

ManageEngine 

# OpManager

A quick installation guide

## Table of Contents

<b>OpManager System Requirements</b>	<b>4</b>
<b>Hardware Requirements</b>	<b>4</b>
<b>Software Requirements</b>	<b>5</b>
<b>Port Requirements</b>	<b>6</b>
<b>Database Requirements</b>	<b>8</b>
<b>MSSQL Server Configuration for OpManager</b>	<b>9</b>
<b>OpManager Essential Installation</b>	<b>12</b>
<b>OpManager Enterprise Installation</b>	<b>17</b>
<b>License Management</b>	<b>33</b>
<b>Failover or High Availability</b>	<b>37</b>
<b>Uninstalling OpManager</b>	<b>40</b>



## OpManager System Requirements

The system requirements mentioned below are minimum requirements for the specified number of devices. The sizing requirements may vary based on the load.

### Hardware Requirements

No. of Devices	Processor	Memory	Hard Disk
OpManager <250	2 GHz	4 GB	20 GB
OpManager 500	2.5 GHz	8 GB	20 GB
OpManager 1000	Quadcore 2.5 GHz or higher	16 GB	40 GB
OpManager with add-ons (Or) OpManager Plus	Dual QuadCore 3.5 GHz or higher	32 GB	100 GB
Enterprise Edition	Dual Quad Core 3.5 GHz or higher	32 GB	100 GB
Enterprise Edition with add-ons	Dual Quad Core 3.5 GHz or higher	32 GB	100 GB

#### Important Notes:

1. In the case of OpManager Enterprise, the hardware requirements are the same for both the Central and Probe.
2. Dedicated resources must be available in the case of VMs

## Software Requirements

The following table lists the recommended software requirements for an OpManager installation.

Software	Evaluation	Production
<b>Windows OS</b>	<p>Windows 10</p> <p>Windows 8</p> <p>Windows 7</p> <p>Also works with,</p> <p>Windows Server 2016</p> <p>Windows Server 2012 R2</p> <p>Windows Server 2012</p> <p>Windows Server 2008</p>	<p>Windows Server 2016</p> <p>Windows Server 2012 R2</p> <p>Windows Server 2012</p> <p>Windows Server 2008</p>
<b>Linux OS</b>	<p>Ubuntu</p> <p>Suse</p> <p>Red Hat</p> <p>Fedora</p> <p>Mandriva (Mandrake Linux)</p>	<p>Red Hat</p> <p>64 bit Linux flavors</p>
<b>Browsers</b>	<p>Chrome latest</p> <p>Firefox latest</p> <p>Edge</p> <p>IE 11</p> <div style="border: 1px solid black; background-color: #fff9c4; padding: 5px; margin-top: 10px;"> <p><b>Note:</b> Do not enable Enterprise Mode option in Internet Explorer. This will make Internet Explorer work as version 7. This is not supported.</p> </div>	<p>Chrome preferred</p>
<b>User privileges</b>	<p>Local administrator privileges required for OpManager installation.</p>	

## Port Requirements

The following table summarizes the ports and protocols that OpManager uses for communication.

### Ports used by the application

Port	Protocol	Port Type	Usage	Remarks
13306	TCP	Static (PostGRE SQL)	Database Port	Can be changed in <code>conf/database_params.conf</code> file.
1433	TCP	Static (MS SQL)	Database Port	Can be changed in <code>conf/database_params.conf</code> file/ <code>dbconfiguration.bat</code> file.
22	TCP	Static	SSH Port	
80/443	TCP	Static	Web Server Port	Can be configured using <code>ChangeWebServerPort.bat</code> .

### Ports used for monitoring

Port	Protocol	Port Type	Usage	Remarks
2000	TCP	Static	Internal Communication Port	
56328	TCP	Dynamic	ShutDown Listener Port	
56378	TCP	Dynamic	Internal Communication Port	Can be made static by configuring <code>NMS_FE_SECONDARY_PORT</code> parameter in <code>conf/OpManager/conf/server_parameters.conf</code> file
56469	TCP	Dynamic	Internal Communication Port	Can be made static by configuring <code>PORT_TO_LISTEN</code> parameter in <code>conf/OpManager/conf/transportProvider.conf</code> file

162	UDP	Static	SNMP Trap Receiver Port	Can be changed in <code>trapport.conf</code> under <code>conf/OpManager/</code>
514	UDP	Static	SYSLOG Receiver Port	SYSLOG Receiver Port can be changed via web client.

**Note:** Dynamic ports change during each server startup based on the ports available in the system

### Ports used by add-ons

Port	Protocol	Port Type	Usage	Remarks
69	UDP	Static	TFTP Port [NCM]	
1514	UDP	Static	Firewall Log Receiver Port [FWA]	Firewall Receiver Port can be changed via web client.
9996	TCP		NetFlow Listener Port [NFA]	NetFlow Listener Port can be changed via web client.

## Database Requirements

The following table lists the basic requirements for your OpManager database server.

### Memory & Disk

DB	Essential Edition	Enterprise Edition
PGSQL	Bundled with the product.	For evaluation purposes only. Please use MSSQL for production.
MSSQL	<p>SQL 2016   SQL 2014   SQL 2012   SQL 2008</p> <p><b>Important Notices:</b></p> <ol style="list-style-type: none"> <li>1. For production use 64 bit versions of SQL</li> <li>2. Recovery mode should be set to SIMPLE.</li> <li>3. SQL and OpManager should be in the same LAN. Currently WAN based SQL installations are not supported.</li> </ol> <p><b>Collation:</b></p> <p>English with collation setting (SQL_Latin1_General_CP1_CI_AS)            Norwegian with collation setting (Danish_Norwegian_CI_AS)            Simplified Chinese with collation setting (Chinese_PRC_CI_AS)            Japanese with collation setting (Japanese_CI_AS)            German with collation setting (German_PhoneBook_CI_AS)</p> <p><b>Authentication:</b></p> <p>Mixed mode (MSSQL &amp; Windows Authentication).</p> <p><b>BCP (Only for Enterprise Edition/ Essential Edition with the NFA addon):</b></p> <p><i>The "bcp.exe" and "bcp.rll" must be available in the OpManager bin directory.</i></p> <p>The BCP utility provided with Microsoft SQL Server is a command line utility that allows you to import and export large amounts of data in and out of SQL server databases quickly. The bcp.exe and bcp.rll will be available in the MSSQL installation directory. If MSSQL is in a remote machine, copy bcp.exe and bcp.rll files and paste them into \OpManager\bin directory.</p> <p><b>Note: The SQL server version compliant with the SQL Native Client must be installed in the same Server.</b></p>	

**Warning:** The Manage Engine directory (By Default: C:\ManageEngine\OpManager) and the Database directory should be excluded from the Antivirus program.

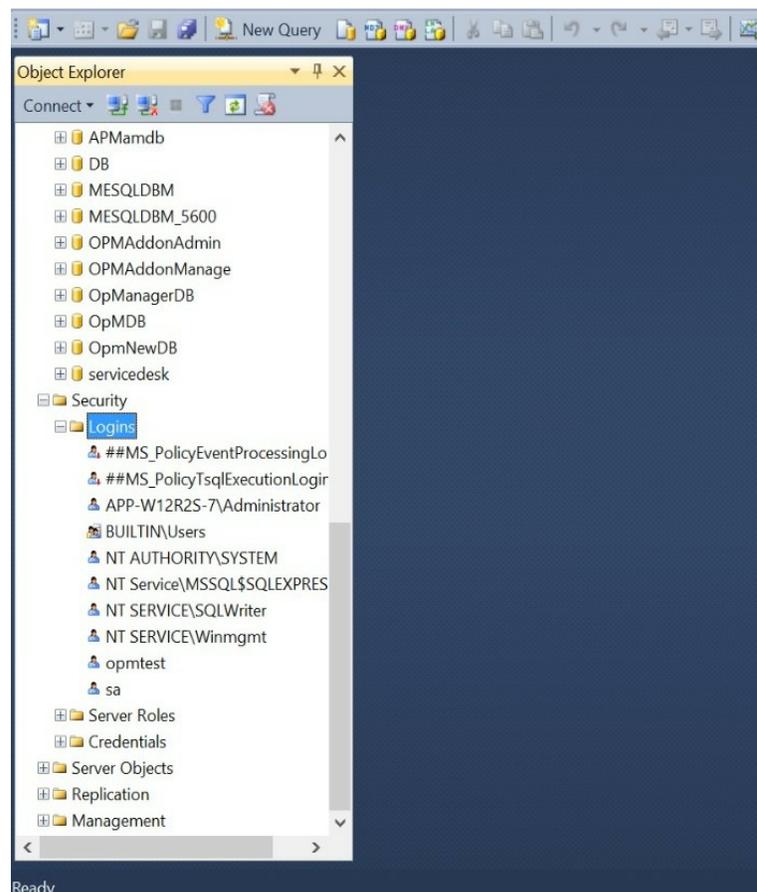
## MSSQL Server Configuration for OpManager

**Note:** If you wish to proceed with your existing server authentication credentials, please skip this step and directly move to the installation procedure.

