

# Printer Profile Manager Enterprise Release Notes

Version 3.3.7607.90d3c512985774bb9f9e494233413636fbec1e6c

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## System Requirements

### **Windows:**

Windows Server 2016

Windows Server 2019

Windows Server 2022

Windows 10

Windows 11

### **Browsers:**

Chrome Browser version 97.x or higher

### **Minimum System Requirements:**

CPU cores: 4

Memory (RAM): 16GB

Minimum: 50GB available drive space

### **Recommended System Requirements:**

CPU cores: 8

Memory (RAM): 16GB

### **Port 80:**

Port 80 should be available on the server where PPME is being installed. If any other services are using port 80, PPME may fail to start. Beginning in version 3.3.x the installer allows a different port to be specified if port 80 is

in use.

## **Network Access Requirements:**

### **Internet Access**

The PPME server must have continued internet access and be able to reach my.nalpeiron.com for the licensing system to work. This applies to the 30-day trial and purchased licenses.

When using SHA-1 certificates for the printer connection, the PPME server must be able to reach acs.zebra.com. Outgoing port 443 must open to the internet.

### **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.
- Port 443: client connections.

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## **Supported Printers**

Print DNA printers running Link-OS v2.5 and later, including the following series:

1. iMZ series
2. QLn series
3. ZC100 series
4. ZC300 series
5. ZQ300 series
6. ZQ500 series
7. ZQ600 series
8. ZD400 series
9. ZD500 series

10. ZD600 series
11. ZR Series
12. ZT200 series
13. ZT400 series
14. ZT500 series
15. ZT600 series

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## General Notes

1. Zebra recommends that the Printer Profile Manager Enterprise (PPME) application be installed on its own server, with no other applications running on that server. This allows for all server resources to be dedicated to the application and can help avoid license conflict with other installed apps.
2. During installation, spaces or other whitespaces in the email field will cause the certificate generation process to fail. The common name field must be a FQDN, using an IP address for that field will cause the certificate generation process to fail.
3. When using the app to distribute printer OS updates, you will experience better performance if you first upload the printer OS to the PPME app before distributing it to printers.
4. If a user deletes a resource, profile or tag associated with a provisioning event, the provisioning event is paused.
5. Selecting all and deselecting all in the quick tag view will only select/deselect the printers that qualify under the current filter, NOT all of the printers available to PPME.
6. After applying an empty IP address or DNS in manually add printer, the discovery will never end, you will have to click Cancel to do a new manually add printer again.
7. Downgrading from the 20.01z printer OS to the 19.15z printer OS prevents the printer from getting an IP address the first time it boots up after the downgrade. Reboot the printer again to obtain an IP address.
8. PPME uses UTC to store all times. This is done so that the browser and the server don't have to worry about synchronizing. When a user creates a provisioning date-based event, any time entered will be first converted to UTC. Assuming the user is in Guangzhou, that is 8 hours ahead of UTC, and the server is in Lincolnshire, that is 6 hours behind UTC. Assuming it is 9:00am in Guangzhou, so that is 1:00am in UTC, and 7:00pm for the server.
  - Now let's say you want to schedule an event to happen at 11:00am 2/17/2017 Guangzhou time. The browser code will take 11:00am UTC+8 and set it to 3:00am UTC +0 2/17/2017. The server will read that and schedule an event to happen in 2 hours, at 9pm UTC-6 2/16/2017. The key point is to

remember the server's time zone is the ultimate deciding factor. All events and logs will be based on and offset from that time.

