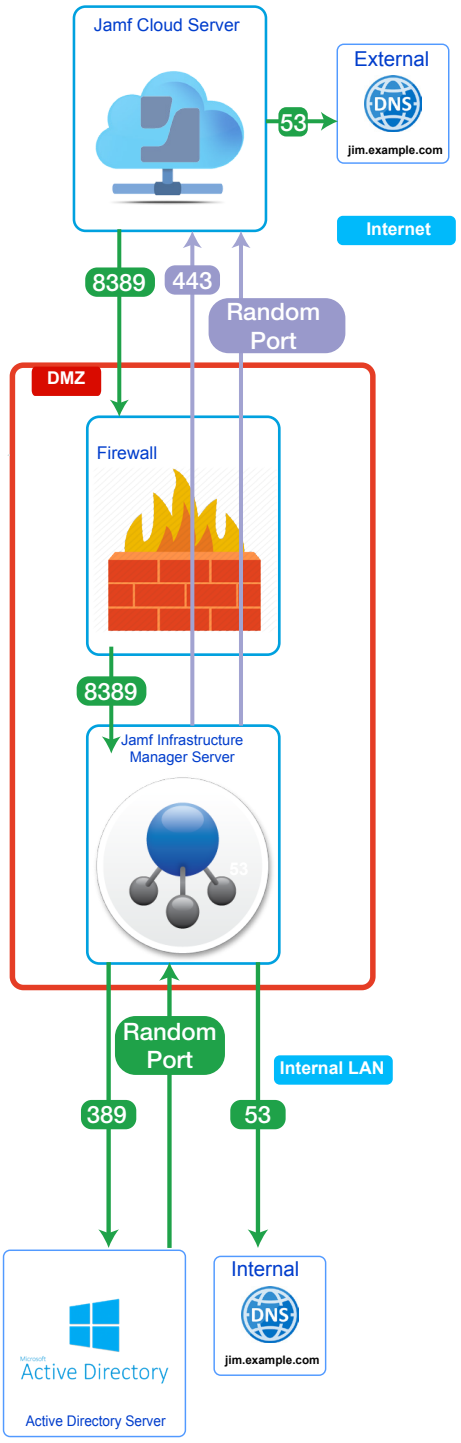
A Guide to Install Jamf Infrastructure Manager on a Windows 2016 Server

HCS TECHNOLOGY GROUP



Internet 1

The Jamf Pro Server needs inbound access to the Jamf Infrastructure Manager Server on port 8389. (If using LDAPS, you can use port 8636).

The Jamf Infrastructure Manager Server makes an outbound connection to the Jamf Cloud Server on port 443.

The Jamf Pro Cloud server will access an External DNS server on port 53. The FQDN must match Externally and Internally on the DNS servers. For example, A DNS record for jim.example.com needs to be on the External and Internal DNS servers.

Firewall-DMZ 2

The Firewall needs to be configured to accept outbound connection requests over port 443 from the Jamf Infrastructure Manager Server and inbound connection requests on port 8389 or 8636 if using LDAPS.

NOTE: Jamf Infrastructure Manager can use any port greater than or equal to 1025. Ports 8389 and 8386 are used in the diagram as an example. The Firewall should accept the requests from the Jamf Cloud Servers in your region listed here:

https://www.jamf.com/jamf-nation/articles/409/permitting-inbound-outbound-traffic-with-jamfcloud

When a inbound connection request comes into the Firewall on port 8389 or 8636 if using LDAPS, it will be forwarded to the Jamf Infrastructure Manager Server on port 389 or 636 if using LDAPS. The Firewall should also be configured to allow the Jamf Infrastructure Manager Server access to the Internal DNS server over port 53.

Internal LAN 3

The Jamf Infrastructure Manager Server will send an inbound connection request to the Internal DNS server on port 53 for the FQDN of the Active Directory Server. The Jamf Infrastructure Manager Server will send the initial lookup request to the Active Directory Server on the Internal LAN over port 389 or 636 if using LDAPS.

The Active Directory Server will send its response back to the Jamf Infrastructure Manager Server on a randomly-generated port. The Jamf Infrastructure Manager Server will send the reply back to the Jamf Cloud Server over a randomly-generated port as well.

Acronyms 4

LDAPS: Lightweight Directory Access Protocol Secure
AD: Active Directory
DNS: Domain Name System
DMZ: Demilitarized Zone
JIM: Jamf Infrastructure Manager
LAN: Local Area Network
FQDN: Fully-Qualified Domain Name

This guide was created using the following:
- Windows Server 2016 Standard Active Directory
- Jamf Infrastructure Manager Version 1.3.1
- Network Address Translation (NAT)

Before you begin:
1. Work with your network team to make sure the following ports are open from the Jamf Infrastructure Manager (JIM) Server:
    - Port 389 for LDAP (or 636 for LDAPS or 3269 for Global Catalog) to an Active Directory Domain Controller.
    - Port 53 to the internal DNS server.
    - Port 443 for outbound traffic to the Jamf Cloud Server (this port is normally open on the firewall).

2. Make sure the following ports are open from the Jamf Cloud Server to the JIM Server:
    - Port 8389 for LDAP (or 8636 for LDAPS).