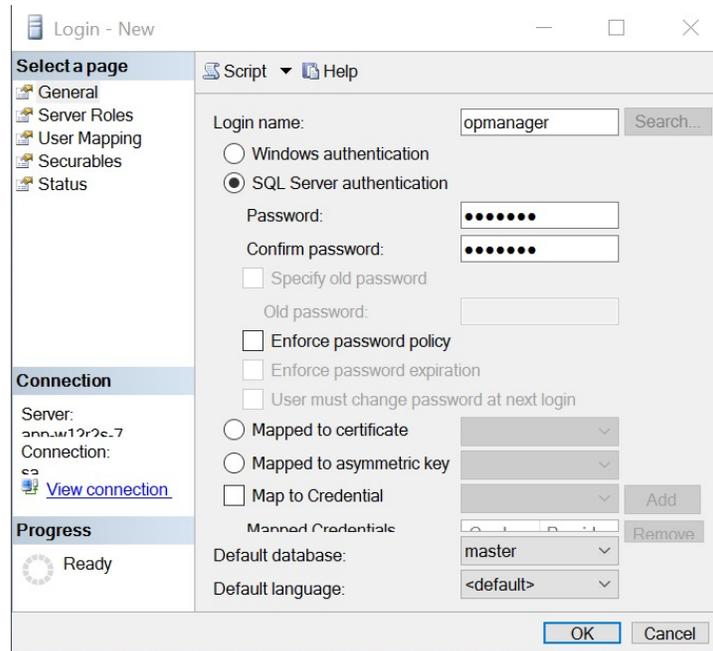
### Steps to configure MSSQL

Step 1: To ensure proper communication between the MSSQL database server and OpManager, a new account has to be created with the below mentioned steps.

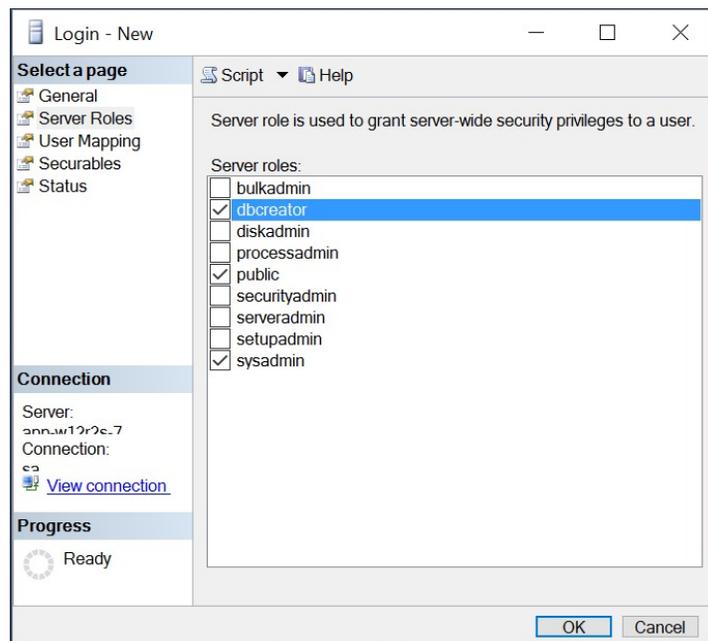
- Open SQL Management Studio and login using your Server Account (sa)/ Windows credentials.
- Right click on Logins
- Select New Login



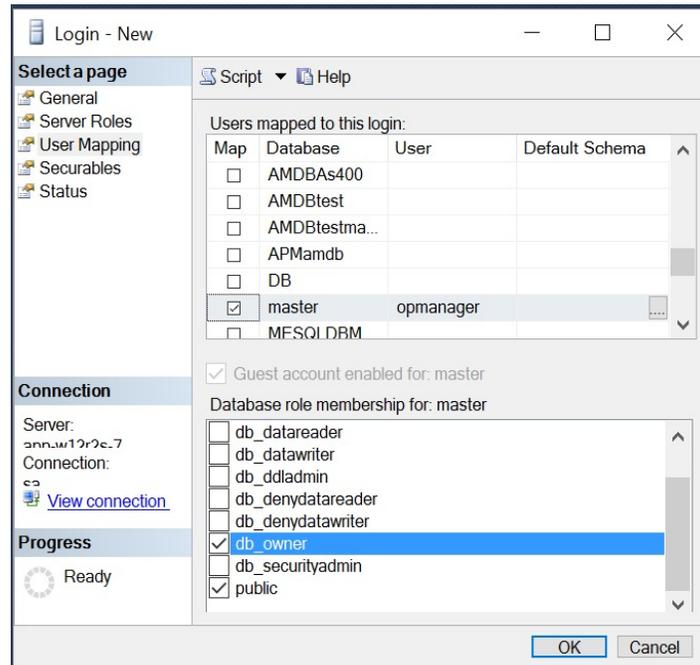
**Step 2: Select Authentication type. For Windows authentication, select and login using your Windows login credentials. For SQL Server Authentication, enter the password. Then proceed with Step 3.**



**Step 3: Click on Server Role. Select Server Roles "dbcreator", "public" and "sysadmin"**



Step 4: Click on User Mapping. Map this login to "master" with database role ownership as "db\_owner" and "public". Click OK.



## OpManager Essential Installation

**Note:** If OpManager is run with MSSQL as the backend database, then the MSSQL database must be configured before proceeding with the following installation.

### Installing OpManager on Windows

#### Steps to install

Step 1: Download [OpManager for Windows](#).

Step 2: Execute the downloaded "OpManager.exe" to install and follow the instructions in the installation wizard.

Step 3: Click 'Next' to begin the installation process. Go through the license agreement and click 'Yes' to proceed to the next step.

Step 4: In the subsequent steps of the wizard, select the OpManager language and the directory to install OpManager. Proceed to the next step.

Step 5: Specify the port number to run OpManager Web Server (OpManager Central uses 80 as the default web server port) and click 'Next'.

Step 6: Register for technical support by providing your contact information such as Name, E-mail Id, etc., and click 'Next'.

Step 7: Select the Server Mode (i.e., Primary or Standby server) and click 'Next'.

Step 8: If the Server Mode is selected as Standby, then enter the Primary webserver host, port and login details and complete the installation.

Step 9: Now, select the database. OpManager supports both, PostgreSQL and MSSQL as database and click 'Next'.

Step 10: Click 'Finish' to complete the installation process.

### Installing OpManager on Linux

#### Prerequisites

1. Sometimes, you might encounter errors such as database connection not getting established or the server not starting up. To workaround these issues, comment the IPv6 related entries in the /etc/hosts file.
2. Check if the DNS resolves properly to the IP Address on the system in which OpManager is installed. Add an entry to /etc/host file with ipaddress and host name if there is trouble starting OpManager.

## Steps to install

1. Download [OpManager for Linux](#).
2. Login as *root* user.
3. Assign the executable permission to the downloaded file using the following command:  
`chmod a+x ManageEngine_OpManager_64bit.bin`
4. Execute `./ManageEngine_OpManager_64bit.bin` This will display the installation wizard.
5. Click 'Next' to begin the installation process. Go through the license agreement and proceed to the next step.
6. In the subsequent steps of the wizard, select the OpManager Edition, language, the directory to install OpManager, and the port number to run OpManager Web Server. Proceed to the next step.
7. Verify the installation details and click 'Next'.
8. Click 'Finish' to complete the installation process.

It is recommended to install OpManager in the *opt* folder. By default, OpManager is installed in the `/opt/ManageEngine/OpManager` directory.

## Installing OpManager on Linux using Console mode/ Silent mode

This is a quick walk-through of the console mode installation of OpManager on a Linux box - an easy thing to do if you are working on a Windows box and want to install on a remote Linux system.

### Prerequisites

To begin with, make sure you have downloaded the binary for Linux.  
(<http://www.manageengine.com/network-monitoring/download.html>)

## Steps to install

Step 1: Execute the binary with `-console` option

```
root@opm-dev-11:/opt/Mohan# ./ManageEngine_OpManager_64bit.bin -console
InstallShield Wizard
Initializing InstallShield Wizard...
```

Step 2: Follow the on-screen instructions

```
Press 1 for Next, 2 for Previous, 3 to Cancel or 4 to Redisplay [1] 1
```

### Step 3: Register for technical support (Enter Name, E-mail id, Phone, Company Name)

```
Registration for Technical Support
Name [ ] Test
E-mail Id [ ] test@zoho.com
Phone [ ] 1234567890
Company Name [ ] Zoho
```

### Step 4: Select the location

```
[ ] 178 - USA
[ ] 179 - Uganda
[ ] 180 - Ukraine
[ ] 181 - Uruguay
[ ] 182 - Uzbekistan
[ ] 183 - Venezuela
[ ] 184 - Vietnam
[ ] 185 - Yemen
[ ] 186 - Yugoslavia
[ ] 187 - Zambia
[ ] 188 - Zimbabwe
[ ] 189 - United Kingdom
To select an item enter its number, or 0 when you are finished: [0]
```

### Step 5: Go through our privacy policy and agree to continue installation

```
Preparing Privacy Policy ...
-----
Summary of our Privacy Policy
This is a summary of our new privacy policy which takes effect on May 25th,
2018. It covers every Zoho website that links here, and all of the products and
services contained on those websites. The detailed
policy(https://www.manageengine.com/privacy.html#long) follows the same
structure as this summary and constitutes the actual legal document.
Our privacy commitment: Zoho has never sold your information to someone else
for advertising, or made money by showing you other people's ads, and we never
will. This has been our approach for almost 20 years, and we remain committed
to it. This policy tells you what information we do collect from you, what we
do with it, who can access it, and what you can do about it. Part I a
Information Zoho collects and controls
We only collect the information that we actually need. Some of that is
information that you actively give us when you sign up for an account, register
for an event, ask for customer support, or buy something from us. We store your
name and contact information, but we don't store credit card numbers (except
with your permission and in one of our secured payment gateways).
Press ENTER to read the text [Type q to quit]
```

