Dell™ Proximity Printing Solution

Installation Guide

Notes and Cautions

NOTE: A NOTE indicates important information that helps you make better use of your computer.

CAUTION: A CAUTION indicates potential damage to hardware or loss of data if instructions are not followed.

Contents

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Installing Ubuntu 32-bit

Server Installation Requirements

The Dell Proximity Printing Solution (DPPS) server requires the following:

- A hardware or virtual server that can install Ubuntu 8.10 Desktop Edition (32-bit).

- At least 2 GB of RAM and a 2 GHz Dual Core processor.

- RAID-5 storage setup.

  NOTE: The hardware requirements may be higher if you have a large setup; for example 100+ buildings or 1000+ printers.

- An active external internet connection for the DPPS server.

- The server administrator must have operational knowledge of Linux based operating systems, particularly Ubuntu.

- The server must be identifiable by the domain controller as a trusted system, otherwise the DPPS server may not be able to join the domain.

You must have the following information:

- The workgroup/domain name used in your network environment.

- The Realm used in your network environment.

- The domain name you want to use for the system that will be hosting the server.

- The Fully Qualified Domain Name (FQDN) for the server you wish to set up.

- Address of the domain controller/KDC.

- Static IP Address for DPPS server.

  NOTE: For more information on workgroup, domain, Realm, DNS, SMTP, routing, etc., contact your network administrator.

Installation Notes

- All the commands used are case sensitive. Using a different case may cause unexpected results.
- The `sudo` prefix executes the command following it in administrator mode.
- GEdit is a text editor.
- Any text prefixed with # is a comment.

Installing Linux and Setting a Static IP Address

You must create a server install using Ubuntu 8.10 Desktop Edition (32-bit). After the installation is complete, you must set a static IP address for the DPPS server. If the setting for static IP are lost after rebooting, follow the steps below to hard-code the information.

1 Type the following command in a terminal window:

   ```
   sudo update-rc.d -f NetworkManager remove
   ```

2 Restart Ubuntu.

3 Type the following command in a terminal window:

   ```
   sudo gedit /etc/hostname
   ```

4 Delete the existing text from the document and then type the FQDN.

5 Save the document and exit GEdit.

6 Restart Ubuntu.

7 Type the following command in a terminal window:

   ```
   sudo gedit /etc/network/interfaces
   ```

8 The network interface file opens. Type the addresses used by your environment where applicable. Your file should look similar to the following:

   ```
   # This file describes the network interfaces
   available on your system
   # and how to activate them. For more information,
   see interfaces(5).
   # The loopback network interface
   auto lo
   ```

```
iface lo inet loopback
# This is a list of hotpluggable network
interfaces.
# They will be activated automatically by the
hotplug subsystem.
mapping hotplug
script grep
map eth0
# The primary network interface
auto eth0
iface eth0 inet static
address 192.168.0.100
netmask 255.255.255.0
gateway 192.168.0.1
```

9   Save the document and exit GEdit.

10 Type the following command in a terminal window:

```
sudo ifup eth0
```

You may see an error message regarding unable to resolve an address. Ignore this error as the next step corrects it.

11 Type the following command in a terminal window:

```
sudo gedit /etc/resolv.conf
```

12 Delete the existing text from the document and then type:

nameserver *IP Address of your DNS server*

You can type all your namespaces in the same format. Each namespace must be typed in the new line.

13 Save the document and exit GEdit.

14 Restart Ubuntu.

15 Type the following command in a terminal window:

```
sudo gedit /etc/hosts
```

16 Use a # to comment out all the line till the first blank line.

17 Type the following in a new line after the commented lines:

```
127.0.0.1 localhost
```

This forces the server to look at the DNS settings for DNS information, allowing a more dynamic setting.

18 Save the document and exit GEdit.

19 Type the following command in a terminal window:

```
hostname -f
```

If this command does not return the FQDN, contact Dell Pro-Support for assistance.

20 Restart Ubuntu.

21 Verify that your settings are retained. If the settings are lost, contact Dell Pro-Support for assistance.

Updating Ubuntu

After you can properly retrieve a static IP address, perform an update to the latest packages.

If you are installing Ubuntu using an ISO image, skip to "Downloading, Installing, and Configuring the DPPS Server Package" on page 11.

1 Click the update icon ![icon] on the upper right corner of the screen.

⚠ **CAUTION: Do not update Ubuntu beyond 8.10. Upgrading to a later version causes issues with the DPPS server.**

2 Click **Install Updates**.

3 Type the root account password and click **OK**.

> 📝 **NOTE:** The time taken to update Ubuntu varies depending on the system performance and network speeds.

