



# Qlik NPrinting 17.1.x Installation Guide

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## Before You Begin

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We recommend answering and fulfilling this list of questions, minimum requirements, and prerequisites prior to completing the NPrinting 17.1.x installation

This document provides instructions for installing NPrinting components in clean environments.

## Supported Configurations

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NPrinting 17.1.x and Qlik Sense must be installed on separate Windows server instances in test and production environments to comply with Qlik Support requirements.

## NPrinting Engine and Server Minimum Requirements

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- Windows Server 2012 or Windows Server 2012 R2
- Microsoft .Net Framework 4.5.2 or above
- 8 gigabytes of RAM for NPrinting Server
- 500 MB of disk space for NPrinting Server
- Minimum of 2 GB is required for each core with the minimum of 4GB of RAM in total for NPrinting Engine
- 300 MB of disk space for NPrinting Engine
- Qlik Sense Server 2.2.4 or higher to create connections to Qlik Sense
- Qlik Sense Server 3.0.1 or higher to distribute reports to the Qlik Sense hub
- Qlik Sense QlikClient certificate and Qlik Sense generated root certificate
- NPrinting Console supports Internet Explorer 10 or above, Chrome, Firefox, and Edge



**Qlik Sense 3.0.1 does not support Internet Explorer 10 and will not work.**

## NPrinting Designer Minimum Requirements

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- Microsoft Windows 7, 8, 8.1, 10 operating systems (32- or 64-bit), Windows Server 2008 R2, Windows Server 2012, or Windows Server 2012 R2
- Microsoft Office is required for creating MS office templates with NPrinting Designer
- Microsoft .Net Framework 4.5.0 or above

## TCP Ports for NPrinting

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Port	Description
4992	NPrinting Repository service port
4993	NPrinting Web Console port (Uses HTTPS)
4994	NPrinting NewsStand port (Uses HTTPS)
4995	Windows authentication service for binding windows credentials to users in the web console
4996	Web Engine service port for connecting NPrinting Designer to the NPrinting Server
5672	RabbitMQ service port



Depending on firewall rules, ports 4993, 4994, 4995, and 4996 may need to be opened inbound on the server running NPrinting Server to allow access from web browsers and NPrinting Designer.

## TCP Ports for NPrinting Communication with Qlik Sense

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Port	Description
4242	Qlik Sense Repository Service (QRS) port
4243	Qlik Sense Proxy Service (QPS) port



Qlik Sense ports need to be opened inbound on the Qlik Sense server. These ports may need to be opened outbound on NPrinting Server and NPrinting Engine servers depending on firewall configuration.

## NPrinting Installation Prerequisites

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- Determine if NPrinting Engine and Server (Scheduler) will be installed in a virtual machine on premise (such as VMWare), physical server, or cloud provider (such as Amazon / Rackspace / Azure).
- Determine if NPrinting Engine and Server (Scheduler) will be installed on the same system.
- Determine if NPrinting Engine and Server (Scheduler) will be installed on the same system that Qlik Sense server is installed.
- Determine the Windows Domain the Qlik Sense server and NPrinting Server (Scheduler) will be attached to.

- Administrative rights and Remote Desktop access to the NPrinting Server(s).
- A service account with administrative rights on the server and possesses Logon as a service privileges.



Instructions for creating a user and enabling Logon as a service privileges are in this document.



It is possible to use a domain account for the NPrinting service account. However, it must be a member of the administrators group and have Logon as a service privileges.

- An account name, password, and email address for the NPrinting administrator console administrator.



This is the account used to administer the NPrinting console. It is different than the services account described previously.

- Validate the environment
  - Clean operating system desired.
  - Ensure the proper operating system is installed per minimum requirements.
  - Ensure Microsoft .Net 4.5.2 is installed.
  - Ensure recommended RAM is available on the system.
  - Ensure the server has access to the Internet for license activation.
  - Ensure firewall is disabled or appropriate ports are opened on firewall to enable NPrinting communications.
  - Qlik Sense QlikClient, server, and root certificates exported and in hand (instructions below).

## Be Prepared

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- Have NPrinting installation files downloaded
- Have NPrinting license and control number in possession
- If Qlik Sense server is already installed, make note of the hostname
- Qlik Sense QlikClient, server, and root certificates exported and in hand.
- Administrator group access to the NPrinting server.
- Rootadmin access to the Qlik Sense server Qlik Management Console (QMC).
- All userids and passwords for authenticating to servers and applications listed are in hand.
- If you are installing NPrinting Server and NPrinting Engine on the same system as Qlik Sense, make sure Qlik Sense is installed, licensed and accessible prior to NPrinting installation.
- Remote Desktop access to the NPrinting and Qlik Sense servers.

## Pre-Installation Steps

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Validate all prerequisites above have been met before continuing with installation

### Windows Setup



If you plan to rename the machine or workgroup, do it before installing NPrinting Server and NPrinting Engine.



Disable Windows Firewall completely (if this is not acceptable, open inbound ports 4993, 4994, 4995, 4996).

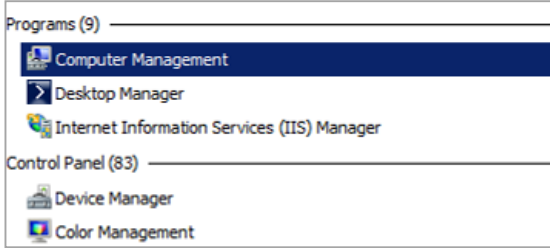
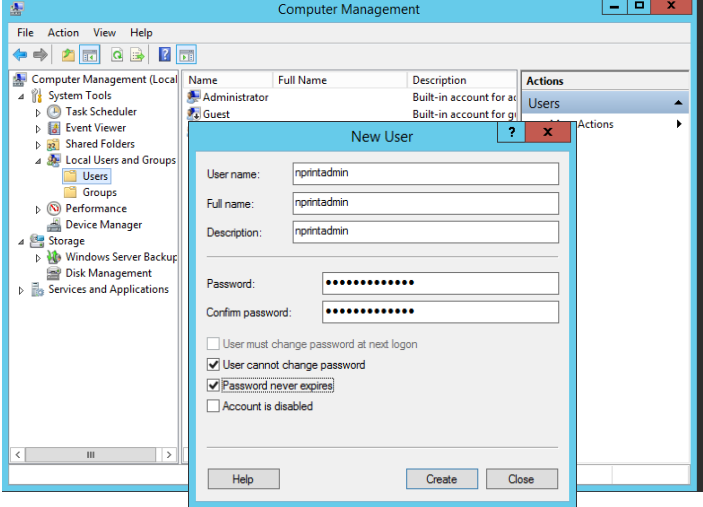
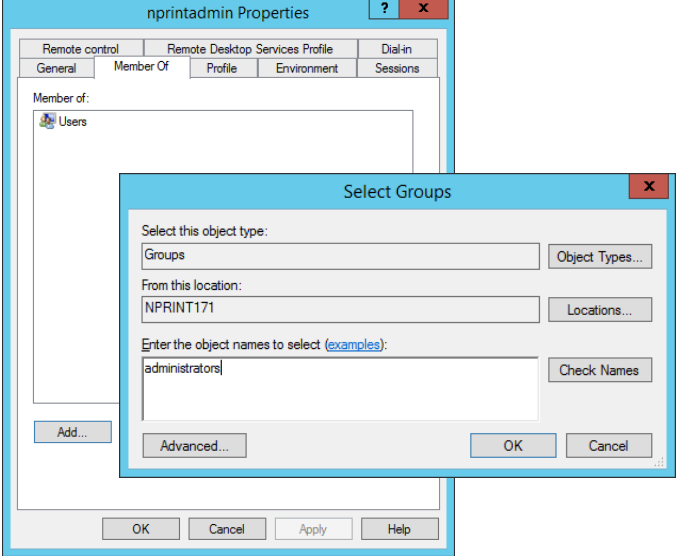


Disable Windows Internet Explorer Enhanced Security Configuration (IE ESC).

## Installation Instructions

Please follow these instructions closely. NPrinting services require a specific order of install to work properly.

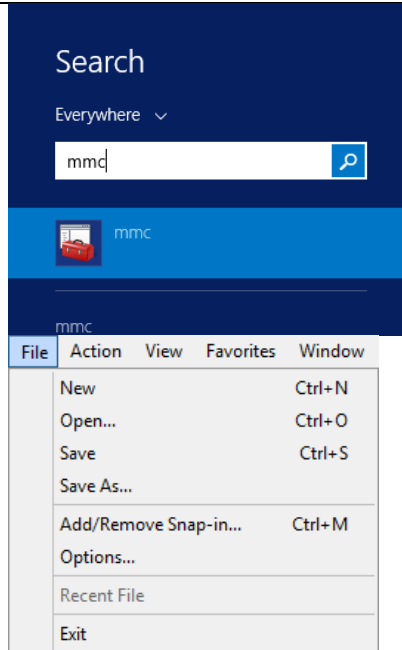
### NPrinting Service Account Setup

<p>On the server NPrinting will be installed, click Start and search for and launch Computer Management.</p>	 <p>The screenshot shows a search window with 'Computer Management' highlighted under the 'Programs (9)' section. Other visible items include 'Desktop Manager' and 'Internet Information Services (IIS) Manager'. Under 'Control Panel (83)', 'Device Manager' and 'Color Management' are visible.</p>
<p>Navigate to Local Users and Groups / Users. Click on the Action menu/New User.</p> <p>Enter User name: nprintadmin</p> <p>Enter password: NPrinting171</p> <p>Deselect User must change password</p> <p>Select User cannot change password and Password never expires</p>	 <p>The screenshot shows the 'Computer Management' console with 'Local Users and Groups' expanded to 'Users'. The 'New User' dialog box is open, with the following fields and options:         <ul style="list-style-type: none"> <li>User name: nprintadmin</li> <li>Full name: nprintadmin</li> <li>Description: nprintadmin</li> <li>Password: [masked]</li> <li>Confirm password: [masked]</li> <li><input type="checkbox"/> User must change password at next logon</li> <li><input checked="" type="checkbox"/> User cannot change password</li> <li><input checked="" type="checkbox"/> Password never expires</li> <li><input type="checkbox"/> Account is disabled</li> </ul> </p>
<p>After the user is created, double click on the user entry and click on the Member Of tab. Click the add button and add the nprintadmin account to the Administrators group. Click Ok. Remove the account from the Users group.</p> <p>Click OK to exit the properties window.</p>	 <p>The screenshot shows the 'nprintadmin Properties' dialog box with the 'Member Of' tab selected. The 'Member of:' list contains 'Users'. An 'Add...' button is visible. A 'Select Groups' dialog box is overlaid on top, showing:         <ul style="list-style-type: none"> <li>Select this object type: Groups</li> <li>From this location: NPRINT171</li> <li>Enter the object names to select (examples): administrators</li> </ul> </p>

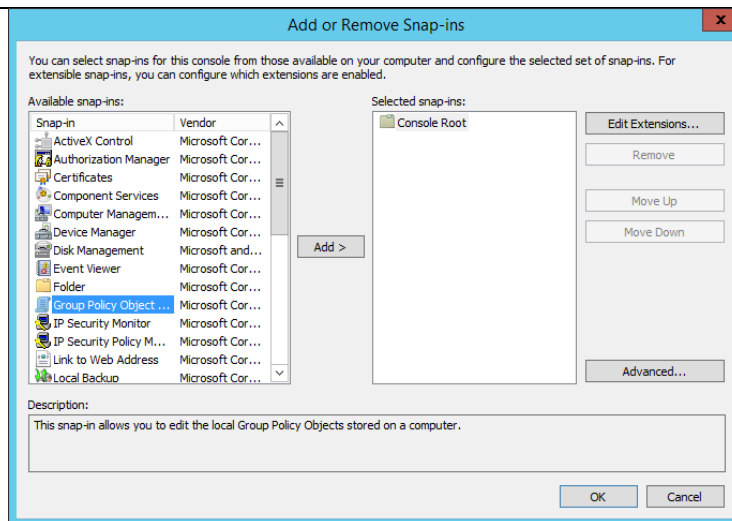


Click on the Start button and search for and select MMC.

When the MMC loads, select File...Add/Remove Snap-in...

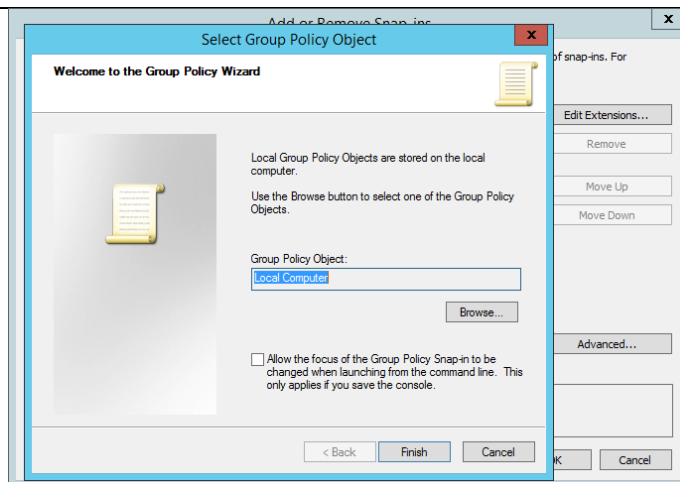


Click on the Group Policy Object entry and click the Add button.



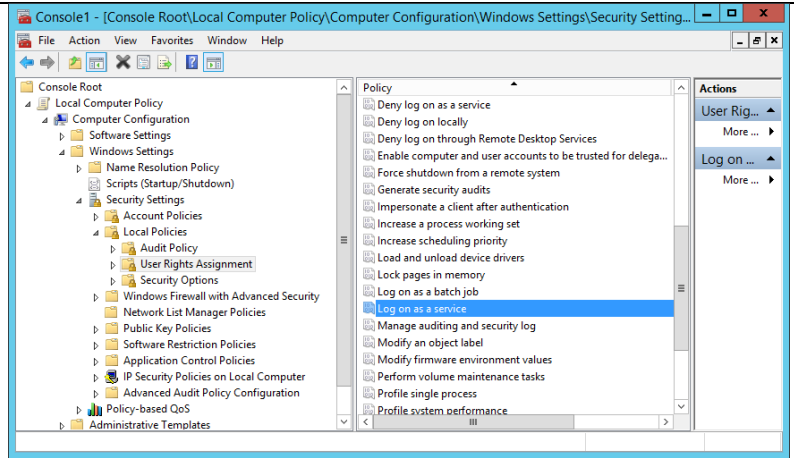
Confirm the group policy object for the Local Computer is highlighted and click Finish.

Click OK to exit the snap-in manager.



Navigate to Local Computer Policy/Windows Settings/Security Settings/Local Policies/User Rights Assignment on the left side of the screen.

On the right side of the screen, scroll down until you see Log on as a service entry and double click on it.

