



Local Printer Management Agent

Administrator's Guide

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Overview

The Local Printer Management Agent (LPMA), or the Local Tracker, is a software service for Windows and Macintosh computers that tracks usage data for printers. It monitors local and network print queues and queries local printers for inventory and status information.

The LPMA collects data in two ways:

- It monitors print queues to retrieve user and print job data for local printers and network printers.
- It queries local printers to retrieve printer inventory and status data.

The LPMA is installed and locally configured on each computer from which you want to track print job and local printer data. Each of these LPMAs rolls up data to the Fleet Tracker directly.

Use the Users and Print Queues tabs to view the data that the LPMA collects. Use the Devices tab to view the local printer inventory data that the LPMA collects.

Notes:

- The LPMA supports all maintenance policy events, Toner Level Alert, and Waste Toner Bottle Level Alert. The rest of the supplies events and all service events are not supported.
- For Windows systems, the LPMA supports local printers connected by USB, parallel, or DOT4 ports. It also supports network-connected printers associated with standard TCP/IP, Lexmark Enhanced TCP/IP, and HP Standard TCP/IP ports.
- For Mac systems, the LPMA supports local printers that are connected by USB only. It also supports network-connected printers associated with standard TCP/IP ports.

This document provides information on how to install and configure the LPMA.

Getting started

Supported Microsoft® Windows® and Mac® operating systems

- Windows Server® 2008
- Windows Server 2003
- Windows 8.1
- Windows 8
- Windows 7
- Windows Vista®
- Mac OS X® v10.6 to v10.9

Notes:

- Windows Server 2003 does not support secure connection.
- In Windows 8.x, Microsoft implemented significant changes to the print path that have made some LPMA features unavailable for print queues when using v4 print drivers.

Installing the LPMA

Using Windows

Note: For Windows Vista or later, make sure that you have administrator privileges.

- 1 Obtain an installation package for LPMA, and then save it to a temporary local drive.
- 2 Copy the configuration file to the folder where you saved the installation package, and then if necessary, modify it. For more information, see [“Understanding the LPMA configuration file” on page 6](#).
- 3 Install the package by doing either of the following:
 - From the folder where you saved the package, double-click the installation package (**lpma32.msi** file for 32-bit systems or **lpma64.msi** file for 64-bit systems).
 - At the command prompt, type **msiexec /i lpma.msi**.
- 4 Follow the instructions on the computer screen.
- 5 After the installation is complete, check if the LPMA service is running.
 - a From the command prompt, type **services.msc**.
 - b Check if the Local Printer Management Agent service is in the “Started” state.
- 6 Check if the LPMA is added to the Windows Firewall exception list.

The LPMA installation creates a Windows Firewall exception that can be checked from Control Panel.

- a From Control Panel, click **Windows Firewall > Allow a program through Windows Firewall**.
- b In the “Allowed programs and features” list, make sure that **Local Printer Management Agent** is added.

Note: If a third-party antivirus or firewall software is installed, then configure it to allow **lpma.exe** to access network printers and remote systems.

Using Macintosh

- 1 Obtain an installation package for LPMA, and then save it to a temporary local drive.
- 2 Copy the configuration file to the folder where you saved the installation package, and then if necessary, modify it. For more information, see [“Understanding the LPMA configuration file” on page 6](#).
- 3 Install the package by doing either of the following:
 - From the folder where you saved the package, double-click the **LPMA-Mac.pkg** file.
 - From the command prompt, type **# sudo installer -pkg LPMA-Mac.pkg -target /**, and then type your administrator credentials.
- 4 Follow the instructions on the computer screen.
- 5 After the installation is complete, make sure that the **datacollector** and **datasender** processes are running in the Activity Monitor.

To check if LPMA is installed and configured correctly, send a print job from the computer where the LPMA is installed. Open the Fleet Tracker Web page, and then from the Users tab, make sure that the Fleet Tracker receives the print job data.

If the job data is not received, then check the LPMA configuration file. Make sure that the correct data is being collected and that the connection to the server is configured correctly.

Configuring the LPMA

You can change the configuration after the LPMA is installed on your system by updating the configuration file in the LPMA directory. The LPMA checks the file for changes at regular intervals and updates the configuration of the service when changes are detected. You can modify it manually using a text editor. You can also use the LPMA configuration tool to generate a new file and replace the existing one in the LPMA directory.

Understanding the LPMA configuration file

The LPMA installer uses a configuration file (**LTConfiguration.ini** for Windows and **lft.conf** for Mac) to set up the service for the environment. Before installing the LPMA, make sure to update the configuration file with the appropriate settings.