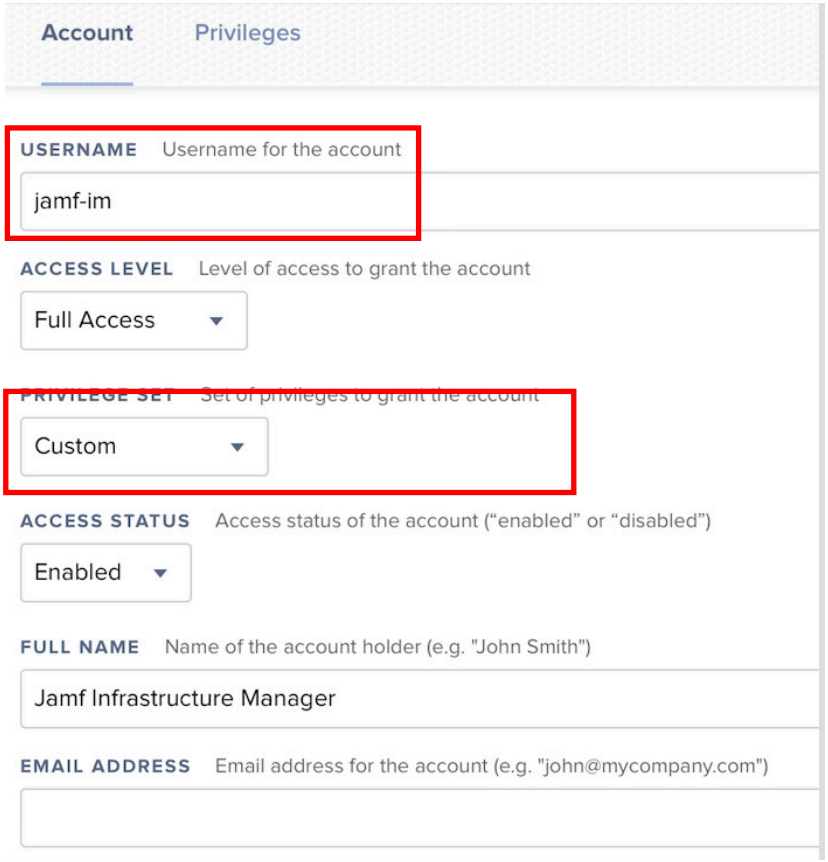
3. Allow only the Jamf Cloud IP addresses in your region inbound access to the JIM Server. See the IP region list below.

   https://www.jamf.com/jamf-nation/articles/409/permitting-inbound-outbound-traffic-with-jamf-cloud

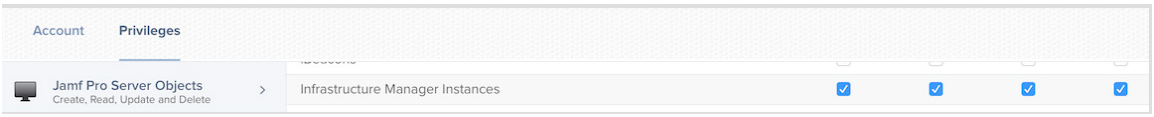
4. The fully-qualified domain name of your JIM, for example, infrastructure.example.com, should have a DNS record available on your internal LAN, and a DNS record available to the public. The DNS record inside your LAN should resolve to the internal IPv4 address of your JIM, and the DNS record available to the public should resolve to the public IPv4 address of your JIM.

5. Java JDK 8 is required. Make sure you have it installed on your JIM before starting this guide.

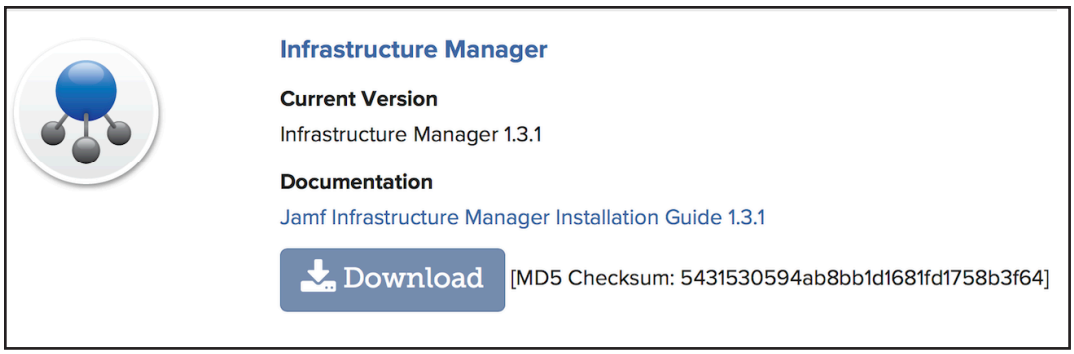
1. Create a user named: jamf-im on the Jamf Pro server and give it custom access.