4 After the updates are complete, close the update manager.

5 Restart the server, if prompted.

You must remove two packages from the system as they interfere with the processes needed by CUPS.

1 Type the following command in a terminal window:

```
sudo aptitude remove apparmor apparmor-utils
```

2 Type the root account password.

3 Press <Enter> when prompted.

Installing the Postfix Mail Server

If you are installing Ubuntu using an ISO image, skip to "Installing Using ISO Image" on page 12.

Type the following command in a terminal window to set up a mail server for E-Mail functionality:

```
sudo aptitude install postfix
```

After the mail server is installed, you are prompted for configuration. It is recommended that you leave the default settings of Internet with Smarthost.

Downloading, Installing, and Configuring the DPPS Server Package

You can download the DPPS package or DPPS ISO image from the Dell Support website at **support.dell.com**.

Downloading Package or ISO Image

If you have already downloaded the package, skip to "Installing Using Package" on page 11 or "Installing Using ISO Image" on page 12.

1 Go to **support.dell.com**.

2 Type Imaging Solutions in the **Search** field and press <Enter>.

3 Navigate to Dell Proximity Printing Solution sub-section.

4 Click the link to download the DPPS server installation file.

5 Click **I agree** if you agree to the license terms. The **File Download** window appears.

6 Click **Save**. The **Save As** window appears.

7 Select the folder where you want to save the file and click **Save**.

Installing Using Package

1 Open the file that you downloaded. The **Application: Dell Proximity Printing Solution** window appears.

2 Click **Install Package.**

3 Type the root account password.

The installer downloads any additional dependencies during installation.

4 Click inside the terminal window embedded in the installer.

5 Continue installation by moving to "Setting Installation Package Options" on page 13.

Installing Using ISO Image

📝 **NOTE:** When installing the DPPS server updates using an ISO image, if you enter any incorrect information, you can reset it by selecting **Package**→ **Configure** at the end of the installation process.

1 Use one of the following methods to make the ISO visible to the DPPS Server:

   a For physical servers, burn the ISO image to a CD/DVD and insert it into the optical drive.

   b For virtual servers, mount the ISO image using the virtual server system for mounting ISOs.

   c If you downloaded the DPPS ISO directly into the virtual server, type the following commands in a terminal:

   ```
   sudo mkdir /mnt/iso
   sudo mount -o loop /PathTo/DPPS-0.5.3-Server-
   Packages.iso /mnt/iso
   ```

   📝 **NOTE:** The version number, `0.5.3` in this example, may vary depending on the package you are installing.

2 After you mount the ISO,

   a Click **System**→ **Administration**→ **Software Sources**.

   b Click **Third Party Sources** tab.

   c Click **Add** and type the path to your optical drive/ISO mount:

   ```
   deb file:///mnt/iso /
   ```

   where `mnt/iso` is the corrected path of the mounted ISO, for example `media/cdrom0`. If you used the third method (1 – c) to mount the ISO, the path is `mnt/iso`.

   📝 **NOTE:** You must insert a space after `iso` in the command.

   d Click **Add Source**.

   e Close the **Software Sources** window. The utility validates the source before it exits.

3 Click **System**→ **Administration**→ **Synaptic Package Manager**.

4 In the Filter field, type DPPS and press <Enter>. You should get one result, dpps, which is the DPPS installation disc.

> ✐ **NOTE:** If you do not get any results, clear the search box and manually locate the package in the list.

5 Right-click the DPPS installation disc, click **Mark for Installation**, and follow the instructions on the screen.

6 Click **Apply** on the toolbar and follow the instructions on the screen.

7 The server setup process begins.

Setting Installation Package Options

1 Set a password for the root user account of CUPS server when prompted.

> ✐ **NOTE:** You will be prompted for this password several times during the installation process.

2 Type the FQDN and click **Forward**.

3 Type the short name of the server and click **Forward**.

4 Type the workgroup/domain name and click **Forward**.

> ✐ **NOTE:** The workgroup or domain names must be in capital letters.

5 Type the Realm (Kerberos) that the server connects to, and click **Forward**.

6 Type the KDC for the Kerberos Realm that the server is on, and click **Forward**.

7 Click **Close** after installation completes.

8 Close the Synaptics Package Manager.

Setting up Database

To setup the database and create the database schema, type the following command in a terminal window:

```
mysql -u root -p < /etc/dpps/dpps.sql
```

Type the root account password, if prompted.

