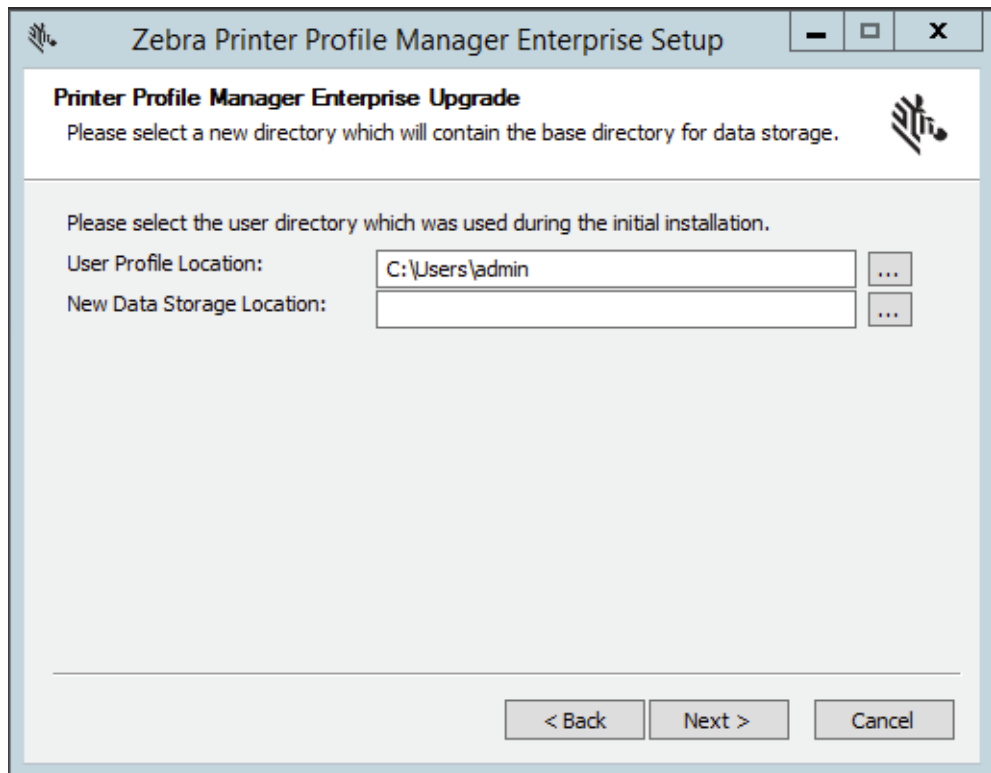
6. Click **Next.**

The Printer Profile Manager Enterprise Upgrade In Progress dialog shows the Upgrade complete.
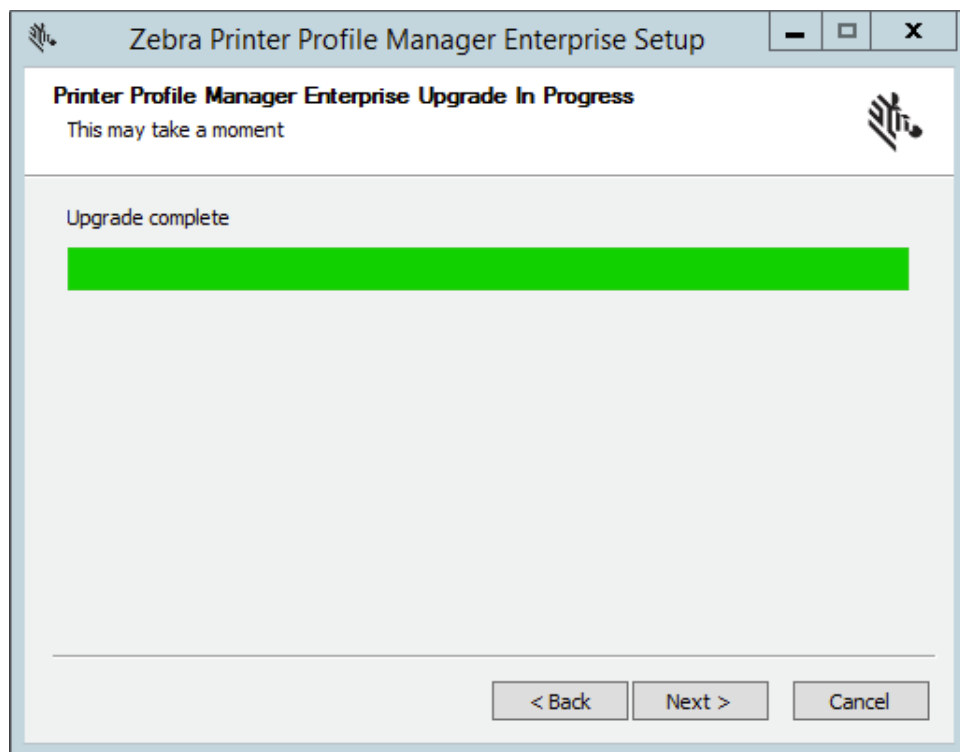
7. Click **Next.**