### Step 6: Choose the installation directory

```
ManageEngine OpManager 12 Install Location
Directory Name: [/opt/Priyadarshini/OPMPlus/OpManager] /opt/Mohan
Directory Name: [/opt/Mohan]
Press 1 for Next, 2 for Previous, 3 to Cancel or 4 to Redisplay [1] 1
```

### Step 7: Configure the Webserver Port

```
Enter the Web Server Port Number [80]
Enter the NetFlow Listener Port [9996]
OpManager occupies port 80 to run the Web server. If you want to run it on a
different port, specify the same here.
Press 1 for Next, 2 for Previous, 3 to Cancel or 4 to Redisplay [1] 1
```

## Step 8: Verify the installation details and the installation status

```
Details of Installation
Installation Directory : /opt/Mohan/OpManager. Selected Edition : Essential
Edition Trial. Product Size : 425.4MB.
Press 1 for Next, 2 for Previous, 3 to Cancel or 4 to Redisplay [1] 1
Installing ManageEngine OpManager 12. Please wait...

|-----|-----|-----|-----|
0%      25%     50%     75%     100%
|||||
Creating uninstaller...

Extracting Files. This will take few minutes. Please wait...

Initialize the pgsq
```

## Step 9: Choose the installation server (Primary or Secondary server)

```
Server Details

Select the Server Name :

[X] 1 - Standalone Server or Primary
[ ] 2 - Standby Server

To select an item enter its number, or 0 when you are finished: [0]

Press 1 for Next, 2 for Previous, 3 to Cancel or 4 to Redisplay [1] 1

-----
You are installing the Primary OpManager Server. If you have already installed
the Primary Server, hit 'Back' button to install the secondary server.

Press 1 for Next, 2 for Previous, 3 to Cancel or 4 to Redisplay [1] 1

-----
The InstallShield Wizard has successfully installed ManageEngine OpManager 12.
Choose Finish to exit the wizard. Technical support : http://support.opmanager.com
Press 3 to Finish or 4 to Redisplay [3] 3
```

## Step 10: Complete the Installation

```
Choose Finish to exit the wizard. Technical support : http://support.opmanager.com
Press 3 to Finish or 4 to Redisplay [3] 3
root@opm-dev-11:/opt/Mohan# cd OpManager/bin/
root@opm-dev-11:/opt/Mohan/OpManager/bin# sh StartOpManagerServer.sh
/opt/Mohan/OpManager/bin/..
/opt/Mohan/OpManager/bin/..
Jul 02, 2018 4:09:16 PM com.adventnet.persistence.ConfigurationParser$1 resolveEntity
INFO: /opt/Mohan/OpManager/bin/null/conf/customer-config.xml doesnt exists, hence it is skipped

-----
Port      Availability      Module
-----
80        Yes               Client
13306     Yes               postgres
22        No                SSHD
69        Yes               TFTP
514       Yes               Syslog

#####
Please free the port(s) [22] before starting the server
#####

JAVA_HOME : /opt/Mohan/OpManager/bin/../jre
SERVER_HOME : /opt/Mohan/OpManager/bin/..
DATE      : Mon Jul 2 16:09:17 IST 2018

Check webServerPort http value : 80 https Port : null
PortCheckerUtil.getPort : serviceName :NETFLOW_LISTENER_PORT Flag : true
NFAPropFile :/opt/Mohan/OpManager/bin/./conf/netflow/nfa.properties
PortValue is : 9996
Check for NetFlow Port with value :9996
PortCheckerUtil.checkPorts :9996
Starting Server from location: /opt/Mohan/OpManager
inside addon check
```

## Starting OpManager on Linux

Go to /OpManager/bin folder

Execute: sh run.sh

To run OpManager server in the background, execute: nohup sh run.sh&

```
Check webServerPort http value : 80 https Port : null
PortCheckerUtil.getPort : serviceName :NETFLOW_LISTENER_PORT Flag : true
NFAPropFile :/opt/Mohan/OpManager/bin/./conf/netflow/nfa.properties
PortValue is : 9996
  Check for NetFlow Port with value :9996
PortCheckerUtil.checkPorts :9996
Starting Server from location: /opt/Mohan/OpManager
inside addon check
Loading Modules

Creating Tables and schemas ::          [ COMPLETED ]
Persistence                          [ POPULATED_PARALLELY ]
Audit                                 [ POPULATED_PARALLELY ]
TaskEngine                            [ POPULATED_PARALLELY ]
CustomView                            [ POPULATED_PARALLELY ]
Tomcat                                 [ POPULATED_PARALLELY ]
SONS                                   [ POPULATED_PARALLELY ]
WorkEngine                             [ POPULATED_PARALLELY ]
Authentication                         [ POPULATED_PARALLELY ]
Authorization                          [ POPULATED_PARALLELY ]
ClientFramework                        [ POPULATED_PARALLELY ]
ClientComponents                       [ POPULATED_PARALLELY ]
jca                                    [ POPULATED_PARALLELY ]
snmp                                   [ POPULATED_PARALLELY ]
cli                                    [ POPULATED_PARALLELY ]
tftp                                   [ POPULATED_PARALLELY ]
topology                               [ POPULATED_PARALLELY ]
discovery                             [ POPULATED_PARALLELY ]
CustomField                           [ POPULATED_PARALLELY ]
LogAnalyzer                            [ POPULATED_PARALLELY ]
netflow                               [ POPULATED_PARALLELY ]
Oputils                               [ POPULATED_PARALLELY ]
ncm                                    [ POPULATED_PARALLELY ]
FirewallAnalyzer                       [ POPULATED_PARALLELY ]
nba                                    [ POPULATED_PARALLELY ]
OpManager                             [ POPULATED_PARALLELY ]
```

```
DataManagement                        [ CREATED ]
DService                               [ CREATED ]
LeaService                             [ CREATED ]
FWASSHDSERVICE                        [ CREATED ]
WebService                             [ CREATED ]

Starting Services
CacheService                           [ STARTED ]
AuthenticationService                  [ STARTED ]
AuthorizationService                   [ STARTED ]
TaskEngineService                      [ STARTED ]
OpManagerService                       [ STARTED ]
WorkEngineService                      [ STARTED ]
ClientFrameworkService                [ STARTED ]
TemplateTablePopulator                 [ STARTED ]
TplTablePopulator                     [ STARTED ]
SnmpService                            [ STARTED ]
CliService                             [ STARTED ]
TftpRAService                          [ STARTED ]
TftpService                            [ STARTED ]
StatusPropagationService               [ STARTED ]
MafService                             [ STARTED ]
DiscoveryService                       [ STARTED ]
ServerStartupNotify                   [ STARTED ]
SysLogMonitoringService                [ STARTED ]
NCMSSHDSERVICE                        [ STARTED ]
NetFlowService                         [ STARTED ]
OpUtilsService                         [ STARTED ]
DataManagement                        [ STARTED ]
DService                               [ STARTED ]
LeaService                             [ STARTED ]
FWASSHDSERVICE                        [ STARTED ]
WebService                             [ STARTED ]

Server started in :: [92896 ms]
Connect to: [ http://localhost:80 ]
```

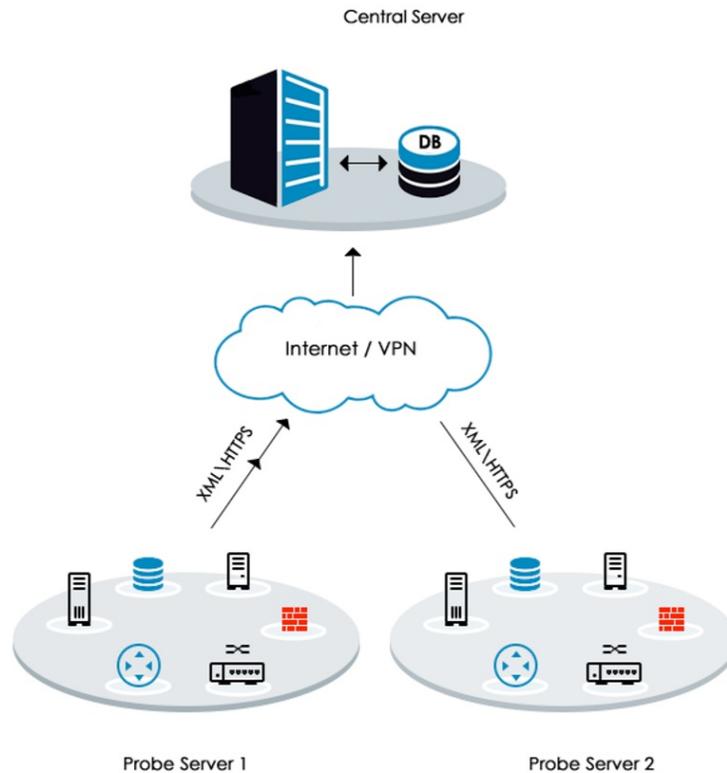
## OpManager Enterprise Installation

OpManager Enterprise Edition can be deployed in the following cases

Case 1: When geographically distributed networks need to be monitored from one location.

Case 2: When the number of devices that need to be monitored is more than 1K devices.

ManageEngine recommends the installation of a Central server and a Probe to effectively achieve a distributed network monitoring environment.



**Central Server:** Central periodically collects health, performance and fault data across all Probes and consolidates the information in one location.

**Probe Server:** The Probe periodically polls the devices in the local network and updates data to the central server. It has to be installed at the Remote Location.

**Note:** If OpManager is run with MSSQL as the backend database, then the MSSQL database must be configured before proceeding with the following installation.