> ✐ **NOTE:** You do not get a confirmation on successful execution of the command. The caret returns to a command prompt.

Setting up Administration Account Access

1 Type the following command in a terminal window:

```
sudo gedit /etc/group
```

2 Search for *lpadmin* in the document that appears.

3 Edit the line to state account names in the following format (assuming dppadmin is the root account on the Ubuntu installation):

```
lpadmin:x:112:dppadmin,username1,username2
```

4 Save the document and exit GEdit.

NOTE: You can later add Unix groups for printer access lists to this file.

Joining the Server to Active Directory/Domain

To join the server to the Active Directory® or to the domain:

1 Type the following command in a terminal window:

```
sudo net ads join -s /etc/dpps/smb.conf -U ####
```
where #### is the name of a domain controller account.

If you get a message DNS update failed!, ignore it.

2 Type the root account password, if prompted.

3 Type the domain controller's account password.

4 Type the following command in a terminal window:

```
sudo net ads keytab add HTTP -s /etc/dpps/smb.conf
-U ####
```
where #### is the login name of a domain administrator.

5 Type the domain controller account password.

6 Type the following command in a terminal window:

```
sudo /etc/dpps/kerberos-setup.sh
```

This command overwrites the default system Kerberos file with DPPS's customized file.

7 Restart Ubuntu.

Testing the Server

1 Type the following command in a terminal to initialize your new authentication:

`kinit ####`
where *####* is the Microsoft® Windows® login name.

This command initializes the Ubuntu system with your Kerberos Authentication, similar to what occurs when you log into Windows on a domain.

2 Type the password for the account you used in step 1 and press <Enter>.

> **NOTE:** A message appears only if there is an error. If the command executes successfully, the caret return to the command prompt.

3 Close the terminal window.

4 Open your web browser, type **about:config** in the address bar, and press <Enter>.

5 Skip the warning that appears.

6 Type `negotiate` in the filter box.

7 Edit the following two fields to state *companyname.com*:

`negotiate.negotiate-auth.delegate-uris`
`negotiate.negotiate-auth.trusted-uris`

8 In the browser's address bar, type **https://***fqdn***:631/**, where *fdqn* is the Fully Qualified Domain Name that you specified earlier during installation.

9 If you get a message stating that the web page certificate is invalid, provide your own certification to this web page to prevent this message in future. Till you provide the certification, add an exception to continue to the page. For more information on adding security exceptions, see your browser's documentation.

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Installing Ubuntu 64-bit

Server Installation Requirements

The Dell Proximity Printing Solution (DPPS) server requires the following:

*   A hardware or virtual server that can install Ubuntu 8.10 Server Edition (64 bit).

*   At least 2 GB of RAM and a 2 GHz Dual Core processor.

*   RAID-5 storage setup.

    NOTE: The hardware requirements may be higher if you have a large setup; for example 100+ buildings or 1000+ printers.

*   An active external internet connection for the DPPS server.

*   The server administrator must have operational knowledge of Linux based operating systems, particularly Ubuntu.

*   The server must be identifiable by the domain controller as a trusted system, otherwise the DPPS server may not be able to join the domain.

You must have the following information:

*   The workgroup/domain name used in your network environment.

*   The Realm used in your network environment.

*   The domain name you want to use for the system that will be hosting the server.

*   The Fully Qualified Domain Name (FQDN) for the server you wish to set up.

*   Address of the domain controller/KDC.

*   Static IP Address for DPPS server.

    NOTE: For more information on workgroup, domain, Realm, DNS, SMTP, routing, etc., contact your network administrator.

Installation Notes

- All the commands used are case sensitive. Using a different case may cause unexpected results.

- The sudo prefix executes the command following it in administrator mode.

- Nano is a text editor. To exit it, press <Ctrl><X>.

- Any text prefixed with # is a comment.

- If your network requires a proxy to access the internet, your DPPS server needs permission to use this proxy. If you don't have permission to use a proxy server, follow these steps:

  a Update Ubuntu. See "Updating Ubuntu" on page 20.

  b Download and install the DPPS server package. See "Downloading, Installing, and Configuring the DPPS Server Package" on page 21.

  c Set installation package options. See "Setting Installation Package Options" on page 23.

  d Set a static IP address. See "Installing Linux and Setting a Static IP Address" on page 18.

  e Join the DPPS server to AD/Domain. See "Joining the Server to Active Directory/Domain" on page 24.

Installing Linux and Setting a Static IP Address

You must create a server install using Ubuntu 8.10 Server Edition (64-bit). After the installation is complete, you must set a static IP address for the DPPS server. If the setting for static IP are lost after rebooting, follow the steps below to hard-code the information.