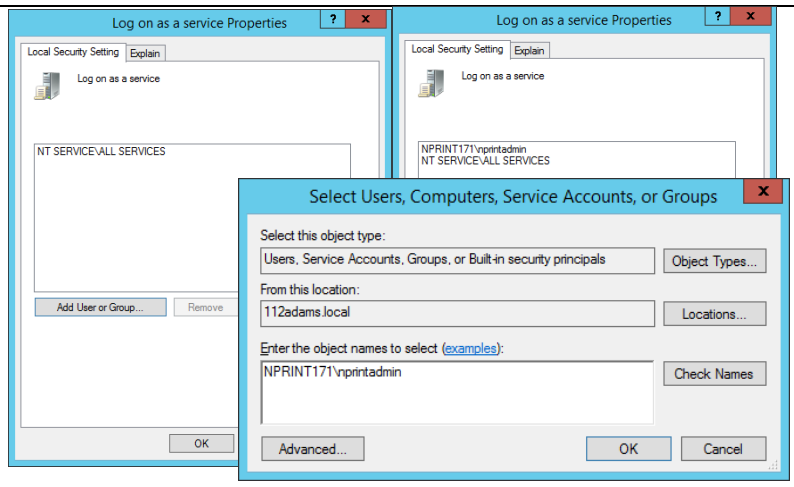


Click on Add User or Group.

In the entry window type %localmachinename%\nprintadmin where %localmachinename% is the name of the server NPrinting is being installed on.

Click Check Names and then OK.

Click OK to close the window.



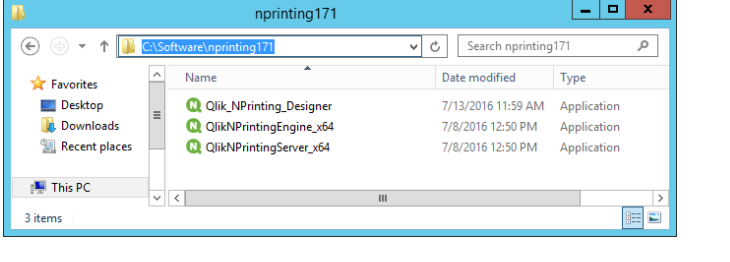
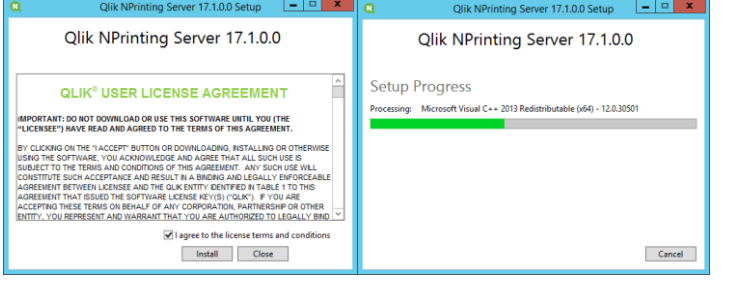

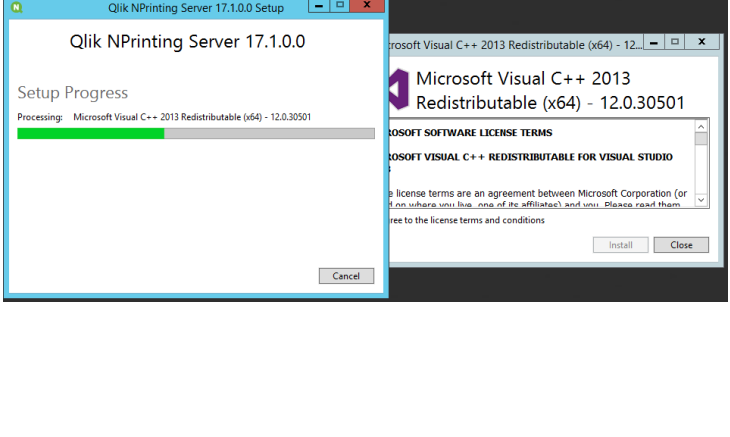
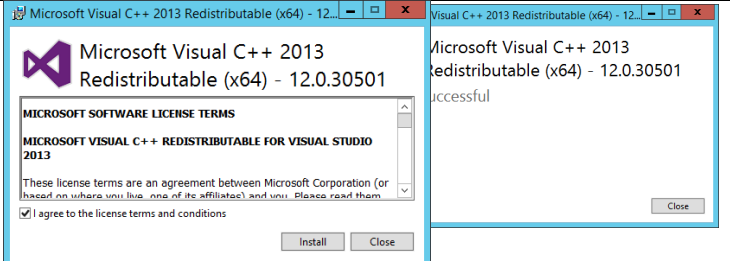


The NPrinting Server installation must be installed before the NPrinting Engine and NPrinting Designer. NPrinting may not work if the installation is not performed in the following order:

1. NPrinting Server
2. NPrinting Engine
3. NPrinting Designer

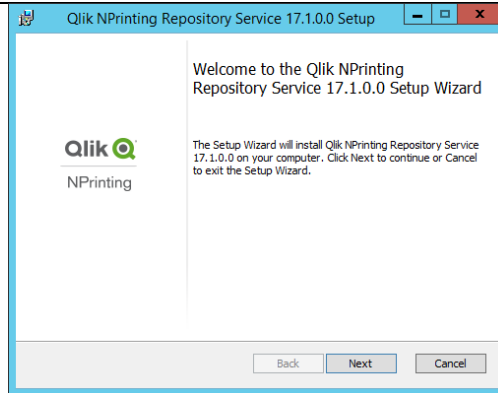
Please install the software in the correct order.

## NPrinting Server Installation

<p>Navigate to the location where NPrinting installation files reside.</p> <p>Double click on QlikNPrintingServer_x64.exe.</p>	
<p>The Qlik NPrinting Server license agreement appears. Select the check box to agree to the license and click the Install button.</p> <p>A Setup progress window will appear.</p>	
<p> When the Setup Progress window appears, click on the window and move it to the left. Below the window is the Microsoft C++ 2013 Redistributable installation.</p> <p>Activate the Microsoft C++ 2013 Redistributable installation window.</p> <p>You will <b>not</b> see this window if you already have the appropriate version of Microsoft Visual C++ installed.</p>	
<p>Select the check box to agree to the license terms and click the Install button.</p> <p>When the installation completes, click the Close button to exit the Microsoft C++ Redistributable installer.</p>	

The Qlik NPrinting Repository Service installer appears.

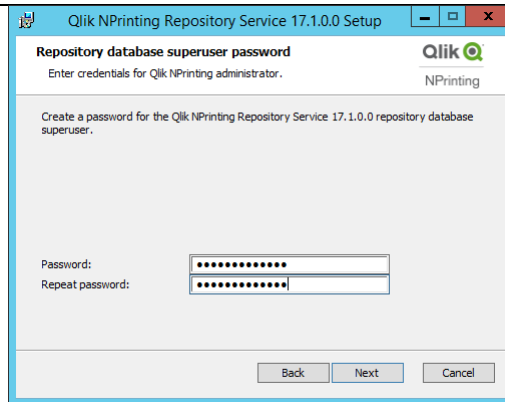
Click the Next button.



Enter a password for the repository database.

Please make note of this password and keep it in a secure location.

Click the Next button.



Enter the credentials that NPrinting will use for the NPrinting administrator.

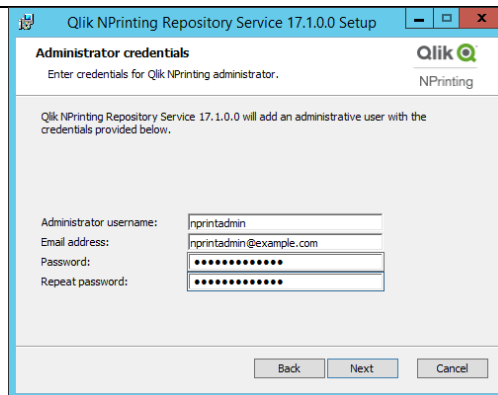


This account is different than the service account because it is NOT a Windows account.

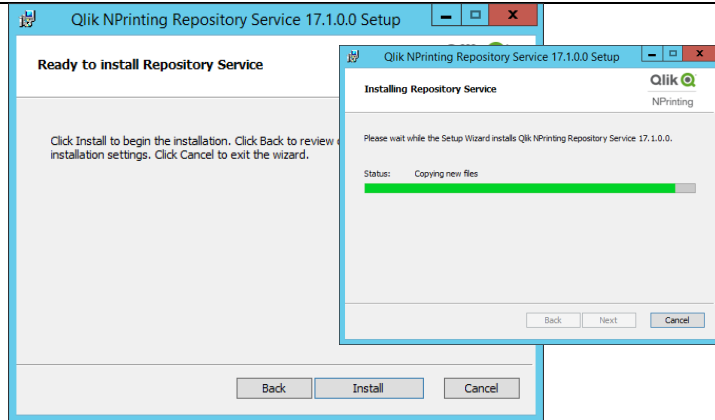
This is an account stored in the NPrinting repository.

Supply a username, an email address, and a password for the NPrinting administrator account.

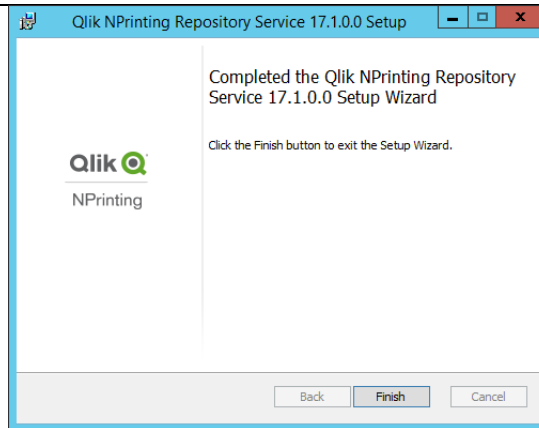
Click the Next button.



Click the Install button to start the installation of the software.



When the NPrinting Repository installation completes, click the Finish button.



The NPrinting Server installation appears.  
Click the Next button.



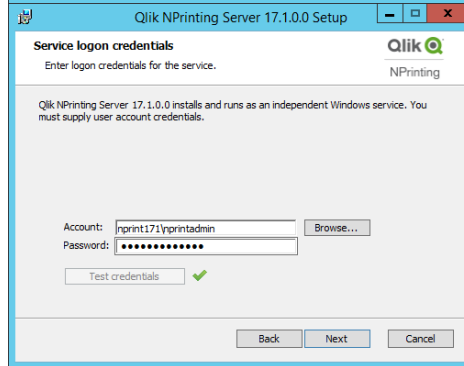
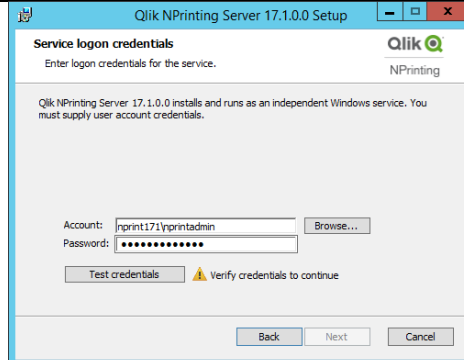
Enter the NPrinting service account (this is the Windows service account added in the create user section of the document) and password in the supplied fields.



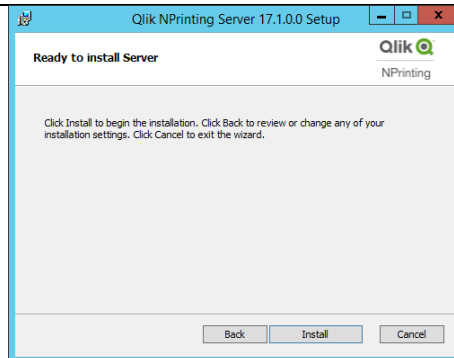
Make sure to enter the account in domain\userid format as in the image.

Click the Test credentials button and verify the yellow warning sign changes to a green check box. If the green check box does not appear, the account does not have Logon as a service right. Please consult the NPrinting Service Account Setup section of this document.

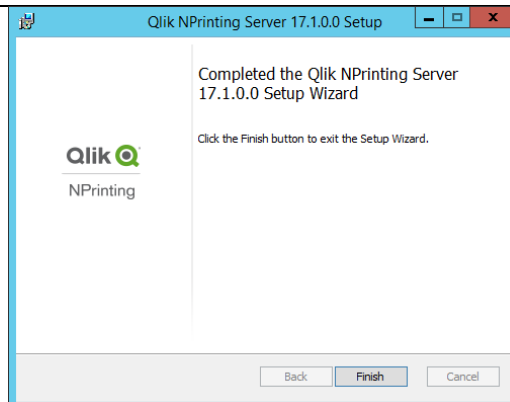
Click the Next button.



Click the Install button to install Qlik NPrinting Server files.

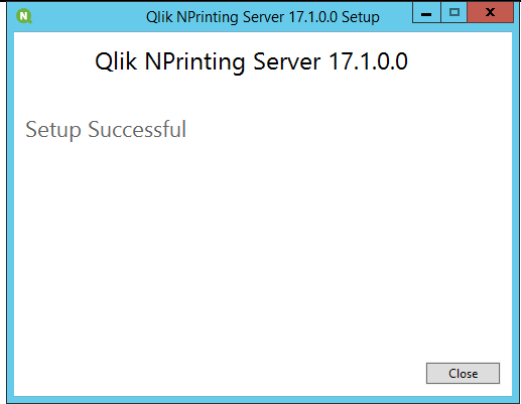


When the installer complete, click the Finish button to exit the installer.



Upon completion of all components, the main setup progress window will state success.

Click the Close button to exit the installation.



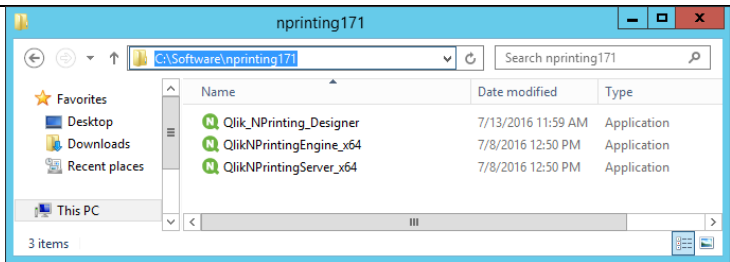
## NPrinting Engine Installation



The NPrinting Engine is installed after the NPrinting Server. If you haven't installed NPrinting Server, please go back to the NPrinting Server Installation section of this document before continuing.

Navigate to the location where NPrinting installation files reside.

Double click on QlikNPrintingEngine\_x64.exe.