## Installing OpManager Enterprise Edition on Windows

### OpManager Central Server

Step 1: Download the OpManager Central.exe from the below link

[https://www.manageengine.com/cgi-bin/download\\_exe?id=4-883](https://www.manageengine.com/cgi-bin/download_exe?id=4-883)

Run the exe as 'administrator'

Step 2: Click 'Next' to proceed with installation.

Step 3: Click 'Yes' to the OpManager License agreement

Step 4: Choose your language for OpManager installation and click 'Next' to proceed

Step 5: Choose the destination folder for OpManager installation and click 'Next' to proceed

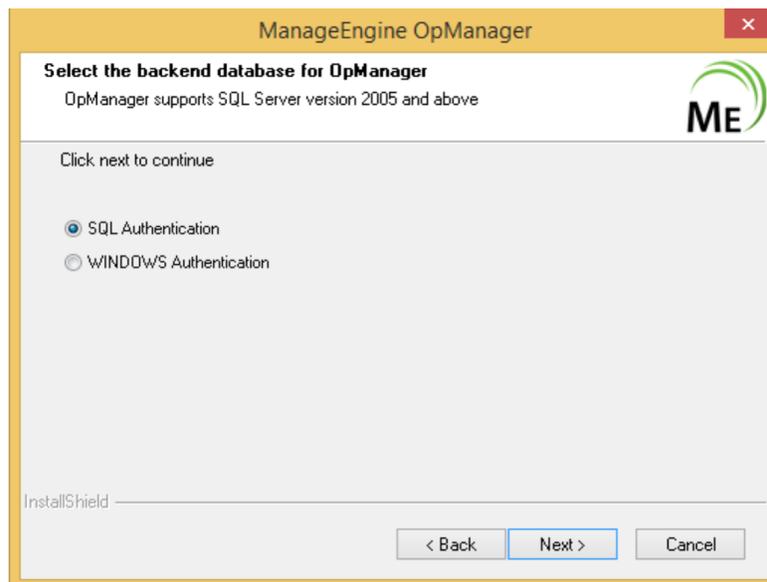
Step 6: If you want to change the default web server port for OpManager installation enter the new port number (OpManager Central uses 80 as the default web server port) and click 'Next' to proceed.

Step 7: Register your OpManager license with required details to get technical support and click 'Next' to proceed.

Step 8: Select 'Standalone' or 'Primary' server . If you are installing failover, select standby server. First configure standalone or primary for failover installation. Click 'Next' to proceed.

Step 9: If you select PGSQL, please proceed with Step 13. (or) If you select 'MSSQL' database (recommended for production). Click 'Next' to proceed

Step 10: If you select SQL Authentication, provide MSSQL details like Host Name, Port, Database Name. Use the SQL Server Authentication credentials (Username and Password) created earlier. Click 'Next' to proceed



ManageEngine OpManager

Configure the SQL Server details

Host Name: app-w12r2s-7

Port: 1433

Database Name: OPMCcentralDB

User Name: opmanager

Password: ●●●●●●●●●●

InstallShield

< Back Next > Cancel

(or)

If you select WINDOWS Authentication, provide MSSQL details like Host Name, Port, Domain Name, Database Name, Username and Password. Click 'Next' to proceed.

ManageEngine OpManager

Select the backend database for OpManager

OpManager supports SQL Server version 2005 and above

ME

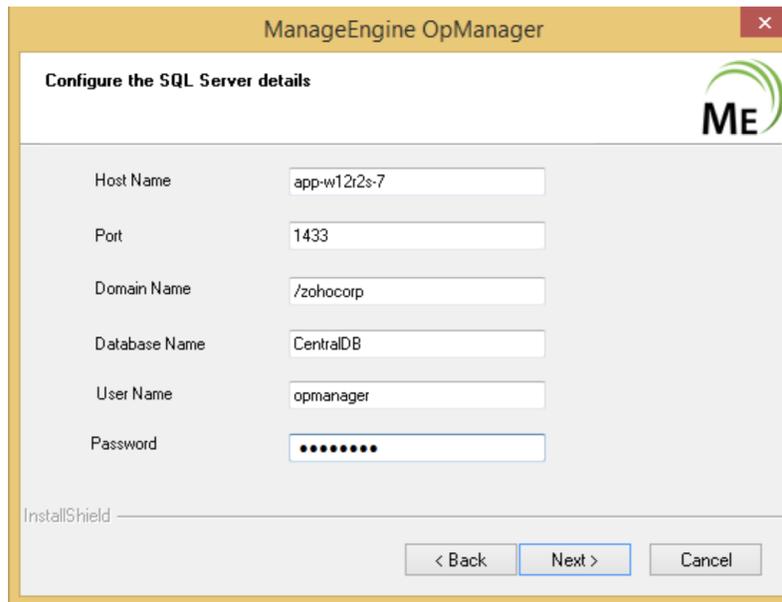
Click next to continue

SQL Authentication

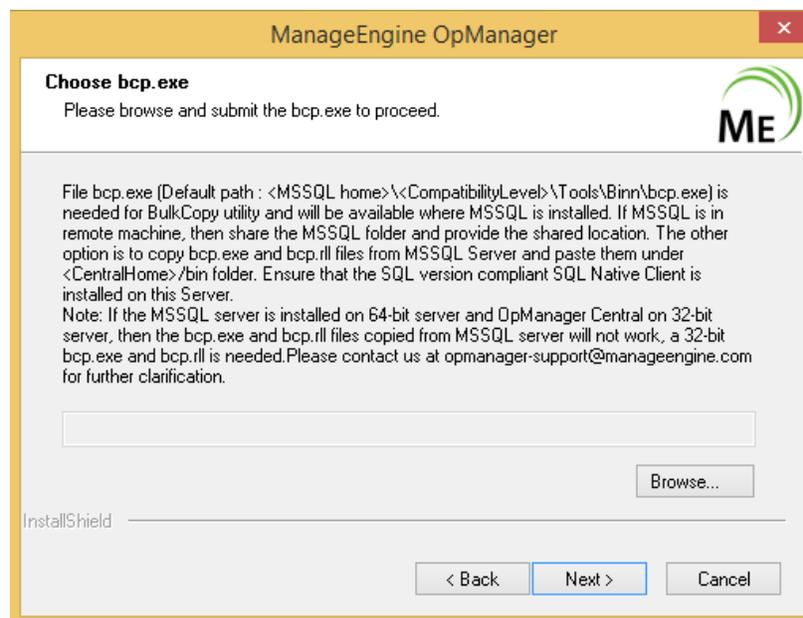
WINDOWS Authentication

InstallShield

< Back Next > Cancel

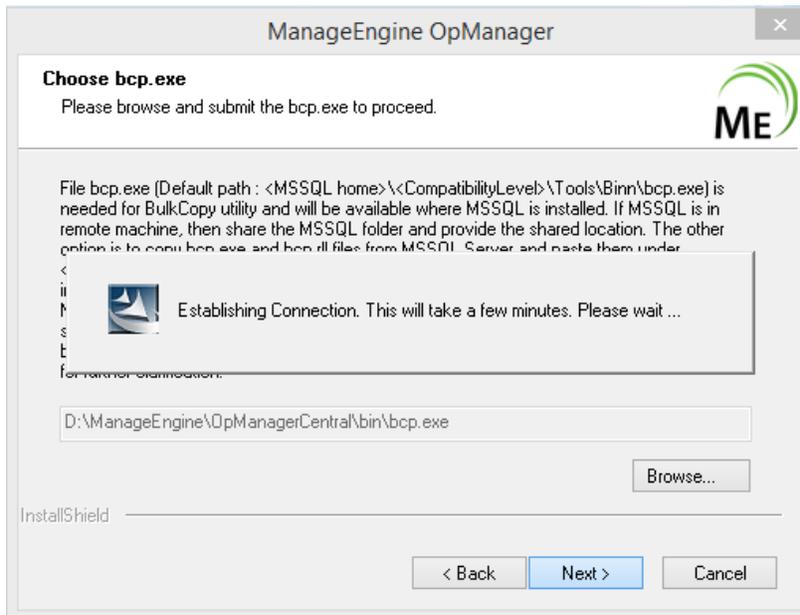
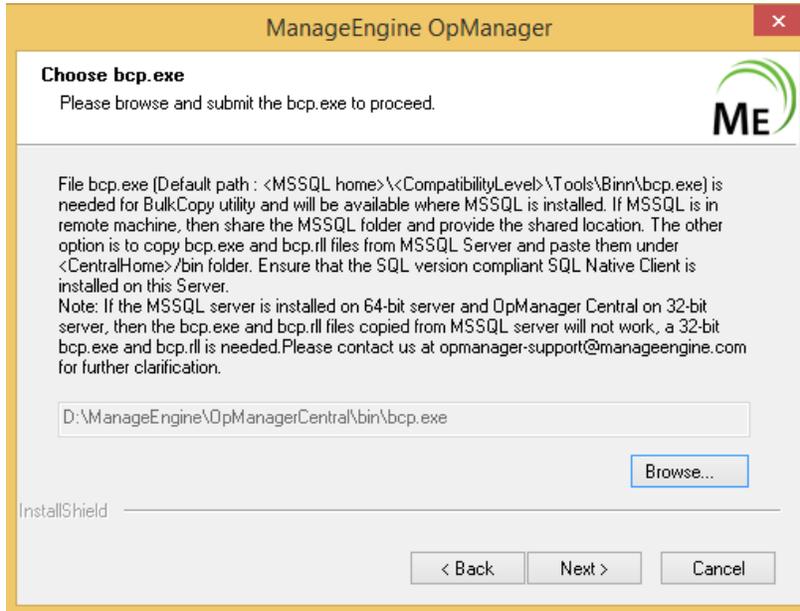


**Step 11: Search for 'bcp.exe' and 'bcp.rll' in the MSSQL installation directory and copy these files under \OpManagerCentral\bin directory. Click 'Next' to proceed.**



**Note: The SQL server version compliant with the SQL Native Client must be installed in the same Server.**

Step 12: Click on browse and select \OpManager\bin\bcp.exe. Click 'Next' to proceed



Step 13: Click 'Finish' to complete OpManager Central Server installation.

