Vision Slim Software Solution

Installation and Configuration Guide Version 4.18.0

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Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| Version | Date | Pages | Description of Change |
| 1.0 | 15/06/22 | All | Initial |

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Preface

## Document conventions

### Typographical conventions

The following typographical conventions are used:

* + 1. Typographical conventions

|  |  |
| --- | --- |
| Style | Indicating |
| Bold | An option that you can select, for example, Insert > Bookmark |
| BoldItalic | The emphasis, for example, “This partition must not be modified.”  A physical key, for example, Shift+F9 |
| Code | Text displayed on-screen  Commands or data entered by the user  Code text and examples |
| Hyperlink | Links to Internet sites  Internal cross-references |
| Italic | The first reference to a keyword  The title of a publication, for example, Product Overview  A file or folder name, for example, C:\Program Files\NCR |

### Admonition conventions

Notes and cautions alert you to critical information. Each is displayed differently:

Note: Notes contain information that has special importance, to which the reader should pay close attention or tips with useful advice for the user on tasks or procedures.

* Caution: Cautions alert you to procedures or conditions that could damage equipment or data.
  + 1. Admonition conventions

| **Notes and cautions in tables** | | |
| --- | --- | --- |
| **Note:** Notes contain information that has special importance. | **Caution:** Cautions alert you to procedures or conditions that could damage equipment or data. |

Introduction

This document provides instructions to install/upgrade the Vision Slim installer. The slim installer exe is compatible with below Vision versions

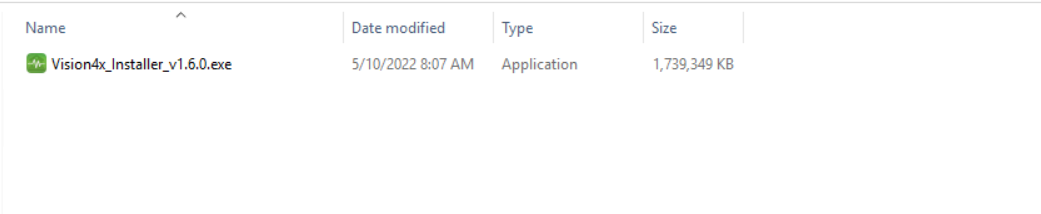
|  |  |
| --- | --- |
| Slim Installer exe version | Vision version |
| Vision4x\_Installer\_v1.0.9.exe | Vision 04.10.00.30 |
| Vision4x\_Installer\_v1.1.0.exe | Vision 04.13.01.01 |
| Vision4x\_Installer\_v1.2.0.exe | Vision 04.14.00.20 |
| Vision4x\_Installer\_v1.3.0.exe | Vision 04.15.00.13 |
| Vision4x\_Installer\_v1.4.0.exe | Vision 04.15.01.18 |
| Vision4x\_Installer\_v1.5.0.exe | Vision 04.16.00.82 |
| Vision4x\_Installer\_v1.6.0.exe | Vision 04.18.00.13 |

1. Installation Media

Copy the supplied Vision v4.18 installation media to a suitable and accessible location on the Vision Server. This contains all the necessary software to install the solution and will be referenced throughout this document

1. Installation Package Structure

Vision4x\_Installer\_v1.6.0.exe is the setup file of Vision Slim v4.18.



1. Vision v4.18 Slim Server - Pre-Installation Prerequisites

Perform the following tasks:

## Virtual Machine Configuration

Ensure that the configuration of the Vision v4.18 Server VM follows the vendor's recommended best practices.

The below references identify the best practice guidelines for **VMWare vSphere**:

Performance Best Practices for **VMWare vSphere 6.5**

*<https://www.vmware.com/content/dam/digitalmarketing/vmware/en/pdf/techpaper/performance/Perf_Best_Practices_vSphere65.pdf>*

Architecting Microsoft SQL Server on **VMWare vSphere**, Best Practice Guide

*<https://www.vmware.com/content/dam/digitalmarketing/vmware/en/pdf/solutions/sql-server-on-vmware-best-practices-guide.pdf>*

## Windows 2019 Server

Windows 2019 Server Standard Edition is installed and has application and file server roles ONLY enabled –

**Note**: **UK or US Regional settings must be used when setting up the OS**

## Windows User / Service Account

A local windows user or local service account must be created with full Admin rights

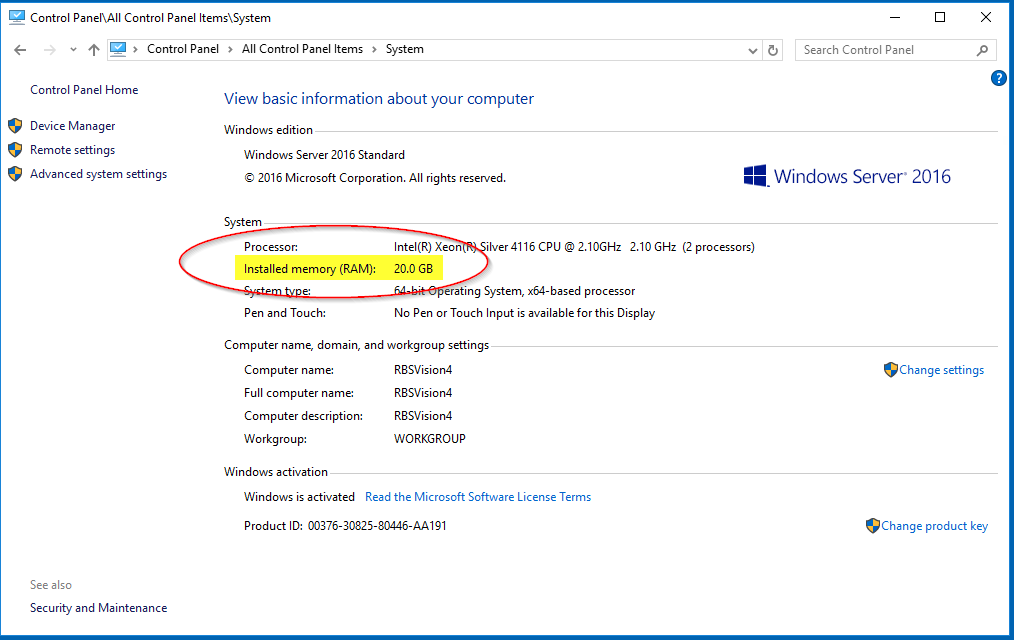
## Windows IIS

In case ***IIS*** has been installed as a Windows Feature, disable IIS. If this is not possible, verify that no websites are listening on any ports.

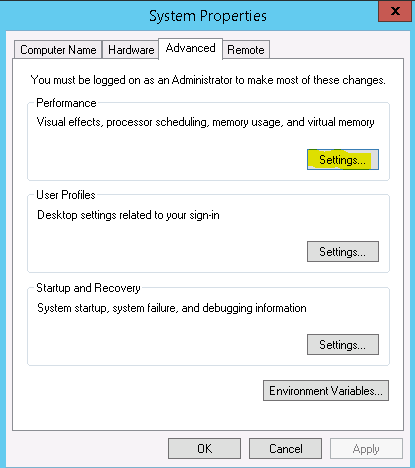
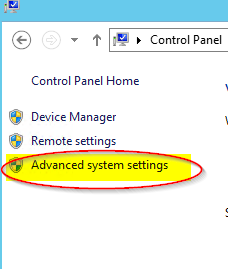
## Windows System/Virtual Swap Settings- Need discussion with Hassan

The Windows System/Virtual Swap settings must be updated to match the physical memory of the server.

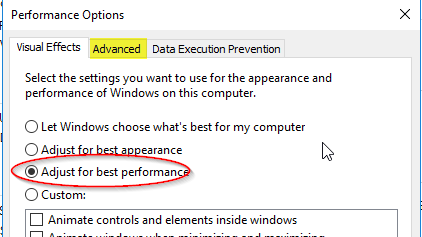
1. Navigate to **Control Panel >System**. Take a note of the Installed memory (RAM) value



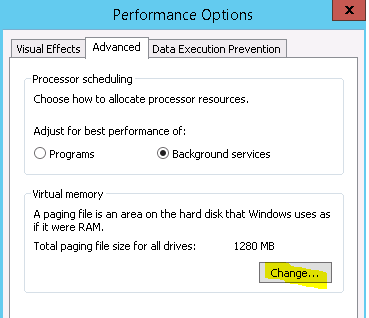
1. Select ***Advanced system settings***, then from the ***Advanced >Performance*** section select ***Settings***



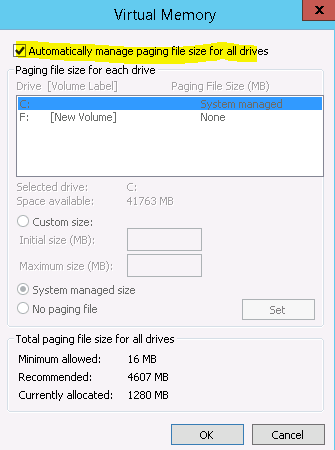
1. Select ***Adjust for best performance*** and click on the ***Advanced*** tab



1. Select the **Change..** option



1. Deselect Automatically manage paging file size for all drives

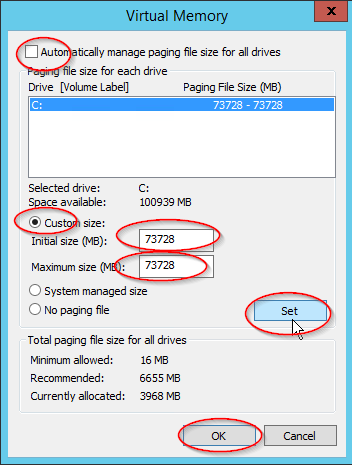


1. Select **Custom Size**. The Virtual Memory maximum paging file size should be 3 times the amount of RAM installed for the server (as per Microsoft recommendations:

*<https://support.microsoft.com/en-us/help/2860880/how-to-determine-the-appropriate-page-file-size-for-64-bit-versions-of>* )

Insert the size (in megabytes) in both the **Initial size** and **Maximum size** boxes and click on the **Set** button.