1 Type the following command in a terminal window:

```
sudo update-rc.d -f NetworkManager remove
```

2 Restart Ubuntu by typing the command `sudo reboot`.

3 Type the following command in a terminal window:

```
sudo nano /etc/hostname
```

4 Delete the existing text from the document and then type the FQDN.

5 Exit Nano and save the document when prompted.

6 Restart Ubuntu.

7 Type the following command in a terminal window:

```
sudo nano /etc/network/interfaces
```

8 The network interface file opens. Type the addresses used by your environment at the locations highlighted below. Your file should look similar to the following:

```
auto lo
iface lo inet loopback
# The primary network interface
auto eth0
iface eth0 inet static
address 192.168.1.100
netmask 255.255.255.0
gateway 192.168.0.1
```

9 Exit Nano and save the document when prompted.

10 Type the following command in a terminal window:

```
sudo ifup eth0
```

You may see an error message regarding unable to resolve an address. Ignore this error as the next step corrects it.

11 Type the following command in a terminal window:

```
sudo nano /etc/resolv.conf
```

12 Delete the existing text from the document and then type:

`nameserver` *IP Address of your DNS server*

You can type all your namespaces in the same format. Each namespace must be typed in a new line.

13 Exit Nano and save the document when prompted.

14 Restart Ubuntu.

15 Type the following command in a terminal window:

```
sudo nano /etc/hosts
```

16 Use a # to comment out all the line till the first blank line.

17 Type the following in a new line after the commented lines:

```
127.0.0.1 localhost
```

This forces the server to look at the DNS settings for DNS information, allowing a more dynamic setting.

18 Exit Nano and save the document when prompted.

19 Type the following command in a terminal window:

```
hostname -f
```

If this command does not return the FQDN, contact Dell Pro-Support for assistance.

20 Restart Ubuntu.

21 Verify that your settings are retained. If the settings are lost, contact Dell Pro-Support for assistance.

Updating Ubuntu

After you can properly retrieve a static IP address, perform an update to the latest packages.

If you are installing Ubuntu using an ISO image, skip to "Downloading, Installing, and Configuring the DPPS Server Package" on page 21.

To update Ubuntu, type the following commands in a terminal window:

```
sudo aptitude update && sudo aptitude upgrade
```

You must remove two packages from the system as they interfere with the processes needed by CUPS.

1 Type the following command in a terminal window:

```
sudo aptitude remove apparmor apparmor-utils
```

2 Type the root account password.

3 Press Enter when prompted.

Installing the Postfix Mail Server

If you are installing Ubuntu using an ISO image, skip to "Installing Using ISO Image" on page 22.

Type the following command in a terminal window to set up a mail server for E-Mail functionality:

```
sudo aptitude install postfix
```

After the mail server is installed, you are prompted for configuration. It is recommended that you leave the default settings of Internet with Smarthost.

Downloading, Installing, and Configuring the DPPS Server Package

You can download the DPPS package or DPPS ISO image from the Dell Support website at **support.dell.com**.

Downloading Package or ISO Image

If you have already downloaded the package, skip to "Installing Using Package" on page 21 or "Installing Using ISO Image" on page 22.

1   Go to **support.dell.com**.

2   Type `Imaging Solutions` in the **Search** field and press Enter.

3   Navigate to Dell Proximity Printing Solution sub-section.

4   Click the link to download the DPPS server installation file.

5   Click **I agree** if you agree to the license terms. The **File Download** window appears.

6   Click **Save**. The **Save As** window appears.

7   Select the folder where you want to save the file and click **Save**.

Installing Using Package

To install using a package:

1   Type the following commands in a terminal window:

```
sudo aptitude install gdebi-core
sudo gdebi filename.deb
```

2   Type the system account administrative password, when prompted.

3   The installer downloads any additional dependencies.

4   Click inside the terminal window embedded on the installer.

5   Continue installation by moving to "Setting Installation Package Options" on page 23.

Installing Using ISO Image

1 Make the ISO visible to the DPPS Server using one of the following methods:

   a For physical servers, burn the ISO image to a CD/DVD and insert it into the optical drive.

   b For virtual servers, mount the ISO image using the virtual server system for mounting ISOs.

   c If you downloaded the DPPS ISO directly into the virtual server, type the following commands in a terminal:

```
sudo mkdir /mnt/iso
sudo mount -o loop /PathTo/DPPS-0.5.3-Server-
Packages.iso /mnt/iso
```

   NOTE: The version number, `0.5.3` in this example, may vary depending on the package you are installing.