## OpManager Probe Server

Step 1: Download the OpManager Probe.exe from the below link

[https://www.manageengine.com/cgi-bin/download\\_exe?id=4-887](https://www.manageengine.com/cgi-bin/download_exe?id=4-887)

Run the exe as 'administrator'

Step 2: Click 'Next' to proceed with installation

Step 3: Click 'Yes' to the OpManager License agreement

Step 4: Choose your language for OpManager Probe installation and click 'Next' to proceed

Step 5: Choose the destination folder for OpManager Probe installation and click 'Next' to proceed

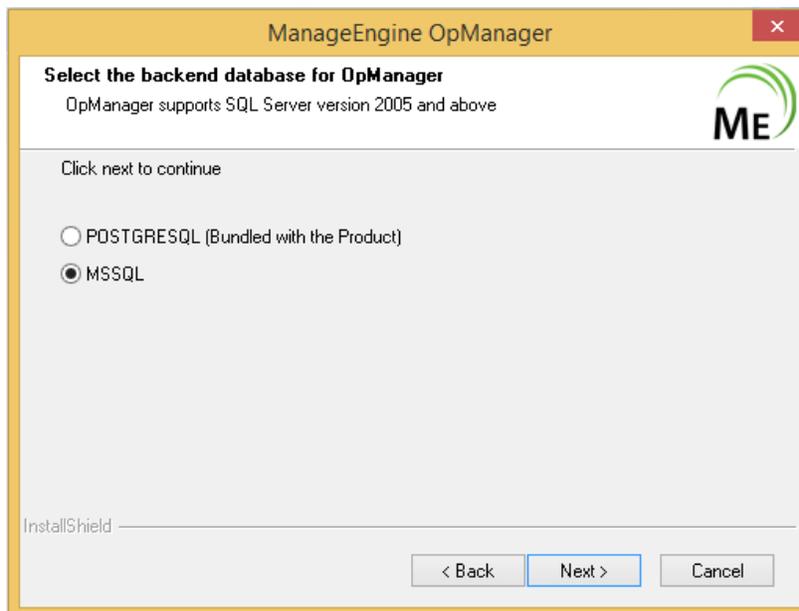
Step 6: If you want to change the default web server, netflow ports for OpManager probe installation enter the new port numbers (OpManager uses 80 as the default web server port and 9996 as the default Netflow port) and click 'Next' to proceed.

Step 7: Enter the details of the proxy server (if the probe is installed behind a proxy server) and click 'Next' to proceed

Step 8: Register your OpManager license with required details to get technical support and click 'Next' to proceed.

Step 9: Select 'Standalone' or 'Primary' server. If you are installing Failover, select standby server. First configure standalone or primary for Failover installation. Click 'Next' to proceed.

Step 10: If you select PGSQL, please proceed with Step 14. (or) If you select 'MSSQL' database (recommended for production). Click 'Next' to proceed



Step 11: Provide MSSQL details like host name, port, database name. Use the credentials (username and password) that was created earlier while configuring SQL. Click 'Next' to proceed

ManageEngine OpManager

Configure the SQL Server details

Host Name

Port

Database Name

User Name

Password

InstallShield

< Back Next > Cancel

Step 12: Search for bcp.exe and bcp.rll in the MSSQL installation directory. Copy these files under \OpManagerCentral\bin directory. Click 'Next' to proceed

ManageEngine OpManager

Please browse and submit the bcp.exe to proceed.  
**Choose bcp.exe**



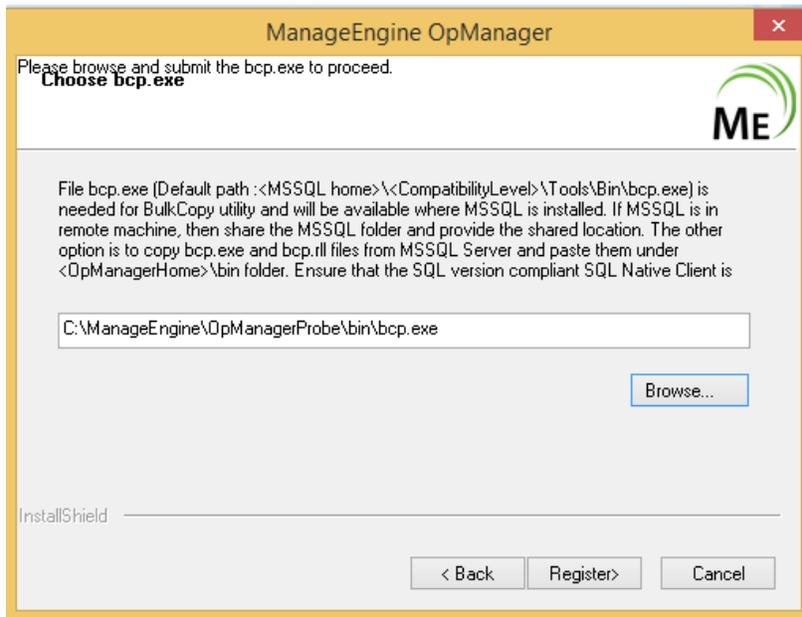
File bcp.exe (Default path : <MSSQL home>\<CompatibilityLevel>\Tools\Bin\bcp.exe) is needed for BulkCopy utility and will be available where MSSQL is installed. If MSSQL is in remote machine, then share the MSSQL folder and provide the shared location. The other option is to copy bcp.exe and bcp.rll files from MSSQL Server and paste them under <OpManagerHome>\bin folder. Ensure that the SQL version compliant SQL Native Client is

Browse...

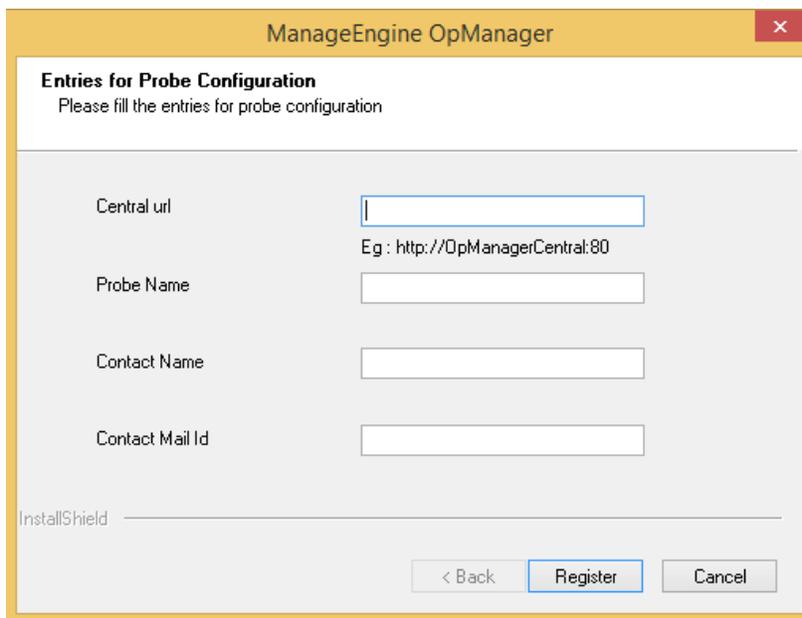
InstallShield

< Back Register > Cancel

Step 13: Click on browse and select \OpManager\bin\bcp.exe. Click 'Next' to proceed



Step 14: Provide OpManager Central server details like central server URL, probe name, contact name and contact mail ID. Click 'Register' to proceed



**ManageEngine OpManager**

**Entries for Probe Configuration**  
Please fill the entries for probe configuration

Central url   
Eg : http://OpManagerCentral:80

Probe Name

Contact Name

Contact Mail Id

InstallShield \_\_\_\_\_

< Back Register Cancel

**ManageEngine OpManager**

**Entries for Probe Configuration**  
Please fill the entries for probe configuration

Central url   
Eg : http://OpManagerCentral:80

Probe Name

Contact Name

Contact Mail Id

InstallShield \_\_\_\_\_

< Back Register Cancel

**ManageEngine OpManager**

**Probe has been Successfully Registered.**

OK

**Step 15: Click 'Finish' to complete OpManager Probe installation**

## Installing OpManager Enterprise Edition on Linux

### Prerequisites

1. Sometimes, you might encounter errors such as database connection not getting established or the server not starting up. To workaroud these issues, comment the IPv6 related entries in the `/etc/hosts` file.
2. Check if the DNS resolves properly to the IP Address on the system in which OpManager is installed. Add an entry to `/etc/host` file with ipaddress and host name if there is trouble starting OpManager.

### Steps to install

#### Central Server

1. Download [ManageEngine\\_OpManager\\_Central\\_64bit.bin for Linux](#).
2. Login as *root* user.
3. Assign the executable permission to the downloaded file using the following command:  
`chmod a+x ManageEngine_OpManager_Central_64bit.bin`
4. Execute `./ManageEngine_OpManager_Central_64bit.bin`. This will display the installation wizard.
5. Click 'Next' to begin the installation process. Go through the license agreement and proceed to the next step.
6. In the subsequent steps of the wizard, select the OpManagerCentral language, the directory to install OpManagerCentral, and the port number to run OpManagerCentral Web Server. Proceed to the next step.
7. Verify the installation details and click 'Next'.
8. Click 'Finish' to complete the installation process.

