



# Jamf Infrastructure Manager Installation Guide

Version 2.1.0

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Jamf has made all efforts to ensure that this guide is accurate.

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# Contents

## **4 Jamf Infrastructure Manager Overview**

4 Network Communication

5 Additional Information

## **6 Installing a Jamf Infrastructure Manager Instance**

6 Requirements

7 Installing a Jamf Infrastructure Manager Instance

## **11 Upgrading a Jamf Infrastructure Manager Instance**

## **12 Uninstalling a Jamf Infrastructure Manager Instance**

12 Uninstalling a Jamf Infrastructure Manager Instance

## **14 Jamf Infrastructure Manager Release History**

# Jamf Infrastructure Manager Overview

A Jamf Infrastructure Manager instance is a service that is managed by Jamf Pro. It can be used to host the following:

- **LDAP Proxy**—This allows traffic to pass securely between Jamf Pro and an LDAP directory service. The Infrastructure Manager and the LDAP Proxy typically reside within the DMZ. The LDAP Proxy requires integration with an LDAP directory service. For more information, see the [LDAP Proxy](#) section in the *Jamf Pro Administrator's Guide*.
- **Healthcare Listener**—This allows traffic to pass securely from a healthcare management system to Jamf Pro. For more information, see the [Healthcare Listener](#) section in the *Jamf Pro Administrator's Guide*.

When you install an instance of the Infrastructure Manager, Jamf Pro allows you to enable the LDAP Proxy or the Healthcare Listener. Infrastructure Manager instances can be installed on Linux and Windows. For more information, see [Installing a Jamf Infrastructure Manager Instance](#).

## Network Communication

When using the LDAP Proxy, the Jamf Infrastructure Manager can be customized for incoming access by any available port 1024 or greater. For Linux, port 1024 or greater must be used because lower-numbered ports are reserved for root services. The port used must be opened, inbound, on your firewall and also on the computer on which the Infrastructure Manager is installed. The recommended port is 8389 for communication between your Jamf Pro server and the Infrastructure Manager. Configure inbound firewall rules on your connection and the Jamf Infrastructure Manager host's operating system to allow connections on a selected port only from Jamf Pro. For more information, see the [Permitting Inbound/Outbound Traffic with Jamf Cloud](#) Knowledge Base article.

**Note:** The Infrastructure Manager does not currently respect network proxy settings configured in the host operating system or in Java. Therefore, the Infrastructure Manager must be enrolled with Jamf Pro and receive its initial configuration on a network that does not require connection via an outbound proxy. Unless a firewall rule is created to allow the Infrastructure Manager to connect to Jamf Pro without using an outbound proxy, the Infrastructure Manager will not receive LDAP configuration updates or be able to notify Jamf Pro that it is operational. It will still be able to receive the inbound LDAP lookup requests from Jamf Pro, however.

For communication between the Infrastructure Manager and an LDAP directory service, your LDAP server's regular incoming port is used. This port is specified in the LDAP server's configuration in Jamf Pro. The most common configurations are port 389 for LDAP and port 636 for LDAPS. This communication occurs between the Infrastructure Manager in the DMZ and an internal LDAP directory service only.

**Note:** If your environment is hosted in Jamf Cloud and uses Network Address Translation (NAT), you can configure the Jamf Infrastructure Manager to ensure successful communication between the Infrastructure Manager and Jamf Pro. For more information, see the [Configuring the Jamf Infrastructure Manager to Use Network Address Translation \(NAT\)](#) Knowledge Base article.

When using Jamf Pro hosted on Jamf Cloud, the necessary external IP addresses for Jamf Cloud must be allowed inbound to the Infrastructure Manager. Jamf Cloud customers should limit the source IP addresses to the list for their hosting region.

**Note:** Internal domain addresses (for example, .local, .company, or .mybiz) are not supported at this time. The Infrastructure Manager must be resolvable to the external Jamf Pro server.

For more information about network communication and the connections initiated between the Infrastructure Manager and Jamf Pro, see the [Network Ports Used by Jamf Pro](#) Knowledge Base article.

## Additional Information

For more information on Infrastructure Manager-related topics, see the following sections in the *Jamf Pro Administrator's Guide*:

- [Jamf Infrastructure Manager Instances](#)
- [LDAP Proxy](#)
- [Integrating with LDAP Directory Services](#)
- [Healthcare Listener](#)

For more information on how to configure the LDAP server manually, see the [LDAP Attribute Mappings Reference](#) Knowledge Base article.