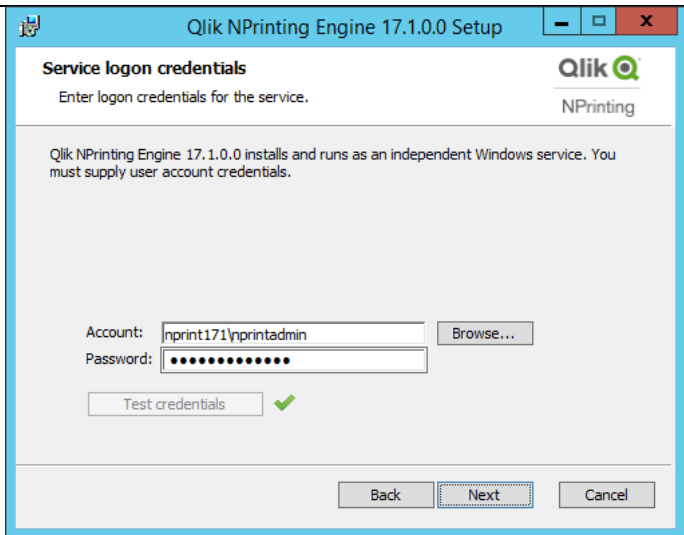
Enter the NPrinting service account (this is the Windows service account added in the create user section of the document) and password in the supplied fields.



Make sure to enter the account in domain\userid format.

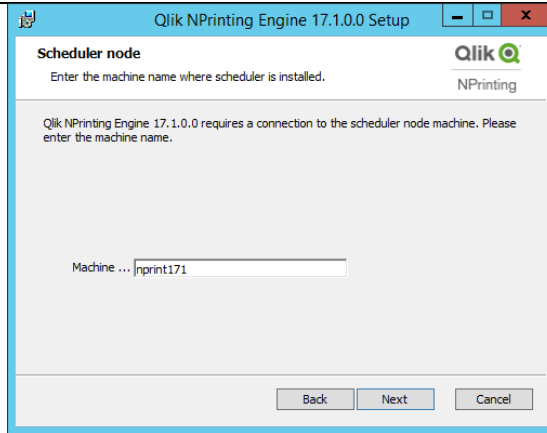
Click the Test credentials button and verify the yellow warning sign changes to a green check box. If the green check box does not appear, the account does not have Logon as a service right. Please consult the NPrinting Service Account Setup section of this document.

Click the Next button.

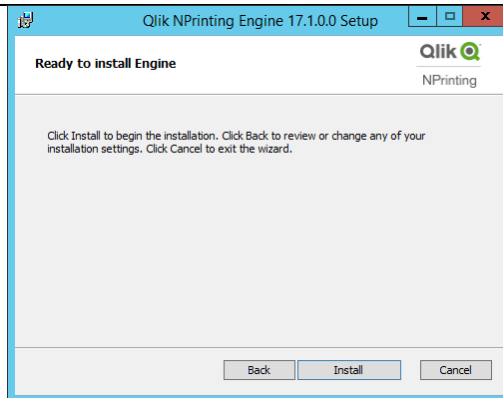


Enter the Windows system name in the field provided. It is recommended to enter the machine name only and not the fully qualified domain name of the server.

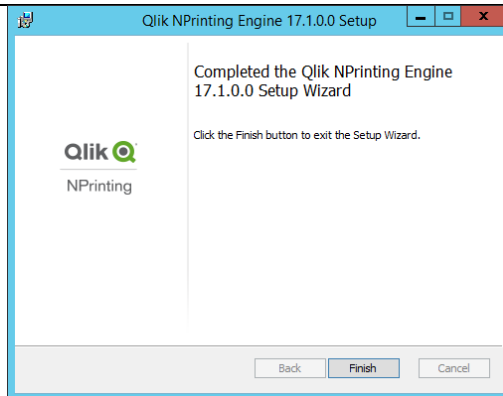
Click the Next button.



Click the Install button to start copying files to the system.

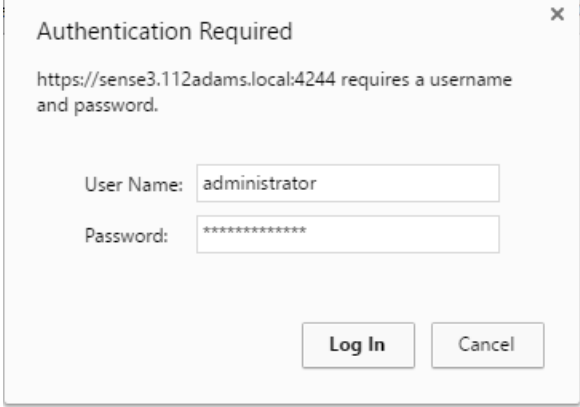
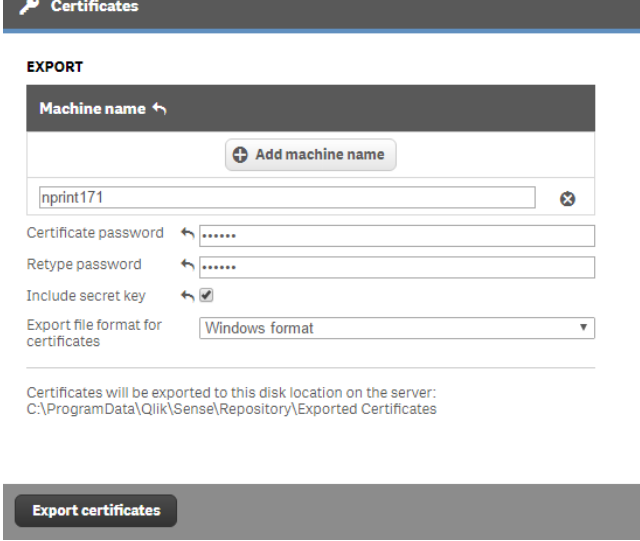
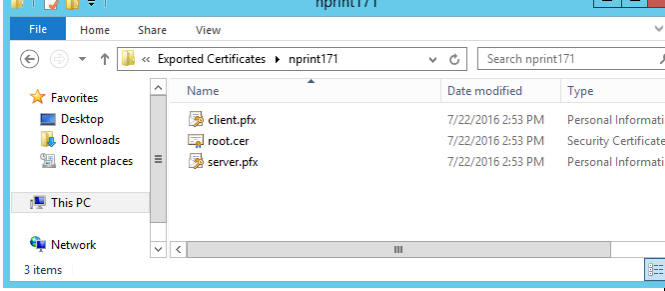


When the installation completes, the completion window appears. Click the Finish button to exit the installer.



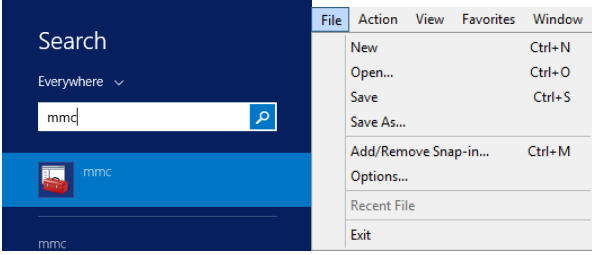
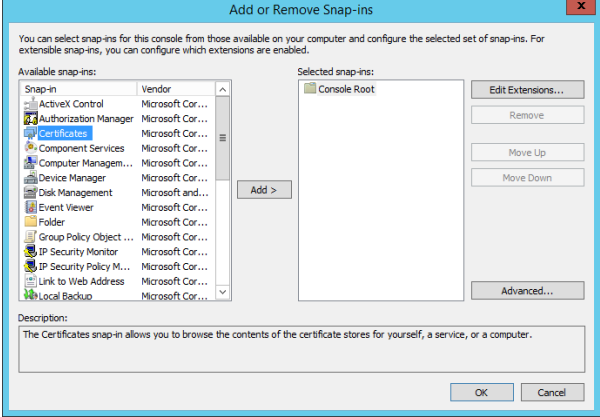
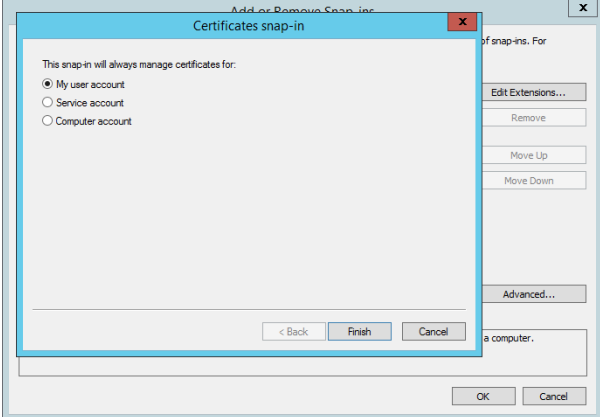


## Exporting Qlik Sense Certificates for use with NPrinting

<p>Navigate to the Qlik Sense server NPrinting will access and log into the QMC with the rootadmin account.</p>	 <p>The dialog box is titled "Authentication Required" and shows the URL "https://sense3.112adams.local:4244 requires a username and password." It contains two input fields: "User Name" with the value "administrator" and "Password" with masked characters "*****". There are "Log In" and "Cancel" buttons at the bottom.</p>
<p>Click on the Certificates menu option in the QMC.</p> <p>To create a certificate export:</p> <p>Click Add machine name and enter the name of the NPrinting Server or NPrinting Engine.</p> <p>Enter a password and re-enter the password for the certificates.</p> <p>Click on the Include secret key check box.</p> <p>Confirm the Windows format export file format for certificates.</p> <p>Click the Export certificates button.</p>	 <p>The interface shows the "Certificates" section with an "EXPORT" button. Below it, there's a "Machine name" field with a dropdown arrow and an "Add machine name" button. The "Machine name" field contains "nprint171". There are fields for "Certificate password" and "Retype password", both with masked characters. An "Include secret key" checkbox is checked. The "Export file format for certificates" dropdown is set to "Windows format". A note at the bottom states: "Certificates will be exported to this disk location on the server: C:\ProgramData\Qlik\Sense\Repository\Exported Certificates". An "Export certificates" button is at the bottom.</p>
<p>Remote desktop to the Qlik Sense server.</p> <p>Navigate to the %programdata%\Qlik\Sense\Repository\Exported Certificates folder. Look for a folder that is the same as the machine name entered in the certificate export tool in the QMC.</p> <p>Copy this folder to the NPrinting server.</p>	 <p>The File Explorer window shows the path "Exported Certificates &gt; nprint171". It contains three files: "client.pfx" (Personal Information System), "root.cer" (Security Certificate), and "server.pfx" (Personal Information System). All files were modified on 7/22/2016 at 2:53 PM.</p>

## Import Qlik Sense Certificates on NPrinting Server and NPrinting Engine

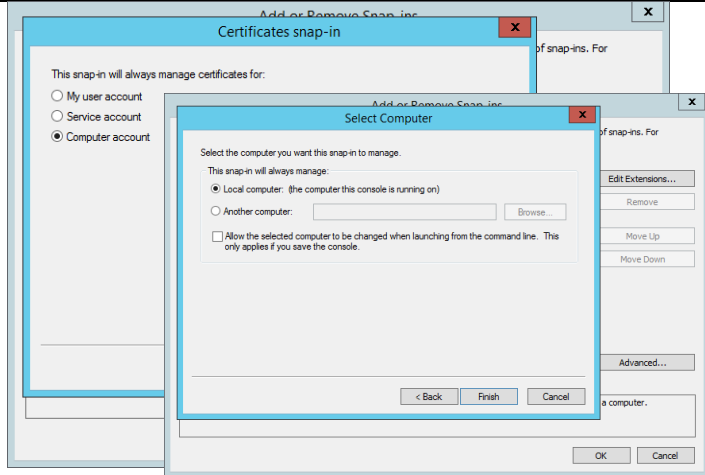
### Importing the QlikClient certificate for the NPrinting Service Account

<p>Remote desktop to the NPrinting Server. Login in with the NPrinting service account credentials.</p> <p>Copy the exported certificate files mentioned in the Exporting Qlik Sense Certificates for use with NPrinting section of this document to the NPrinting Server.</p>	
<p>Click the Start button and search for mmc and click on MMC.</p> <p>Go to File and select Add/Remove Snap-in...</p>	
<p>Select Certificates and click the Add button.</p>	
<p>Select the My user account radio button and choose Finish.</p>	

Highlight Certificates again in the Snap-in manager and click Add.

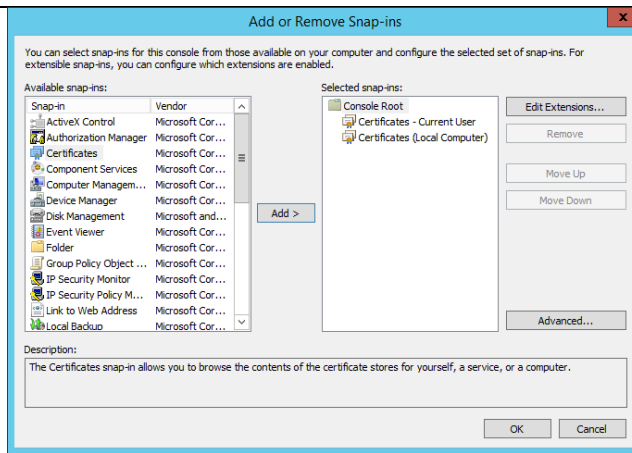
Select the Computer account radio button and click the Next button.

In the Select Computer window select the Local computer radio button and click the Finish button.



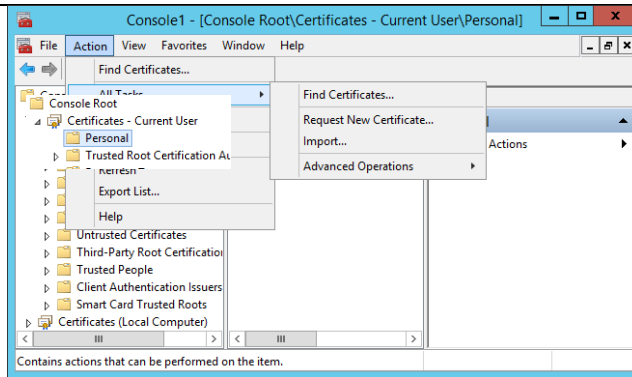
Confirm the Certificates snap-ins for Current User and Local Computer are on the right side list box.

Click the OK button to continue.

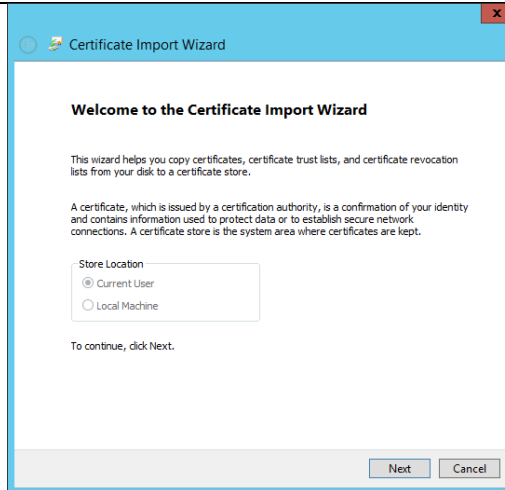


In the MMC console, navigate to Certificates – Current User \ Personal

Click on the Action menu and select All Tasks/Import...



The Certificate Import Wizard appears.  
Click the Next button.