9. The printer list refreshes every 60 seconds to accommodate for printers that are changed into a state that doesn't match the current filter.
  - Example: The user filters for online printers and then powers off an online printer. The now offline printer will still be in the printer list even though the filter is for online printers. But because of the 60-second refresh interval, the printer list will be refreshed and the offline printer will be removed from the list of online printers, given that the user is still filtering for online printers at the time of refresh.
10. The printer only works with PNG and GRF image types by default, so the application converts graphics to a PNG as needed.
11. Applying a profile to a printer will trigger a reboot. Applying a profile with a printer OS change will trigger two reboots.
12. Do not apply a profile with a '~jr' command inside the profile to a printer, because then PPME would have no choice but to restart the printer over and over again.
13. Multiple pending actions sent to an offline printer may result in errors and incomplete operations when printers come back online.
14. When setting the printer to static IP address the "dns server ip address" setting on the printer needs to be configured in order for the printer to find the server. Otherwise, the printer will be unable to find the PPME server when it comes online again.
15. Switching a printer from Line mode to ZPL mode (or to other languages, in any order) is not supported by PPME.
16. Gleaning and RARP protocols are not supported.
17. When the PPME server or service is restarted, the higher the number of printers you have trying to reconnect at the same time increases the load on the server. This can be avoided by reconfiguring the printer's weblink connections to retry connecting at different intervals rather than the current 10 second default. Doing so will prevent all of the printers from reconnecting at the same time and reducing the load on the server. The PPME application will attempt to reconfigure the retry interval automatically when printers connect or are added, however, the new configuration will not take effect until the printers have been restarted.

It's recommended that printers are reconfigured to varying retry intervals of 20 seconds to 120 seconds in groups of no larger than 100-200 (e.g. possibly by subnet). NOTE: This is not meant to imply that you have to limit your tagged groups to 200 printers.

The reconfiguration can be done by setting the following two weblink values (depending upon which connection is being utilized for PPME).

For example, if you were setting the printers to an `retry_interval` of 20, you'd send these two commands to the printers:

```
! U1 setvar "weblink.ip.conn1.retry_interval" "20"  
! U1 setvar "weblink.ip.conn2.retry_interval" "20"
```

To make this as easy as possible, you can create a file called `retryint.zpl`, containing the above commands, and then use the Resources directory in PPME to send the file to printers. It's important to name the file with the `.zpl` extension, because when you click on the file in the Resources you will be able to choose the "Send Resource" on the Resource Actions screen, using the stacked three dot menu.

18. If an existing Printer Profile Manager Enterprise installation is found, the installer will attempt to update the service. Before continuing with the upgrade, it is recommended that you backup your current installation. The upgrade will stop the Printer Profile Manager Enterprise service, upgrade the application, and restart the service. Any printers or users connected 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.
19. Link-OS 6.0 firmware is known to have download issues with some binary files. If a download issue is encountered, make sure your printer is running the latest firmware version.
20. The wireless certificate management feature supports the Microsoft AD CS Enterprise type CA. The Microsoft AD CS Stand-Alone type CA is *not* supported.

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## Licensing Notes

1. For the Printer Profile Manager Enterprise licensing system to work, the server must have port 443 open, and must be able to reach the host **my.nalpeiron.com**
2. The PPME licensing system will check in with the cloud based license server one or more times within each 24hr period. Therefore it's necessary for the PPME server to have continued internet access. Failure to connect to the license server can result in a "License Expired" message when attempting to log in to PPME.
3. Perpetual licenses will report "License expires in N/A days" because a perpetual license does not expire.

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## Change Log

Date	Version	Changes

- **IMPORTANT note when upgrading:** Due to a change in the database structure, any assigned static IP addresses will be lost when upgrading to a 3.2.x version from a 2.1.x or 3.1.x version. This only affects the assignment in the PPME user interface, printers will retain their static IP address.
- The installer has been updated to detect if port 80 is in use and allow a different port to be specified.
- The installer has been updated to prevent an upgrade using a different user account to the one used for the initial installation.
- The installer has been updated to recommend a permanent service account is used to install the application.
- The EULA has been updated.
- Corrected an issue that prevented services starting if there was conflict with port 8000.
- Corrected an issue where printers running a Link-OS version lower than 2.5 were included in "select all" in the discovery list. They are no longer included in "select all" since they cannot connect to PPME.
- The ZE511 and ZE521 models have been added to the base printer models for creating profiles from file.
- When creating a network configuration that uses Wireless Encryption and Authentication, the Security Username field now supports up to 64 characters. This requires all printers are running Link-OS 6.6 or later.
- Updated the placeholder text in the Username field on the Certificate Authority Configuration screen to show the field entry should be in the format Domain\Username.
- The username and password fields in the SMTP Settings section of the Configuration screen are no longer required fields. This allows adding a server that doesn't require authentication.
- Added buttons in the 'Weblink for Printer Connections' section of the Configuration screen to download a file containing commands needed to manually configure a printer to connect to PPME.
- PostgreSQL has been updated to version 14.2-1.
- The Java version has been updated to JDK 17.0.2.
- Corrected an issue that prevented profiles being created from a printer if .CSF font files were stored on the printer.