# Installing a Jamf Infrastructure Manager Instance

Jamf Infrastructure Manager instances can be installed on Linux and Windows. When you install an Infrastructure Manager instance, it is enrolled with Jamf Pro. You can install as many instances as your organization requires.

**Note:** You can only install one Infrastructure Manager instance per computer. However, an Infrastructure Manager instance that hosts the Healthcare Listener can also host other Infrastructure Manager services such as the LDAP Proxy.

After you install an Infrastructure Manager instance, you can view the services installed on each instance using Jamf Pro.

## Requirements

The Jamf Infrastructure Manager Installer requires a computer with the following:

- One of the following operating systems:
  - Ubuntu Server 18.04 LTS
  - Red Hat Enterprise Linux 7.x
  - Windows Server 2019 (64-bit)
  - Windows Server 2016 (64-bit)
  - Windows Server 2012 (64-bit)

**Note :** For Windows Server operating systems, .NET Framework 4.0 or later is required.

- A 64-bit capable Intel processor
- 2 GB of RAM
- 300 MB of disk space available
- Java 11 (For more information, see the [Migrating to Java 11](#) and [Installing Java and MySQL for Jamf Pro 10.14.0 or Later](#) Knowledge Base articles.)

In Jamf Pro, the built-in CA or a trusted third-party CA must be configured.

In addition, you need a Jamf Pro user account with the "Infrastructure Manager Instances" privilege. For information on creating a Jamf Pro user account, see [Jamf Pro User Accounts and Groups](#) in the *Jamf Pro Administrator's Guide*.

# Installing a Jamf Infrastructure Manager Instance

## Ubuntu

1. Log in to Jamf Nation and go to the following page:

<https://www.jamf.com/jamf-nation/my/products>

2. Do one of the following:

- (LDAP Proxy) Download the Infrastructure Manager Installer Bundle for Ubuntu (`jamf-im_version.deb`) to the computer on which you plan to install it.
- (Healthcare Listener) Download the Healthcare Listener Installer Bundle for Ubuntu (`jamf-im-HCL-version.deb`) to the computer on which you plan to install it.

**Note:** In the installer filename, "version" is the version of the installer you are downloading. For example, "jamf-im\_1.3.1.deb".

3. (Optional) If your environment requires you to move the Infrastructure Manager after downloading it, execute a command similar to the following:

```
scp /Path/To/JIM/Installer.deb <sshusername>@<jim.server.hostname> : /tmp/
```

Ensure the following:

- `/Path/To/JIM/Installer.deb` is the file path for the Infrastructure Manager Installer Bundle on your computer.
- `<sshusername>` is the username on the server that has administrator Secure Shell (SSH) privileges.
- `<jim.server.hostname>` is the hostname or IP address of your Infrastructure Manager.

4. Log in to the server as a user with superuser privileges.

**Note:** If your environment requires you to move the Infrastructure Manager after downloading it, you must connect to the server over SSH or navigate directly to the `/tmp/` directory.

5. Initiate the installer by executing a command similar to the following:

```
sudo dpkg --install /path/to/jamf-im.deb
```

6. When prompted, enter the Jamf Pro URL (formerly the JSS URL). For example, "https://instancename.jamfcloud.com/" (hosted in Jamf Cloud) or "https://jamf.instancename.com:8443/" (hosted on-premise).
7. When prompted, enter credentials for a Jamf Pro user account with the "Infrastructure Manager Instances" privilege.

- When prompted, enter the Jamf Pro password.
- When prompted, enter the hostname of the computer on which the Infrastructure Manager is installed. For example, "computername.mycompany.com".

**Notes:**

- The hostname must be externally resolvable and follow the fully qualified domain name format.
- If your Jamf Pro server is hosted in Jamf Cloud, the Jamf Infrastructure Manager server must be publicly reachable.

- Follow the onscreen instructions to complete the installation.

When the Infrastructure Manager instance installation is complete, Jamf Pro allows you to enable the LDAP Proxy and/or enable the Healthcare Listener.

### Red Hat Enterprise Linux

- Log in to Jamf Nation and go to the following page:  
<https://www.jamf.com/jamf-nation/my/products>
- Do one of the following:
  - (LDAP Proxy) Download the Infrastructure Manager Installer Bundle for Red Hat Enterprise Linux ( `jamf-im-version.rpm`) to the computer on which you plan to install it.
  - (Healthcare Listener) Download the Healthcare Listener Installer Bundle for Red Hat Enterprise Linux (`jamf-im-HCL-version.rpm`) to the computer on which you plan to install it.