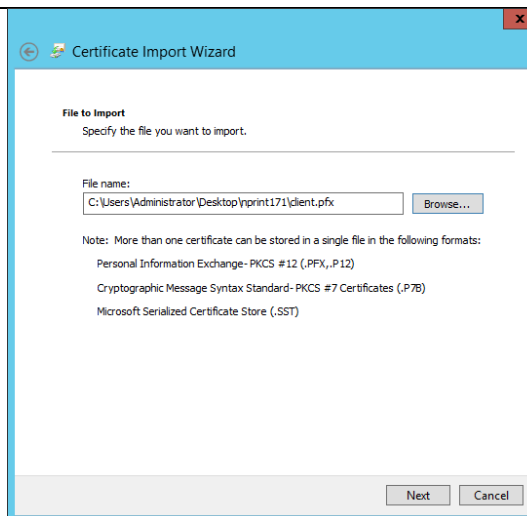
Click the Browse... button and navigate to the path where the certificate files were placed earlier.

Locate the client.pfx file and click OK.



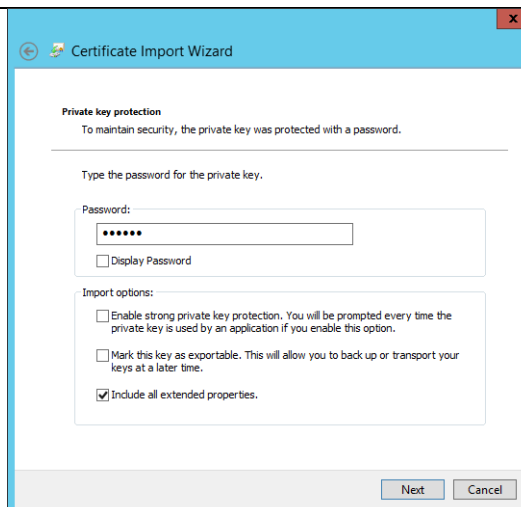
You may have to change the file extension to search for in the Browse... window to \*.pfx to find the client certificate.

Click the Next button.



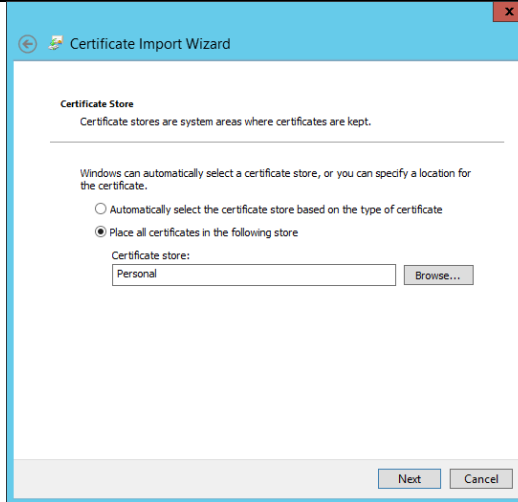
Enter the password supplied during the certificate export process. Make sure the first two check boxes are not selected and the third check box is selected.

Click the Next button.

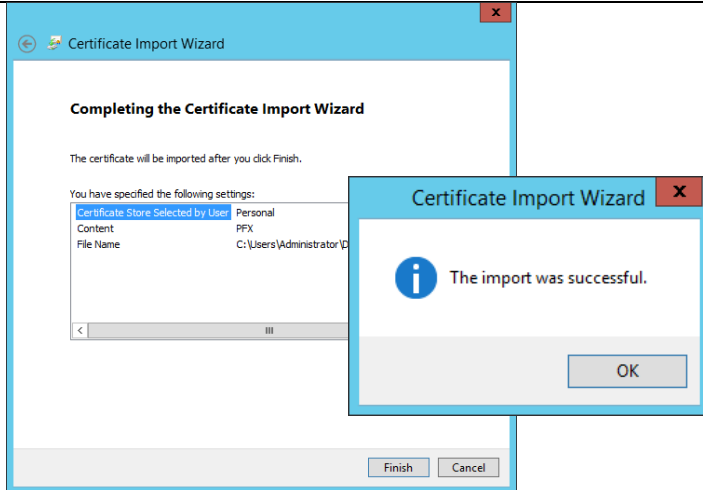


Confirm the destination certificate store for the client certificate.

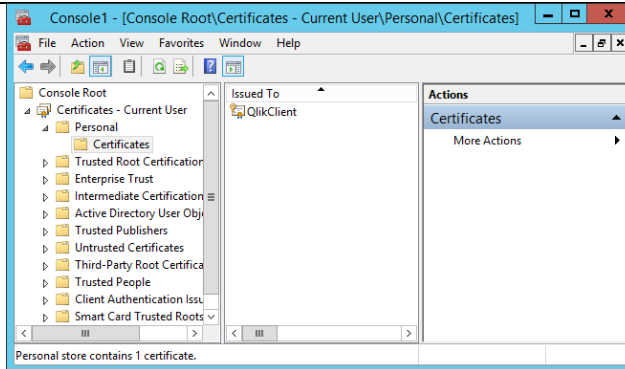
Click the Next button.



Click the Finish button. Once imported, click the OK button to confirm successful certificate import.



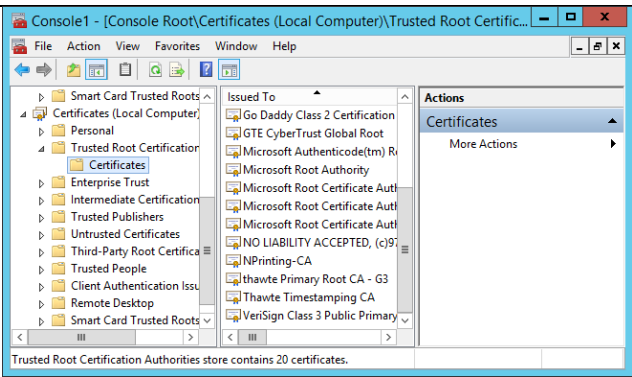
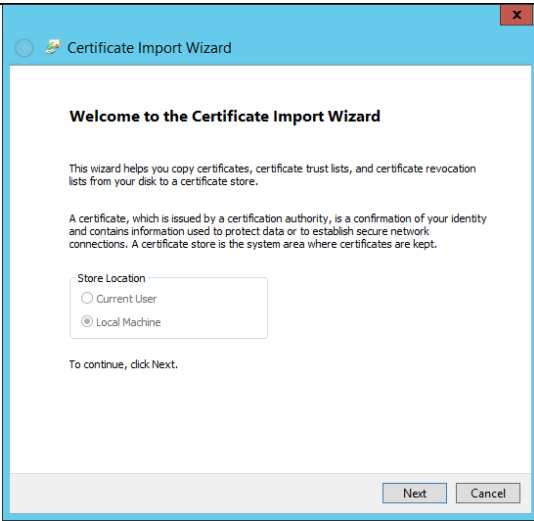
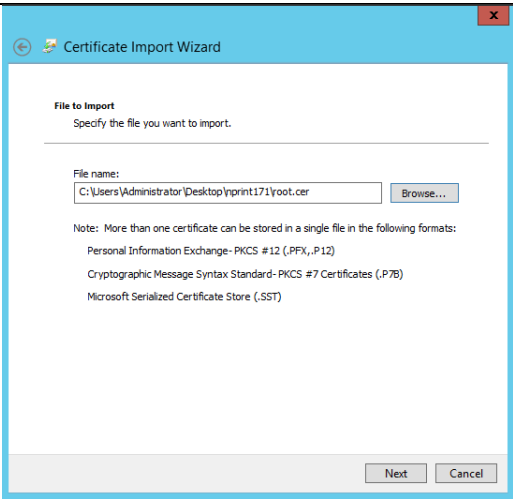
After importing the client certificate, you will see the QlikClient certificate appear in the Current User \ Personal \ Certificates store.



## Importing the root certificate from the Qlik Sense server

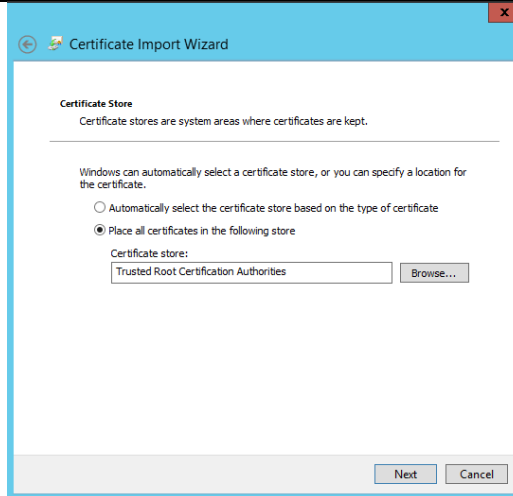


Importing the root certificate is necessary if NPrinting Server and Engine are installed on a separate server than Qlik Sense server.

<p>Navigate to the Certificates (Local Computer) section in the MMC and expand. Expand the Trusted Root Certification Authorities folder and click on the Certificates subfolder.</p> <p>Click on the Action menu and select All Task / Import...</p>	
<p>The Certificate Import Wizard appears. Click the Next button.</p>	
<p>Click the Browse... button and navigate to the path where the certificate files were placed earlier.</p> <p>Select the root.cer file and click OK.</p> <p>Click the Next button.</p>	

Confirm the certificate will be installed in the Trusted Root Certification Authorities certificate store.

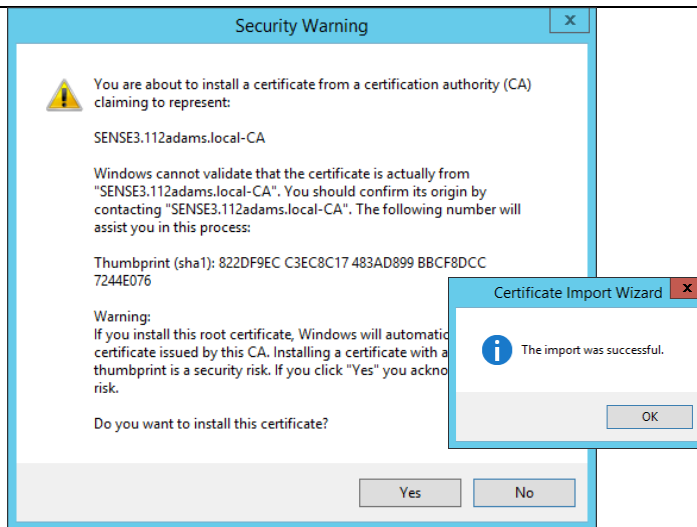
Click the Next button to continue.



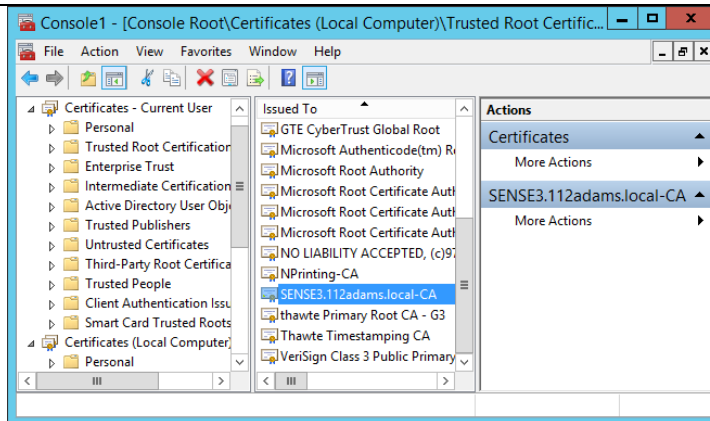
When installing a self-signed root certificate, a security warning **may** appear. If it does, Windows is unable to validate the certificate authority that created the Qlik Sense certificate. This is ok.

Click the Yes button when presented with this message.

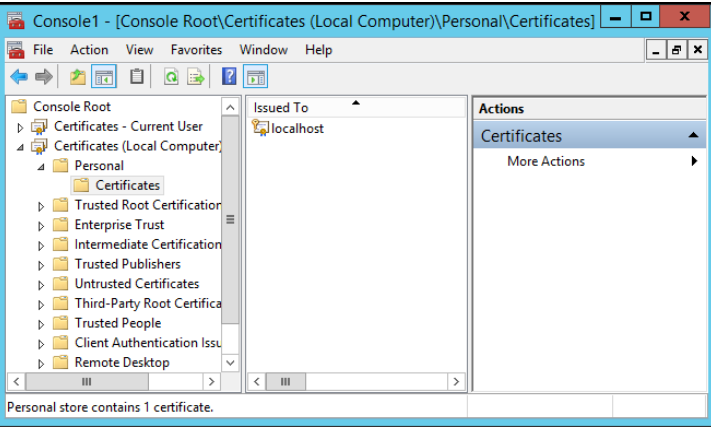
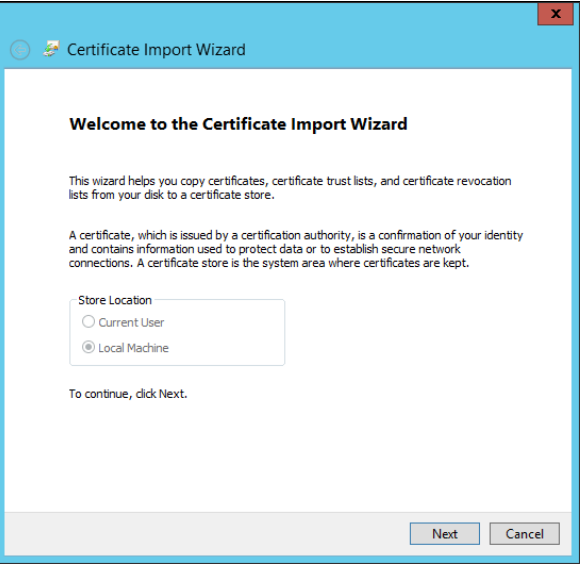
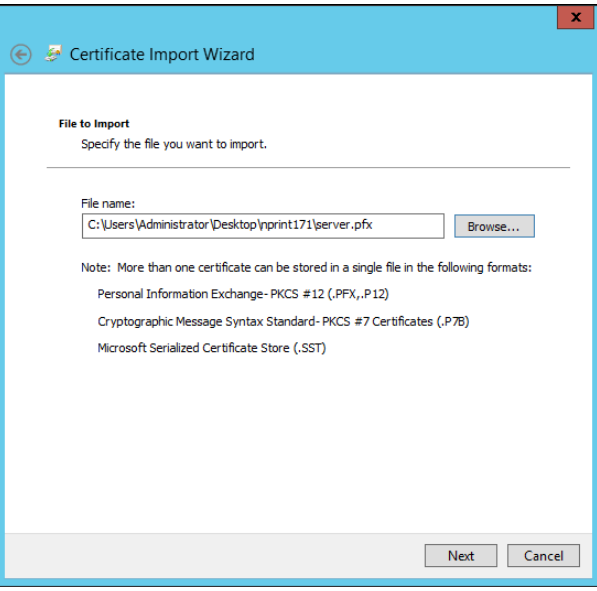
Click OK when the success message appears.



Observe the Qlik Sense generated root certificate for the Qlik Sense server appears in the Certificates (Local Computer) \ Trusted Root Certification Authorities certificate store.