For Windows

You can create the configuration file using the configuration tool (**LTConfigUI.exe**), which provides a GUI for configuring the LPMA settings.

[CLIENT_VERSION] section

Key	Values
VERSION	The version of the installation file. This value is provided by the system and should not be modified.

[INVENTORY_REPORT] section

Key	Values
RUN	Set the value to ENABLED to run inventory reporting at the scheduled interval.
TASK_RUN_TIME	Set the schedule for running inventory reports. Note: If the key requires an interval value, then the value must be greater than or equal to 60. For more information, see “Valid interval values” on page 14 .
RUN_ON_STARTUP	Set the value to ENABLED to run inventory reporting when Local Tracker starts, in addition to scheduled inventory reporting.
ALERTS_TRIGGER_ON_DEMAND_REPORT	Set the value to ENABLED to send an inventory report when an alert occurs.

[JOB_REPORT] section

Key	Values
RUN	Set the value to ENABLED to run job metrics reporting.
INCLUDE_DOCUMENT_INFORMATION	If the value is DISABLED , then the name of the printer document is not included in job reports.
INCLUDE_USER_INFORMATION	If the value is DISABLED , then the user information is not included in job reports.

Key	Values
INCLUDE_NETWORK_PRINTERS	If the value is DISABLED , then the printing activity of network printers is not monitored.
INCLUDE_LOCAL_PRINTERS	If the value is DISABLED , then the printing activity of local printers (USB, Parallel, DOT4, or Serial ports) is not monitored.

[SERVER] section

Key	Values
BLACKOUT_TIME	The time of day when communication with the LFM server is not allowed. This value is used together with [SERVER] BLACKOUT_DAYS . Use the format HHMM-HHMM , where HHMM is the 24-hour time format for the start and end of the blackout period. For example, if the value is 1200-1400 , then the blackout time starts at 12:00 p.m. and ends at 2:00 p.m. You can also set the value to DISABLED .
BLACKOUT_DAYS	The days of the week when communication with the LFM servers is not allowed. This value can be used together with [SERVER] BLACKOUT_TIME . Use the numeric value that represents the day of the week, separated by commas. For example, if the value is 1, 3, 5, 7 , then the blackout days are Sunday, Tuesday, Thursday, and Saturday. You can also set the value to DISABLED .
CS_COST_CENTER	The cost center associated with the user for the job.
CS_COMPANY_ID	A unique company ID.
CS_COMPANY_NAME	The company name.
PORT	The IP port number used for server communication. You can set the value to either of the following: <ul style="list-style-type: none"> • 80 or 8080—Use for nonsecure server communication. • 443 or 8443—Use for secure server communication.
SECURE_CONNECTION	Set the value to ENABLED to secure the server communication. This value is used together with [SERVER] PORT .
TIMEOUT	The number of seconds that the LPMA waits for the LFT server to respond.
SERVER_ADDRESS_CHANGE_PORT	A Local Tracker (UDP) port number that listens for server-generated “my address changed” packets. The default value is 2723 .
CS_SERVER_ADDRESS	The IP address of the server.
CS_JOB_REPORT_URI	The URI that handles the job reports.
CS_INVENTORY_REPORT_URI	The URI that handles the inventory reports.
CS_CONFIGURATION_URI	The URI that handles the configuration updates.
CS_SOFTWARE_UPDATE_URI	The URI that handles the software updates.

[REMOTE_CONFIGURATION] section

Key	Values
TASK_RUN_TIME	If the value is DISABLED , then the Local Tracker does not retrieve the configuration from the LFM server. If the value contains a valid interval, then the Local Tracker retrieves the configuration from the LFM server on the specified schedule. For more information, see “Valid interval values” on page 14 .
RUN_ON_STARTUP	If the value is ENABLED , then the Local Tracker retrieves the configuration from the LFM server when the Local Tracker starts.

[REMOTE_UPDATE] section

Key	Values
TASK_RUN_TIME	If the value is DISABLED , then the Local Tracker does not check for LPMA software updates on the LFM server. If the value contains a valid interval, then the Local Tracker checks for a newer version of LPMA on the LFM server. For more information, see “Valid interval values” on page 14 .
RUN_ON_STARTUP	If the value is ENABLED , then the Local Tracker checks for a newer version of LPMA on the LFM server when the Local Tracker starts. If a newer version is found, then it is downloaded from the LFM server and installed on the LPMA client.