2 Add the following line to **/etc/apt/sources.list**.

```
deb file:///mnt/iso /
```

3 Perform an update by typing the following command in a terminal window:

```
sudo aptitude update
sudo aptitude install dpps
```

   NOTE: When installing the DPPS server updates using an ISO image, if you enter any incorrect information, you can reset it using the command `sudo dpkg-reconfigure dpps`.

Setting Installation Package Options

1 Set a password for the root user account of CUPS server when prompted.

> ![Note icon] **NOTE:** You will be prompted for this password several times during the installation process.

2 Type the FQDN and press Enter.

3 Type the short name of the server and press Enter.

4 Type the workgroup/domain name and press Enter.

> ![Note icon] **NOTE:** The Workgroup or Domain names must be in capital letters.

5 Type the Realm (Kerberos) that the server connects to, and press Enter.

6 Type the KDC for the Kerberos Realm that the server is on, and press Enter.

7 Click **Close** after installation completes.

8 Close the Package Installer.

Setting up Database

To setup the database and create the database schema, type the following command in a terminal window:

```
mysql -u root -p < /etc/dpps/dpps.sql
```

Type the root account password, if prompted.

> ![Note icon] **NOTE:** You do not get a confirmation on successful execution of the command. The caret returns to a command prompt.

Setting up Administration Account Access

1 Type the following command in a terminal window:

```
sudo nano /etc/group
```

2 Search for *lpadmin* in the document that appears.

3 Edit the line to state account names in the following format (assuming dppadmin is the root account on the Ubuntu installation):

```
lpadmin:x:112:dppsname,username1,username2
```

4 Exit Nano and save the document when prompted.

> ![Note icon] **NOTE:** You can later add Unix groups for printer access lists to this file.

Joining the Server to Active Directory/Domain

To join the server to the Active Directory® or to the domain:

1 Type the following command in a terminal window:

   ```
   sudo net ads join -s /etc/dpps/smb.conf -U ####
   ```
   where #### is the name of a domain controller account.

   If you get a message `DNS update failed!`, ignore it.

2 Type the root account password.

3 Type the domain controller's account password, if prompted.

4 Type the following command in a terminal window:

   ```
   sudo net ads keytab add HTTP -s /etc/dpps/smb.conf
   -U ####
   ```
   where #### is the login name of a domain administrator.

5 Type the domain controller account password.

6 Type the following command in a terminal window:

   ```
   sudo /etc/dpps/kerberos-setup.sh
   ```

   This command overwrites the default system Kerberos file with DPPS's customized file.

7 Restart Ubuntu.

Testing the Server

To test the server, perform the following steps:

1 Install the DPPS client on a computer that is capable of detecting the network you joined the DPPS server to.

2 Start the DPPS client on the computer are using to test

3 Type the FDQN when prompted to enter the DPPS server address.

The computer now connects to the DPPS server and you can proceed with setting up maps and printers. For more information on setting up maps and printers, see the *DPPS Administrator's Guide*.

3

Installing Red Hat Enterprise Linux

Server Installation Requirements

The Dell Proximity Printing Solution (DPPS) server requires the following:

- A hardware or virtual server where you can install Red Hat Enterprise Linux (RHEL) version 5.5.
- At least 2 GB of RAM.
- At least a 2 GHz dual-core processor.
- RAID-5 storage setup.

    NOTE: The hardware requirements may be higher if you have a large setup; for example 100+ buildings or 1000+ printers.

You must have the following information:

- The workgroup/domain name used in your network environment.
- The Realm used in your network environment.
- The domain name for the system that will be hosting the server.
- The Fully Qualified Domain Name (FQDN) for the server you wish to set up.
- The username and the password to modify the domain controller settings.
- The SMTP mail server gateway (optional).
- Domain controller/KDC address.
- An static IP address for the DPPS server.

    NOTE: For more information on workgroup, domain, Realm, DNS, SMTP, routing, etc. contact your network administrator.

Installation Notes

- All the commands used are case sensitive. Using a different case may cause unexpected results.
- Gedit is a text editor.
- Any line of text prefixed with # is a comment.

Installing RHEL

To install RHEL, boot the server with the installation media or the ISO image and select **Installation** on the splash screen.

The following table lists the subsequent windows that appear and the options available.