   The Completing...Setup Wizard dialog appears.
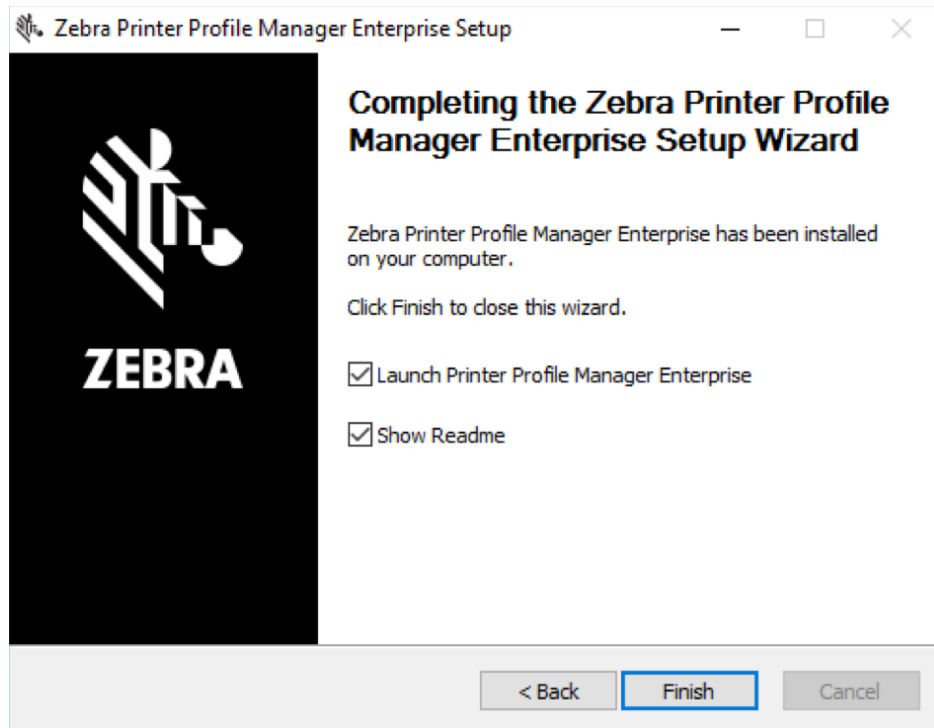
8. Click **Finish** to close the wizard.