2. Provide Full Access only to the JIM Instances.

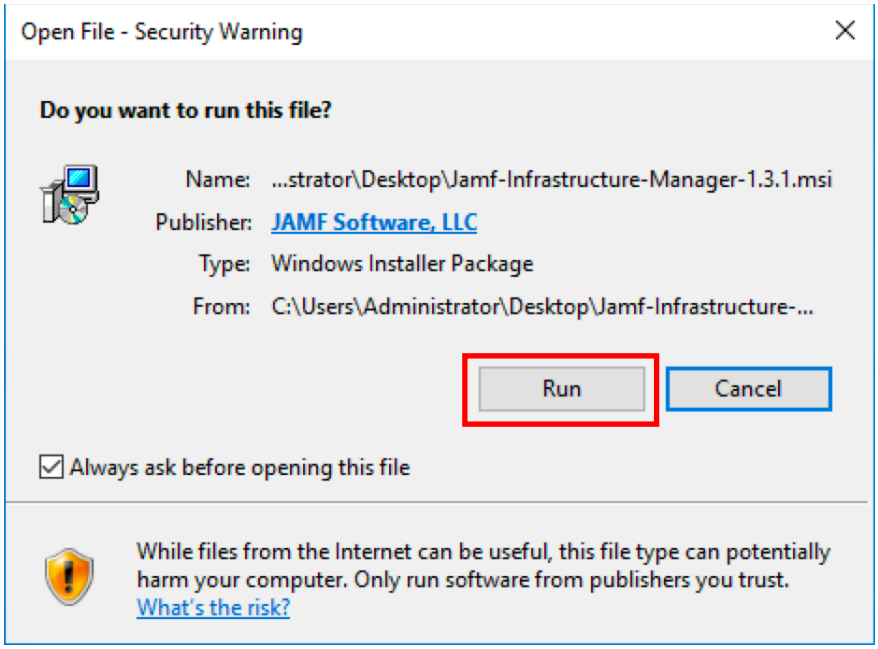


3. Using a browser on your JIM server, log in to your Jamf Nation Account and download the latest version of JIM.

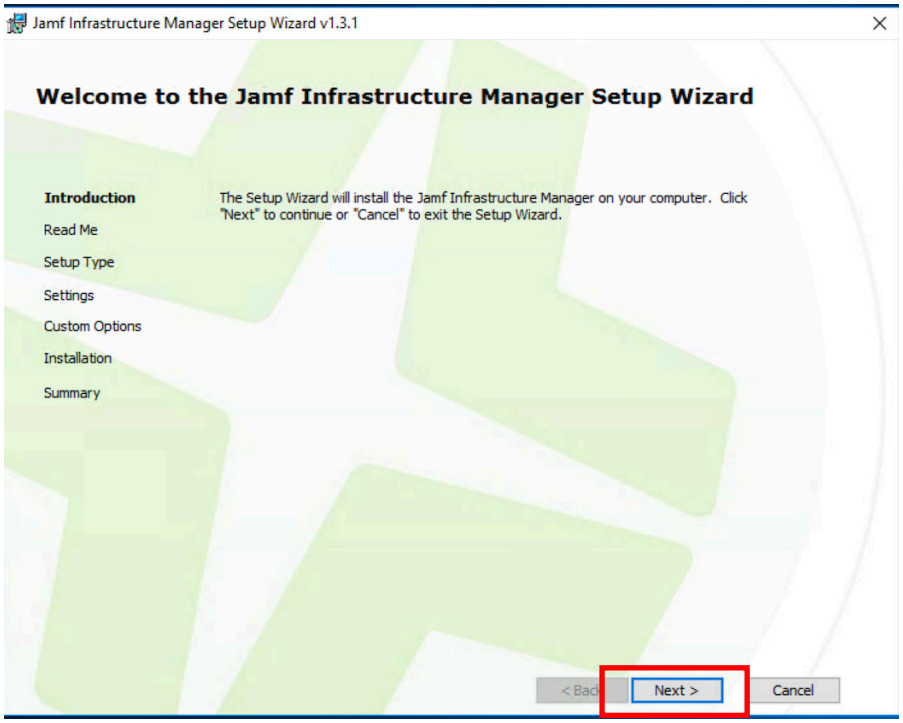


4. Double Click the JIM 1.3.1 installer.

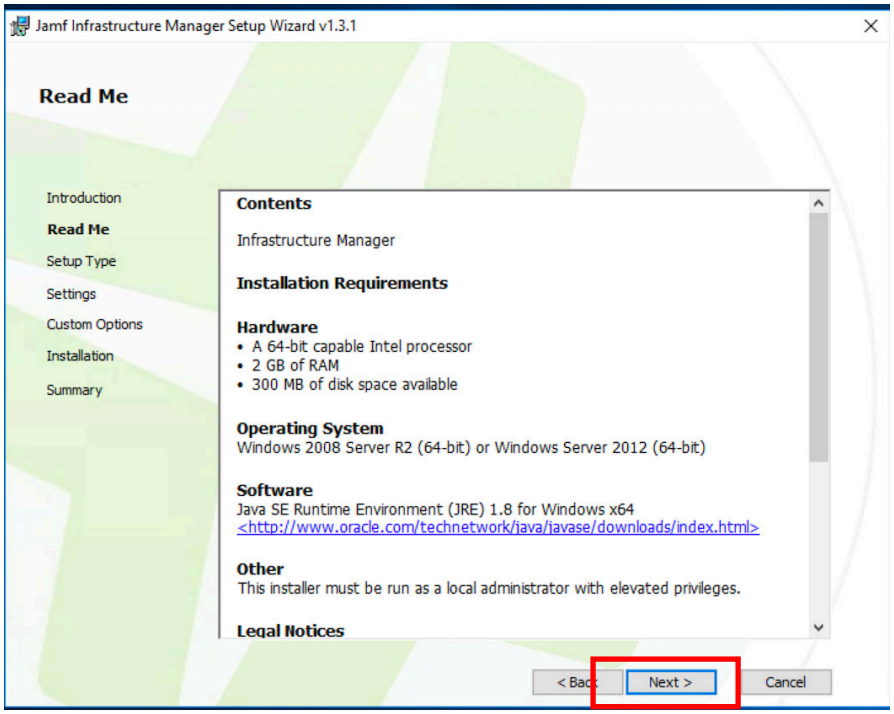
5. Click Run.



