



NPrinting Governance Dashboard v3 installation instructions

Prerequisites

To deploy the NPrinting Governance Dashboard, the following points are required:

1. Qlik Sense Enterprise and either NPrinting SBE or NPrinting Enterprise version installed
2. A user with admin access to the Qlik Management Console
3. Repository User login access (including password) to the NPrinting PostgreSQL repository

Configure NPrinting to accept remote connections from Qlik Sense

The NPrinting Governance Dashboard application uses a PostgreSQL ODBC connection to load metadata from the NPrinting PostgreSQL repository database. By default, the database allows only local connections from IP 127.0.0.1. Since supported installations of NPrinting require Qlik Sense to be remote, it is necessary to edit the PostgreSQL configuration files on the NPrinting server to allow remote connections. Detailed steps are included in the next section.

In addition, the NPrinting Server must allow inbound firewall access over port 4992 from the Qlik Sense Server, Qlik Sense Desktop, or, if using Qlik Cloud, the Qlik Sense Direct Access Gateway Server.

Configure the NPrinting PostgreSQL Repository Database to Accept Remote Connections

Unless NPrinting and Qlik Sense are installed on the same server, the NPrinting PostgreSQL repository must be configured to accept remote connections from the Qlik Sense Server or Qlik Sense Desktop computer.

If using Qlik Cloud, the NPrinting PostgreSQL repository must be configured to accept remote connections from the server running Qlik Data Access Gateway.

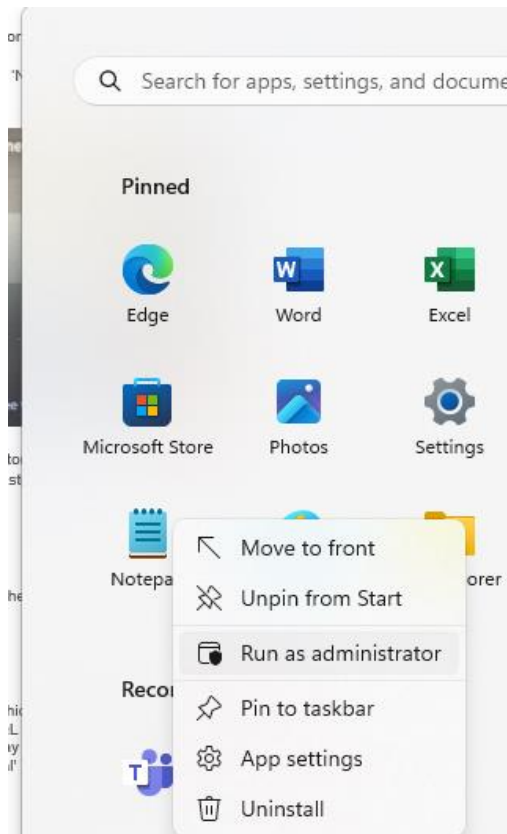
Steps:

1. Open a remote session to the NPrinting Server.

Note: In a NPrinting environment running multiple engines in the same site, remote into the NPrinting Server running the 'NPrinting Server' component.

2. Locate the file 'PostgreSQL.conf' and pg_hba.conf files in the C:\ProgramData\NPrinting\data folder
3. *****IMPORTANT** Backup both files (prior to making changes in the next steps)
4. Open 'Notepad' as the administrator:

From the start menu, right click on 'Notepad' and select 'Run as Administrator'



5. With Notepad open (as administrator), open the C:\ProgramData\NPrinting\data\postgresql.conf file

6. Find the line that contains:

`#listen_addresses='localhost'`

7. Uncomment the line by removing the leading '#' character so that it reads:

```
listen_addresses='*
```

Note: This configuration defines which NICs PostgreSQL will listen on. The recommended setting is *. This allows PostgreSQL to bind to any NICs presented to the server. Multiple comma-separated DNS entries may be added as well. (e.g. listen_addresses = 'localhost,QlikServer2.domain.local') More advanced configurations are possible here but will not be covered in this guide.