Troubleshooting

Installation Issues

- If you receive either of the error messages below, check your Internet connection.
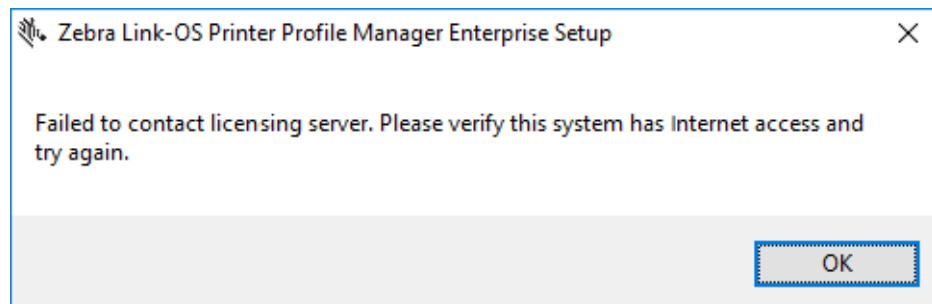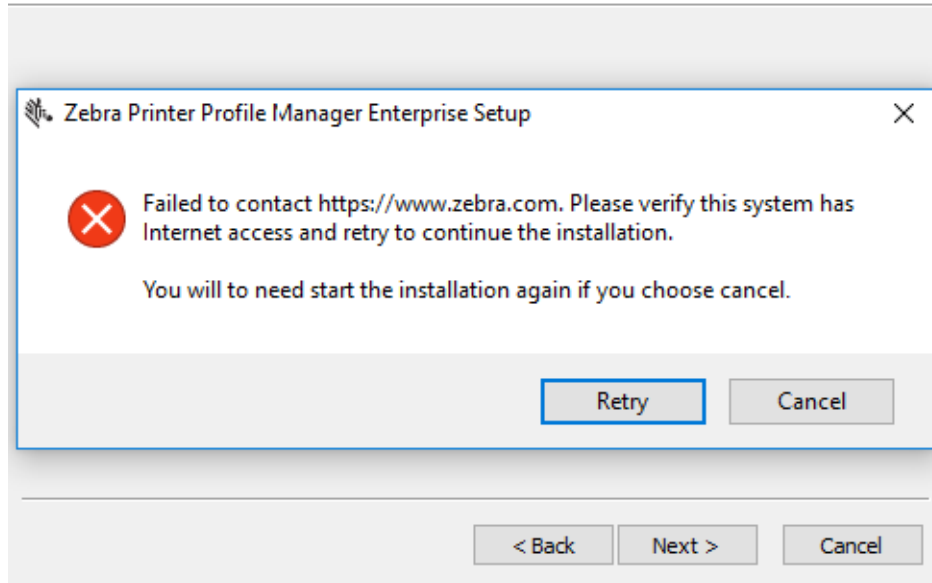
Other reasons you may not be able to connect include:

- Connection to a network that has no Internet access
- Firewall is blocking outgoing ports 80/443
- Firewall is blocking zebra.com
- Firewall is blocking nalpeiron.com
- DNS issues

Other Issues

Increasing log capture content

The logging levels for PPME are controlled by the ppmelogback.xml file stored in the user's .PPME folder (e.g. C:\Users\Administrator\.PPME\). To change the levels one must edit the file and save it. PPME will automatically check every 2 minutes for any updates and apply them without the need to reboot the server/service.

To Change the Level to Debug for Non-Printer Data

1. Edit the ppmelogback.xml file in a text editor that understands Windows and Linux line endings. (Notepad or a browser are not recommended.)

2. Find the PPME_LOGS appender. The xml line looks like this:

```
<appender name="PPME_LOGS" class="ch.qos.logback.core.rolling.RollingFileAppender">
```

3. Change the filter level to DEBUG:

```
<filter class="ch.qos.logback.classic.filter.ThresholdFilter">
    <level>DEBUG</level>
</filter>
```

4. Find the root level filter that contains the PPME_LOGS appender and change it to DEBUG

```
<root level="DEBUG">
    <!--<appender-ref ref="CONSOLE"/>-->
 <appender-ref ref="PPME_LOGS"/>
</root>
```

5. Save the file and wait approximately 2 minutes

6. The .PPME/logs/ppme.log file should start to increase in size at a much faster rate (depending upon how many printers being used).

7. If the file is opened, the 'DEBUG' level should be seen as a prefix to some messages

To Change the Level to Debug for Printer Data

1. Edit the ppmelogback.xml file in a text editor that understands Windows and Linux line endings. (Notepad or a browser are not recommended.)