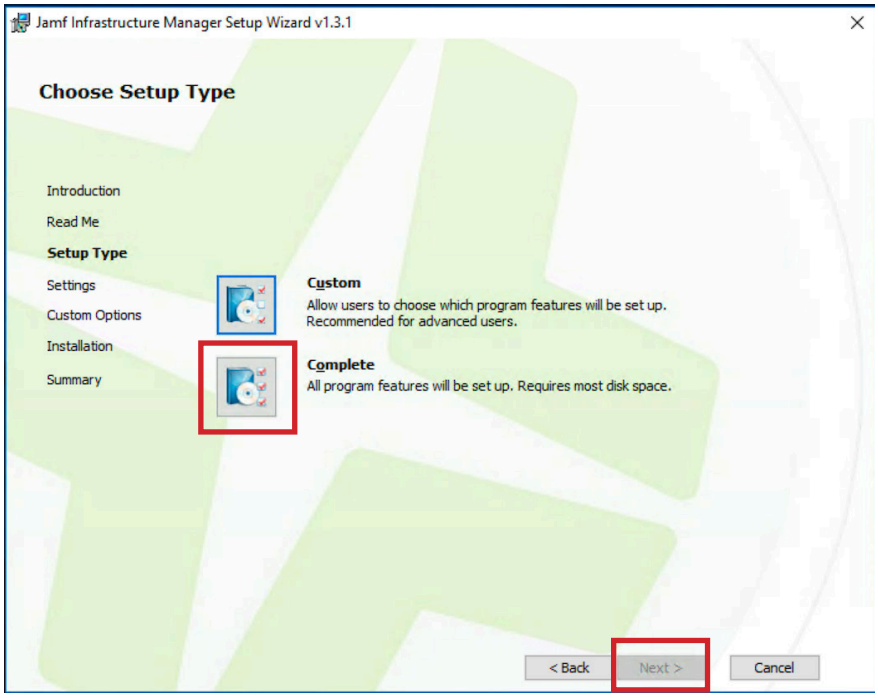
6. Click Next.



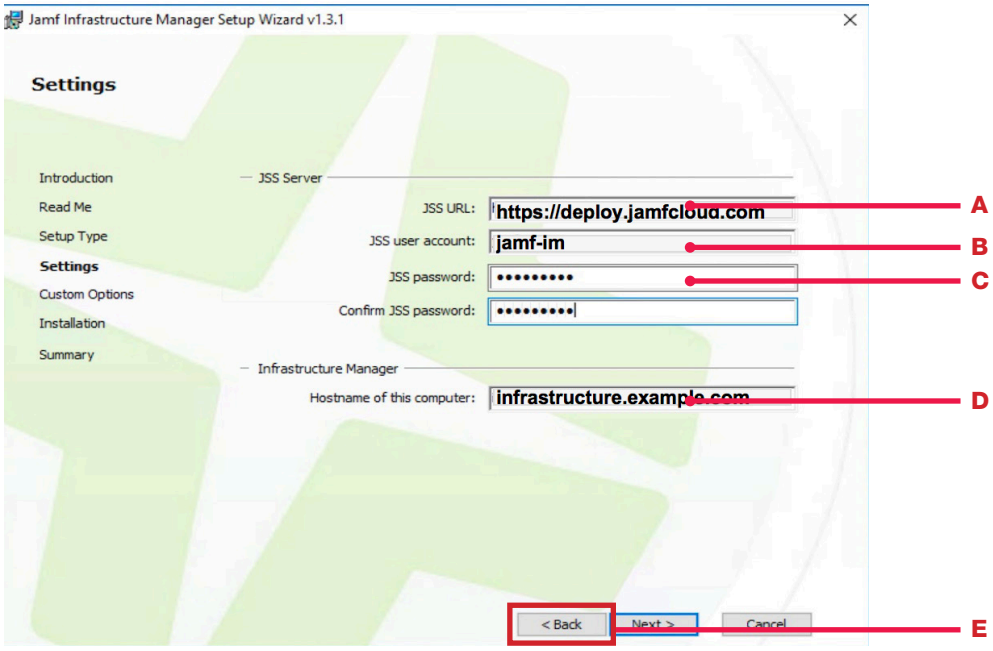
7. Click Next.



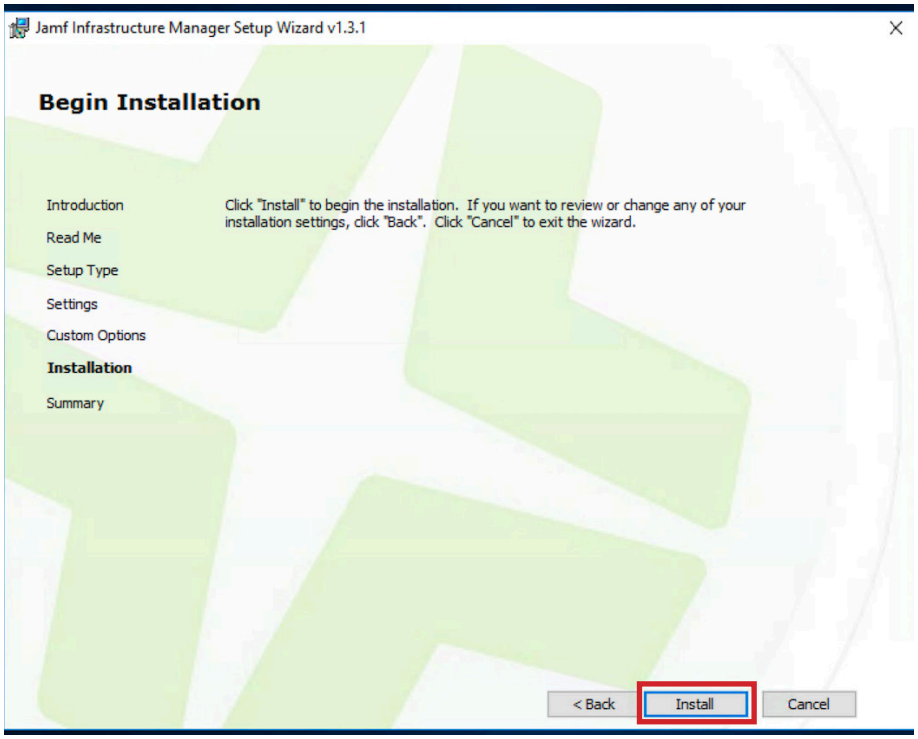
8. Click Complete, then click Next.