8. Save the file.

Note: if there is an error, go back to step #4 and ensure notepad was 'run as administrator'.

9. In the same notepad session, open the C:\ProgramData\NPrinting\data\pg_hba.conf file.
10. Locate the following line towards the bottom of the file:

```
#IPv4 local connections  
#IPv6 local connections
```

11. Under both IPv4 and IPv6 sections, insert a new line. The section should now which reads as follows:

(please do not copy/paste as special characters will may be included in the copy and it will invalidate the .conf file)

```
# IPv4 local connections:  
Host    all    all    127.0.0.1/32    md5  
Host    all    all    0.0.0.0/0       md5  
  
# IPv6 local connections:  
Host    all    all    ::1/128         md5  
Host    all    all    ::/0            md5
```

Note: In this configuration, the first new line specifies that all users can connect to all databases from any valid IPv4 address using MD5 authentication (host all all 0.0.0.0/0 md5). The second new line specifies the same but for IPv6 addresses.

For further details about restricting connections can be found here <https://www.postgresql.org/docs/10/auth-pg-hba-conf.html>

12. Save the file

13. Once this has been done, please go to the Windows Services of the NPrinting server and restart the QlikNPrintingRepoService.

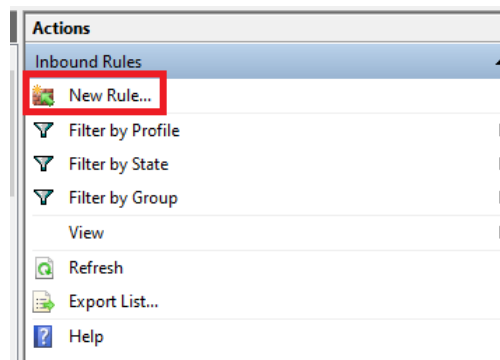
14.

Open firewall to allow inbound communication to the NPrinting Server over port 4992

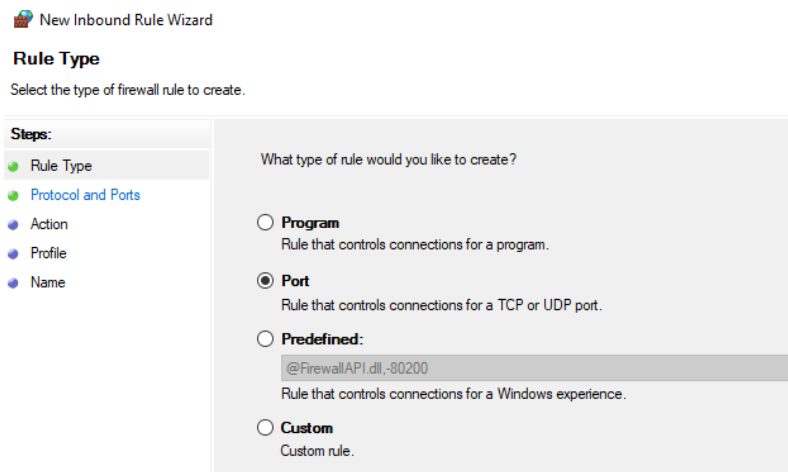
The NPrinting Server must allow inbound connections from the Qlik Sense server or the Qlik Data Gateway – Direct Access server. This typically means opening one or more firewalls for port 4992. The following covers steps to open the windows firewall on the NPrinting server for inbound communication over port 4992, but you may have other firewalls separating Qlik Sense from NPrinting. Please consult with your network team.

With Windows Defender Firewall follow these steps:

1. Launch Windows Defender Firewall on the NPrinting Server
2. On the right side, select 'New Rule'



3. Select 'Port' and then click 'Next'



- Select 'Specific Local Ports' and enter 4992. Then click 'Next'

Protocol and Ports

Specify the protocols and ports to which this rule applies.

Steps:

- Rule Type
- Protocol and Ports
- Action
- Profile
- Name

Does this rule apply to TCP or UDP?