**Note**: in this example, the server has 24GB of RAM installed. 3 x 24GB = 72GB. 1 GB = 1024MB. 72GB = 73728MB.



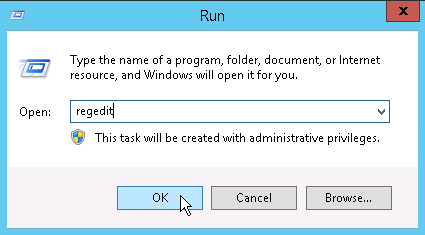
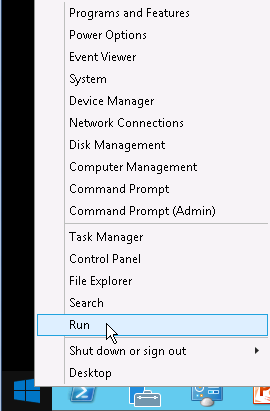
1. Select **OK** to commit the changes

## TCP/IP Registry Configuration- Need discussion with Hassan if they were performed or not. They were not performed during slim installation by Engineering

* **Caution: The following settings must be applied to both the SQL server and the Application server**

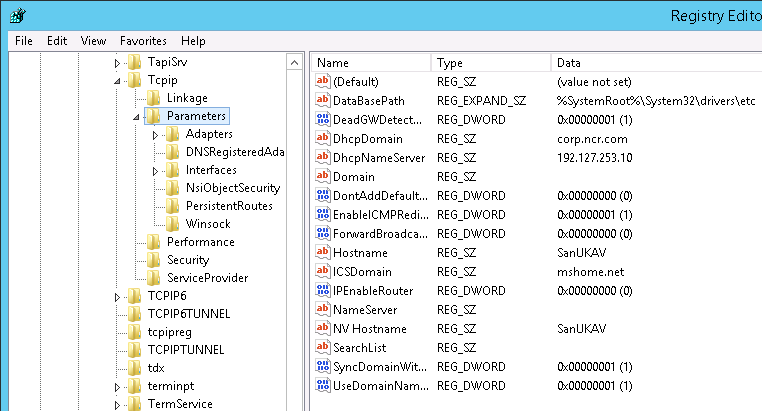
These changes increase the number of database connections available and reduce the time that each connection is held after the connection is no longer required.

1. Open the **Registry Editor** by clicking on **Run** and then type **Regedit** and click the **OK** button.

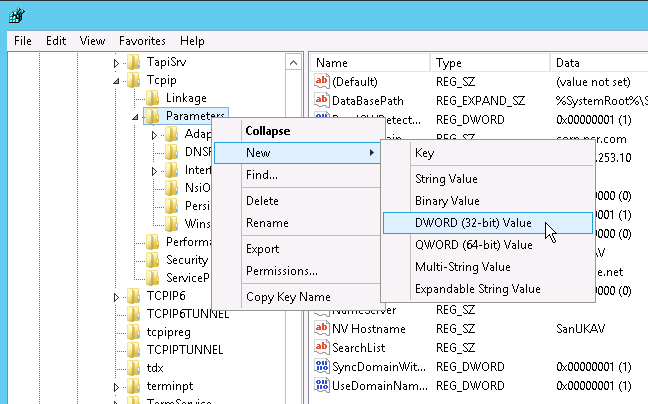


1. Navigate to:

***HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters***



1. Add two following entries to the Parameters (or modify the current entries if they already exist) by right-clicking over **Parameters | New | DWORD (32-Bit) Value**:



**Note**: DWORD (32-Bit) Value relates to the Value being input and not the system architecture

Value Name: ***MaxUserPort***

Value Data: ***EA60 (60000)***

Click on ***OK*** to save the new parameter setting

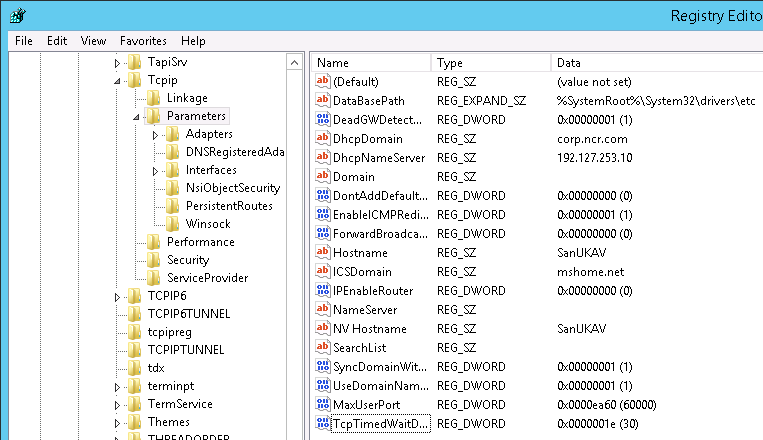
1. Repeat step 3 using the following parameters

Value Name: ***TcpTimedWaitDelay***

Value Data: ***1e (30)***

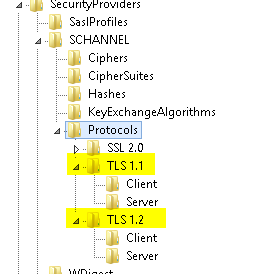
Click on ***OK*** to save the new parameter setting

The two new Parameters will now be displayed on the right-hand window as shown below:



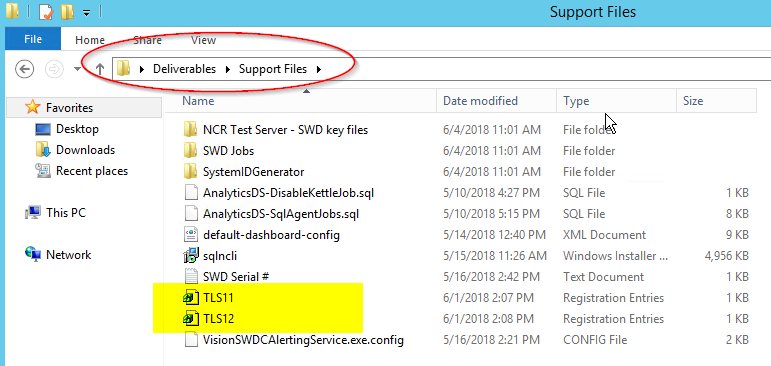
1. On **SQL Server only**, validate that the registry entries for **TLS 1.1** and **1.2** exist by naviagating to

***HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Control\SecurityProviders\SCHANNEL\Protocols***



1. If the keys do not exist, use the registry update scripts as supplied on the install media to add the keys

Note: This step is not for the Application server, these keys are added automatically during installation



1. Exit the **Registry Editor** application

**\*\*\* Restart both the SQL server and the Vision 4.15 Application server to apply these changes \*\***

## Firewall / Port Settings

Physical firewall incoming and outgoing rules must be defined to allow communications on the following ports:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Protocol | Port(s) | Vision 4.18 Application Server | Database Server | Client (ATM – Unified Agent and/or SWD Agent) | Client (Desktop Internet Explorer) |
| Microsoft SQL Server | 15010 | Directional | Directional | - | - |
| HTTPS | 443 | Bidirectional | - | ATM Unified Agent  Directional (outbound – client connects to server) | Directional (outbound – client connects to server) |
| HTTPS | 35010 | Bidirectional | - | - | Directional (outbound – client connects to server) |
| SMTP | 25 | Directional | - | - | - |
| SFTP  Used for authentication/authorization. Once authenticated, hands over to passive port for data transfer | ? | Directional  (Outbound–Vision server connects to NCR FTP server) | - | - | - |

## Microsoft Exchange Server SMTP Whitelisting and Configuration Details

The Vision v4.15 solution will send emails for Incident Management automation and also Business Intelligence automation using Microsoft Exchange.