2. Find the PPME_LOGS appender. The xml line looks like this:

```
<appender name="PRINTER_DATA_LOGS"
class="ch.qos.logback.core.rolling.RollingFileAppender">
```

3. Change the filter level to DEBUG:

```
<filter class="ch.qos.logback.classic.filter.ThresholdFilter">
    <level>DEBUG</level>
</filter>
```

4. Find the root level filter that contains the PPME_LOGS appender and change it to DEBUG

```
<root level="DEBUG">
<!--<appender-ref ref="CONSOLE"/>-->
 <appender-ref ref="PPME_LOGS"/>
</root>
```

5. Save the file and wait approximately 2 minutes

6. The .PPME/logs/ppme_printer_data.log file should start to increase in size

7. If the file is opened, the 'DEBUG' level should be seen as a prefix to some messages

NOTE: In both scenarios above, only leave the new "DEBUG level in place for the duration that is needed in order to collect the logs. Once the collection period is over, make sure to put the levels back to WARN so that the log is not filled up with DEBUG data during normal operation.

Uploading large files triggers an exception in the system log

No solution required. This exception is just a warning from the database code stating that the operation is taking too long and may be a memory/data leak.

The application fails to start and the log file reads "SOAP: invalid license number"

This is typically due to an incorrectly set server clock. If the server clock is not the correct time, update the clock and then reinstall the application. If this does not solve the problem, you may have an invalid license key.

LDAP encounters a communication or connection error when attempting to 'Save and Test' the settings.

This can be due to several issues:

- One of the server settings being incorrect.

- The PPME server cannot resolve the Hostname

- The port is blocked between PPME and the LDAP server

- If the SSL box is checked, the LDAP server may be issuing a self-signed certificate. In order for PPME to connect it must trust the server's Certificate Authority (CA). If the certificate is self signed then PPME needs to be updated to trust that CA. In order to do that, the following steps must be taken:

Configuring PPME to trust the LDAP CA

1. Stop the PPME service

2. Open a Windows Command Window

3. Go to the jre directory with in the PPME install directory (e.g. C:\Program Files\Zebra Technologies\Printer Profile Manager Enterprise\jre)

4. Note the location of the LDAP CA PEM file. In this example, assume it is C:\Users\Administrator\Desktop\ldap_ca.pem

5. Run the following command assuming the alias is 'ldapca'. Note it can be anything the customer wants it to be

```
> bin\keytool -importcert -keystore lib\security\cacerts -file
C:\Users\Administrator\Desktop\ldap_ca.pem -alias ldapca
```

6. Start the PPME service

7. Try the 'Save and Test' again and this time it should connect

Note that typically when this issue happens, the following will be seen in the ppme.log file:

```
PKIX path building failed:
sun.security.provider.certpath.SunCertPathBuilderException: unable to find valid
certification path to requested target
```

The application fails to start and the log file reads "Nalpeiron: Invalid or corrupt library"

1. Shut down the application

2. Locate the Nalpeiron folder, typically located at C:\Users\Administrator\AppData\Roaming\Nalpeiron and delete the entire folder.

3. Restart the application.

The printer will not connect to PPME and/or the printer is stuck in the 'Adding' state

NOTE: The Zebra Programming Guide contains much of what you see below and goes into more detail on the operation and functionality of Weblink.

The printer uses HTTPS in order to connect to the PPME server. Therefore, it does hostname verification when connecting to ensure that the certificate that is presented by the server matches the hostname/DNS name the printer is attempting to connect to. In order to make a successful connection to PPME, several things have to be true:

• The PPME server must be reachable from the printer's subnet (e.g., you can ping the PPME server from the printer's subnet)

• The port that printers use to connect to PPME (e.g. 8443) must be reachable from the printer's subnet (e.g., any firewalls or firewall rules that prevent access to the server port should be modified to allow access)

• The Fully Qualified Domain Name (FQDN) of the server (e.g., acme.internal.lan) must be in the DNS server that the printer is configured to use so that it can be properly resolved

• The certificate associated with the port that the printer connects to must be signed by Zebra. Only the default certificate generated by the installer or any issued by Zebra after the installation are acceptable.

Printers do not always connect right away, or pages are extremely slow to load or don't load completely. In some cases, a user cannot always login, or there is a large delay when logging in.