Window	Instructions
RHEL splash screen	Press **<Enter>** to continue.
CD Found	Click **Skip** to continue.
Window	Click **Next** to continue.
Language	**1** Select the language and click **Next** to continue. **2** Select the keyboard layout and click **Next** to continue.
Installation Number	Enter the installation number and click **OK** to continue.
Partition Warning	**1** Click **Yes** to initialize the drive. **2** Select the partition criteria and click **Next** to continue. **3** Click **Yes** to continue partitioning the drive.
Network Devices	Edit the devices [Type the static IP and subnet mask].
Hostname	Set the hostname: • Automatic address setup (using DHCP) • Manual selection (set as the FQDN)

Window	Instructions
Miscellaneous Settings	Static address setup Type the: • Gateway IP • Primary DNS • Secondary DNS
Clock and Time Zone	Select the region/time zone and click **Next** to continue.
Root User Account	Type the root password and confirm it, then click **Next** to continue.
Default Installation package	**1** Select the web server. **2** Select the **Customize Now** box. **3** Click **Next**. **4** Select the servers and select the following boxes apart from those already selected: • Mail server • MySQL database • Server configuration tools **5** Click **Next**.
Installation	Click **Next** to install.
Base Install complete	Click **Reboot** to continue.
Welcome	Click **Forward** to continue.
License Agreement	Click **Accept** and then click **Forward** to continue.
Firewall	**1** Set firewall **2** Select trusted services and then click **Forward** to continue. • Select the boxes for HTTPS and HTTP • Add port 631/TCP
Security Enhanced Linux	Select either **Permissive** or **Disabled**, click **Forward**, and then click **Yes**.

Window	Instructions
Installation Settings	Verify or modify the setting, if needed:

Verify or modify the setting, if needed:

- Kdump — Disabled (unchecked) or Enabled (checked)

- Date & Time — Setup depending on your location

- Software Updates — Select **Register Now**

  a Go to Application/Software Updater and click **Apply Updates**

  b A prompt appears asking you to log in to your Red Hat account

  c Verify the system name created for the machine [FQDN]

Updating and Installing New Software Packages

To update and install any new software packages:

1 Login to your RHEL account.

2 Enter the system name of the machine (FQDN) where FQDN is the Fully Qualified Domain Name that you specified earlier during the installation.

3 Select the packages to update.

4 Click **Add/Remove Software**.

- Search the latest version for **mod_auth_kerb**.

- Search the latest version for **php_mysql**.

- Select **Apply**.

- Click **Continue** for dependencies.

- Click **Continue** to add the packages.

- Click **OK** to complete the installation.

5 Modify the file **httpd.conf** located in **/etc/httpd/conf/**.

- Locate the section for **/var/www/html**.

- Change the option for **Allow Override** from None to All.

6 Verify if the software packages are updated.

Installing DPPS Server Package

To install the DPPS server package,

a Copy/download the DPPS installer to your desktop.

b Extract the files from the DPPS installer to your desktop using the GUI or a terminal.

GUI:

- Double-click to open the package, then drag the contained folder to your desktop.
- Open the folder and double-click **install.sh**.
- Click **Run**.

Terminal:

- Double-click to open the package, then drag the contained folder to your desktop.
- Open the folder and double-click **install.sh**.
- Click **Run in Terminal**.
- Type the following commands in the terminal:
  ```
  tar xvf filename.tar
  cd directory : ./install.sh
  ```

c Log in as **Root** and execute install shell, if you have not already.

- Verify the FQDN and press y if correct.

  NOTE: In case of errors, contact Dell Pro Support.

If prompted to download additional packages, press y to accept. You need to mount the RHEL install disc/ISO image again, if it is not still mounted. Repeat this process until you are no longer prompted for more packages.

- Type the Realm that the server connects to.
- Type the IP or FQDN for the KDC/Active Directory.
- Type the NT workgroup.
- Overwrite **/etc/krb5.conf**. Press y if prompted.
- Join the domain. Press y if prompted.

- Type the username and password for a user account that has administrative rights/permissions.
- Type the password to obtain the keytab for the HTTP service.
- Add the SSLCert.
- Overwrite the Apache configuration files.
- Initialize the DPPS.

NOTE: If this is the first time you are installing DPPS, your DPPS password will not be set; so press <Enter>, if prompted, to continue without a password.

The DPPS packages are now installed.

Set up your initial server administrators list

a Pressing <Alt><F2> to open the **Run** window.

b Enter the command `gedit /etc/group` and press <Enter>.

NOTE: Since you logged in as root, you do not need to provide administrator privileges.