1. The server name / IP address of any Vision v4.15 server installed should be added to the Microsoft Exchange Server SMTP whitelist to allow the Vision software to send emails.
2. The following information must be made available for the Vision installation process:

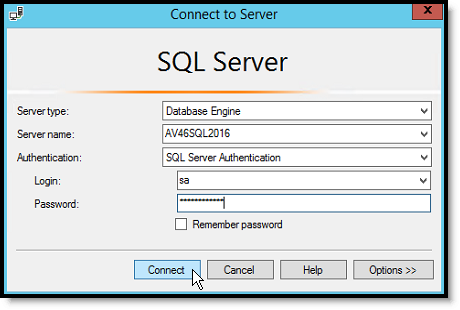
* SMTP server name or IP address
* SMTP account login name
* SMTP account login name password
* SMTP ‘From’ email address

1. Microsoft SQL Server - Pre-Installation Prerequisites

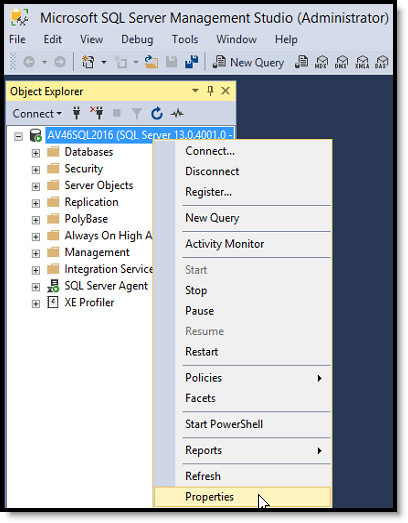
It is assumed that Microsoft SQL Server 2017 (Standard Edition) and Microsoft SQL Server Management Studio have been pre-installed. Appendix E documents a typical installation process installing the features as required for a Vision 4.x solution.

## 4.1 Database Properties Settings

1. Login to ***SQL Server Management Studio***.

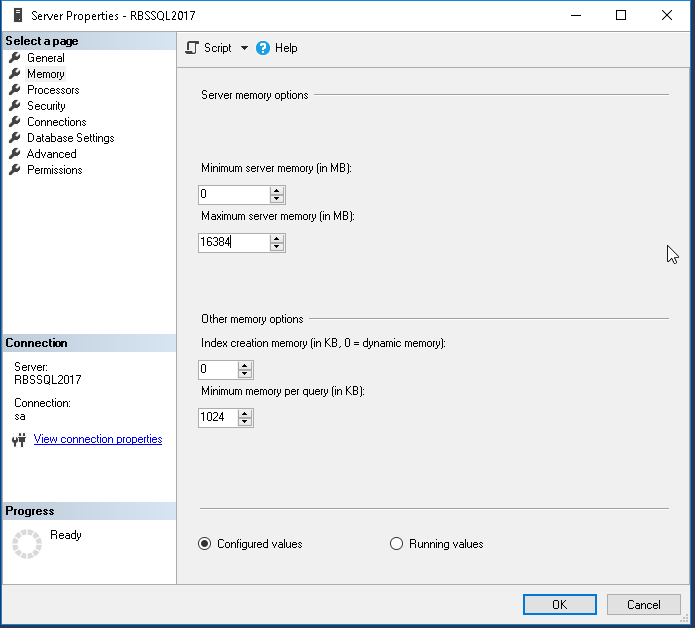


1. Right-click on the **Database** server and select the **Properties** option.

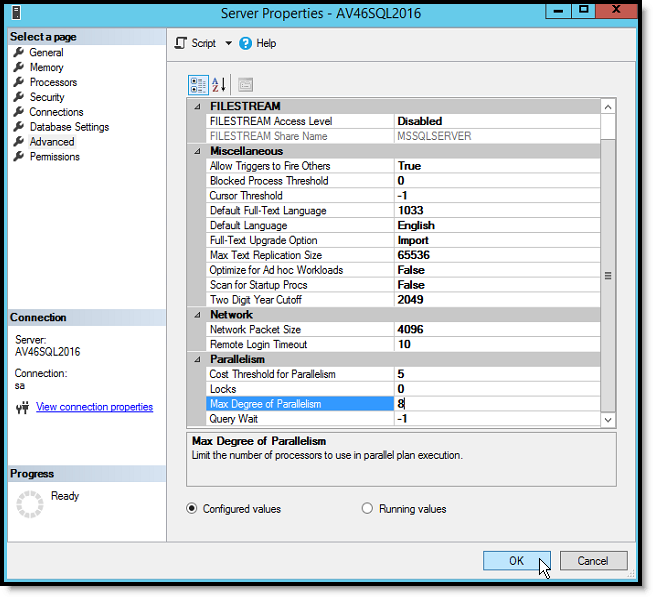


1. Select the Memory tab in the Server Properties pane and set the Maximum server memory.

The **Max Server Memory** value should be set to the amount of memory in the server minus approx and 4GB for Windows operating system use. For example, if 20GB of memory is installed, set the Maximum server memory field to 16,386

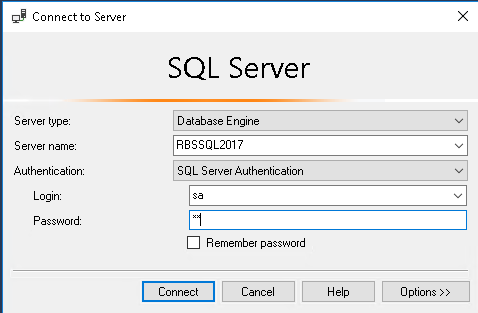
.

1. Select the **Advanced** page and change "**Max Degree of Parallelism**" from **0** to **8**. (to minimize parallel query waits). Click on **OK** to accept these settings.

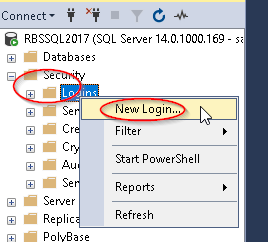


## 4.2 Create a Vision Install SQL Login

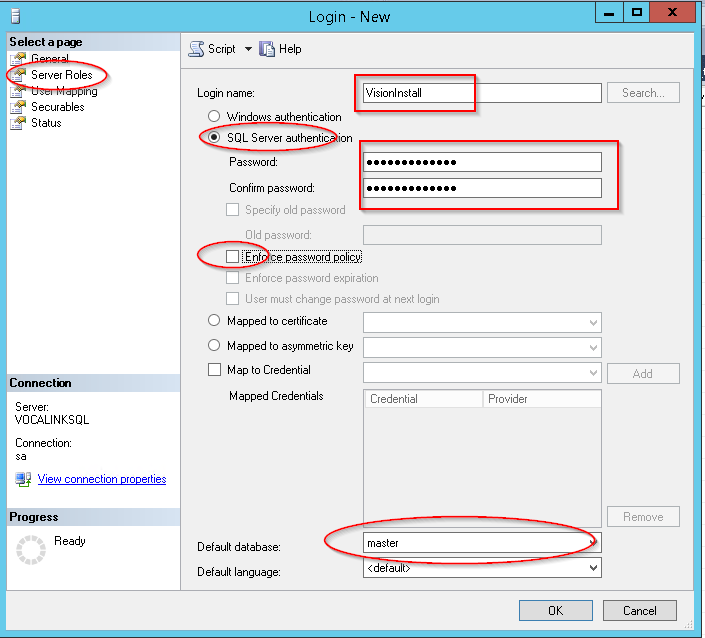
1. Login to **SQL Server Management Studio** (using sa or a Login name that has permissions to create a new Login)



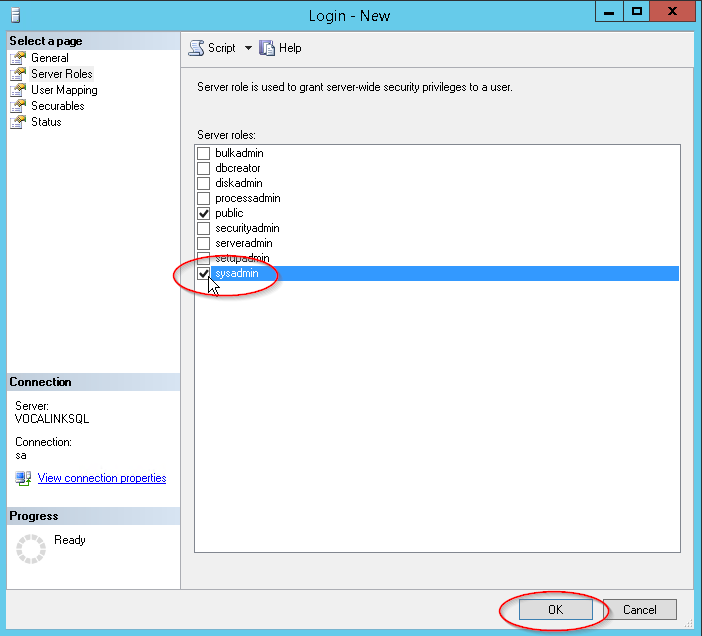
1. Expand the Object tree in Object Explorer to expose ***Security\Logins***. *Right-click* on ***Logins*** and select ***New Login*…**



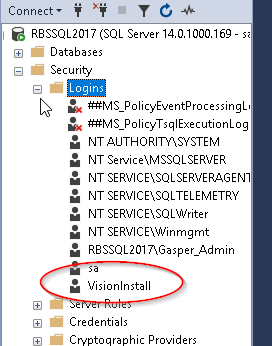
1. Set the login name to ***VisionInstall***, select ***SQL Server authentication***, set the ***Password / Confirm password*** to the same as the login name and ***uncheck*** the ***Enforce password policy*** box. Verify the ***Default database*** is set to ***master***, then click on ***Server Roles*** in the left-hand pane



1. Select ***sysadmin*** and click on ***OK***



1. Verify that the Login has been correctly created and then exit ***SQL Server Management Studio***



1. Vision slim installer: Pre-upgrade Pre-requisites

If upgrading from Slim Installer 4.15.x or previous versions to the latest, follow the below steps to upgrade SOLR from 5 to SOLR 8.