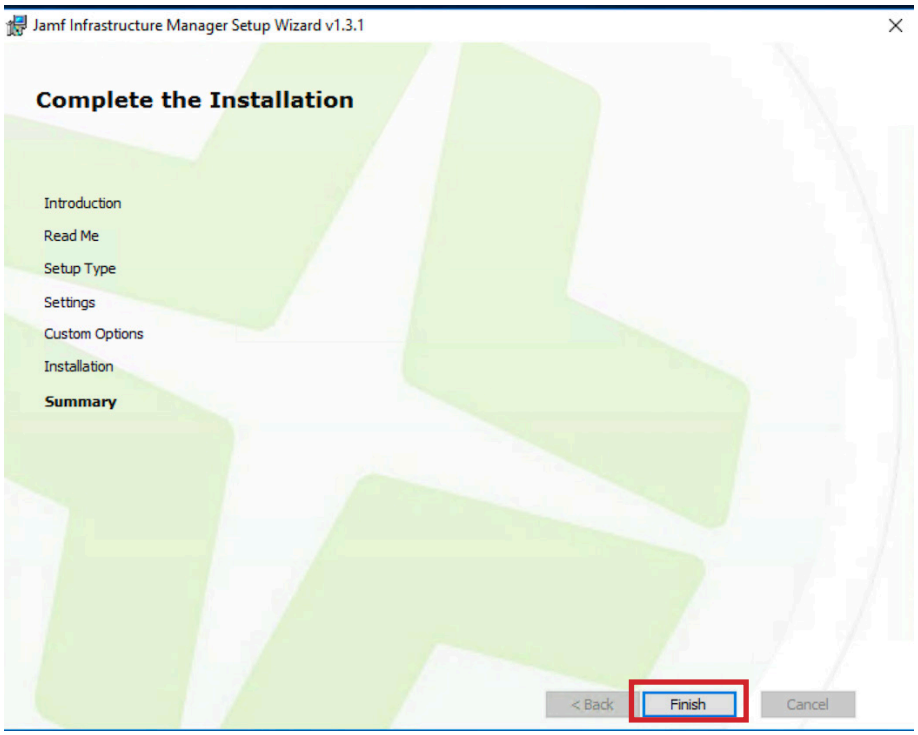
9. Enter the following:
   A. JSS URL: Enter the URL of your Jamf Pro Server.
   B. JSS User Account: jamf-im
   C. Password
   D. Hostname of this computer: Enter the fully-qualified domain name of the computer running JIM.
   E. Click Next.



10. Click Install.



11. Click Finish.



12. If your JIM is in the DMZ of your firewall that is using Network Address Translation (NAT), and you do not have an internal DNS server with the FQDN of the internal IPv4 address of your JIM server, you need to create entries for internal IPv4 addresses in the host file of your JIM Server. The file is located in: /Windows/System32/Drivers/etc/hosts

    Add the following to the bottom of the file:

    A. The IP address and hostname of your JIM Server in the DMZ.
    Example: 192.168.225.4 infrastructure.example.com

    B. The IP address of your Active Directory Server on your LAN. Example:
    192.168.100.8 ad.example.com

    C. Save this file when done.

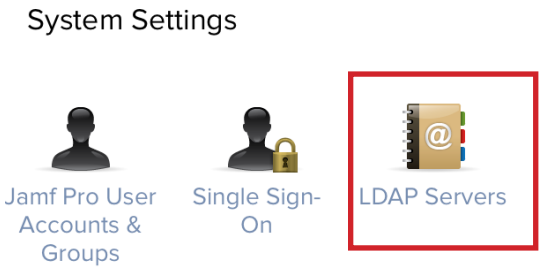
```
Windows.
#
# This file contains the mappings of IP addresses to host names.
Each
# entry should be kept on an individual line. The IP address
should
# be placed in the first column followed by the corresponding
host name.
# The IP address and the host name should be separated by at
least one
# space.
#
# Additionally, comments (such as these) may be inserted on
individual
# lines or following the machine name denoted by a '#' symbol.
#
# For example:
#
#      102.54.94.97     rhino.acme.com          # source server
#       38.25.63.10     x.acme.com              # x client host

# localhost name resolution is handled within DNS itself.
#     127.0.0.1       localhost
#     ::1             localhost
      192.168.225.5   infrastructure.example.com      A
      192.168.100.8   ad.example.com                  B
```

13. Log in to your Jamf Pro Server and confirm that the Infrastructure Manager Instance was created and is responding. Select Infrastructure Managers.