		<ul style="list-style-type: none"><li>• Improved the printer reclaiming function on the discovery screen by removing the Reclaim buttons. It's now possible to select individual or all printers to reclaim.</li><li>• Corrected an issue where the "Case Sensitivity" option did not work when creating an Auto-Tag and using the Regex match type.</li><li>• The Certificate Management Item section has been improved to allow additional Subject Alternative Name types of User Principle Name and IP address to be added to the certificate.</li><li>• Improved how the interaction of setting printer tone and printer darkness is handled in the UI. This applies to mobile printers that have different darkness ranges for ZPL and CPCL darkness/tone types.</li><li>• Added the ability to provide PPME with a csv file containing a list of subnets to search and add printers.</li><li>• When creating a profile from printer, NRD certificate files are no longer retrieved and added to the profile. Certificates can be added manually to the profile from the resources section.</li><li>• Corrected an issue where a new ECDSA key size was not saved if you edited a Certificate Management Item.</li><li>• Corrected an issue where both a key size and curve were included after editing a Certificate Management Item and changing the encryption algorithm.</li><li>• Added support for the ZT231 printer model.</li><li>• The installation guide has been updated.</li><li>• The help system has been updated.</li></ul>
17 Jan 2022	3.2.7563	<ul style="list-style-type: none"><li>• <b>IMPORTANT note when upgrading:</b> Due to a change in the database structure, any assigned static IP addresses will be lost when upgrading to a 3.2.x version from a 2.1.x or 3.1.x version. This only affects the assignment in the PPME user interface, printers will retain their static IP address.</li><li>• The following Apache Log4j vulnerabilities have been addressed.<ul style="list-style-type: none"><li>◦ <a href="https://nvd.nist.gov/vuln/detail/CVE-2021-44228">https://nvd.nist.gov/vuln/detail/CVE-2021-44228</a></li><li>◦ <a href="https://nvd.nist.gov/vuln/detail/CVE-2021-45046">https://nvd.nist.gov/vuln/detail/CVE-2021-45046</a></li><li>◦ <a href="https://nvd.nist.gov/vuln/detail/CVE-2021-45105">https://nvd.nist.gov/vuln/detail/CVE-2021-45105</a></li></ul></li></ul>

- <https://nvd.nist.gov/vuln/detail/CVE-2021-44832>
- The following Logback vulnerability has been addressed.
  - <https://nvd.nist.gov/vuln/detail/CVE-2021-42550>
- jQuery has been updated to version 3.6.0
- The stompjs library has been updated to version 6.1.2
- Improved error messages related to connecting to a CA. Previously, a "server redirected too many times" message was displayed.
- Corrected an issue where operations listed in the operation logs would show pending and not update to a completed state.
- The Java mail library has been updated so it's compatible with Java JDKs which require TLS1.2
- Users can no longer add printers running a Link-OS version lower than 2.5 as they cannot connect to PPME. Previously this caused the printers to show in PPME in the *Adding Failure* state as they are not able to connect.
- Printer images have been added for the ZE511 and ZE521 models.
- Users can no longer delete a CMI if it's associated with a Network configuration.
- The add printers from CSV file option has been expanded to support both IP addresses and DNS names.
- Corrected an issue where deleting an object from a profile also caused certificate resources to be deleted.
- Corrected an issue where the Gather Application Analytics option did not show the correct state when returning to the configuration page.
- Corrected an issue where tags were not created and associated as part of the Tagging Policy after a printer OS update was performed.
- Corrected an issue where re-ordering or re-arranging of tags didn't work when more than 20 tags existed.
- Corrected the sort order of Network configuration items.
- Corrected an issue where re-ordering tags by number of printers didn't work.
- Corrected an issue where the generic printer image did not display if a printer model image is not present. This might occur if a newly released or beta printer model is connected to PPME.