* Stop ncr\_vision\_tomcat
* We need to perform a commit to solr core.
* Open the below URL from a browser of the app server: *<http://localhost:8983/solr/electronicjournal/update?commit=true>*

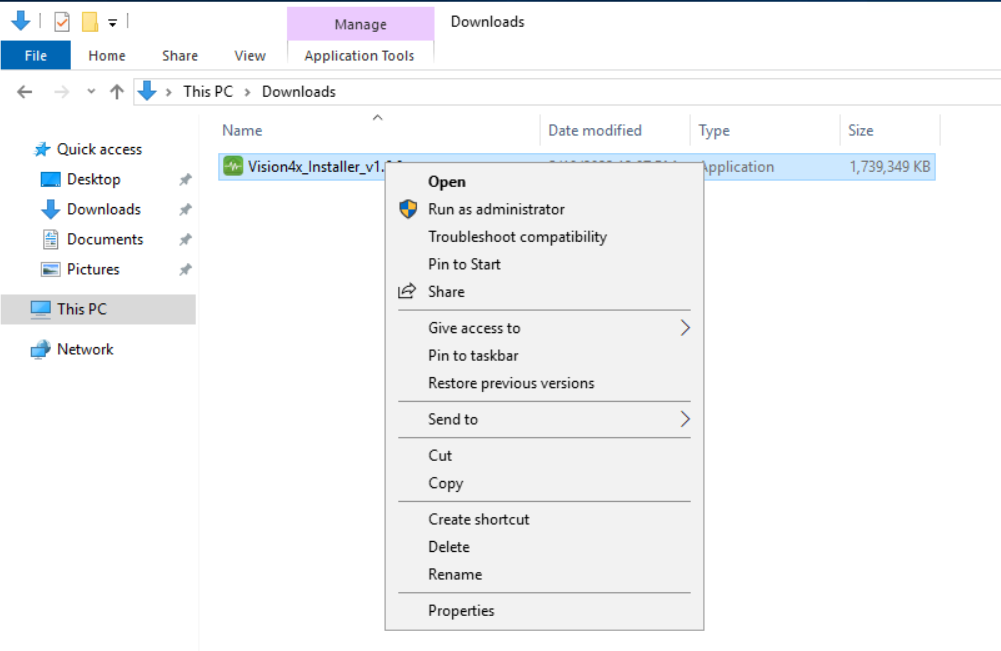
1. Installation Process

The following sections provide concise descriptions of each task that must be performed as part of the installation process. These tasks must be executed in the order as documented

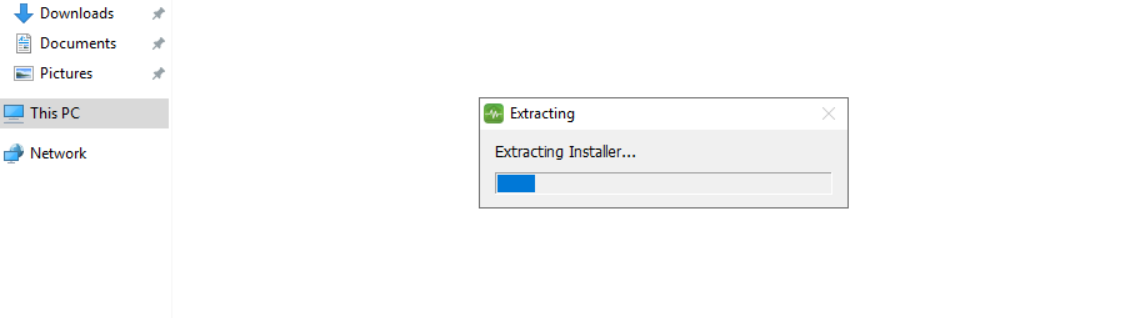
**\*\*\* The installation / test strategy should be to install using the included Apache24 load balancer initially, proving that all Vision functionality works. Once this is confirmed the system should be reconfigured to use the F5 load balancer\*\*\***

**\*\*\*\* Unless otherwise specified, all actions in this document apply to the Vision 4.18 server ONLY \*\*\*\***

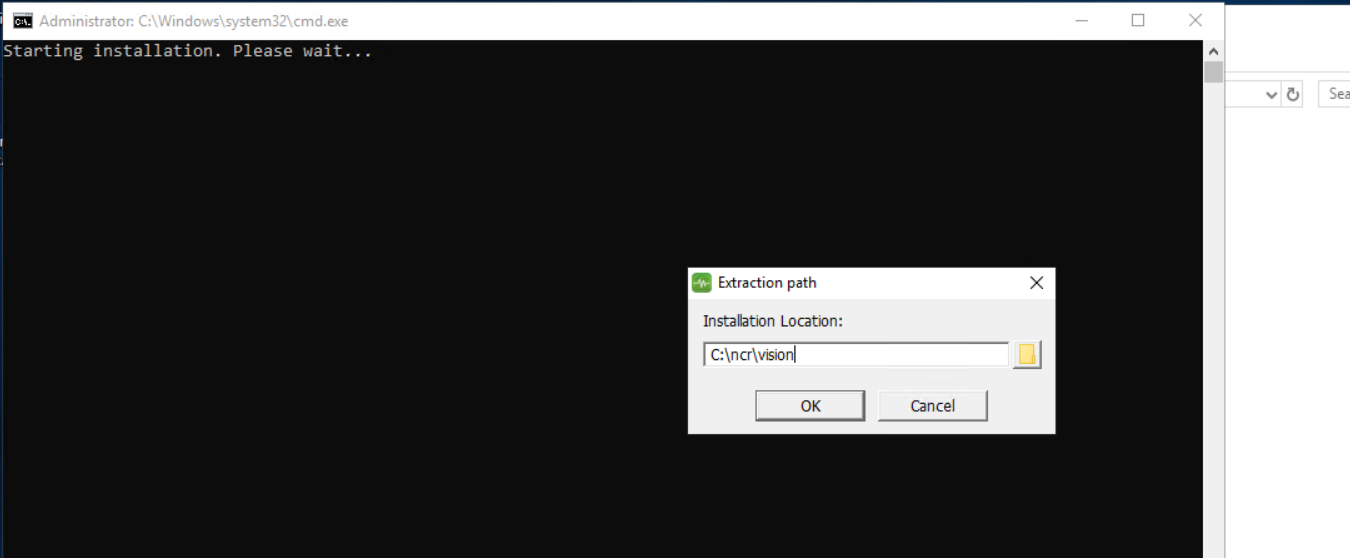
1. Before starting the installation, verify that the firewalls are configured to BLOCK all potential ATM traffic to prevent ATMs from registering with Vision inadvertently before the system is in a configured state.
2. Right-click on Vision4x\_Installer\_v1.6.0.exe and run the setup as administrator.