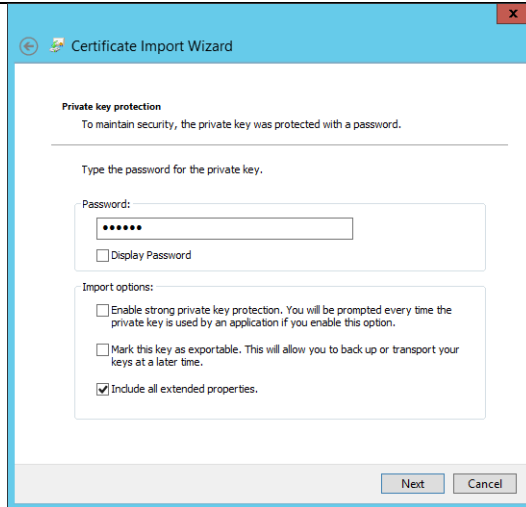
## Importing the server certificate for the NPrinting Server and Engine.

<p>Click on the Personal folder in the Certificates (Local Computer) certificate entry in the MMC.</p> <p>Select the Action menu and click on All Tasks / Import...</p>	
<p>The Certificate Import Wizard appears. Click the Next button.</p>	
<p>Click the Browse... button and navigate to the path where the certificate files were placed earlier.</p> <p>Locate the server.pfx file and click OK.</p> <p><b>Tip!</b> You may have to change the file extension to search for in the Browse... window to *.pfx to find the client certificate.</p> <p>Click the Next button.</p>	



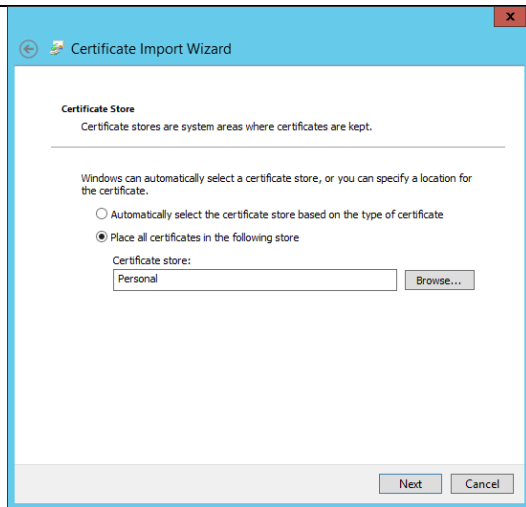
Enter the password supplied during the certificate export process. Make sure the first two check boxes are not selected and the third check box is selected.

Click the Next button.

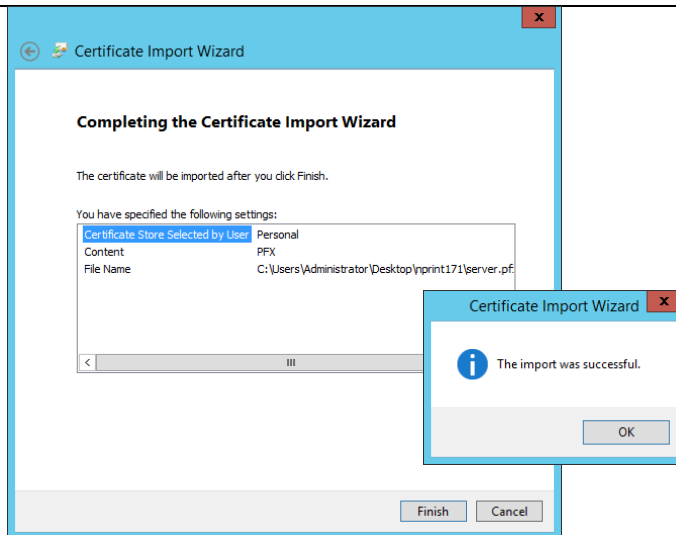


Confirm the destination certificate store for the client certificate.

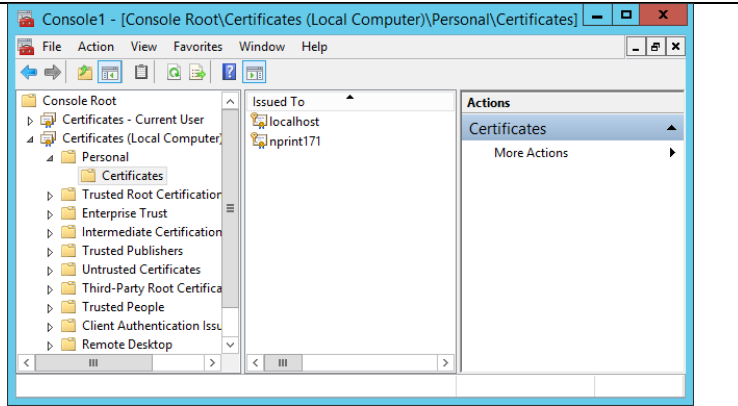
Click the Next button.



Click the Finish button. Once imported, click the OK button to confirm successful certificate import.

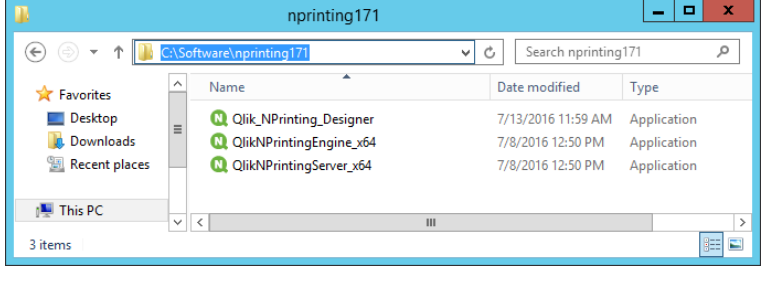
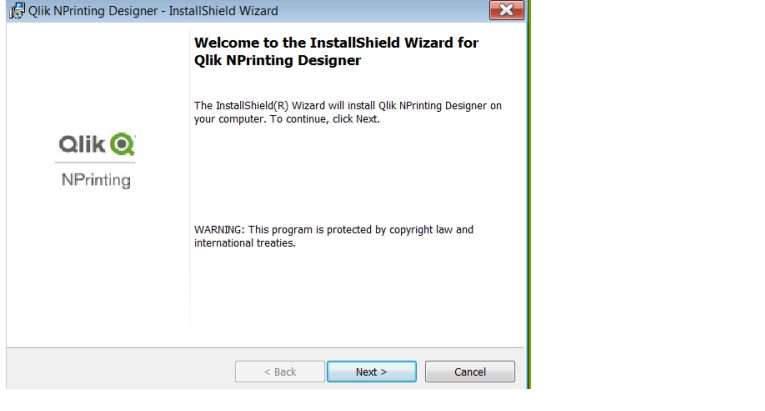
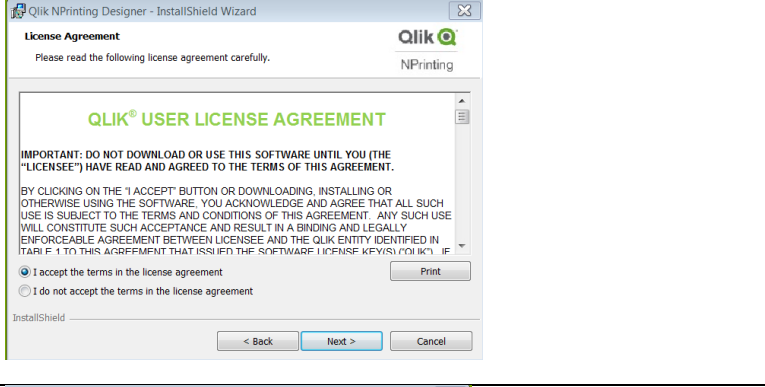
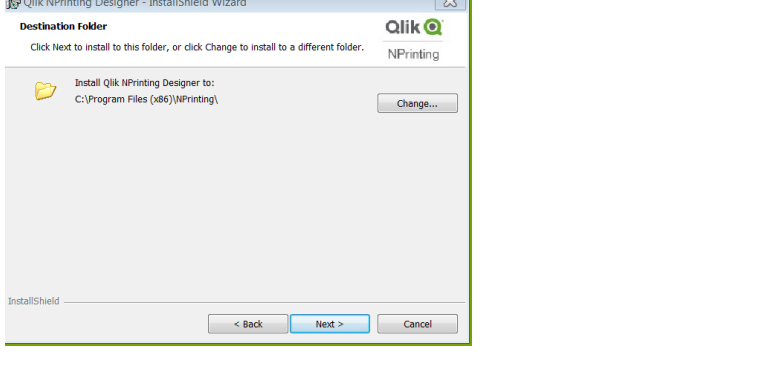


Observe the server certificate with the named entered during the export process appears in the Certificates (Local Computer)\Personal\Certificates certificate store.

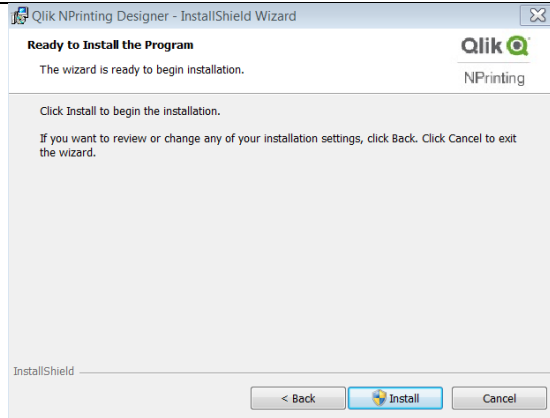


## Install NPrinting Designer

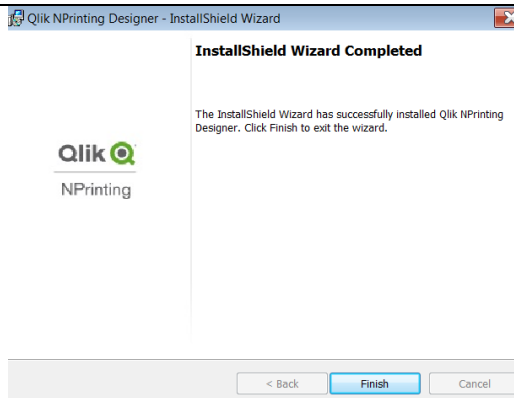
NPrinting Designer is used to create NPrinting report templates. NPrinting Designer is installed typically on a desktop system for report development. However, it does not launch like a conventional desktop application. NPrinting Designer launches from NPrinting's web interface.

<p>Navigate to the location where NPrinting installation files reside.</p> <p>Double click on Qlik_NPrinting_Designer.exe.</p>	
<p>Click Next</p>	
<p>Accept the terms of the license agreement and click next</p>	
<p>Click Next</p>	

Click Install



Click Finish to complete installation



# NPrinting Post Install Configuration

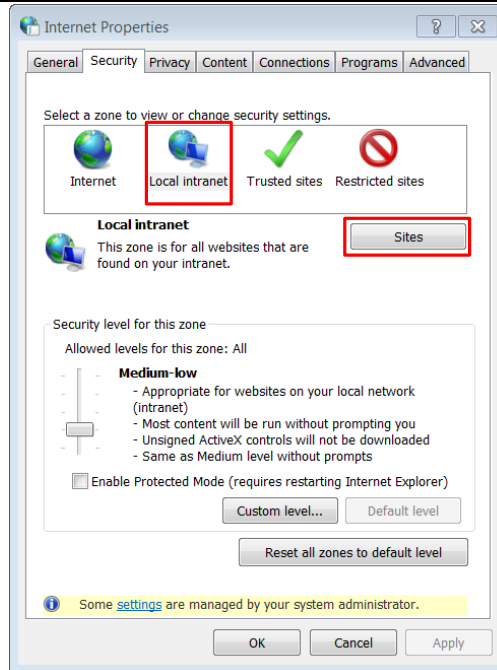
## Configure Internet Options



There is an issue with rendering Qlik Sense images in reports where Sense prompts for username and password thus breaking the NPrinting rendering engine. The following modifications are required on the system on which NPrinting Designer is installed to ensure proper image rendering.

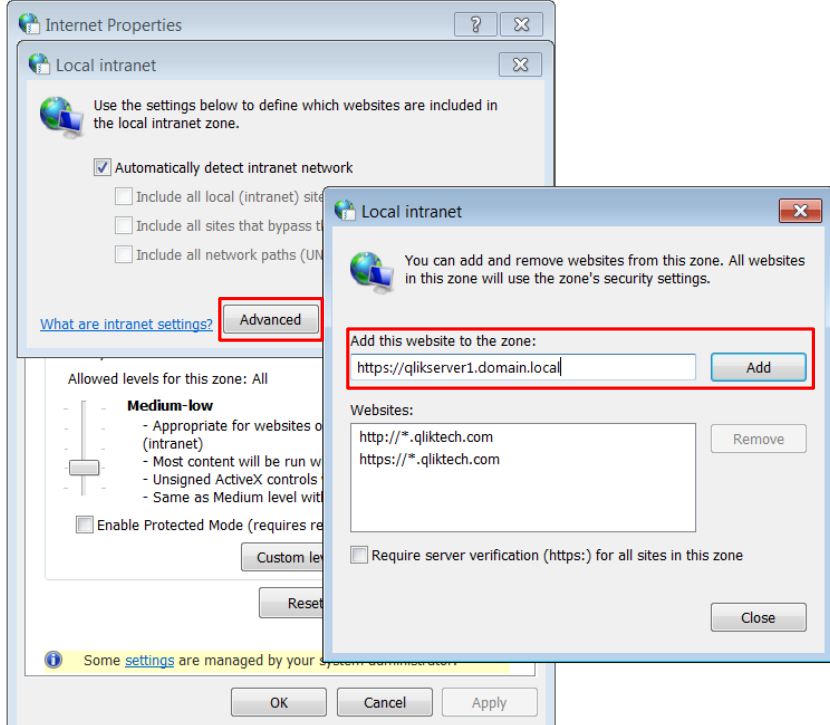
Open Internet Options from the Network and Sharing Center in the Control Panel.

Click on the Security tab, then click Local Intranet and then click the Sites button.

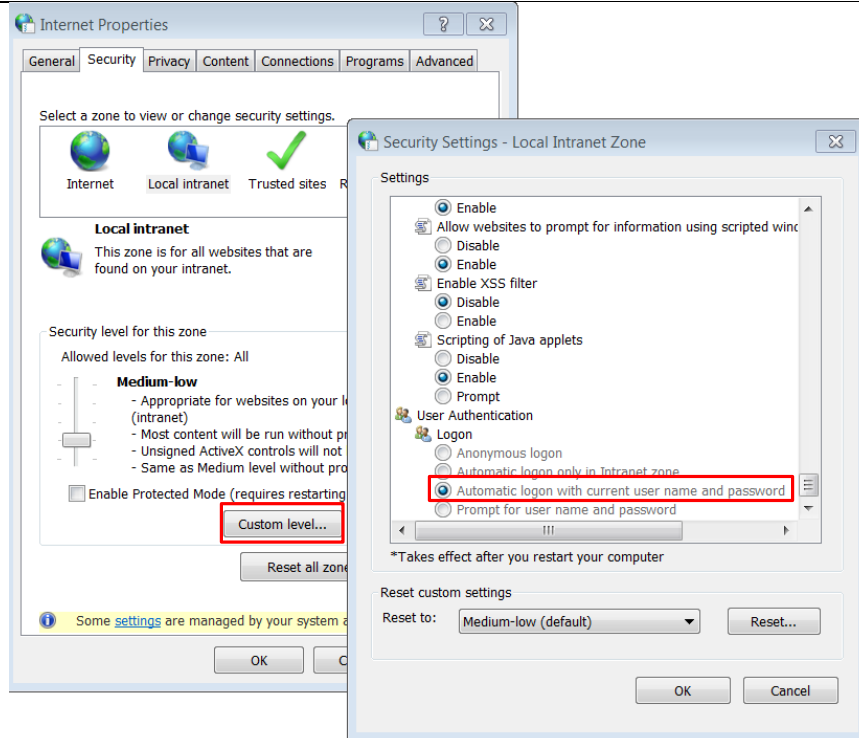


Then click Advanced and add https://myNPrintingserverfull name.domain (for example, https://qlikserver1.domain.local).