**Note:** In the installer filename, "version" is the version of the installer you are downloading. For example, "jamf-im-1.3.1-1.rpm".

- (Optional) If your environment requires you to move the Infrastructure Manager after downloading it, execute a command similar to the following:

```
scp /Path/To/jamf-im-1.3.1-1.noarch.rpm <sshusername>@<jim.server.hostname>:/tmp/
```

Ensure the following:

- `/Path/To/jamf-im-1.3.1-1.noarch.rpm` is the file path for the Infrastructure Manager Installer Bundle on your computer.
  - `<sshusername>` is the username on the server that has administrator SSH privileges.
  - `<jim.server.hostname>` is the hostname or IP address of your Infrastructure Manager.
- Log in to the server as a user with superuser privileges.

**Note:** If your environment requires you to move the Infrastructure Manager after downloading it, you must connect to the server over Secure Shell (SSH) or navigate directly to the `/tmp/` directory.



5. Initiate the installer by executing a command similar to the following:

```
sudo rpm -i /path/to/jamf-im-1.1.0-1.noarch.rpm
```

6. When prompted, execute the following command:

```
sudo jamf-im enroll
```

7. When prompted, enter the Jamf Pro URL (formerly the JSS URL). For example, "https://instancename.jamfcloud.com/" (hosted in Jamf Cloud) or "https://jamf.instancename.com:8443/" (hosted on-premise).
8. When prompted, enter credentials for a Jamf Pro user account with the "Infrastructure Manager Instances" privilege.
9. When prompted, enter the Jamf Pro password.
10. When prompted, enter the hostname of the computer on which the Infrastructure Manager is installed. For example, "computername.mycompany.com".

**Notes:**

- The hostname must be externally resolvable and follow the fully qualified domain name format.
- If your Jamf Pro server is hosted in Jamf Cloud, the Jamf Infrastructure Manager server must be publicly reachable.

11. Follow the onscreen instructions to complete the installation.

When the Infrastructure Manager instance installation is complete, Jamf Pro allows you to enable the LDAP Proxy and/or enable the Healthcare Listener.

## Windows

1. Log in to Jamf Nation and go to the following page:  
<https://www.jamf.com/jamf-nation/my/products>
2. Do one of the following:
  - (LDAP Proxy) Download the Infrastructure Manager Installer Bundle for Windows (Jamf-Infrastructure-Manager-version.msi) to the computer on which you plan to install it.
  - (Healthcare Listener) Download the Healthcare Listener Installer Bundle for Windows (Jamf-Infrastructure-Manager-HCL-version.msi) to the computer on which you plan to install it.

**Note:** In the installer filename, "version" is the version of the installer you are downloading. For example, "Jamf-Infrastructure-Manager-1.3.1.msi".

3. Run the installer.

**Note:** The installer must be run as an administrator.

4. When prompted, select setup type.

5. When prompted, enter the Jamf Pro URL (formerly the JSS URL). For example, "https://instancename.jamfcloud.com/" (hosted in Jamf Cloud) or "https://jamf.instancename.com:8443/" (hosted on-premise).

6. When prompted, enter credentials for a Jamf Pro user account with the "Infrastructure Manager Instances" privilege.

7. When prompted, enter the Jamf Pro password.

8. When prompted, enter the hostname of the computer on which the Infrastructure Manager is installed. For example, "computername.mycompany.com".

**Notes:**

- The hostname must be externally resolvable and follow the fully qualified domain name format.
- If your Jamf Pro server is hosted in Jamf Cloud, the Jamf Infrastructure Manager server must be publicly reachable.

9. Follow the onscreen instructions to complete the installation.

When the Infrastructure Manager instance installation is complete, Jamf Pro allows you to enable the LDAP Proxy and/or enable the Healthcare Listener.

# Upgrading a Jamf Infrastructure Manager Instance

Beginning with Jamf Infrastructure Manager 2.1.0, Java 11 is required for server environments. Earlier versions of Infrastructure Manager use Java 8. You can upgrade from any version of Infrastructure Manager 1.3.x to 2.1.0.