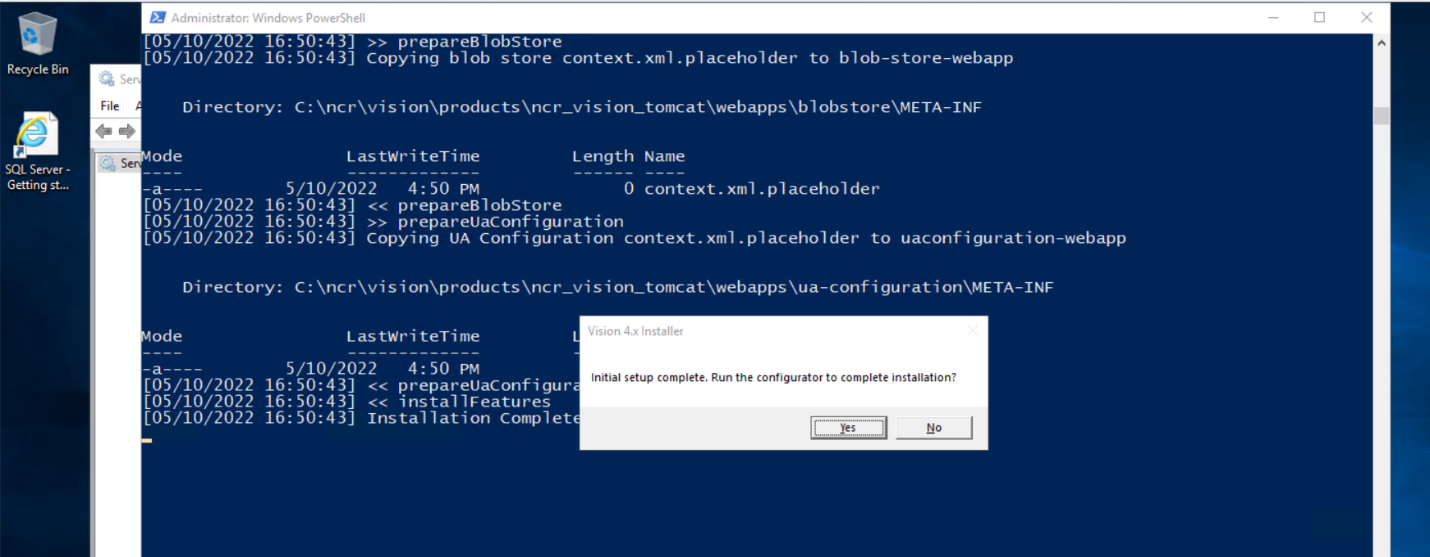
1. The initial setup steps will be performed, and the second self-extracting executable will be launched automatically



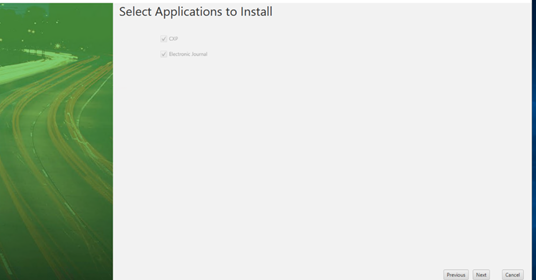
1. Specify a location to install the product, the default is **"C:\ncr\vision"** but we recommend using a different drive for the **OS installation** to prevent issues. If you are performing slim installer upgrade, specify the same location as used in the previous install.



1. Once the product is extracted, a ***PowerShell*** will begin executing to install the product without intervention. when completed, a pop-up will appear asking if the user wants to launch the configurator.



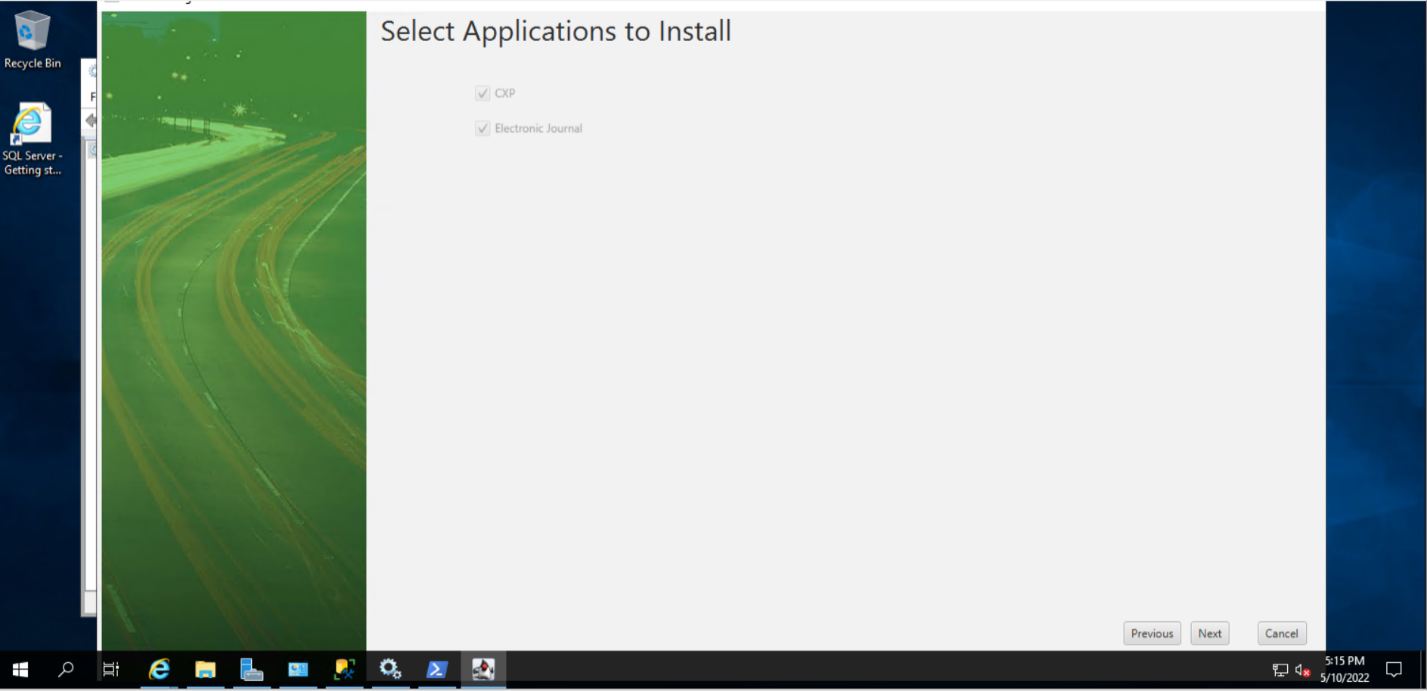
1. Select ***Next*** on Select Applications to install page.



1. If **"yes"** was selected at the end of the last step the configuration utility will be launched. Otherwise, double-click the **"configure.bat"** file within the ***<Installation Directory>*** to launch the configuration utility.

Follow the steps in the Wizard to complete the installation and configure the system.

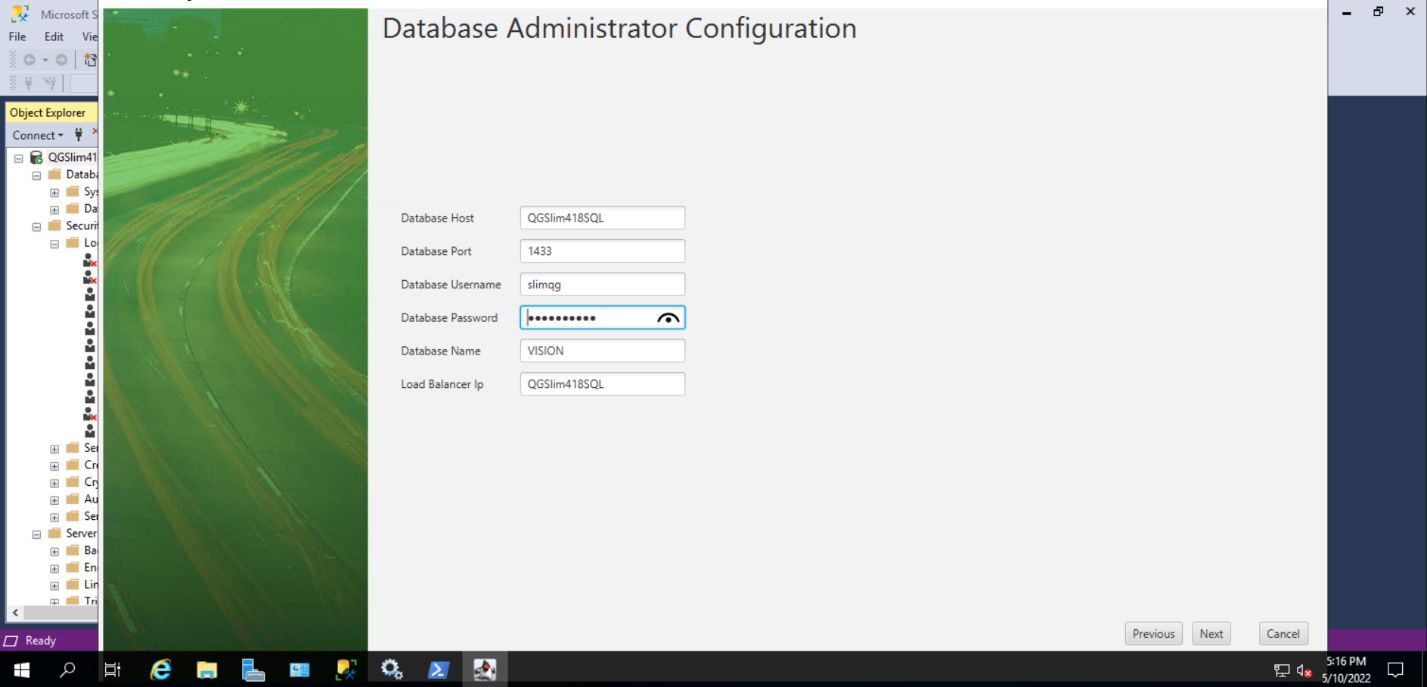
* 1. Under **"Select applications to install"**, click on ***"Next"***. We always want (for these installations) for EJ and CxP to be installed.