Click Add, then OK, then Close to get back to the Internet Properties.



Once back on the Security tab, click on Custom level and make sure that "Automatic logon with current user name and password" is selected



## Login for the First Time and Activate NPrinting

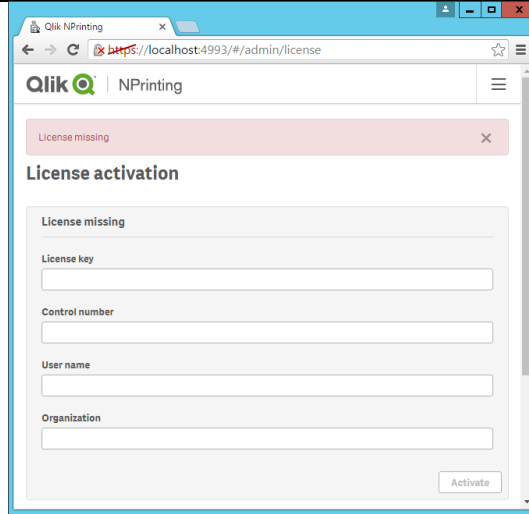
You use NPrinting Designer and view reports in the Newsstand in the browser.



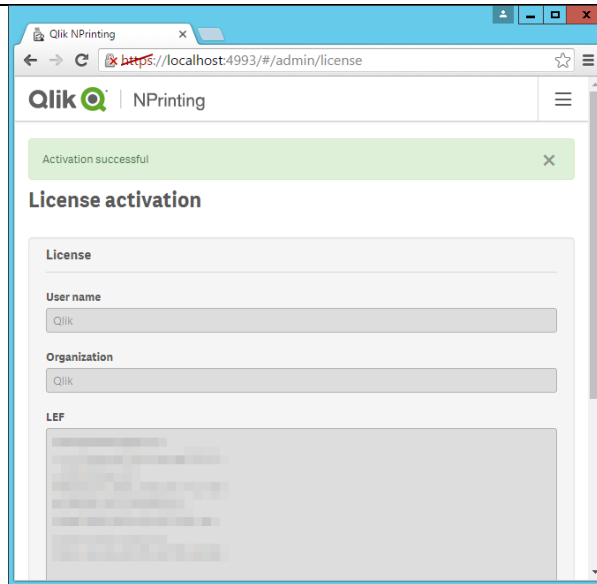
Typically, yourservername will be "localhost".

<p>Log into NPrinting 17 at the following url:</p>	<p><a href="https://yourservername:4993">https://yourservername:4993</a></p>
<p>Access the NewsStand at:</p>	<p><a href="https://yourservername:4994">https://yourservername:4994</a></p>
<p>Enter the userid and password created when NPrinting Server was installed.</p>	
<p>Close the Getting Started window</p>	

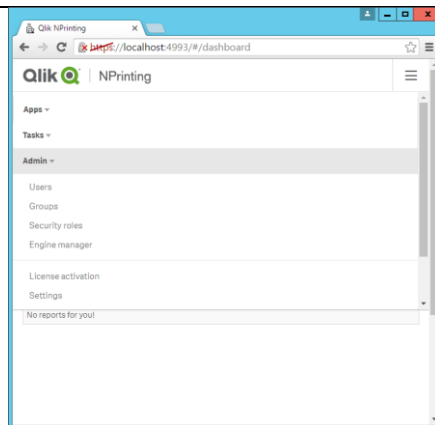
Activate NPrinting Server by inserting the license key and control number. Enter a user name and organization.



Once the product is activated, you can start to build out connections to Sense apps, reports and all the other objects you'll need to deliver reports.

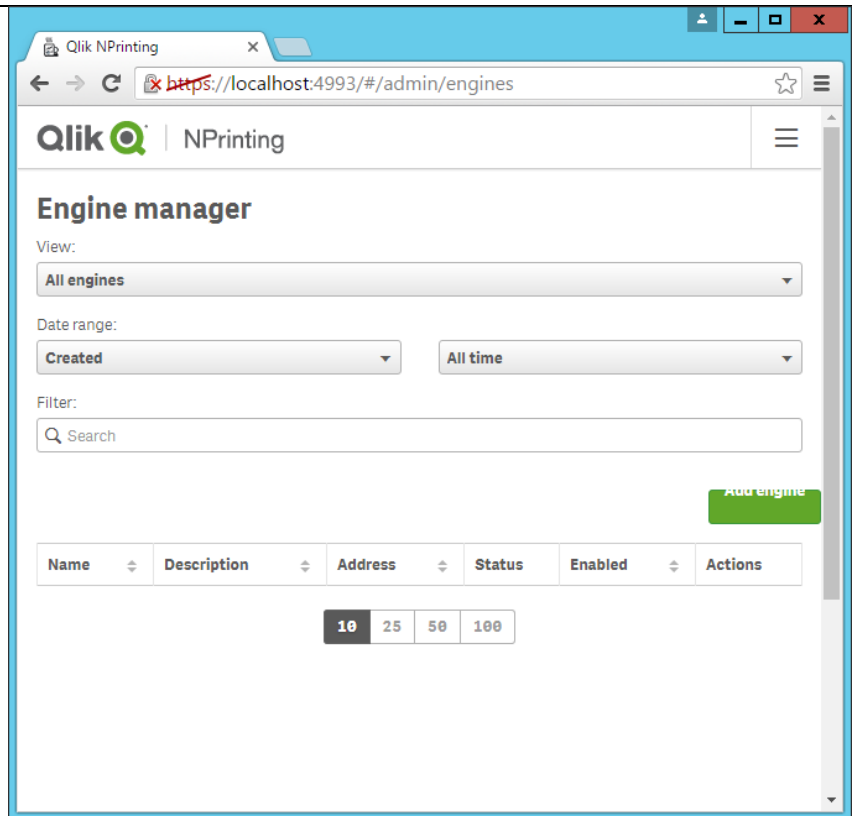


The next step is to activate the NPrinting Engine. To do this, navigate to the Admin area.

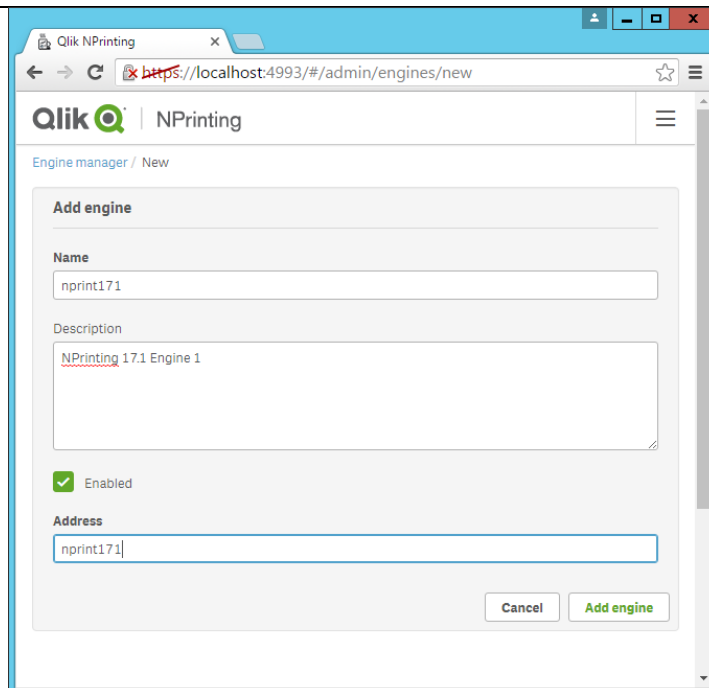




Select: Admin>Engine Manager and click “Add engine”.

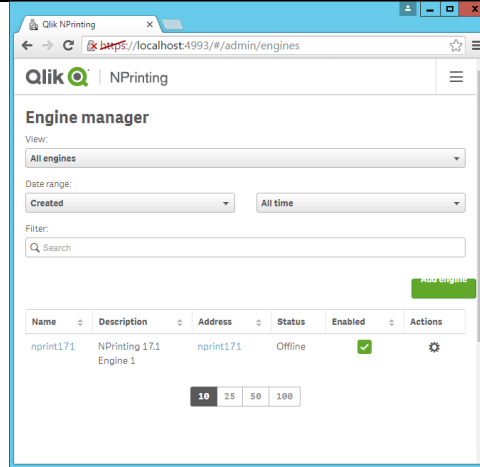


Give the engine any name you like and insert the machine name into the “Address” dialog box.

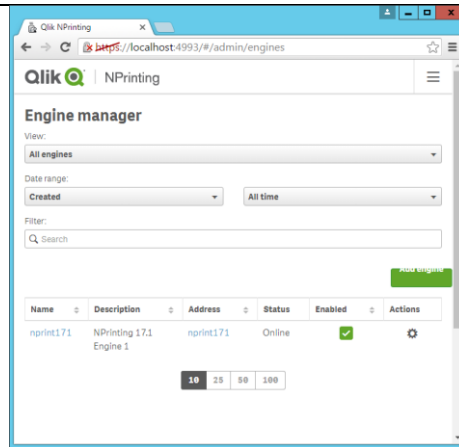


The engine will appear to be “Offline” for up to 5 minutes – this is normal.

The screen will update automatically when the engine becomes online or you can press F5 to refresh the browser.



Once the engine is online, you can start to connect to Qlik Sense and QlikView apps and start developing NPrinting reports.



## Connecting to a Sense app in Qlik NPrinting

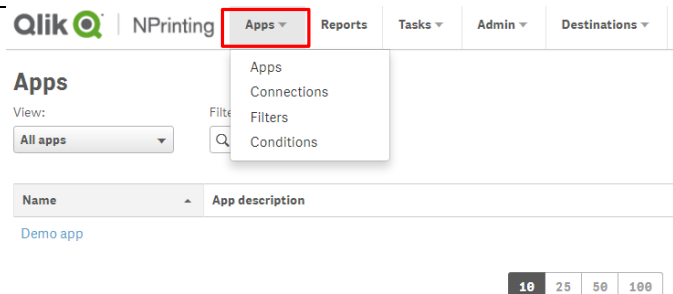
To connect to a Sense app in Qlik NPrinting, you need to create an NPrinting app, specify the user who will create the connection, and define the Qlik Sense Hub as a destination in NPrinting.

### Create an app in Qlik NPrinting

An NPrinting app is a collection of connections (QVWs/QVFs used for source data), filters, conditions, reports, and tasks.

You will need to create an NPrinting app before you can do anything else.

Click on Apps from the Apps drop-down menu in the ribbon



Click the Create app button

Qlik NPrinting

### Apps

View: All apps Filter: Search

**Create app**

Name	App description	Enabled	Actions
Demo app		<input checked="" type="checkbox"/>	

10 25 50 100

Give your app a name and description, if desired, and click Create.

You are now able to create a connection to a QlikView or Qlik Sense document.

Qlik NPrinting

Apps / New

### Create app

Name: Demo app

Description: [Text Area]

Enabled

Cancel **Create**

## Connections to Sense

Click on Connections from the Apps drop-down menu in the ribbon

Qlik NPrinting

Apps Reports Tasks Admin Destinations

### Apps

View: All apps Filter: Search

**Connections**

Name	App description
Demo app	

10 25 50 100

Click the Create connection button

Qlik NPrinting

### Connections

View: All connections App: All Filter: Search

**Create connection**

Name	Connection description	App	Connection status	Cache status	Last cache update	Actions
Sales Demo		Demo app	Ok	Generated	July 19, 2016 12:05 PM	
Test App (Sense)		Demo app	Ok	Generated	July 19, 2016 12:25 PM	

10 25 50 100

Give the connection a name and description, if desired.

In the app field, choose the Qlik NPrinting app with which to associate the connection from the drop-down menu.

Click the QlikSense button as the source.

The proxy address is the address of the Sense server. The address to use for the Qlik Proxy is the Qlik Sense hostname. The Qlik Sense hostname may be found in the QMC under the Nodes menu option. Click on the Nodes menu and make note the hostname for the proxy.

Proxy address

Nodes Total: 1 Showing: 1 Selected: 1		
Name	Host name	Status
Central	masterlib.112adams.local	5 of 5 services are running

The Sense app ID is located in the Qlik Sense QMC under the Apps section.