[SNMP] section

Key	Values
CS_COMMUNITY_NAME	The community name used in SNMP communications. For more information, see “SNMP settings” on page 15 .
PORT	The port name used in SNMP communications. For more information, see “SNMP settings” on page 15 .

[ALERT_POLLING] section

Key	Values
INTERVAL_MINUTES	Set the number of minutes before another polling event occurs. Note: The task is disabled if you set it to an invalid value, such as a negative number, a zero, or a string. A warning for the invalid entry appears in the log.
TIMEOUT_SECONDS	Set the number of seconds before the alert status times out.

Sample configuration file

```
[CLIENT_VERSION]
VERSION=1.0.0.1
```

```
[INVENTORY_REPORT]
RUN=ENABLED
RUN_ON_STARTUP=ENABLED
TASK_RUN_TIME=DAILY: 2200
```

```
[JOB_REPORT]
RUN=ENABLED
INCLUDE_DOCUMENT_INFORMATION=ENABLED
INCLUDE_LOCAL_PRINTERS=ENABLED
```



```

INCLUDE_NETWORK_PRINTERS=ENABLED
INCLUDE_USER_INFORMATION=ENABLED

[SERVER]
BLACKOUT_DAYS=1,2,3,4,5
BLACKOUT_TIME=1200-1300
CS_COMPANY_NAME=Lexmark International
CS_COMPANY_ID=Lexmark
CS_COST_CENTER=accounts
CS_SERVER_ADDRESS=10.194.107.110
PORT=443
SECURE_CONNECTION=ENABLED
TIMEOUT=30
SERVER_ADDRESS_CHANGE_PORT=2723
CS_JOB_REPORT_URI=/jobs/v2/metrics
CS_INVENTORY_REPORT_URI=/inventory/v2/metrics
CS_CONFIGURATION_URI=/config/v2/win
CS_SOFTWARE_UPDATE_URI=/update/v2/

[REMOTE_CONFIGURATION]
TASK_RUN_TIME=HOURLY
RUN_ON_STARTUP=ENABLED
[ALERT_POLLING]
INTERVAL_MINUTES=DISABLED
TIMEOUT_SECONDS=5

```

For Macintosh

You can create the configuration file on a Windows computer using the configuration tool and transfer it to the Macintosh computer. You can also update the configuration file manually using a text editor.

[APPLICATION] section

Key	Values
VERSION	The version of the LPMA-Mac application. By default, this value is provided by the system and should not be modified.
JobAgentID	A unique identifier for the application that collects direct-print data. It lets the server know which application submitted the jobs. For example, LPMA-Mac .

[SERVER] section

Key	Values
IPAddress	The IP address of the server.
Port	The port of the server.
BroadcastPort	The port where the server broadcasts changes in the server address.
SecureConnection	A flag that indicates the server connection type to use. Set this value to true to use SSL connection. Set this value to false to use non-SSL connection. The default value is true .
JobMetricURI	The URI where the job metric data will be posted.

Key	Values
InventoryMetricURI	The URI where the printer inventory will be posted.
ClientUpdateURI	The URI that returns the client application version hosted on the server. It also provides an option to update if necessary.
ConfigUpdateURI	The URI that returns the client configuration.

[SSL] section

Key	Values
CertificateFile	The file name of the certificate. Set the certificate file permission to 755 and the certificate file owner to root:wheel . Note: This item cannot be configured by the server.
CertificatePath	The path where the certificate is located.
SSLVerifyHost	A flag that indicates whether LPMA-Mac needs to verify the server host name. Set the value to Yes or No .
SSLVerifyPeer	The flag identifier that determines if LPMA-Mac enables the server-certificate verification when using SSL connection. Set the value to Yes or No .

[JOB_REPORTING] section

Key	Values
Enabled	Set the value to either of the following: <ul style="list-style-type: none"> • true—Job Data Post Submission messages can be generated depending on the values of the TrackLocalPrinters and TrackNetworkPrinters. • false—No Job Data Post Submission messages are generated.
TrackUserName	Set the value to either of the following: <ul style="list-style-type: none"> • true—The user name is included in Job Data Post Submission. • false—The user name is not included in Job Data Post Submission.
TrackDocumentName	Set the value to either of the following: <ul style="list-style-type: none"> • true—The application name, document name, and print job application name are included in Job Data Post Submission. • false—The application name, document name, and print job application name are not included in Job Data Post Submission.
TrackLocalPrinters	Set the value to either of the following: <ul style="list-style-type: none"> • true—Job Data Post Submission messages are generated when print jobs are sent to local printer queues. • false—No Job Data Post Submission messages are generated when print jobs are sent to local printer queues.