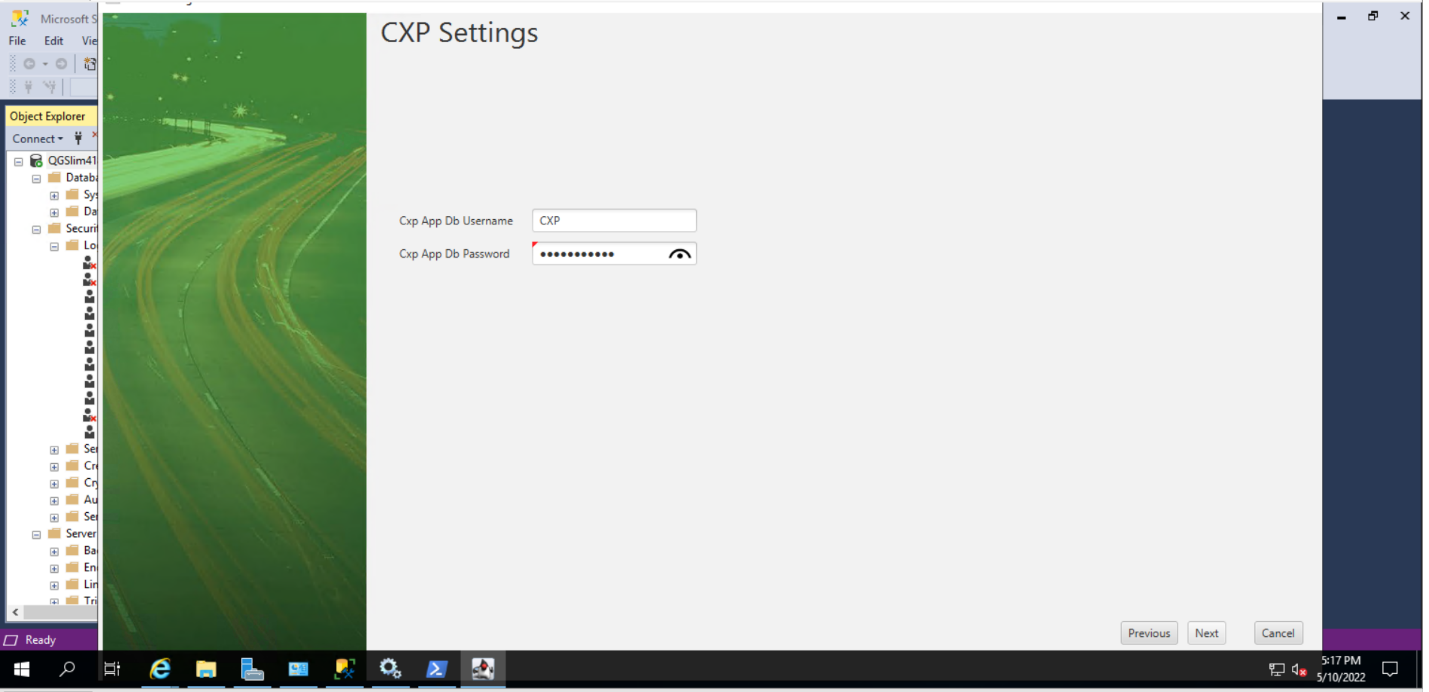
* 1. Under **"Database Administrator Configuration"**, enter the following details:
     + **Database Host** - The IP or Hostname of the database server
     + **Database Port** - The port number that the database is running on
     + **Database Username** - The **"system administrator"** (or SA) account on the database server
     + **Database Password** - The password for the above account.

NOTE: This is not stored.

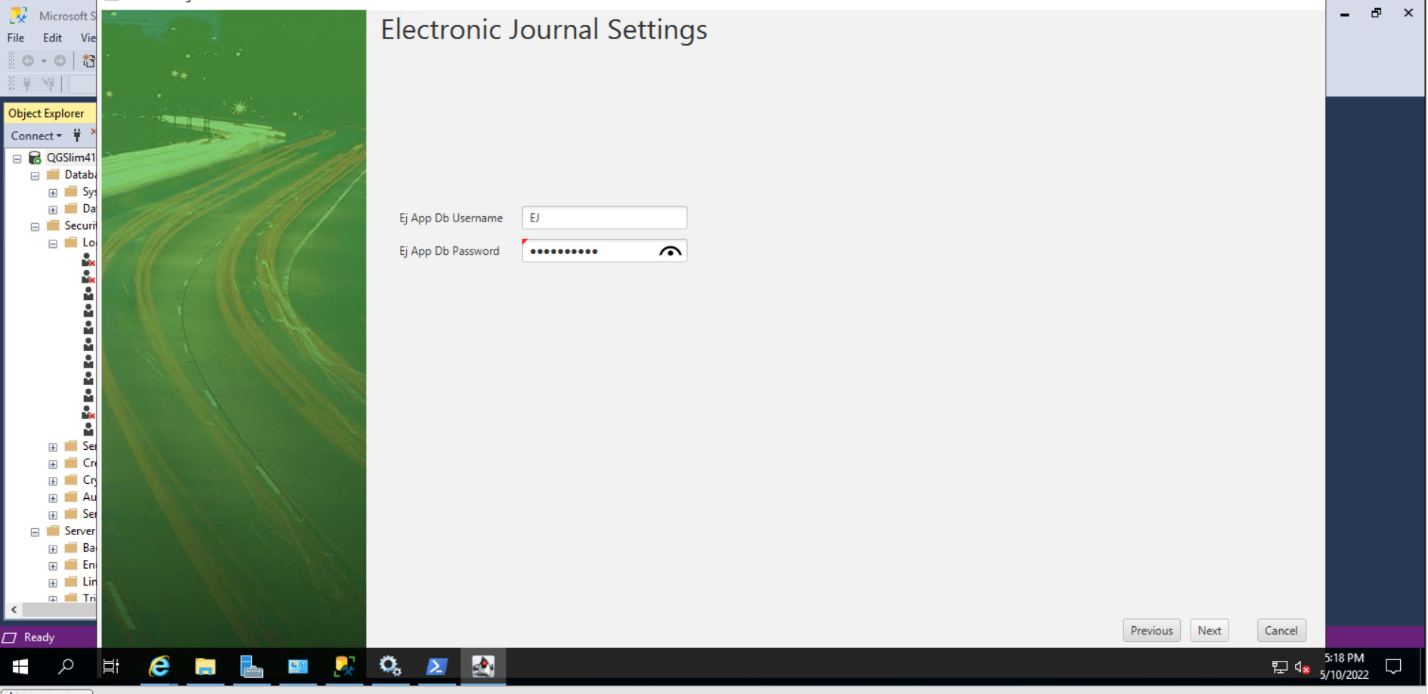
* + - **Database Name** - The name of the database you wish to be created.
    - **Load Balancer IP** - The IP or hostname of the application server.



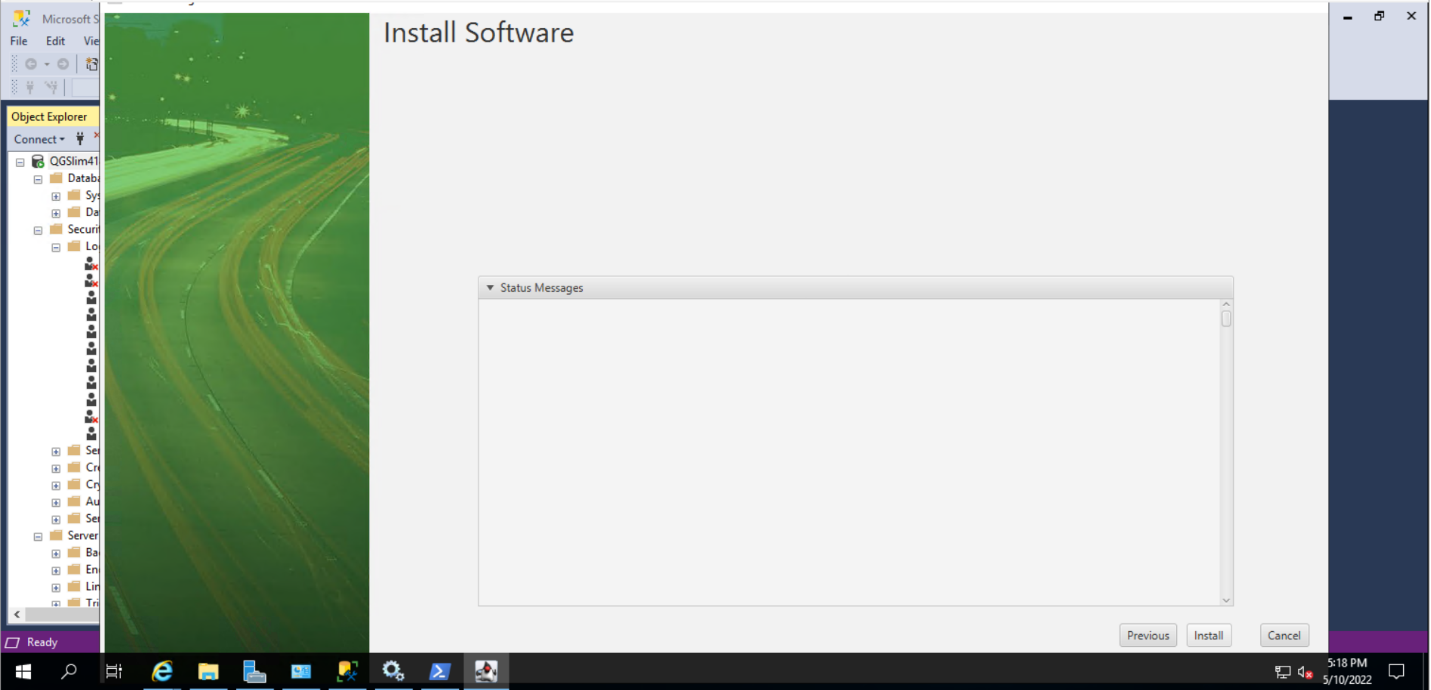
* 1. Under **"CXP Settings"**, either enter new values for **"Cxp App Db Username"** and **"Cxp App Db Password"** or use the defaults. If you are performing slim installer upgrade, use the same **CXP DB username and password** as used in the previous install.