**Tip!** To see the ID column in the app list, add the ID in the Column Selector in the QMC.

Sense app ID

Apps Total: 3 Showing: 3 Selected: 0						
Name	Owner	Published	Migration status	Stream	ID	
TestApp1	qlikservice (WINDOWS2012\qlikservice)		Successful		9aa5bc24-ea9c-4088-8ed9-d4fd33b73a3d	
Operations Monitor	sa_repository (INTERNAL\sa_repository)	2016-06-13 20:55	Successful	Monitoring apps	93893bef-5020-41c8-8ae6-0b6a8d958d80	
License Monitor	sa_repository (INTERNAL\sa_repository)	2016-06-13 20:54	Successful	Monitoring apps	95bbe893-424d-4421-a971-49aaa6468d1c	

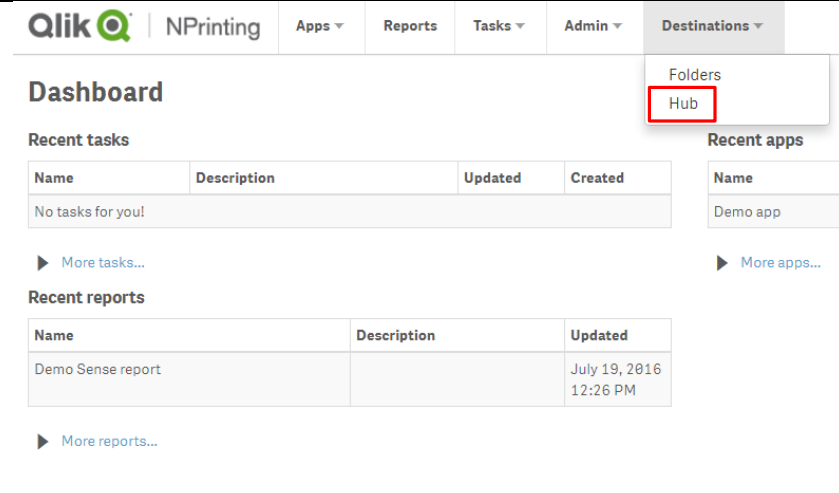
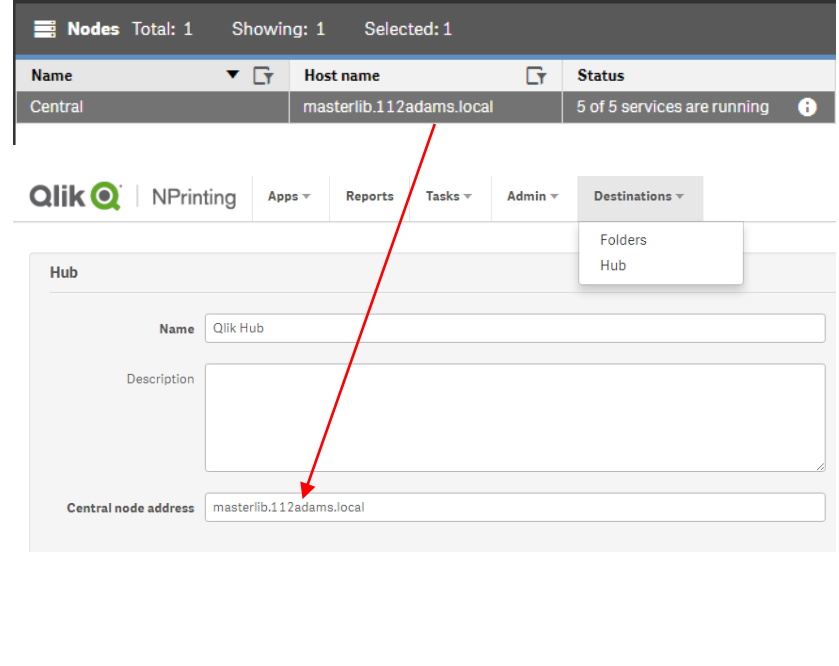
<p>The <b>identity</b> is the Windows domain account of the user creating the connection to the Sense app.</p> <p>Apps may be unpublished (in the user's Work stream) or published in the Everyone stream.</p>	 <p>For the user to access apps published on their own “Work” stream, they must have a Sense token allocated to them in the Qlik Sense QMC.</p> <p><b>A token is not needed for public apps that are published under the “Everyone” stream.</b> In either case, the identity field must be populated in order to create the connection.</p>																												
<p>Click the Create button in the lower right-hand corner.</p> <p>This will take you back to the Connections page where the cache status for your new connection will show as 'Generating'.</p> <p>This will automatically be updated when the cache is generated, or you can press F5 to refresh the page. Once the cache has been generated, you can author reports.</p> <p>Cache generation may take several minutes and will depend on the size of the app and the number of objects in the app.</p>	 <p><b>Qlik</b>   NPrinting</p> <p><b>Connections</b></p> <p>View: All connections   App: All   Filter: Search   Create connection</p> <table border="1"> <thead> <tr> <th>Name</th> <th>Connection description</th> <th>App</th> <th>Connection status</th> <th>Cache status</th> <th>Last cache update</th> <th>Actions</th> </tr> </thead> <tbody> <tr> <td>Sales Demo</td> <td></td> <td>Demo app</td> <td>Ok</td> <td>Generated</td> <td>July 19, 2016 12:05 PM</td> <td>⚙️</td> </tr> <tr> <td>Test App (Sense)</td> <td></td> <td>Demo app</td> <td>Ok</td> <td>Generated</td> <td>July 19, 2016 12:25 PM</td> <td>⚙️</td> </tr> <tr> <td>Demo Sense App</td> <td></td> <td>Demo app</td> <td>-</td> <td>Generating</td> <td>-</td> <td>⚙️</td> </tr> </tbody> </table> <p>10   25   50   100</p> <p> Complexity of structure and amount of data greatly affect the metadata loading of NPrinting. After that, the amount of data is still a small bottleneck for Sense, although it's highly optimized for it.</p> <p>Additional information on connections can be found here:  <a href="http://help.qlik.com/en-US/nprinting/17.1/Content/GettingStarted/HowCreateConnections/Create-Connections.htm">http://help.qlik.com/en-US/nprinting/17.1/Content/GettingStarted/HowCreateConnections/Create-Connections.htm</a></p> <p>This link also includes documentation on how to connect to QlikView documents.</p>	Name	Connection description	App	Connection status	Cache status	Last cache update	Actions	Sales Demo		Demo app	Ok	Generated	July 19, 2016 12:05 PM	⚙️	Test App (Sense)		Demo app	Ok	Generated	July 19, 2016 12:25 PM	⚙️	Demo Sense App		Demo app	-	Generating	-	⚙️
Name	Connection description	App	Connection status	Cache status	Last cache update	Actions																							
Sales Demo		Demo app	Ok	Generated	July 19, 2016 12:05 PM	⚙️																							
Test App (Sense)		Demo app	Ok	Generated	July 19, 2016 12:25 PM	⚙️																							
Demo Sense App		Demo app	-	Generating	-	⚙️																							

## Set up the hub as a destination

In addition to delivery via e-mail, save-to-disk and the NPrinting Newsstand, Qlik NPrinting 17.1 also offers the possibility to send reports to the Qlik Sense 3.0 Hub. These reports can contain either QlikView or Qlik Sense data.



Users accessing the hub to download reports do **not** need a token allocated to them.

<p>To enable the Hub as a destination for reports, click on Hub from the Destinations drop-down in the ribbon.</p>	
<p>Name the Hub as you desire and use the central node hostname for the hub destination address. This can be found in the QMC.</p> <p>Note that you do <b>not</b> need to include https:// for the central node address in NPrinting.</p> <p>Additional information can be found here: <a href="http://help.qlik.com/en-US/nprinting/17.1/Content/AdministeringQVNprinting/SetHubDestination/Hub-destination.htm">http://help.qlik.com/en-US/nprinting/17.1/Content/AdministeringQVNprinting/SetHubDestination/Hub-destination.htm</a></p>	

## Authoring and previewing reports

### Report content



#### Qlik Sense objects which are/are not supported

- Reports can include:
  - Charts
  - Tables
  - Formulas
  - Variables
- Reports do **not** include:
  - Sheets
  - Extension objects
  - Stories

### Create a report

Click on Reports in the ribbon and then click the Create report button

The screenshot shows the 'Reports' overview page in Qlik NPrinting. At the top, there are filters for View (All reports), Type (All), Date range (Created), and Filter (All time). A search bar and a 'Create report' button are also visible. Below the filters is a table with columns: Name, Type, Report description, App, Enabled, and Actions. The table contains one entry: 'Demo Sense report' (PowerPoint) associated with 'Demo app', which is enabled. A pagination bar at the bottom shows '10' selected, with options for 25, 50, and 100 items.

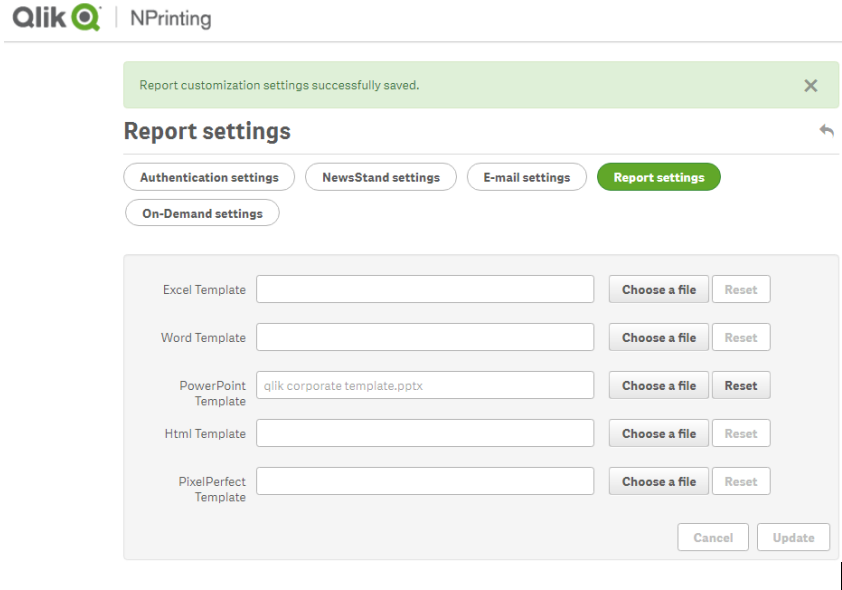
Give your report a name and description, if desired. Choose the format type and the Qlik NPrinting app with which the report will be associated.

Then select from empty file, default template or custom file. Then click the Create button in the lower right-hand corner.

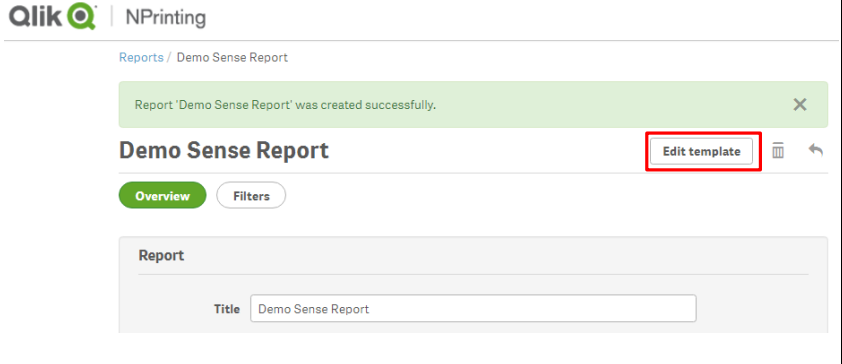
The screenshot shows the 'Create report' form in Qlik NPrinting. The form has the following fields and options:

- Title:** Demo Sense Report
- Description:** A large text area for entering a description.
- Type:** PowerPoint
- App:** Demo app
- Template:** Radio buttons for 'Empty file', 'Default template: qlik corporate template.pptx' (selected), and 'Custom'. A 'Choose a file' button is next to the 'Custom' option.
- Enabled:** A checked checkbox.

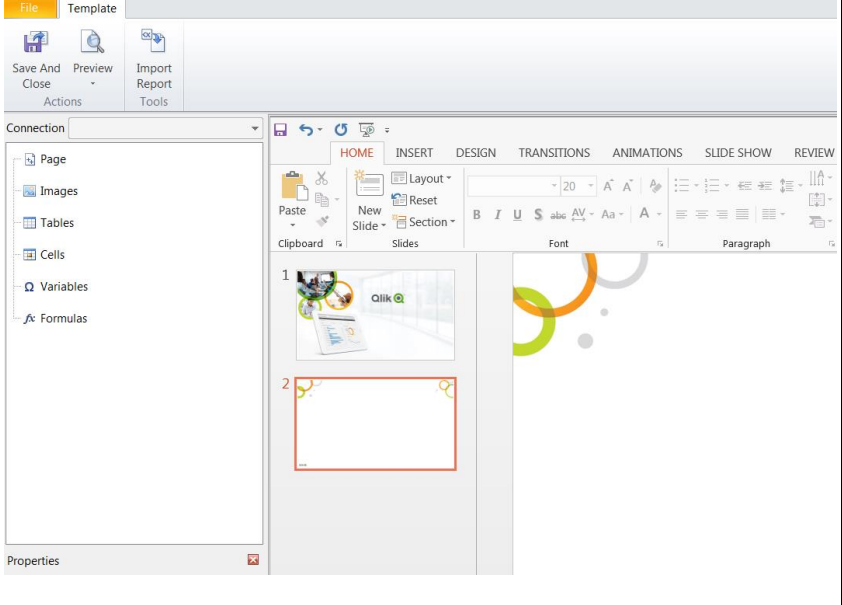
**Tip!** If you want to pre-load a default template to include things like logos and design, this can be done from the Admin section in the ribbon → Settings → Report settings.



Once the report is created, click on the Edit template button to launch Qlik NPrinting Designer. You will be prompted to enter credentials if this is your first time running the Designer.



In the left panel, you can choose from images, tables, cells, variables and formulas to populate the report template.

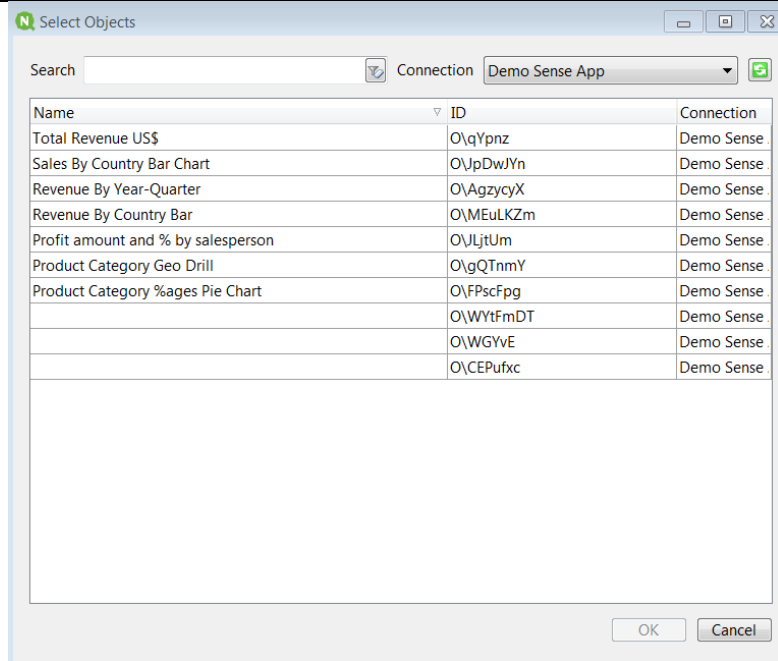




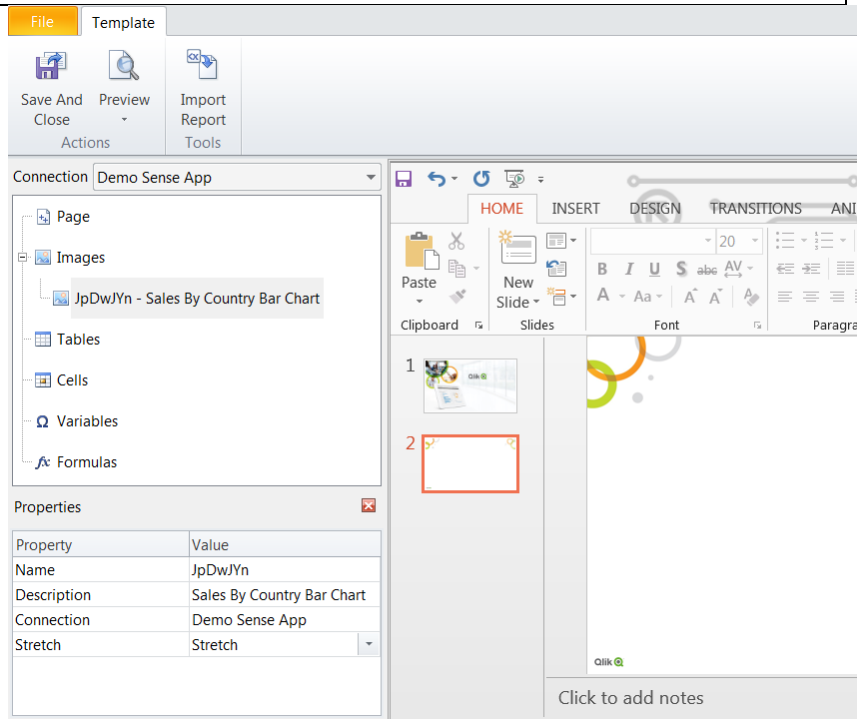
For this example, right-click on images and click on Add objects. The object list from your connection will appear.