It is recommended to install OpManagerCentral in the `opt` folder. By default, OpManagerCentral is installed in the `/opt/ManageEngine/OpManagerCentral` directory.

#### Probe Server

1. Download [ManageEngine\\_OpManager\\_Probe\\_64bit.bin for Linux](#).
2. Login as *root* user.
3. Assign the executable permission to the downloaded file using the following command:  
`chmod a+x ManageEngine_OpManager_Probe_64bit.bin`
4. Execute `./ManageEngine_OpManager_Probe_64bit.bin`. This will display the installation wizard.

5. Click 'Next' to begin the installation process. Go through the license agreement and proceed to the next step.
6. In the subsequent steps of the wizard, select the OpManagerProbe language, the directory to install OpManagerProbe, and the port number to run the OpManagerProbe Web Server. Proceed to the next step.
7. Please enter the Central URL, Probe Name, Username, Email ID and proceed to register the Probe.
8. Verify the installation details and click 'Next'.
9. Click 'Finish' to complete the installation process.

It is recommended to install OpManagerProbe in the *opt* folder. By default, OpManagerProbe is installed in the */opt/ManageEngine/OpManagerProbe* directory.

## Installing OpManager Enterprise Edition on Linux using Console mode/ Silent mode

### Prerequisites

To begin with, make sure you have downloaded the binary for Central and Probe for Linux OS. (<https://www.manageengine.com/network-monitoring/download.html>)

### Central Server

Step 1: Execute ManageEngine\_OpManager\_Central\_64bit.bin with `-console` option

```
[root@opm-dev-l2 Marketing]# ./ManageEngine_OpManager_Central_64bit.bin -console
InstallShield Wizard
Initializing InstallShield Wizard...
```

Step 2: Follow the on-screen instructions

```
Press 1 for Next, 2 for Previous, 3 to Cancel or 4 to Redisplay [1] 1
```

Step 3: Register for technical support (Enter Name, E-mail id, Phone, Company Name)

```
Registration for Technical Support
Name [ ] Test
E-mail Id [ ] test@zoho.com
Phone [ ] 1234567890
Company Name [ ] Zoho
```



### Step 9: Choose the installation server (Primary or Secondary server)

```
Server Details

Select the Server Name :

[X] 1 - Standalone Server or Primary
[ ] 2 - Standby Server

To select an item enter its number, or 0 when you are finished: [0]

Press 1 for Next, 2 for Previous, 3 to Cancel or 4 to Redisplay [1] 1

-----
You are installing the Primary OpManager Server. If you have already installed
the Primary Server, hit 'Back' button to install the secondary server.
Press 1 for Next, 2 for Previous, 3 to Cancel or 4 to Redisplay [1] 1
-----
```

### Step 10: Complete the Installation

```
The InstallShield Wizard has successfully installed ManageEngine OpManager
Central.
Choose Finish to exit the wizard. Technical support : http://support.opmanager.com
Press 3 to Finish or 4 to Redisplay [3] 3
[root@opm-dev-l2 Marketing]# cd OpManagerCentral/bin/
[root@opm-dev-l2 bin]# sh run.sh
/opt/Mohan/Marketing/OpManagerCentral/bin/..
/opt/Mohan/Marketing/OpManagerCentral/bin/..
Jul 30, 2018 1:19:45 PM com.adventnet.persistence.ConfigurationParser$1 resolveEntity
INFO: /opt/Mohan/Marketing/OpManagerCentral/bin/null/conf/customer-config.xml doesnt exists, hence it is skipped

-----
Port      Availability  Module
-----
80        Yes          Client
13307     Yes          postgres
22        No           SSHD
69        Yes          TFTP
|
```

### Probe Server

#### Step 1: Execute ManageEngine\_OpManager\_Probe\_64bit.bin with -console option

```
[root@opm-dev-l2 Marketing]# ./ManageEngine_OpManager_Probe_64bit.bin -console
InstallShield Wizard
Initializing InstallShield Wizard...
```

#### Step 2: Follow the on-screen instructions

```
Press 1 for Next, 2 for Previous, 3 to Cancel or 4 to Redisplay [1] 1
```

#### Step 3: Register for technical support (Enter Name, E-mail id, Phone, Company Name)

```
Registration for Technical Support

Name [ ] Test

E-mail Id [ ] test@zoho.com

Phone [ ] 1234567890

Company Name [ ] Zoho
```

#### Step 4: Select the location

```
[ ] 177 - STATE
[ ] 178 - USA
[ ] 179 - Uganda
[ ] 180 - Ukraine
[ ] 181 - Uruguay
[ ] 182 - Uzbekistan
[ ] 183 - Venezuela
[ ] 184 - Vietnam
[ ] 185 - Yemen
[ ] 186 - Yugoslavia
[ ] 187 - Zambia
[ ] 188 - Zimbabwe
[ ] 189 - United Kingdom
To select an item enter its number, or 0 when you are finished: [0]
```

#### Step 5: Go through our privacy policy and agree to continue installation

```
Preparing Privacy Policy ...
-----
Summary of our Privacy Policy
This is a summary of our new privacy policy which takes effect on May 25th, 2018. It covers every Zoho website that links here, and all of the products and services contained on those websites. The detailed policy(https://www.manageengine.com/privacy.html#long) follows the same structure as this summary and constitutes the actual legal document.
Our privacy commitment: Zoho has never sold your information to someone else for advertising, or made money by showing you other people's ads, and we never will. This has been our approach for almost 20 years, and we remain committed to it. This policy tells you what information we do collect from you, what we do with it, who can access it, and what you can do about it. Part I - Information Zoho collects and controls
We only collect the information that we actually need. Some of that is information that you actively give us when you sign up for an account, register for an event, ask for customer support, or buy something from us. We store your name and contact information, but we don't store credit card numbers (except with your permission and in one of our secured payment gateways).
Press ENTER to read the text [Type q to quit]
```

#### Step 6: Choose the installation directory

```
-----
OpManager Probe Install Location
Directory Name: [/opt/rejoe/fw_257/EE_PPM/OpManagerProbe] /opt/Mohan/Marketing/
Click Next to install "OpManager Probe" in this directory, or click Browse to choose a different directory.
Directory Name: [/opt/Mohan/Marketing/]
Press 1 for Next, 2 for Previous, 3 to Cancel or 4 to Redisplay [1] 1
```

#### Step 7: Configure the Webserver Port

```
Enter the Web Server Port Number [80]
Enter the NetFlow Listener Port [9996]
OpManager occupies port 80 to run the Web server. If you want to run it on a different port, specify the same here.
Press 1 for Next, 2 for Previous, 3 to Cancel or 4 to Redisplay [1] 1
```

## Step 8: Verify the installation details and the installation status

```
-----
Details of Installation
Installation Directory : /opt/Mohan/Marketting//OpManagerProbe. WebServer Port
Number : 90. Product Size : 426.0MB.
Press 1 for Next, 2 for Previous, 3 to Cancel or 4 to Redisplay [1]
Installing OpManager Probe. Please wait...
-----
```

## Step 9: Choose the installation server (Primary or Secondary server)

```
-----
Server Details
Select the Server Name :
[X] 1 - Standalone Server or Primary
[ ] 2 - Standby Server
To select an item enter its number, or 0 when you are finished: [0]
Press 1 for Next, 2 for Previous, 3 to Cancel or 4 to Redisplay [1] 1
-----
You are installing the Primary OpManager Server. If you have already installed
the Primary Server, hit 'Back' button to install the secondary server.
Press 1 for Next, 2 for Previous, 3 to Cancel or 4 to Redisplay [1] 1
-----
```

## Step 10: Please enter the details required for Probe configuration.

```
-----
Entries for Probe Configuration
Please fill the entries for Probe Configuration
Central Url [ ] http://opm-dev-l2:80
Probe Name [ ] TestProbe
Username [ ] Test
Email ID [ ] test@zoho.com
Press 1 for Next, 2 for Previous, 3 to Cancel or 4 to Redisplay [1] 1
Probe has been Successfully Registered.
[OK]
-----
```

## Step 11: Complete the installation

```
-----
The InstallShield Wizard has successfully installed OpManager Probe.
Choose Finish to exit the wizard.
Press 3 to Finish or 4 to Redisplay [3] 3
-----
```