		<ul style="list-style-type: none"> <li>• Improved handling of the license related fields in the login screen.</li> <li>• Corrected an issue where the start date of a repeating provisioning item would be empty if the time zone set is earlier than the local time zone.</li> <li>• Corrected an issue where the result displayed on the message after generating a UI certificate may not be correct.</li> <li>• Corrected an issue where an object could not be downloaded to the local computer from the printer landing page objects tab if the resource was added to the printer from a source other than PPME.</li> </ul>
30 Sep 2021	3.2.7515	<ul style="list-style-type: none"> <li>• <b>IMPORTANT note when upgrading:</b> Due to a change in the database structure, any assigned static IP addresses will be lost when upgrading to a 3.2.x version from a 2.1.x or 3.1.x version. This only affects the assignment in the PPME user interface, printers will retain their static IP address.</li> <li>• The licensing components have been updated.</li> <li>• Port 80 is no longer required for the license system to work. It now uses port 443.</li> <li>• Added the ability to enable license logging for troubleshooting purposes.</li> <li>• Corrected an issue where the private key was not stored on the printer when sending a Network configuration.</li> <li>• For consistency with the printer front panel displays, a printer in a PAUSED state is now displayed as a warning. Previously it was displayed as an error.</li> <li>• Added the ability to specify a certificate template name when using a Microsoft AD CS CA server.</li> <li>• The UI certificate generated by PPME now contains the DNS name in the certificate SAN field.</li> <li>• In the CMI certificate information section, <i>MAC address</i> is renamed to <i>Wireless MAC address</i> in the common name field. Selecting this option now forces use of the printer's wireless MAC address. Previously it used the active MAC address.</li> <li>• In the CMI certificate information section, the printer Friendly Name has been added as a selection for the Common Name field.</li> <li>• Corrected an issue when sending a profile to many printers that included storing objects where the objects may not have been stored on</li> </ul>

all printers.

- Notifications relating to the license are no longer sent to users with a Technician role.
- Added images for new printer models.
- Corrected some broken help topic links.
- The installation guide has been updated.
- Usage of the certificate management feature is now gathered when *Gather Application Analytics* is enabled.
- Auto-Tags are now indicated by green tag icons to distinguish them from Manual Tags which are indicated by blue tag icons.
- Corrected an issue where a suspended provisioning item prevented other scheduled provisioning events from executing.
- Improved the "Malformed subnet search address " message when exceeding the subnet search range.
- Added a new Tagging Policy feature. This can be enabled under Beta Features in the configuration section.
- Printers can now be added to PPME using a list of known IP addresses.
- The system log now includes the name of the profile that has been sent.
- Corrected an issue where the import button for the UI certificate was disabled.
- Corrected an issue where the PPME service may not start after upgrading from 2.x to 3.x. This could occur if a UI cert had been imported in the 2.x version.
- Corrected an issue where certificates files couldn't be added to a Network configuration from Resources.
- Corrected an issue where WLAN certificates were not stored on the printer with the correct filename when sent in a Network configuration.
- Corrected an issue that prevented the PPME service starting if the elastic-search service took a long time to start due to the size of its database.
- When proxy settings are configured, they are no longer used for connection to the CA certificate server.
- For printers that support a *print.tone.format* setting of *zpl* or *cpcl*, the darkness is now set correctly.