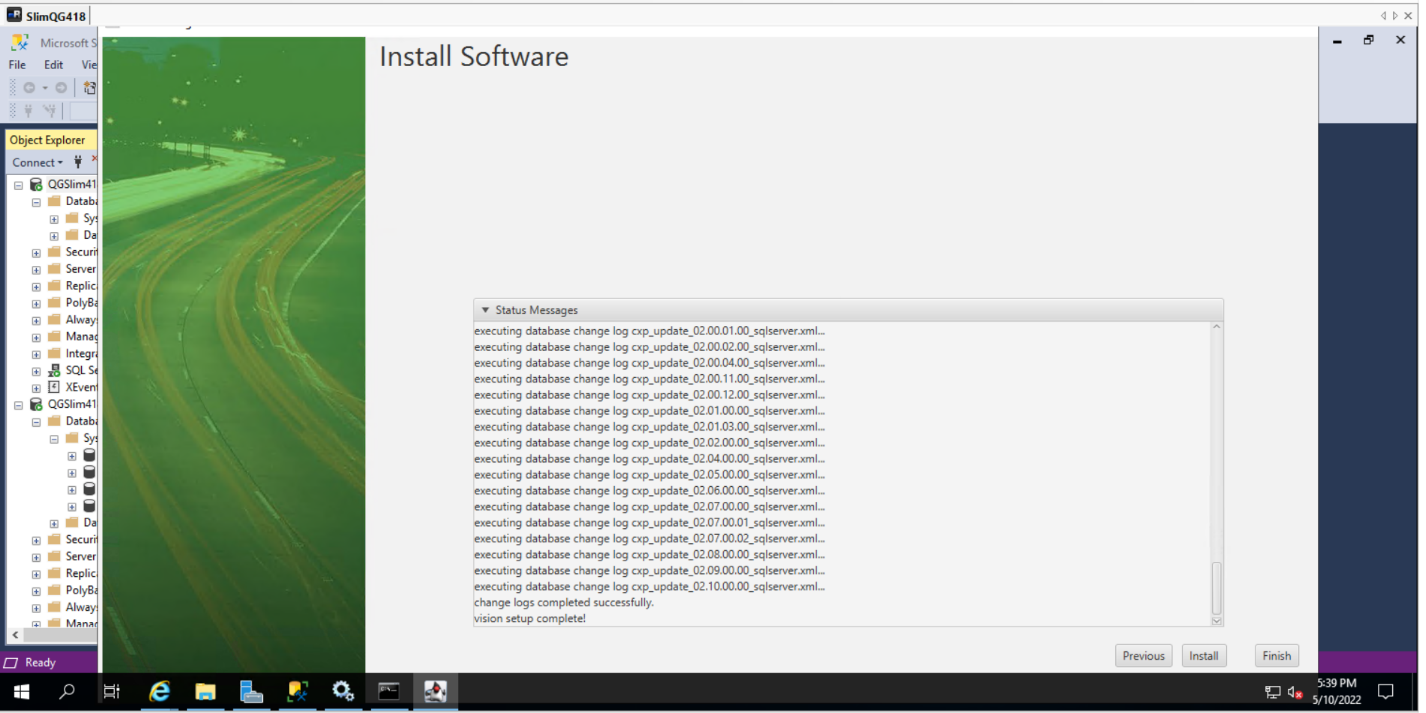
* 1. Under **"Electronic Journal Settings"**, either enter new values for "EJ App Db Username" and "EJ App Db Password" or use the defaults. If you are performing slim installer upgrade, use the same EJ App Db username and password as used in the previous install.



* 1. Once ***"Install"*** is clicked, the configuration will begin. This will start by verifying the database connectivity and preparing the system.



* 1. Once installation is completed, Click on finish to complete the installation.



* 1. If upgrading from 4.15.x or previous versions to the latest follow the below steps to upgrade SOLR from 5 to SOLR 8.

7.7.1) Open command prompt as admin on ***install-location\dependencies\SolrUpgradeUtil***

7.7.2) Run ***RunToUpgradeSolrData.bat***

7.7.3) Open a web browser and open the below URL, it will ask for the username password, the default is **admin/admin** https://localhost:8983/solr/admin/collections?action=REINDEXCOLLECTION&name=upgradedataelectronicjournal&removeSource=true&target=electronicjournal&configName=electronicjournalSolr8&async=8888

7.7.4) Open the below URL and keep on reloading for a few minutes, wait until the response says completed

<https://localhost:8983/solr/admin/collections?action=REQUESTSTATUS&requestid=8888&wt=xml>

* 1. Once the system is configured, the user can start the ***"ncr\_vision\_tomcat"*** service within the Windows Services (services.msc) snap-in.

**Note**: Also, make sure that the Log On user for ***ncr\_vision\_tomcat*** service has the privilege to read/write/modify.

When the system is finished loading, the user will be able to access the system using the load balancer IP that you have specified in step 5.

The default user credentials are admin / Password-100. On initial login, the user will be prompted to change these.

**Note**: This may take some time depending on the performance of the application server and database server.

Data loads for language translations and roles will be performed as the application comes up.

All installation activities are logged in a file named **ApplicationServerInstallation\_*servername*.log** which is saved in the application install directory (e.g. D:\Vision4). Edit this file using a text editor and search for the word ‘**error**’

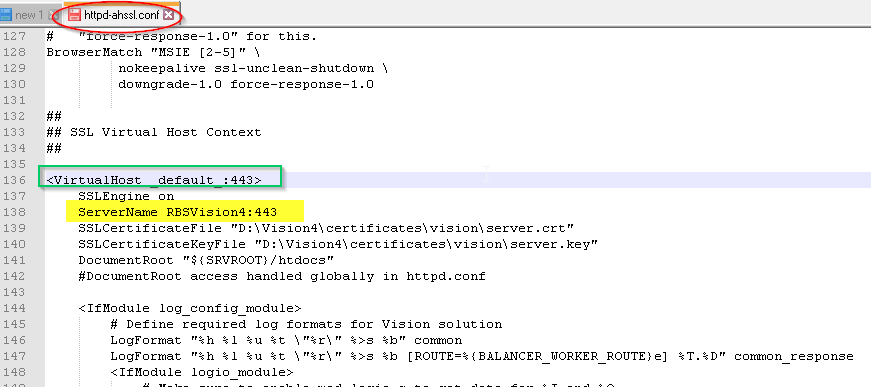
**Note**: Do not progress further with the installation and configuration process until any errors displayed are resolved (ignoring any errors recorded for Vision-Reports).

1. Uninstallation Process
2. Run the ***"cleanup-services.bat"*** file using an Administrator command prompt, provided in the folder.
3. Delete the ***<Installation Location>*** folder.

**Note**: The above steps will only remove the services and binaries added during installation. It will ***NOT*** make any modification to the Database.

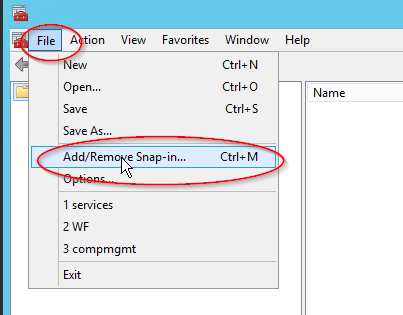
1. Upgrade installation Process
2. Perform un-installation: Follow Step 7: [Uninstallation process](#Installationprocess)
3. Install the latest version of the slim installer: Follow step 6: [Installation process](#Installationprocess)
4. Apache load balancer and certificate configuration
5. Edit the file ***<Install Directory>\ncr\vision\properties\Httpd\httpd-ahssl.conf*** and make changes as follows:

Find the section **<VirtualHost \_default\_:443>** Update the **ServerName** value to the load balancer URL as specified for installation (and as per the server name specified for the self-signed SSL certificate). For this example, this should be **NCBVision4** as shown below.