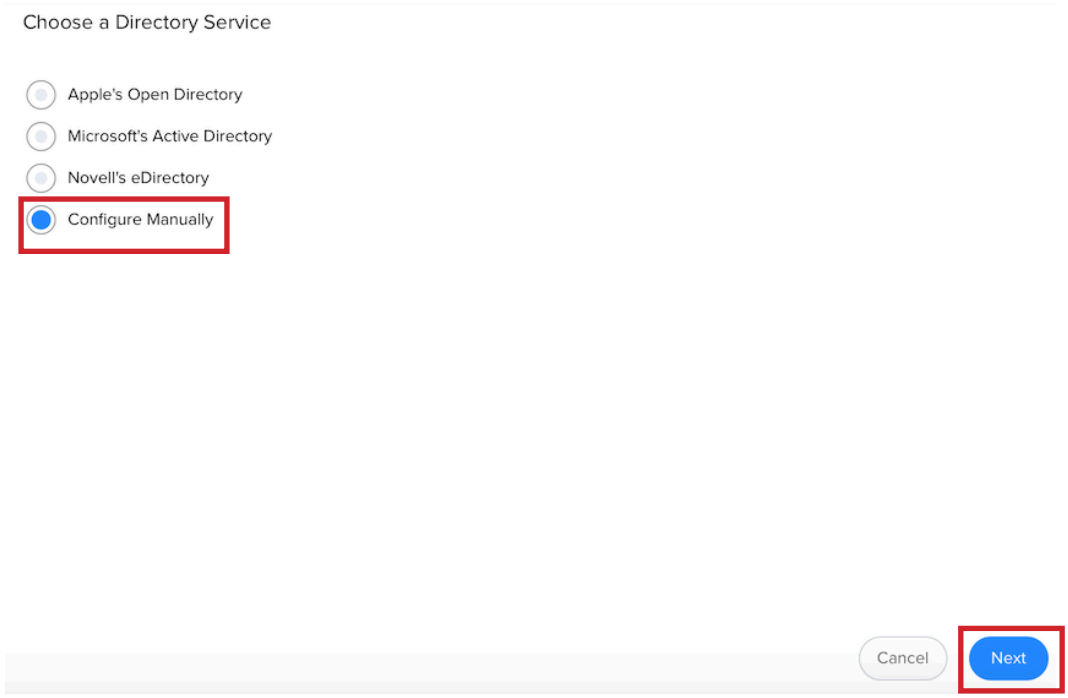
14. Make sure the status is Enabled and Last check in succeeded.

APPLICATION	STATUS	NAME	VERSION	LAST CHECK-IN
LDAP Proxy	Enabled			Less than a minute ago

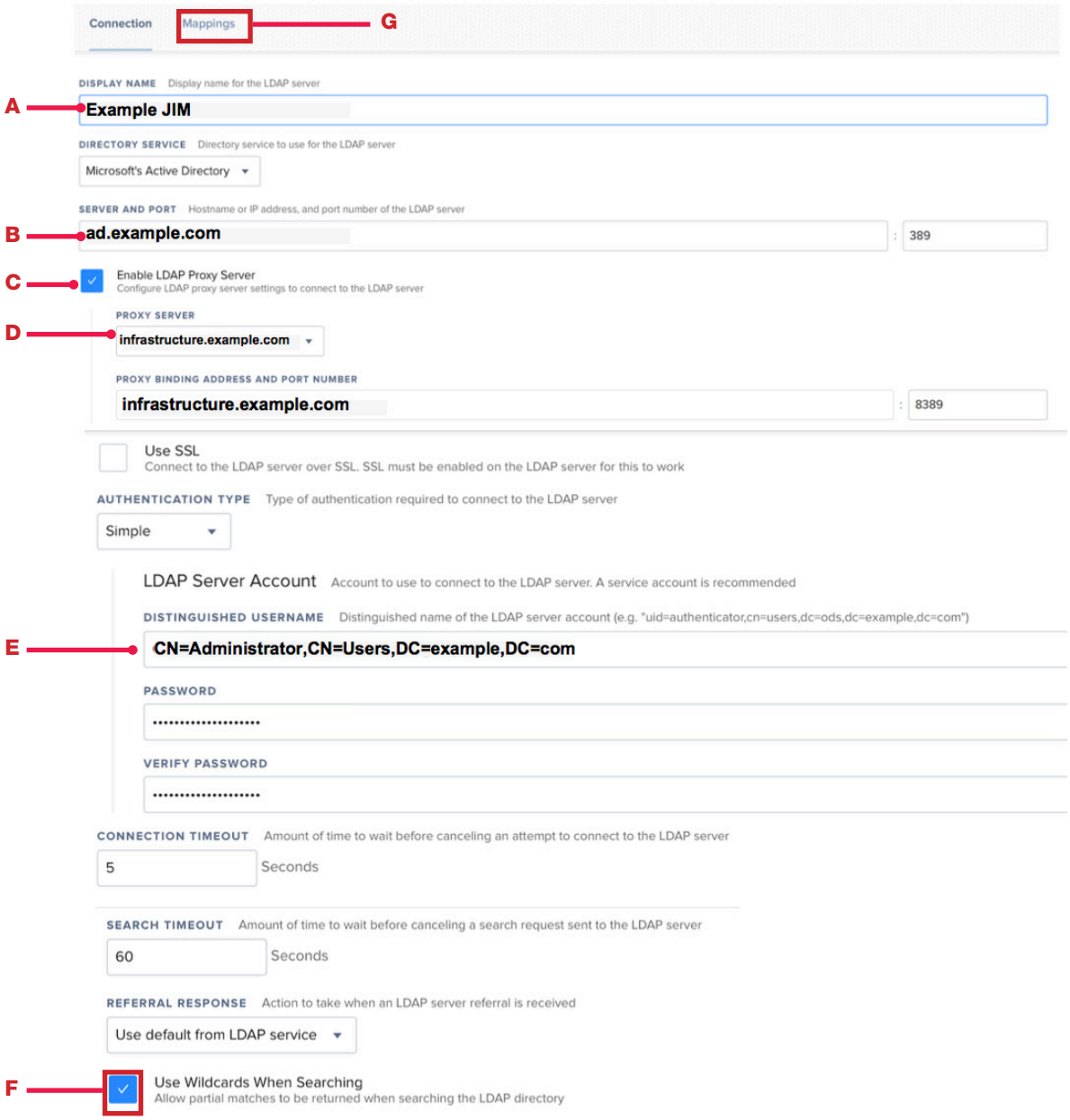
15. Configure an LDAP server. Go to System Settings, then select LDAP Servers.