TCP
 UDP

Does this rule apply to all local ports or specific local ports?

All local ports
 Specific local ports:
Example: 80, 443, 5000-5010

- Select 'Allow the Connection'

Action

Specify the action to be taken when a connection matches the conditions specified in the rule.

Steps:

- ▶ Rule Type
- ▶ Protocol and Ports
- ▶ Action
- ▶ Profile
- ▶ Name

What action should be taken when a connection matches the specified conditions?

Allow the connection
This includes connections that are protected with IPsec as well as those are not.

Allow the connection if it is secure
This includes only connections that have been authenticated by using IPsec. Connections will be secured using the settings in IPsec properties and rules in the Connection Security Rule node.

Block the connection

- You can check all boxes but typically only 'Domain' should be required as NPrinting is only supported in a domain configuration with Qlik Sense. Select all that apply and click 'Next'

Profile

Specify the profiles for which this rule applies.

Steps:

- Rule Type
- Protocol and Ports
- Action
- Profile
- Name

When does this rule apply?

Domain
Applies when a computer is connected to its corporate domain.

Private
Applies when a computer is connected to a private network location, such as a home or work place.

Public
Applies when a computer is connected to a public network location.

7. Provide a name for the rule and click 'Finish'

Ex: NPrinting Postgresql 4992 inbound

Name

Specify the name and description of this rule.

Steps:

- Rule Type
- Protocol and Ports
- Action
- Profile
- Name

Name:

Description (optional):

Installation Instructions

1. Download and save the NPrinting Governance Dashboard.qvf file
2. Open the Qlik Sense Management console with an administrative user with rights to import apps.
3. Open the Apps section
4. Click 'Import' and then click 'choose file'.
5. Browse to the NPrinting Governance Dashboard.qvf file downloaded in step 1 and press 'Import'
6. Switch to the Qlik Sense Hub and open the NPrinting Governance Dashboard
7. Open the Data Load Editor
8. Navigate to the ****Connect**** section
9. Click 'Create Connection' in the top right

Option 1: For Qlik Sense Client Managed and Qlik Sense Desktop



Option 2: For Qlik Cloud, select 'PostgreSQL (via gateway)'



10. Enter the appropriate values for the highlighted entries below.

Host Name: The host name of the NPrinting Server computer

(please note that in the screenshot below 'localhost' is only valid if NPrinting is installed on the same computer as a single node Qlik Sense environment)

Port: The NPrinting repository port. By default this is **4992**

Database: The NPrinting repository database. This is **nprinting**

User name: The NPrinting repository database user. This is **postgres**

Password: The NPrinting repository database password. This is “super user” password that was entered during the initial NPrinting installation and during all upgrades.

Name: The name of the NPrinting Connection. If you choose a different name to 'NPrinting DB' ensure to update the CONNECT statement

Edit connection (NPrinting DB)

Database properties

Host name: localhost

Port: 4992

Database: nprinting

Authentication

User name: postgres

Password:

SSL Options

SSL Mode: prefer

Name: NPrinting DB

Buttons: Cancel, Test connection, Save



****IMPORTANT** in recent versions of Qlik Sense, bulkreader is automatically enabled, however this default setting will likely cause the reload to fail as it can only support character strings up to 16636 characters.

To disable, bulkreader:

Please also scroll down and enter an 'Advanced Parameter' as follows.

Disabling the bulkreader allows NPrinting to load long XML strings without truncating them and causing load errors

Advanced

Name	Value	
useBulkReader	false	

11. Press 'OK' to validate and generate the connection
12. If necessary, update the 'LIB CONNECT' statement to reference the name of your connection.

```
//REPLACE this connection with an ODBC connection to the NPrinting repository which runs on port 4992.
//LIB CONNECT TO 'NPrinting DB';

LIB CONNECT TO 'NPrinting DB';

//Qlik Cloud Examples
//Postgresql Connection in personal space:      'NPrinting DB'
//Postgresql Connection in shared space:       'SpaceName:NPrinting DB'
```