For instructions on upgrading to Java 11 and upgrading to Infrastructure Manager 2.1.0 or later, see the [Migrating to Java 11](#) Knowledge Base article. The article contains information about Jamf Pro and Infrastructure Manager, but the instructions for migrating to Java 11 apply to both.

# Uninstalling a Jamf Infrastructure Manager Instance

Uninstalling a Jamf Infrastructure Manager instance involves the following steps:

1. Removing artifacts from the hosting server
2. Disabling the proxy server from the LDAP server configuration in Jamf Pro

Consider uninstalling Jamf Infrastructure Manager from the hosting server in the following scenarios to avoid issues with re-enrollment and incorrect inventory reporting:

- Upgrading the hosting server that requires a new Infrastructure Manager instance installation (e.g., upgrading Windows Server 2012 R2 to Windows Server 2019)
- Upgrading Java on the hosting server
- Failed communication between Jamf Pro and Infrastructure Manager components due to unidentified issues

**Important:** You must uninstall Infrastructure Manager from the hosting server before you remove it from Jamf Pro.

## Uninstalling a Jamf Infrastructure Manager Instance

1. To remove artifacts on the hosting server, do the following:

### Linux-based Server

- a. Log in to the server as a user with superuser privileges.
- b. Use a package manager to uninstall Infrastructure Manager. Open Terminal and execute a command similar to the following:

```
sudo dpkg --purge jamf-im
```

- c. (Optional) Remove log files. Open Terminal and execute a command similar to the following:

```
sudo rm -f /Path/to/logs/jamf-im*
```

### Windows-based Server

- a. In the Control Panel, open **Programs and Features**.
- b. Select **Infrastructure Manager** from the list.
- c. Click **Uninstall**.

2. To disable the proxy server from the LDAP server configuration in Jamf Pro, do the following:
  - a. Log in to Jamf Pro.
  - b. Navigate to **System Settings > LDAP Servers** and click the instance name you want to edit.
  - c. Click **Edit** and deselect **Enable LDAP Proxy Server**.
  - d. Click **Save**.

**Note:** Contact Jamf Support if you experience issues with Jamf Infrastructure Manager workflows after the uninstall process completes.

# Jamf Infrastructure Manager Release History

Version	Changes
2.1.0	(Documentation update only, 17 February 2021) <ul style="list-style-type: none"> <li>Updated the "Jamf Infrastructure Manager Overview" section with details about the network port to use for Linux and source IP limitation for environments hosted in Jamf Cloud.</li> <li>Added the "Uninstalling a Jamf Infrastructure Manager Instance" section.</li> </ul>
2.1.0	(Documentation update only, 17 September 2020) Updated notes in the "Installing a Jamf Infrastructure Manager Instance" section: <ul style="list-style-type: none"> <li>.NET Framework 4.0 or later is required only for Windows Server operating systems.</li> <li>The hostname of the computer on which the Infrastructure Manager is installed must be externally resolvable.</li> </ul>
2.1.0	<ul style="list-style-type: none"> <li>Added support for Java 11</li> <li>Various changes to system requirements</li> </ul> For more information, see <a href="#">Installing a Jamf Infrastructure Manager Instance</a> .
1.3.2	(Documentation update only, 5 November 2019) Corrected a note in the "Jamf Infrastructure Manager Overview" section to distinguish between inbound and outbound proxy server support, and to clarify that the Infrastructure Manager can use an inbound proxy server.
1.3.2	(Documentation update only, 23 May 2019) Added links to the "Configuring the Jamf Infrastructure Manager to Use Network Address Translation (NAT)" and the "LDAP Attribute Mappings Reference" Knowledge Base articles.
1.3.2	(Documentation update only, 27 March 2019) Added information about moving the Jamf Infrastructure Manager Installer Bundle on Ubuntu and Red Hat Linux after downloading the installer from Jamf Nation.
1.3.2	Added support for Healthcare Listener features.
1.3.1	<ul style="list-style-type: none"> <li>Added support for Healthcare Listener features.</li> <li>[PI-003831] Fixed an issue that caused the Jamf Infrastructure Manager instance hosting the LDAP Proxy to run out of memory.</li> </ul>
1.3.0	<ul style="list-style-type: none"> <li>Improved the usability of the API for the Infrastructure Manager.</li> <li>Added support for Healthcare Listener features.</li> </ul>
1.1.0	You can now install Infrastructure Manager instances on Red Hat Enterprise Linux (RHEL) and Windows.