## Starting OpManager Enterprise Edition on Linux

Go to /OpManager/bin folder

Execute: sh run.sh

To run OpManager server in the background, execute: nohup sh run.sh&

```
Check webServerPort http value : 80 https Port : null
PortCheckerUtil.getPort : serviceName :NETFLOW_LISTENER_PORT Flag : true
NFAPropFile :/opt/Mohan/OpManager/bin/./conf/netflow/nfa.properties
PortValue is : 9996
Check for NetFlow Port with value :9996
PortCheckerUtil.checkPorts :9996
Starting Server from location: /opt/Mohan/OpManager
inside addon check
Loading Modules
Creating Tables and schemas :: [ COMPLETED ]
Persistence [ POPULATED_PARALLELY ]
Audit [ POPULATED_PARALLELY ]
TaskEngine [ POPULATED_PARALLELY ]
CustomView [ POPULATED_PARALLELY ]
Tomcat [ POPULATED_PARALLELY ]
SQMS [ POPULATED_PARALLELY ]
WorkEngine [ POPULATED_PARALLELY ]
Authentication [ POPULATED_PARALLELY ]
Authorization [ POPULATED_PARALLELY ]
ClientFramework [ POPULATED_PARALLELY ]
ClientComponents [ POPULATED_PARALLELY ]
jca [ POPULATED_PARALLELY ]
snmp [ POPULATED_PARALLELY ]
cli [ POPULATED_PARALLELY ]
tftp [ POPULATED_PARALLELY ]
topology [ POPULATED_PARALLELY ]
discovery [ POPULATED_PARALLELY ]
CustomField [ POPULATED_PARALLELY ]
LogAnalyzer [ POPULATED_PARALLELY ]
netflow [ POPULATED_PARALLELY ]
Oputils [ POPULATED_PARALLELY ]
ncm [ POPULATED_PARALLELY ]
FirewallAnalyzer [ POPULATED_PARALLELY ]
nba [ POPULATED_PARALLELY ]
OpManager [ POPULATED_PARALLELY ]
DataManagement [ CREATED ]
DService [ CREATED ]
LeaService [ CREATED ]
FWASSHDSERVICE [ CREATED ]
WebService [ CREATED ]
Starting Services
CacheService [ STARTED ]
AuthenticationService [ STARTED ]
AuthorizationService [ STARTED ]
TaskEngineService [ STARTED ]
OpManagerService [ STARTED ]
WorkEngineService [ STARTED ]
ClientFrameworkService [ STARTED ]
TemplateTablePopulator [ STARTED ]
TplTablePopulator [ STARTED ]
SnmpService [ STARTED ]
CliService [ STARTED ]
TftpRAService [ STARTED ]
TftpService [ STARTED ]
StatusPropagationService [ STARTED ]
MafService [ STARTED ]
DiscoveryService [ STARTED ]
ServerStartupNotify [ STARTED ]
SysLogMonitoringService [ STARTED ]
NCMSSHDSERVICE [ STARTED ]
NetFlowService [ STARTED ]
OpUtilsService [ STARTED ]
DataManagement [ STARTED ]
DService [ STARTED ]
LeaService [ STARTED ]
FWASSHDSERVICE [ STARTED ]
WebService [ STARTED ]
Server started in :: [92896 ms]
Connect to: [ http://localhost:80 ]
```

# License Management

## OpManager Licensing Model

OpManager license options depend on the number of devices to be monitored. The license is inclusive of all the interfaces, nodes or sensors in the device. A device can have any number of interfaces, elements or sensors.

Eg: Let us assume that a network has 50 devices with 4 interfaces each and the total number of interfaces will be 200. To monitor these 50 devices and 200 interfaces, OpManager needs a 50-device license.

### How to register for a license in OpManager

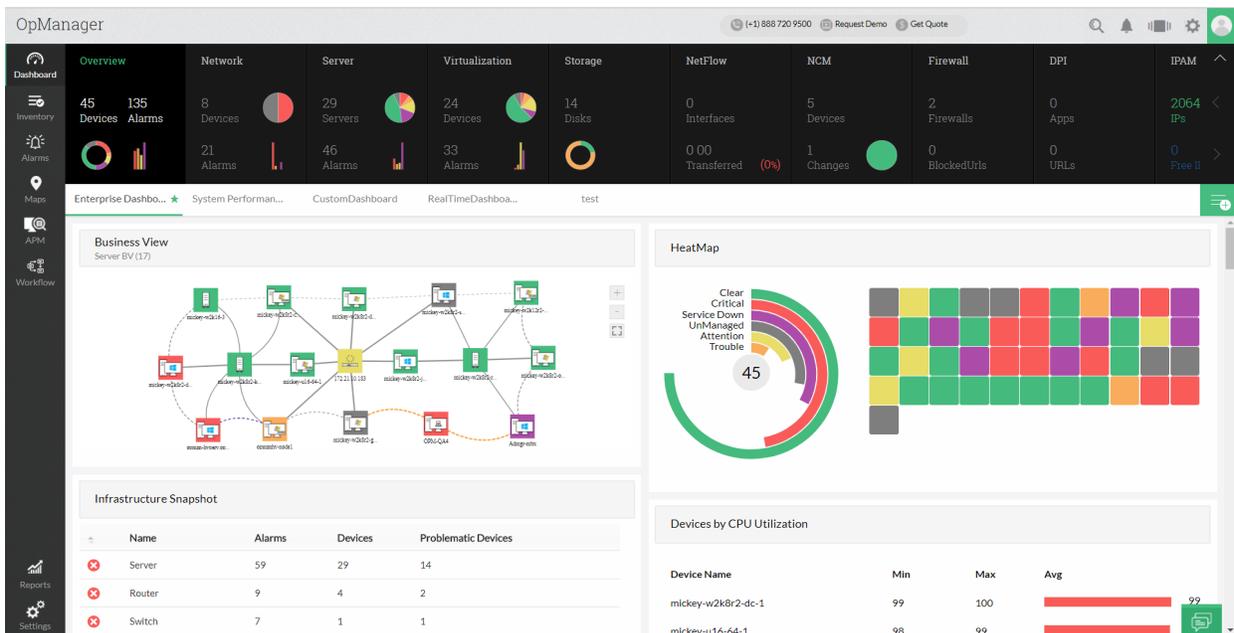
There are two ways to invoke license registration in OpManager.

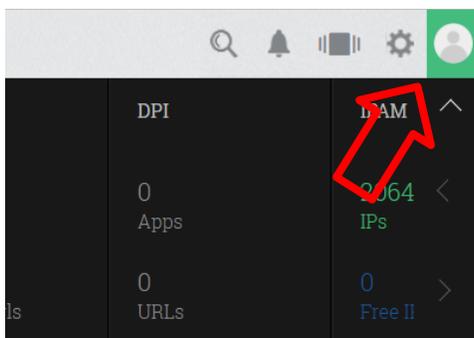
- i) Using the OpManager UI
- ii) During Server Startup (User Interface/Console Mode)

### 1. Steps to register license in the OpManager User Interface

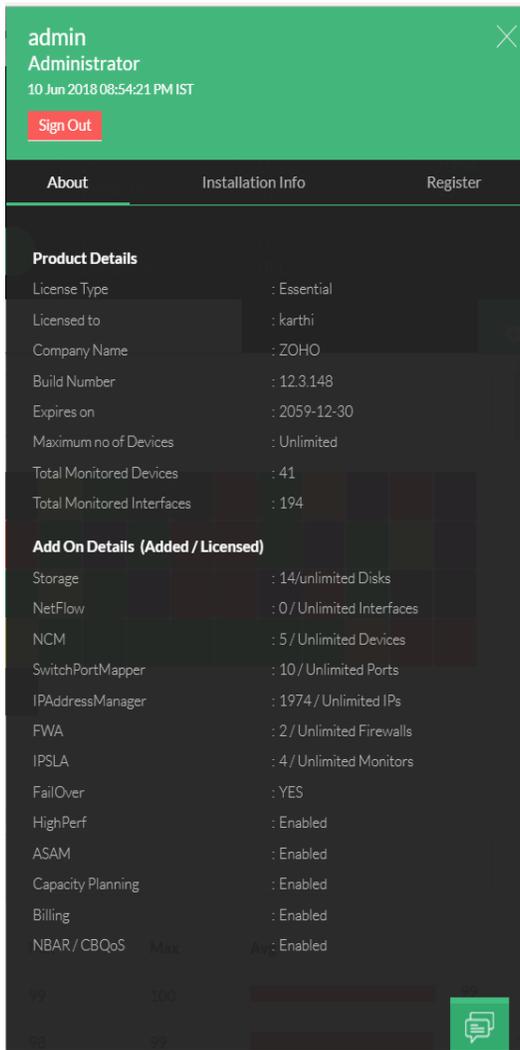
OpManager allows users to obtain and register for a license with ease.

- 1. Connect to the Webclient and click the "User" icon in the top right corner.

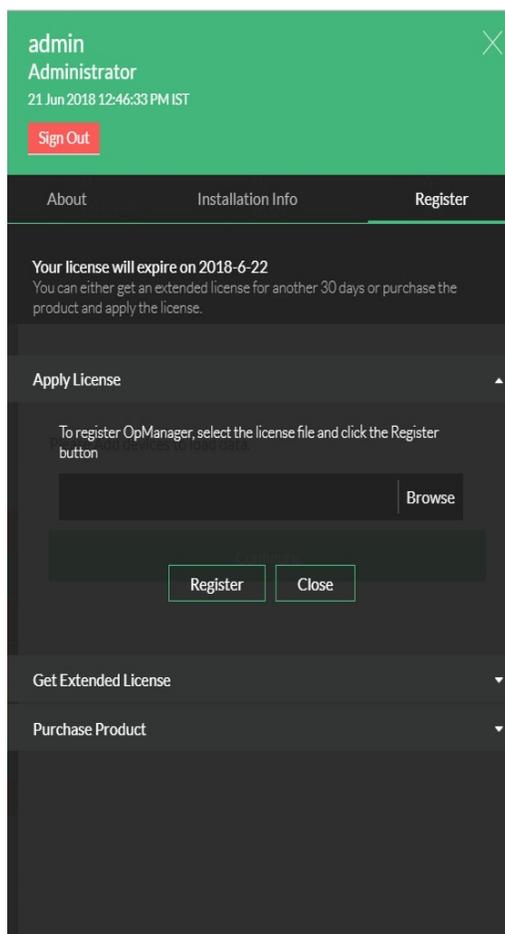




2. You will get the following pop up on the right side of your screen, displaying details about the product, add-ons, installation and registration.