**Tip!** The object IDs are not very useful for Qlik Sense as compared to objects from QlikView (which can easily be identified from the object properties). Instead you will have to rely on the Name which is represented by the title of the object in Qlik Sense.

Qlik NPrinting should recognize the title of the object even if Show titles is set to 'Off' in Qlik Sense.

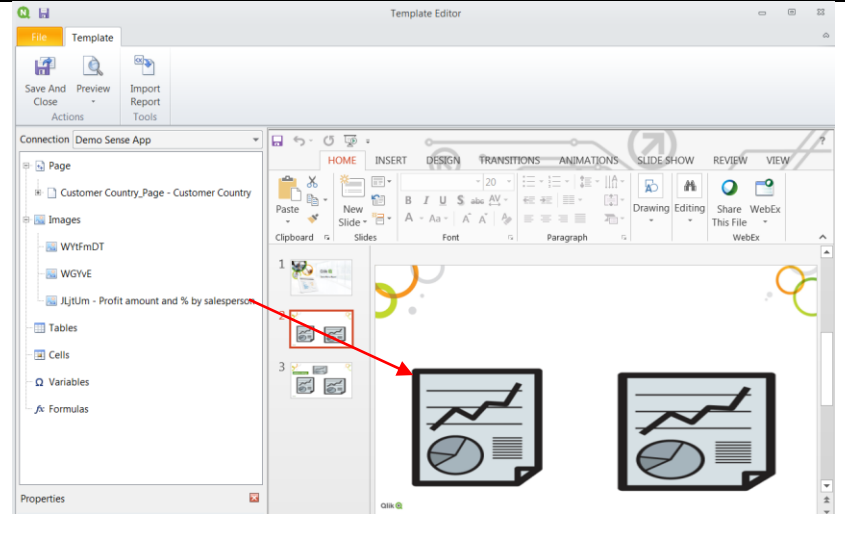


Select the object(s) you want to include in the report and click OK.



To add the object to the report, simply drag and drop the newly added object into the template in the desired location.

You can expand the image as needed inside the template editor by dragging the edges and resizing as you would any other object.



### Previewing reports



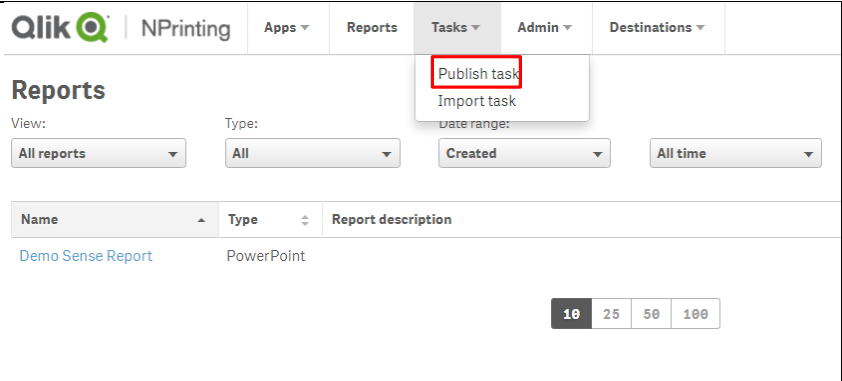
Reports from Qlik Sense will not preview as quickly as QlikView reports in NPrinting 16 due to the manner in which Sense renders images. An improvement to the overall process is currently being analyzed by both the NPrinting and Qlik Sense teams.

<p>When you preview a report from the template editor, the first connection takes several seconds to establish a connection to Sense for these reasons (see text at right):</p> <p>Subsequent previews (even for new reports) will render faster. This is specific to Sense reports, particularly those with images.</p>	<ul style="list-style-type: none"> <li>- A “handshaking” between NPrinting and QRS happens; Sense checks the validity of the Certificates chain.</li> <li>- The specific .NET SDK assemblies and their dependencies to connect to Sense are loaded by NPrinting (NPrinting supports different versions of Sense and loads version-specific DLLS)</li> <li>- NPrinting then connects to a valid Sense Engine (QES). The Sense Engine loads and caches some information about the app structure and some data.</li> <li>- The more complex the app structure is, the more time it takes to load.</li> <li>- The more data the app has, the more time it takes to load.</li> <li>- Subsequent connections are faster because both NPrinting and Sense have already loaded DLLs and cached some data.</li> </ul>
<p>For <b>QlikView</b> reports, “Local” connections will be faster than server connections for preview</p>	<p>This is not true of production where we are rendering hundreds of reports and the overhead in starting up the system is spread across all of these reports.</p>

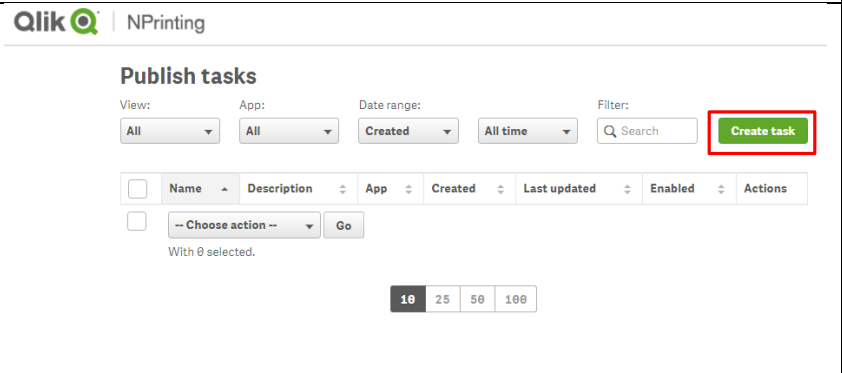
### Report Distribution

To distribute reports, you need to create a Publish Task in Qlik NPrinting.

Click on Publish task from the Tasks drop-down menu in the ribbon.



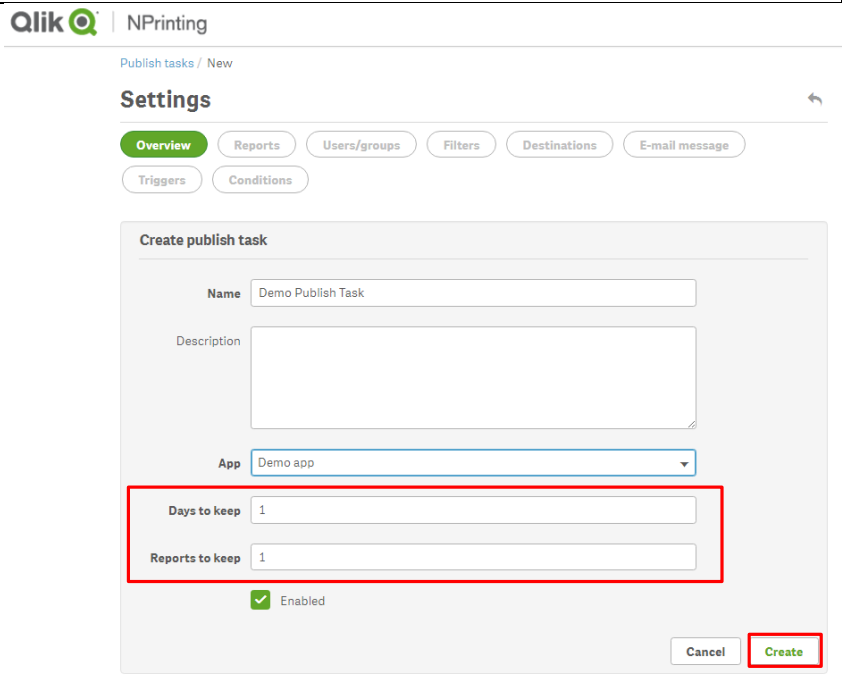
Then click the Create task button.  
Give the publish task a name and description, if desired. Choose the Qlik NPrinting app with which to associate the publish task.



It is possible to set both the number of days and the number of instances of a report to keep in the Newsstand and Hub “history” from an NPrinting publish task.  
All reports in a Task will saved for the same period of time and the specified number of instances

**Tip!** In case of conflict, the lesser number of reports will be saved; for instance if “Reports to keep” is set to 100, and the “Days to keep” is set to 1, if the Task has a daily trigger, then 1 instances of the report will be saved. The *effective* “Reports to keep” will be 1.

Once all parameters have been entered, click the Create button in the lower right-hand corner.





An admin cannot delete published reports in the Newsstand and Hub. What an admin can do is to configure the “reports to keep” and “days to keep” settings in the publish task in order to set up the correct reports lifetime.

These settings affect both Newsstand and Hub published reports. The purging batch runs every 10 seconds for Newsstand and every 8 hours for Hub.

Make sure that reports that you send to the Newsstand and Hub are the ones that you want displayed there. If you want test reports sent to either destination, create an additional user in NPrinting that you can use for these purposes. You will not have to allocate a token for additional users in Sense, as accessing the hub and downloading reports does not require a token.

As of the publish date of this document, history is not accessible from the Hub, only the Newsstand. Report history in the Hub will be part of a future release.

Next you will need to add a report(s) to the publish task. Click on the Reports button and then click the Add report button.

On the subsequent screen, select the report you want to add from the Choose report drop-down menu and edit the friendly name, if desired.



The friendly name is how reports will be displayed in the Newsstand and Hub. Any dynamic naming applied to the report will appear in the downloaded version of the report or to any reports sent via e-mail or saved to disk.

Select the desired output format.



The output formats available to you will

depend on the template type you are using.

For example, a PowerPoint template can be rendered as PPTX or PDF, while an Excel template can be rendered as XLSX, XLS, PDF, HTML or TIFF.

Finally, click the Add report button in the lower right-hand corner.

Next, select the user(s) to receive the reports in the publish task.

Click on Users/groups and then the Add user or group button.

Qlik NPrinting

Publish tasks / Demo Publish Task / Users/groups

### Users/groups

Overview Reports **Users/groups** Filters Destinations E-mail message

Triggers Conditions

**Add user or group**

<input type="checkbox"/>	Name	User description	Enabled	Actions
<input type="checkbox"/>				-- Choose action -- Go

With 0 selected.

10 25 50 100

Select the user or group from the Choose recipient drop-down menu and then click the Add recipient button in the lower right-hand corner.

Qlik NPrinting

Publish tasks / Demo Publish Task / Users/groups / New

Overview Reports **Users/groups** Filters Destinations E-mail message

Triggers Conditions

#### Add recipient

Choose recipient sjw

Enabled

NewsStand destination

E-mail destination

Cancel **Add recipient**

Select a destination(s) for report delivery. The default options available are Newsstand, E-mail and Hub.

**Tip!** If you want to include a folder(s), this will have to be configured in the Destinations section prior to creating the publish task.

Qlik NPrinting  
Publish tasks / Demo Publish Task / Destinations

**Destinations**

Overview Reports Users/groups Filters Destinations E-mail message  
Triggers Conditions

Recipients	NewsStand	E-mail	Hub	
	<input type="checkbox"/> Publish for all	<input type="checkbox"/> E-mail for all	<input type="checkbox"/> Upload for all	--Select folder-- Add
sjw	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Cancel Save

Create a trigger (schedule) for task execution. Click on Triggers and then click the Create trigger button.

Qlik NPrinting  
Publish tasks / Demo Publish Task / Triggers

**Triggers**

Overview Reports Users/groups Filters Destinations E-mail message  
Triggers Conditions

Create trigger

Name	Description	Next execution	Enabled	Actions

10 25 50 100

Give the trigger a name and description, if desired. The schedule types available as of the publish date of this document are one-shot, daily and weekly.

For recurring triggers, pick from the associated parameters as well as start date, time zone and end parameters. Once all information has been entered, click the Create button in the lower right-hand corner.

Qlik NPrinting  
Publish tasks / Demo Publish Task / Triggers / new

**New Trigger**

Overview Reports Users/groups Filters Destinations E-mail message  
Triggers Conditions

Create trigger for task Demo Publish Task Enabled Disabled

Name: New Trigger

Description:

Schedule

Schedule type: One-shot Daily Weekly

Time: 15:43

Start

Start date: 20/07/2016

Time zone: US/Eastern

Cancel Create

You can also manually run the task by clicking the Run now button which can be found in the publish task Overview section.

A message showing that the task was successfully scheduled for execution will appear.

When the publish task has run successfully, you will see the reports in the selected destinations.

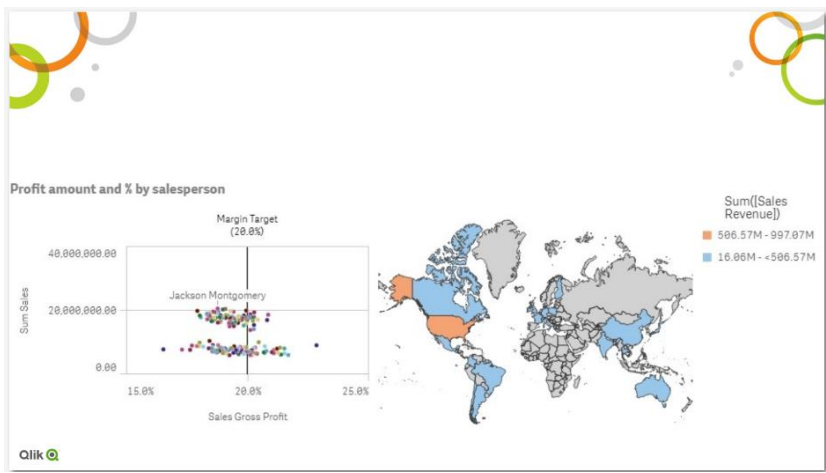


For the Hub, the **Reports** section will not be visible until it has been populated with at least one report.

From the Hub, only the most recent report can be download. Report preview and report history are on the development path.

From the Newsstand, the report can be previewed on the web without opening Office, a PDF reader or a web browser (for HTML reports). The report can also be downloaded and report history, dependent on the parameters initially established in the publish task, is also accessible.

Resulting sample report





## Additional Links

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### NPrinting videos

<http://help.qlik.com/en-US/nprinting/17.0/Content/Videos/Intro-Videos.htm>

<http://help.qlik.com/en-US/nprinting/17.1/Content/Videos/Intro-Videos.htm>

### NPrinting architecture

<http://help.qlik.com/en-US/nprinting/17.1/Content/DeployingQVNprinting/Architecture-sizing.htm>



The sizing estimates in the link above need updating. Benchmarking documents are being analyzed and more formal requirements will be released in the future.