Key	Values
TrackNetworkPrinters	<p>Set the value to either of the following:</p> <ul style="list-style-type: none"> • true—Job Data Post Submission messages are generated when print jobs are sent to network printer queues. • false—No Job Data Post Submission messages are generated when print jobs are sent to network printer queues. <p>The default value is true.</p>

[COMPANY] section

Key	Values
CompanyIDName	A unique company ID.
CompanyName	The company name.

[COSTCENTER] section

Key	Values
CostCenterIDName	The cost center associated with the user for the job.

[INVENTORY_REPORT] section

Key	Values
Enabled	<p>Set the value to either of the following:</p> <ul style="list-style-type: none"> • true—Inventory Data Post Submission messages are generated. <p>Note: Make sure that valid values are set for the INVENTORY_REPORT keys.</p> <ul style="list-style-type: none"> • false—No Inventory Data Post Submission messages generated. <p>The default value is true.</p>
Days	<p>The days of the week when Inventory Data Post Submission is sent to the server. The valid range is 1 through 7, where 1 is Sunday and 7 is Saturday. Use commas to separate multiple days. For example, 1, 3, 5.</p> <p>The default value is 1, 2, 3, 4, 5, 6, 7.</p>
StartTime	<p>The start of the time when Inventory Data Post Submission is sent to the server. Use the hhmm format, where hh is hours, and mm is minutes. StartTime should be less than EndTime.</p> <p>The default value is 0800.</p>
EndTime	<p>The end of the time when Inventory Data Post Submission is sent to the server. Use the hhmm format, where hh is hours, and mm is minutes. EndTime should be greater than StartTime.</p> <p>The default value is 1800.</p>
ReportInterval	<p>The time interval between the collection of the inventory report and the sending of the report to the server.</p> <p>The value can be a number in minutes. For example, ReportInterval=1, where 1 is 1 minute. You can also set the value to HOURLY or DAILY.</p> <p>The default value is HOURLY.</p>

[BLACKOUT_PERIOD] section

Key	Values
Enabled	<p>Set the value to either of the following:</p> <ul style="list-style-type: none"> • true—Enable the Blackout Period functionality. <p>Note: Make sure that valid values are set for the BLACKOUT_PERIOD keys.</p> <ul style="list-style-type: none"> • false—Disable the Blackout Period functionality. <p>The default value is false.</p>
BlackOutDays	<p>The days of the week when no reports are sent to the server.</p> <p>The valid range is 1 through 7, where 1 is Sunday and 7 is Saturday. Use commas to separate multiple days. For example, 1, 3, 5.</p> <p>The default value is 1, 3, 5.</p>
BlackOutStartTime	<p>The start of the time when no reports are sent to the server.</p> <p>Use the hhmm format, where hh is hours, and mm is minutes. BlackOutStartTime should be less than BlackOutEndTime.</p> <p>The default value is 1045.</p>
BlackOutEndTime	<p>The end of the time when no reports are sent to the server.</p> <p>Use the hhmm format, where hh is hours, and mm is minutes. BlackOutEndTime should be greater than BlackOutStartTime.</p> <p>The default value is 1055.</p>

[SOFTWARE_UPDATE] section

Key	Values
Enabled	<p>Set the value to either of the following:</p> <ul style="list-style-type: none"> • true—Enable software update. <p>Note: Make sure that valid values are set for the SOFTWARE_UPDATE keys.</p> <ul style="list-style-type: none"> • false—Disable software update. <p>The default value is true.</p>
UpdateCheckTime	<p>The server checks for updates at a specified time interval or schedule. For more information on the valid values, see “Valid interval values” on page 14.</p> <p>The default value is DAILY:2300.</p>
UpdateCheckDays	<p>The server checks for updates on one or more days of the week.</p> <p>The valid range is 1 through 7, where 1 is Sunday and 7 is Saturday. Use commas to separate multiple days. For example, 1, 3, 5. If there is no value, then LPMA does not check for updates.</p> <p>Note: The value supersedes the DAILY value in UpdateCheckTime. For example, if UpdateCheckTime is set to DAILY:1030 and UpdateCheckDays is set to 1, then the checking of updates runs only on Mondays at 10:30 a.m.</p> <p>The default value is 1, 2, 3, 4, 5, 6, 7.</p>