		<ul style="list-style-type: none"> <li>• The Java version has been updated to JDK 11.0.8.</li> <li>• In Profiles, Objects has been renamed to <i>Files to Store</i> and Objects to Process has been renamed to <i>Files to Process</i>.</li> <li>• Added an option in Profiles &gt; Files to Store to select whether or not files will be deleted from the printer when sending a profile. Previously files were deleted when sending a profile. This option does not apply to Card printers.</li> <li>• Added a Check FQDN option that applies when uploading certificates for the printer weblink connection.</li> <li>• Corrected an issue that prevented profiles working when upgrading to Link-OS 6.3 or downgrading from Link-OS 6.3.</li> <li>• Corrected an issue where the WEBLINKx_CERT.NRD and WEBLINKx_CA.NRD files were not removed from the printer if the printer connection changed from Advanced to Basic.</li> <li>• If the printer connection is changed from Advanced to Basic, the certificates for the Advanced connection are now deleted from the printer.</li> <li>• Added the ability for Administrators to remove a user. Users created in the Local Directory can now be deactivated or removed.</li> <li>• Other fixes to improve stability and performance.</li> </ul>
25 Sep 2020	v3.1.7146A	<ul style="list-style-type: none"> <li>• Corrected an issue that caused an "Error parsing provided certificate" message when configuring a CA. Handling the URL that is requesting authentication has been corrected. This applies to the Microsoft ADCS CA type server only (not Microsoft ADCS NDES or EJBCA servers).</li> </ul>
13 Sep 2019	v3.1.7124	<ul style="list-style-type: none"> <li>• Added ZC1X0 and ZC3X0 series card printer support</li> <li>• Added a setup wizard on new installations to assist with initial configuration</li> <li>• Added a new Auto-Tag feature which allows printers to be automatically tagged based of a printer setting</li> <li>• Added a new wireless certificate management feature which allows customers to setup automatic updates of their printer's wireless lan</li> </ul>

		<p>certificates. This feature requires printers to have Link-OS 6 or later installed, and it supports the follow Certificate Authority servers:</p> <ul style="list-style-type: none"> <li>◦ Microsoft ADCS: Microsoft Certification Authority 10.0</li> <li>◦ Microsoft ADCS NDES 2019: Microsoft Certification Authority 10.0</li> <li>◦ EJBCA-SCEP: EJBCA 7.1.0 Enterprise</li> </ul> <ul style="list-style-type: none"> <li>• Improved database disk use</li> <li>• Other minor bug fixes</li> </ul>
30 Mar 2018	v2.1.6633	<ul style="list-style-type: none"> <li>• Improved the tag filtering on the Device Listing Page.</li> <li>• Improved the searching capability of the System Log.</li> <li>• The Device Listing Page now supports the ability to export all printer settings to a CSV file.</li> <li>• Added the ability to delete multiple printers at once from the Device Listing Page.</li> <li>• Added a new Battery Monitoring Feature (BETA) that allows customers to individually monitor the batteries for their mobile devices. This feature can be enabled and disabled. Please note, it can take the app up to 15 min to gather enough data to create a trend line chart for each battery.</li> <li>• Improved the visibility of issues that can arise when adding a printer and improved the steps to resolve those issues, reducing the need to communicate directly with the printer when troubleshooting.</li> <li>• Analytics gathering can be enabled to store all printer settings in the Elasticsearch document store so they may be queried for report generation and other analytics. Note that turning on the Analytics function can greatly increase the hard drive space the app uses and will also cause the app to attempt to open a connection to the cloud-based Zebra Printer Connector to communicate the data it has gathered.</li> <li>• Updated the Java Virtual Machine to version 8.0.151</li> <li>• Updated Elasticsearch to version 5.6.5</li> <li>• Updated Postgresql to version 10.1-3</li> <li>• Added support for newer printer firmware versions and printer models.</li> <li>• Added the ability to specify a CA Certificate for LDAP.</li> <li>• Other minor bug fixes.</li> </ul>

01 Oct 2017	2.0.6353	<ul style="list-style-type: none"> <li>• Updates to LDAP configuration will no longer remove existing LDAP users.</li> <li>• Added support for newer firmware versions and printer models.</li> <li>• The installer has been updated to allow for upgrades of Printer Profile Manager Enterprise (see General Notes).</li> </ul>
12 Jun 2017	2.0.6301	<ul style="list-style-type: none"> <li>• Addressed stability issues when updating the printer operating system for a 1000+ printers at one time.</li> <li>• Require customers to configure Domain Name Server address when they are setting static addresses on printers. Note that the printers using static addresses will have their DNS configuration overwritten when they are added through the PPME application.</li> <li>• Weblink logs shown for printers in offline or adding states on the Printer Details Page.</li> </ul>
31 Mar 2017	2.0.6194	Initial release.

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## Technical Support

Worldwide Technical Support is available through your Reseller, or at: <https://www.zebra.com/support>

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## Software Updates

Updated versions will be available on our web site: <https://www.zebra.com/profilemanagerenterprise>

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