3. Select the "Register" tab to view your license and registration options.



4. Click "Browse" and select the "License.xml" file you received from ManageEngine for OpManager.

5. Now click "Register" to finish applying your license.

## 2. Steps to register license during Server Startup

There are two ways to apply for a license during the server startup.

### i. User Interface Mode

While starting a server in the console mode, with the GUI enabled, you will receive a notification stating that your license is about to expire. You can then "Browse", select the "License.xml" file and click on "Register" to apply your license in OpManager.

## **ii. Console Mode**

When in the console mode, the CMD prompt will show you a message stating that your license is about to expire and it will request the address to the directory in which the "License.xml" file is available. Here, you can provide the path to the license file and register.

### **How to check your license**

To check your license details, you can follow the simple steps below;

1. Click the "User" icon in the top right corner of your OpManager UI.
2. Under the "About" tab, you will be able to find details about your license and add-ons in the "License Details/Add-On Details (Added/Licensed)" section respectively.

### **IPF & ASF License Details**

The Initial Product Fee (IPF) contains both the Initial License fee and the Annual Support Fee (ASF). The initial license fee allows you to purchase the base product/add-ons while ASF provides support to ensure healthy network monitoring from OpManager.

## Failover or High Availability

High Availability/ Failover ensures continuous and uninterrupted monitoring of network critical resources and can be setup easily by following the below three steps.

It requires you to configure OpManager Secondary or Standby server and keep monitoring the OpManager Primary server. In case the Primary server fails the Standby server automatically starts monitoring the network. The Standby server also triggers an email alert (email ID entered configured in the [mail server settings](#)) about the Primary's failure. Once the Primary server is restored back to operation the Standby server automatically goes back to standby mode.

**Note:** The backend DB for both the Primary and Secondary servers must be MSSQL to support failover.

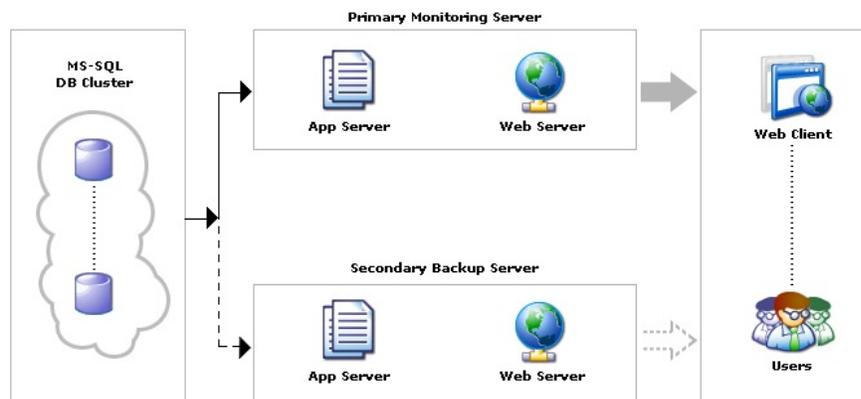
### Steps to configure Failover/ High Availability

#### 1. Clustering

ManageEngine recommends you to use clustering when running OpManager with MSSQL as the backend DB.

Clustering refers to an array of databases in which the data is stored and has a single virtual IP. If any DB in the cluster environment fails, the other DBs have the data thereby providing high availability.

The Primary server sends all its data to a virtual IP and the data gets stored in multiple locations. The Standby server that takes control over the network in case the primary fails, also sends the data to the same virtual IP.

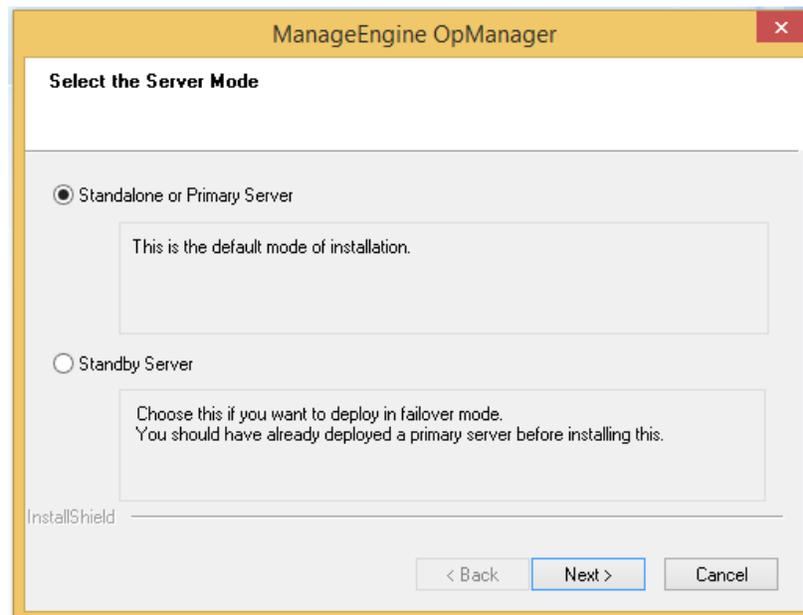


When the Primary server fails, the Standby server assumes itself as the Primary server and starts monitoring the network. Once the Primary server is up, the Standby server goes back to its standby mode and monitors the Primary server.

For configuring MSSQL server clustering visit the below link published by Microsoft.  
[https://technet.microsoft.com/en-us/library/hh231721\(v=sql.110\).aspx](https://technet.microsoft.com/en-us/library/hh231721(v=sql.110).aspx)

## 2. Installing the Primary Server

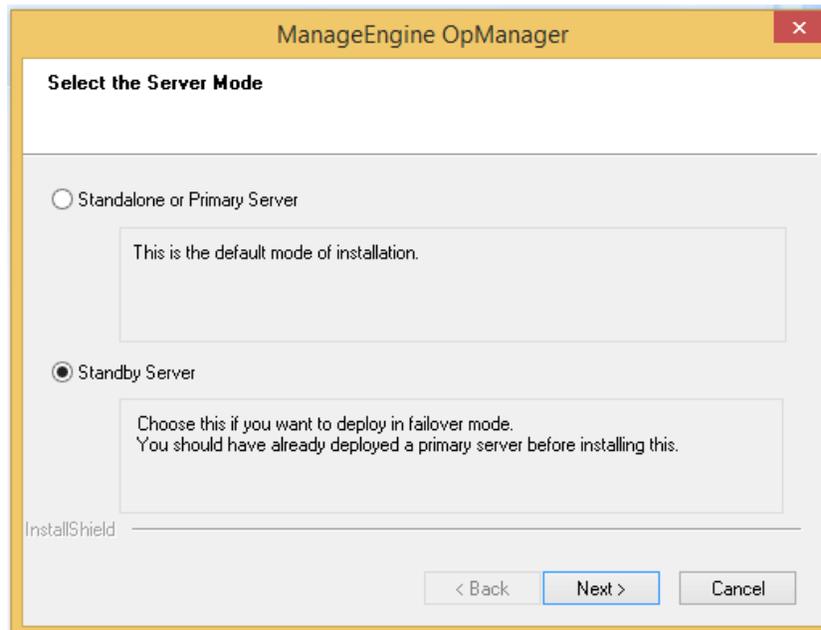
While installing OpManger on the Primary server, select as "Primary server" (default) in the installation wizard and complete the installation process. Start the Primary server.



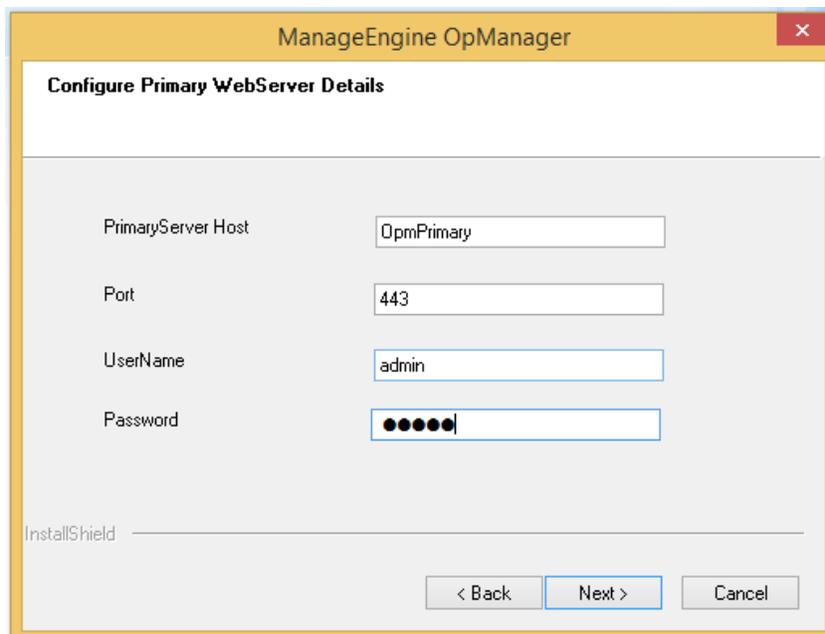
## 3. Installing the Standby Server

While installing OpManager on the standby server,

1. Select as "Standby server" mode in the installation wizard.



2. Enter the Primary webserver host, port and login details and complete the installation.



**Note:** The Date and Time settings of the Primary and the Standby should be same.

## Uninstalling OpManager

### Windows

1. To uninstall from a Windows machine, try **Start > Programs > ManageEngine OpManager > Uninstall OpManager**.

### Linux

2. To uninstall from a Linux machine, execute the command `./uninstaller.bin` from the `/bin/_uninst` directory under OpManager installation.