[CONFIG_UPDATE] section

Key	Values
Enabled	<p>Set the value to either of the following:</p> <ul style="list-style-type: none"> • true—Enable configuration update. <p>Note: Make sure that valid values are set for the CONFIG_UPDATE keys.</p> <ul style="list-style-type: none"> • false—Disable configuration update. <p>The default value is true.</p>
UpdateCheckTime	<p>The server checks for updates at a specified time interval or schedule. For more information on the valid values, see “Valid interval values” on page 14.</p> <p>The default value is INTERVAL:05.</p>
UpdateCheckDays	<p>The server checks for updates on one or more days of the week. The valid range is 1 through 7, where 1 is Sunday and 7 is Saturday. Use commas to separate multiple days. For example, 1,3,5. If there is no value, then LPMA does not check for updates.</p> <p>Note: The value supersedes the DAILY value in UpdateCheckTime. For example, if UpdateCheckTime is set to DAILY:1030 and UpdateCheckDays is set to 1, then the checking of updates runs only on Mondays at 10:30 a.m.</p> <p>The default value is 1,2,3,4,5,6,7.</p>

Sample configuration file

```
[APPLICATION]
Version=3.2
JobAgentID=LPMA-Mac

[SERVER]
IPAddress=0.0.0.0
Port=443
BroadcastPort=
SecureConnection=true
JobMetricURI=/jobs/v2/metrics
InventoryMetricURI=/inventory/v2/metrics
ClientUpdateURI=/update/v2/mac
ConfigUpdateURI=/config/v2/mac

[SSL]
CertificateFile=
CertificatePath=
SSLVerifyHost=No
SSLVerifyPeer=No

[JOB_REPORTING]
Enabled=true
TrackUserName=true
TrackDocumentName=true
TrackLocalPrinters=true
TrackNetworkPrinters=true

[COMPANY]
CompanyIDName=
```

CompanyName=

[COSTCENTER]
CostCenterIDName=

[INVENTORY_REPORT]
#Unit of ReportInterval under this section is minutes
Enabled=true
Days=1,2,3,4,5,6,7
StartTime=0800
EndTime=1800
ReportInterval=HOURLY

[BLACKOUT_PERIOD]
Enabled=false
BlackOutDays=1,3,5
BlackOutStartTime=1045
BlackOutEndTime=1055

[SOFTWARE_UPDATE]
Enabled=true
UpdateCheckTime=DAILY:2300
UpdateCheckDays=1,2,3,4,5,6,7

[CONFIG_UPDATE]
Enabled=true
UpdateCheckTime=INTERVAL:05
UpdateCheckDays=1,2,3,4,5,6,7

Valid interval values

Values	Description
DISABLED	The task is disabled.
INTERVAL: mm	The task runs every time a specified number of minutes elapses. For example, if the key value is set to INTERVAL: 30 , then the task runs every 30 minutes.
HOURLY	The task runs every hour after the service starts. For example, if the service starts at 10:24, then the task runs at 11:24, 12:24, and so on.
DAILY: hhmm1, hhmm2, hhmm...	The task runs every day at specified times. For example, if the key value is DAILY: 0830, 1245, 2100 , then the task runs every day at 8:30 a.m., 12:45 p.m., and 9:00 p.m.
WEEKLY: dayofweek1, dayofweek2, dayofweek... : hhmm1, hhmm2, hhmm...	The task runs on one or more days of the week at specified times. For example, if the key value is set to WEEKLY: Sunday, Tuesday, Thursday: 0830, 1245, 2100 , then the task runs at 8:30 a.m., 12:45 p.m., and 9:00 p.m. on each of those days.
Note: Make sure to use the 24-hour time format. Use commas to separate the items.	

SNMP settings

The LPMA uses the SNMP protocol to retrieve information from network printers. The LPMA configuration file contains two items related to SNMP: the SNMP community name and the SNMP port.

```
[SNMP]
CS_COMMUNITY_NAME=
PORT=
```

The LPMA retrieves the SNMP community name associated with the port from the print spooler. However, there are some exceptions that require you to change the values manually, such as the following cases:

- If you are using standard TCP/IP network connections with SNMP support disabled, and the printers have an SNMP community name other than "public"
- If you are not using standard TCP/IP ports, and the printers have an SNMP community name other than "public"
- If you are not using Port 161 for SNMP communication

Creating a log file

Logging is available for the Windows LPMA and can be enabled by modifying the **LTLogger.ini** file.

- 1** Using a text editor, open the **LTLogger.ini** file from the LPMA application directory.
- 2** Set the LOGGING_LEVEL value to **ENABLED**.
- 3** If necessary, in the LOG_FILE_NAME key, type the new file path and file name for the log file.
- 4** Save the file.
- 5** Restart the Local Printer Management Agent service to apply the changes.

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