It is possible that the database (DB) connections are overwhelming the database. Take the following steps to ensure the PPME DB connection pool size is correct:

1. Open the ppme.log (and maybe a few of the previous days' logs) and look for a message similar to the following:

```
ERROR org.hibernate.engine.jdbc.spi.SqlExceptionHelper - FATAL: sorry, too many
clients already
```

2. If the above message is found, proceed with the rest of these steps, otherwise the DB pool size isn't the issue

3. Open the Windows Services window and find 'Printer Profile Manager Enterprise Database'

4. Double click the service to open it

5. Locate the value passed into the service using the -N parameter (e.g. it is likely -N 75).

6. Close the service dialog

7. Go to the .PPME directory (e.g. C:\Users\Administrator\.PPME\) and open the ppme.properties file

8. Edit (or insert if it isn't present) the linkos.database.poolsize value to be about 5 fewer than the value seen in step 5. See the following illustration

9. Restart the PPME service and see if the issue(s) still occur

Uninstall PPME

Release License

1. Navigate to the main licensing page from the **User** menu admin 👤 ▾ .

2. Choose **Release** (beside **License Code**) and confirm.

   The license code will be returned to the server and allow it to be used on another server without going over the activation limit.

   ⚠️ **CAUTION:** This will log the user out of the application and make it unusable until a valid license is entered.

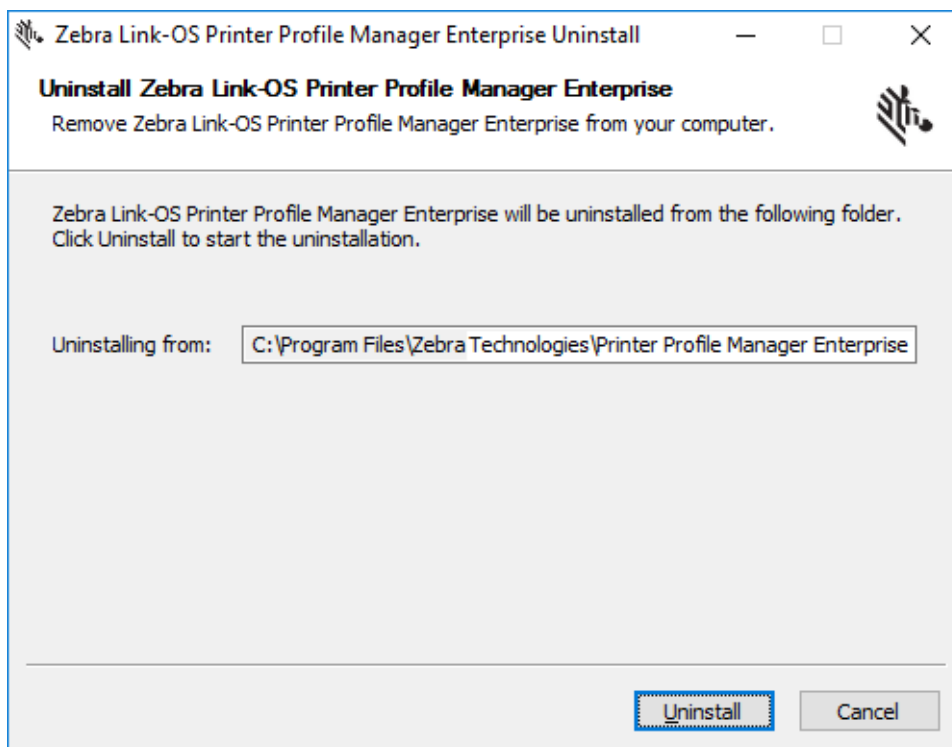## Uninstall PPME

1. Log in as Administrator.

2. Navigate to the drive and folder where you installed PPME.

   For example:

   ```
   C:\Program Files\Zebra Technologies\Link-OS Printer Profile Manger Enterprise...
   ```

3. Double-click uninstaller.exe to run the uninstaller program.

Reboot the Server

• If PPME is uninstalled, rebooting the server is required before re-installing.

License

This chapter provides general and specific information about the license.

View License Status

This page allows the administrator to view the license status and all relevant license information.