Setting up Administration Account Access

- Enter the following command in a terminal:
  `gedit /etc/group`
- Search the document for **sys**.
- Edit the line to state account names as follows:
  `sys:x:3:root,bin,adm,user1,user2,user3...`
- Save the document and exit gedit.

Testing the Server

1 Type the following command in a terminal window to initialize your new authentication:
`kinit ####`
where *####* is the Microsoft® Windows® login name, without the domain information.

2 Type the password for the account you used in step 1 and press <Enter>.

NOTE: If this is the first time you are installing DPPS, your DPPS password will not be set; so press <Enter>, if prompted, to continue without a password.

> ✍ **NOTE:** A message appears only if there is an error. If the command executes successfully, the caret returns to the command prompt.

3   Close the terminal window.

4   Open your web browser, type `about:config` in the address bar, and press <Enter>.

5   Skip the warning that appears.

6   Type `negotiate` in the filter box.

7   Edit the following two fields to state `companyname.com`:

    `negotiate.negotiate-auth.delegate-uris`
    `negotiate.negotiate-auth.trusted-uris`

8   In the browser's address bar, type **https://fqdn:631/**, where fdqn is the Fully Qualified Domain Name that you specified earlier during installation.

9   If you get a message stating that the web page certificate is invalid, provide your own certification to this web page to prevent this message in future. Till you provide the certification, add an exception to continue to the page.

> ✍ **NOTE:** For more information on adding security exceptions, see your browser's documentation.

10 Install the DPPS on a client.

11 Configure the client to use the server name created above using the **Set Server** option.

12 Print a test document to verify installation.

4

Installing SUSE Linux Enterprise Server

Server Installation Requirements

The Dell Proximity Printing Solution (DPPS) server requires the following:

- A hardware or virtual server where you can install SUSE Linux Enterprise Server (SLES) version 11–x64.
- At least 2 GB of RAM.
- At least a 2 GHz dual-core processor.
- RAID-5 storage setup.

NOTE: The hardware requirements may be higher if you have a large setup; for example 100+ buildings or 1000+ printers.

You must have the following information:

- The workgroup/domain name used in your network environment.
- The Realm used in your network environment.
- The domain name you want to use for the system that will be hosting the server.
- The Fully Qualified Domain Name (FQDN) for the server you wish to set up.
- The username and the password to modify the domain controller settings.
- The SMTP mail server gateway (optional).
- Address of the domain controller/KDC.
- An static IP address for the DPPS server.

   NOTE: For more information on workgroup, domain, Realm, DNS, SMTP, routing, etc., contact your network administrator.

Installation Notes

- All the commands used are case sensitive. Using a different case may cause unexpected results.

- The sudo prefix executes the command following it in administrator mode.

- Gedit is a text editor. To exit it, press <Ctrl><X>.

- Any text prefixed with # is a comment.

Installing SLES

To install SLES, boot the server with the installation media or the ISO image and select **Installation** on the splash screen.

The following table lists the subsequent windows that appear and the options available.

Window	Instructions
Welcome	• Select the language.
	• Select the keyboard layout.
	• Read the license agreement and click **Yes**.
Media Check	Ensure that the installation media or ISO image is mounted.
Installation Mode	Select the type of installation:
	• New Installation
	• Update
	• Repair Installed System
	NOTE: Do not include add-on products from separate media.
Installation Settings:	

Window	Instructions

Network Setup	Configure the networks settings:
	
	• Run the network setup wizard
	• Automatic address setup (using DHCP)
	• Static Address Setup:
	  • Type the IP address
	  • Type the Netmask
	  • Type the Default Gateway IP
	  • Type the DNS Server IP
	  • Configure the proxy settings used to access the Internet, if required.
	    – HTTP proxy server
	    – Port
	    – Username (Optional)
	    – Password (Optional)

Clock and Time Zone	• Region • Time zone • Time and date. **NOTE:** You can change the date and time manually by entering the date and time or automatically by choosing to synchronize with the NTP Server. **NOTE:** Ensure that the system clock is set correctly.
Server Base Scenario	Select the type of system: • Physical machine (also for fully virtualized guests) (Recommended) • Virtual machine (For para-virtualized environments) • Xen virtualization host (local X11 not configured by default)

Window	Instructions
Installation Settings	Verify or modify the settings if needed:
	• Overview
	• Keyboard layout
	• Partitioning
	• Software
	• Language
	• Expert
	• System
	• Keyboard layout
	• Partitioning
	• Booting
	• Add-on products
	• Software
	• Time zone
	• Language
	• Default run level
	• Kdump
Confirm Package License: agfa-fonts	YaST2
	• Confirm installation
Root User Account	• Type the root password and confirm the password.
	• Test the keyboard layout.
Hostname and Domain Name	• Type the hostname.
	• Type the domain name (The Realm used in your network environment, or the latter part of the FQDN).
	• Change the hostname using DHCP.
	• Type the hostname in **/etc/hosts**.