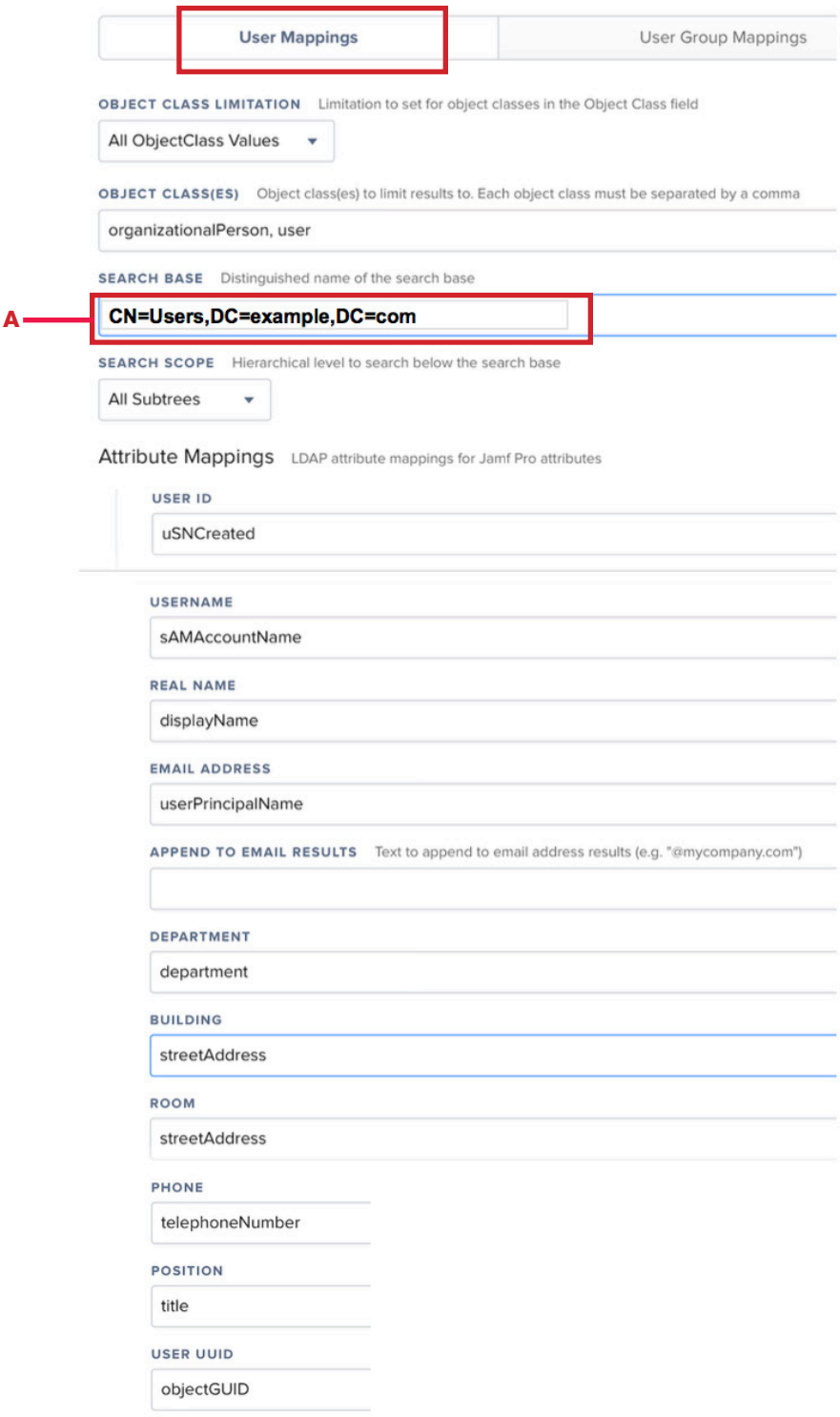
16. Select Configure Manually, then click Next.