1. Click **User** menu admin 👤 ▾ .
2. Select **License** from the User dropdown menu.

Setup a License

For the PPME licensing system to work, the server must have ports 80 and 443 open, and must be able to reach the host:

   my.nalpeiron.com

> If the server is unable to access the above web site, the server will revert to an unlicensed status.

To Enter a New License Code:

If an administrator wants to enter a new license code before it expires for whatever reason, this can be done from the main license page.

1. Click **User** menu admin 👤 ▾ .
2. Select **License** from the User dropdown menu.
3. Locate the License Code field with the lock icon.
4. Click the lock icon to allow editing, and enter the new code.
5. Click the icon once again to save and activate the new license code.

Effects of License Limits

License Check Interval - If the licensing server is not contacted by PPME within the license check interval, the license will be considered expired. (This means that PPME must always be online.)

Printer Count - When the maximum printer count is reached, further connection attempts from printers will be denied. All PPME admins will receive an e-mail notification.

Move an Installation of PPME

If an administrator is moving an installation of PPME to a new server, you may want to reuse the same license code.

1. Navigate to the main licensing page from the **User** menu ~admin~ .

2. Choose **Release** (beside **License Code**) and confirm.

   The license code will be returned to the server and allow it to be used on another server without going over the activation limit.

CAUTION: This will log the user out of the application and make it unusable until a valid license is entered.

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LDAP User Directory Configuration

This section describes how to configure the fields in the PPME LDAP User Directory section for user authentication with Active Directory. This can be configured from the PPME configuration page after logging into the console with admin privileges.

Name (Required): This is used only for display purposes within PPME.

Hostname (Required): The address which Active Directory is available at, should not include port or protocol prefix.

Port (Required): The port Active Directory is available on, usually this is 389 for non-secure traffic and 636 for secure traffic.

Use SSL: Check this if the Active Directory system requires secure traffic.

Username (Required): This should be the full path to a management/admin user within Active Directory that can be used for the initial connection, allowing PPME to validate/authenticate users.

Password: The password for the management user.

CA Certificate: If using SSL, you will most likely need to add the certificate which your Active Directory system is hosting unless the certificate is signed by a trusted certificate authority. This will allow PPME to trust the Active Directory server, otherwise, the connection will be refused.

Base DN (Required): This is the base distinguished name for which all queries will be run against. Generally this will be your internal domain for example zebra.lan would be an internal domain and the Base DN might be dc=zebra,dc=lan.

The URL used to connect to the Active Directory server would be ldap://HOSTNAME:PORT/BASE_DN

Additional User DN: This is an optional field which can be used to limit where PPME will query users, for example users may be stored in a path such as CN=PPME_Users,DC=zebra,DC=com in which case you would want to set this field to CN=PPME_Users, as the Base DN will be automatically added. It can however, be left blank and PPME will attempt to search the Active Directory tree for users.

Use of this field requires PPME version 2.1.6638 or later.

Additional Group DN: This is an optional field which can be used to enforce users be part of an Active Directory group via their memberOf attribute. For example, you may have a Group within Active Directory at path CN=PPME_Admins,OU=Groups,DC=zebra,DC=lan in which case you would want to set this field to CN=PPME_Admins,OU=Groups. If you have multiple groups and you want them to be created with specific PPME roles when the users log in, you will have to create multiple LDAP User Directory entries inside of PPME where each one defines a separate Additional Group DN and Default User Role.

User Name Attribute (Required): This is the field name inside of your Active Directory system which maps the username. This is NOT a username, it is a field. Generally, this will be samAccountName if using Active Directory or if using OpenLDAP, it will probably be uid.

User Full Name Attribute (Required): This is the field name inside of your Active Directory system which maps the user's full name.

User Email Attribute (Required): This is the field name inside of your Active Directory system which maps the user email addresses. While this field is required, it is only used to store the email address within PPME and no validation of whether it is a valid email address occurs. Therefore, if you are using an Active Directory system which does not map an email address to users, you can set this to something else, such as the User Name Attribute (samAccountName), and PPME will store the username as the email address.

Default user Role: This is used to predefine which role Active Directory users will be given when they first login to PPME.

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