Window	Instructions
Network Configuration	• Skip configuration
	• Verify or modify the settings if needed:
	• General Network Settings
	• Firewall
	– Go to **Allowed Services**.
	– Allow cups on the **External Zone**.
	– Click **Advanced**.
	– Type 4 4 3 in both TCP and UDP fields.
	– Click **OK**.
	• Network interfaces
	• DSL connections
	• ISDN Adapters
	• Modems
	• VNC remote administration
	• Proxy
Test Internet Connection	Select the option you require:
	• Yes — Test connection
	• No — Skip testing the connection
Installation Overview	Select the option you require:
	• Skip Configuration
	• Use following configuration (Recommended)
	• CA management
	• Open LDAP server
User Authentication Method	• Local (**/etc/passwd**) (Recommended)
	• LDAP
	• NIS
	• Windows domain

Window	Instructions

Hardware Configuration	Select the option you require:
	 • Skip configuration
	 • Use following configurations:
	  • Graphics cards
	  • Printer
	  • Sound

New Local User	Skip creating a new local user. Click **Next** and then click **Yes**.
Installation Complete	• Deselect **Clone This System for AutoYaST**. • Click **Finish**.

You can log into the SLES with the root account username and password.

Installing the DPPS Server package

To install the DPPS server package,

a Copy/download the DPPS installer to your desktop.

b Extract the files from the DPPS installer to your desktop using:

GUI:

- Double-click to open the package, then drag the contained folder to your desktop.
- Open the folder and double-click **install.sh**.
- Click **Run**.

Terminal:

- Double-click to open the package, then drag the contained folder to your desktop.
- Open the folder and double-click **install.sh**.

- Click **Run in Terminal**.
- Type the following commands in the terminal:
  ```
  tar xvf filename.tar
  cd directory : ./install.sh
  ```

c   Log in as root and execute install shell, if you have not already.

- Verify the FQDN and press y if correct.

    > **NOTE:** In case of errors, contact Dell Pro Support.

    If prompted to download additional packages, press y to accept. You need to mount the SLES install disc/iso again, if it is still not mounted. Repeat this process until it stops asking for more packages.

- Type the Realm that the server connects to.
- Type the IP or workgroup.
- Overwrite **/etc/krb5.conf**. Press y if prompted.
- Join domain. Press y if prompted.
- Type the username and password for a user account that has administrative rights/permissions.
- Type the password to obtain the keytab for the HTTP service.
- Add the SSLCert.
- Overwrite the Apache configuration files.
- Initialize the DPPS.

> **NOTE:** Unless already configured prior to the installation, your password will not be set, so press <Enter>.

The DPPS Packages are now installed.

Set up your initial server administrators list

a   Pressing <Alt><F2> to open the **Run** window.

b   Enter the command gedit /etc/group and press <Enter>.

> **NOTE:** Since you logged in as root, you do not need to provide administrator privileges.

Setting up Administration Account Access

- Enter the following command:
  ```
  gedit /etc/group
  ```
- Search the document for sys
- Edit the line to state account names as follows:
  ```
  sys:x:3:root,bin,adm,user1,user2,user3...
  ```
- Save the document and exit gedit

Testing the Server

1. Type the following command in a terminal to initialize your new authentication:
   ```
   kinit ####
   ```
   where **####** is the Microsoft® Windows® login name, without the domain information.

2. Type the password for the account you used in step 1 and press <Enter>.

   NOTE: A message appears only if there is an error. If the command executes successfully, the caret returns to the command prompt.

3. Close the terminal window.

4. Open your web browser, type `about:config` in the address bar, and press <Enter>.

5. Skip the warning that appears.

6. Type `negotiate` in the filter box.

7. Edit the following two fields to state *companyname.com*:

   ```
   negotiate.negotiate-auth.delegate-uris
   negotiate.negotiate-auth.trusted-uris
   ```

8. In the browser's address bar, type **https://***fqdn***:631/**, where *fdqn* is the Fully Qualified Domain Name that you specified earlier during installation.

9. If you get a message stating that the web page certificate is invalid, provide your own certification to this web page to prevent this message in future. Till you provide the certification, add an exception to continue to the page.

> **NOTE:** For more information on adding security exceptions, see your browser's documentation.

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