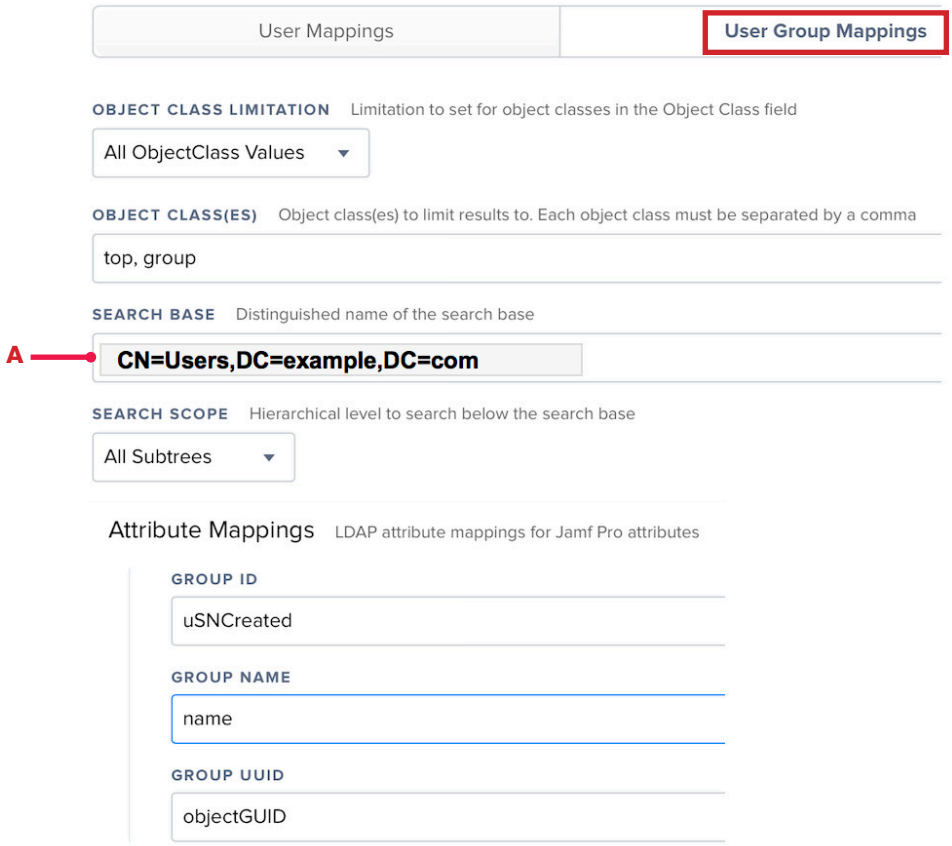
17. Fill out the following:
    A. Display Name: Can be anything you want (this name is not displayed to users).
    B. Server and Port: The hostname of your Active Directory Sever and port 389. If connecting to the Global Catalog, use port 3269.
    C. Ensure the checkbox is selected for “Enable LDAP Proxy Server”.
    D. Proxy Server: Select your JIM Instance. The port is the port you use to connect to JIM. It can be any port greater than or equal to 1025. This Guide uses 8389 in this example.
    E. Distinguished Name: Enter an account that has access to look up accounts in your Active Directory Server.
    F. Ensure the checkbox is selected for “Use Wildcards When Searching.”
    G. Click Mappings in the toolbar.



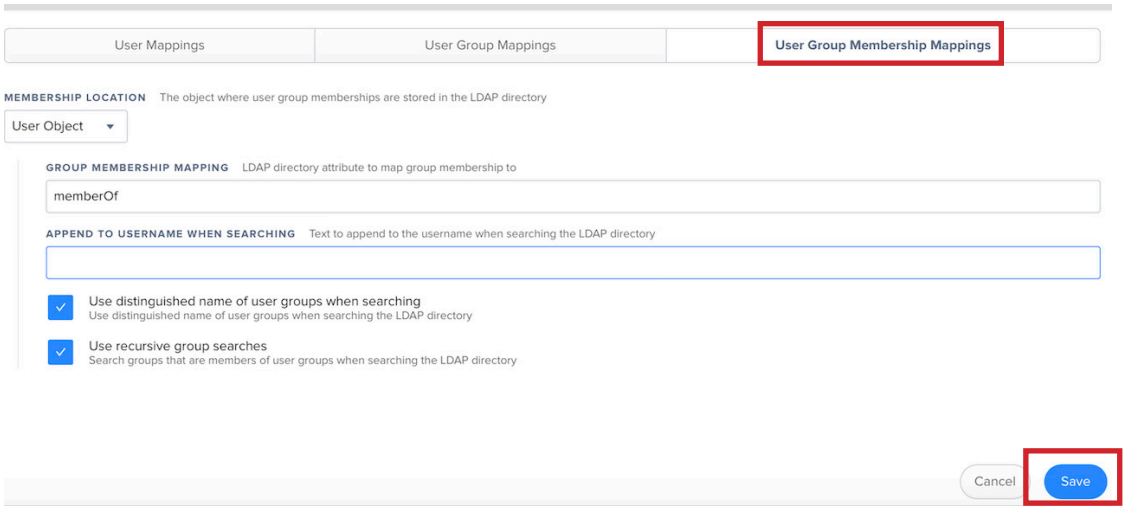
18. Click “User Mappings.”
19. Match your settings to the settings in the screen shot below.
    A. In the Search Base field, replace the “DC=example,DC=com”, with your domain.



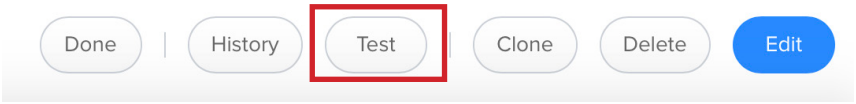
20. Click “Use Group Mappings.”
21. Match your settings to the settings in the screen shot below.
    A. In the Search Base field, replace the “DC=example,DC=com”, with your domain.



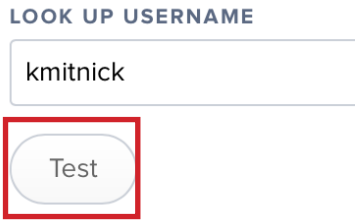
22. Click “User Group Membership Mappings.”
23. Match your settings to the settings in the screen shot below. Click Save.



24. Wait 30 seconds; the JIM connects every 30 seconds to Jamf Pro to check for settings changes.
25. Click Test.



26. Enter an Active Directory user account name, then click Test.



27. If all goes well, you will see the account you just searched for. If all doesn't go well, hit the gym then try again. This completes this guide.