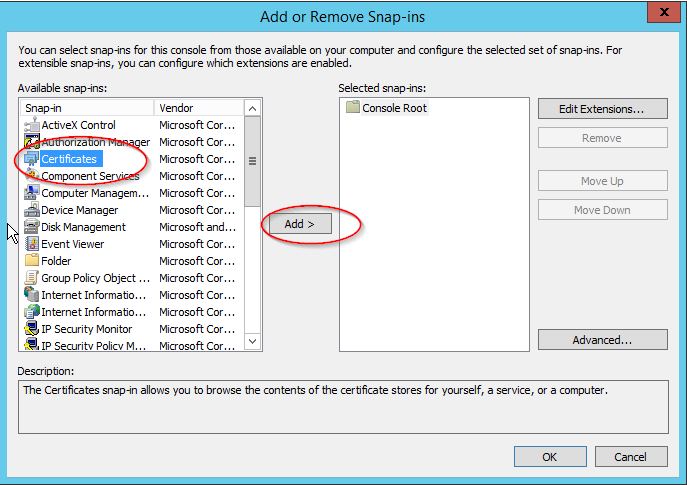


1. Register the certificate in the Certificates / Trusted Root Certification Authorities location of the Vision application server.

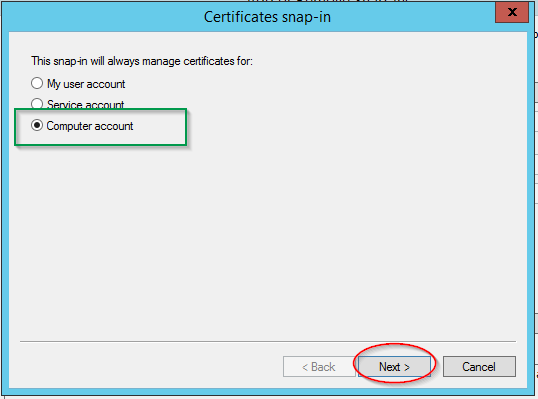
* Start **Microsoft Management Console** (Click on the Start button at the bottom left of the screen, type **MMC** and then select **MMC** from the search find window on the right-hand side of the window
* Click on ***File*** and select ***Add/Remove Snap-in ….***



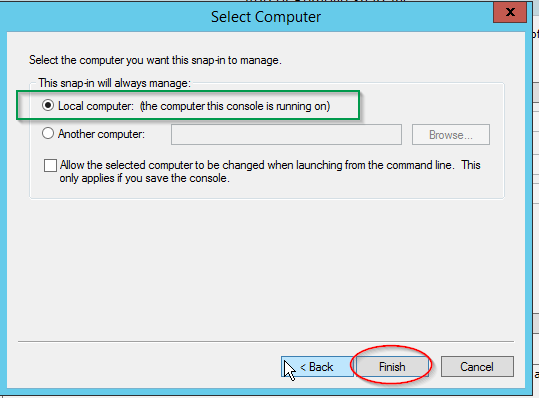
* Select ***Certificates*** and click on ***Add>***



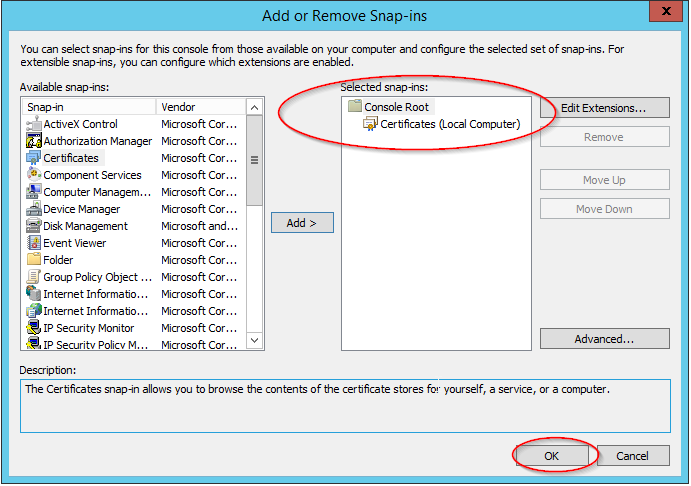
* Select ***Computer account*** and click on ***Next>***



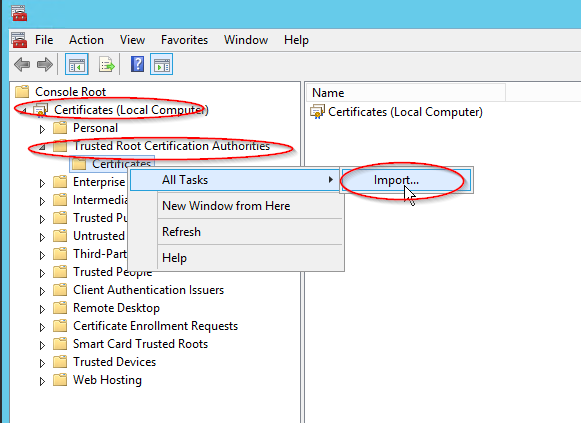
* Verify if ***Local computer*** is selected and click on ***Finish***



* Verify that ***Certificates*** appear in the ***Selected snap-ins*** window and click on ***OK***



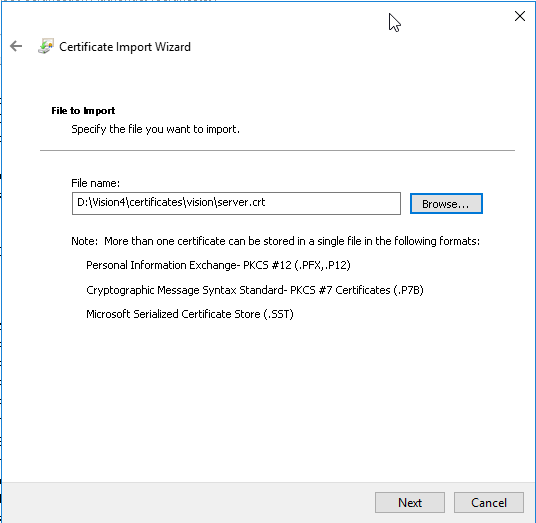
* In the left-hand **Console Root** window, expand **Certificates** and then expand **Trusted Root Certification Authorities.** **Right-click** on **Certificates** (under Trusted Root Certification Authorities), select **All Tasks** and then select **Import….**



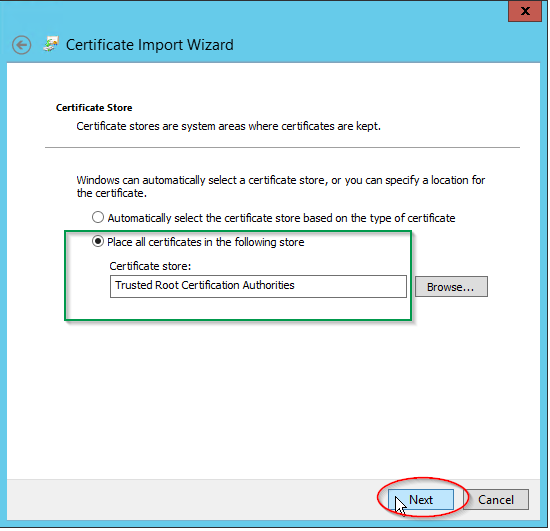
* When the **Certificate Import Wizard** is displayed, verify that **Local Machine** is selected for the ***Store Location*** and click on ***Next***



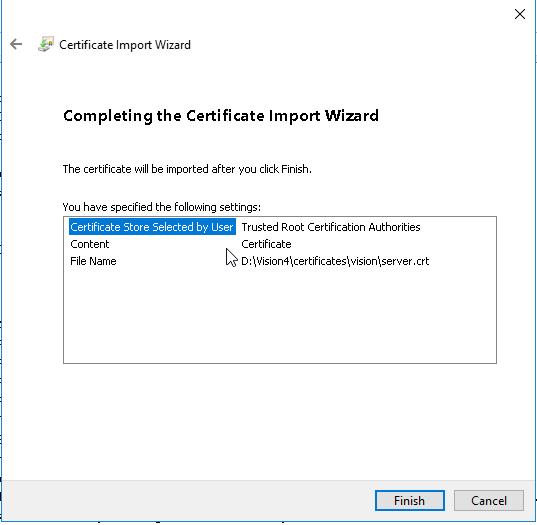
* Browse and select the file ***D:\Vision4\certificates\vision\Server.crt*** and click on ***Next***



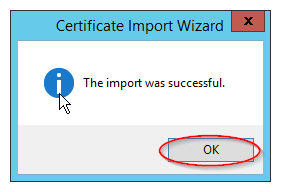
* Verify that **Trusted Root Certification Authorities** are selected as shown, and click on **Next**



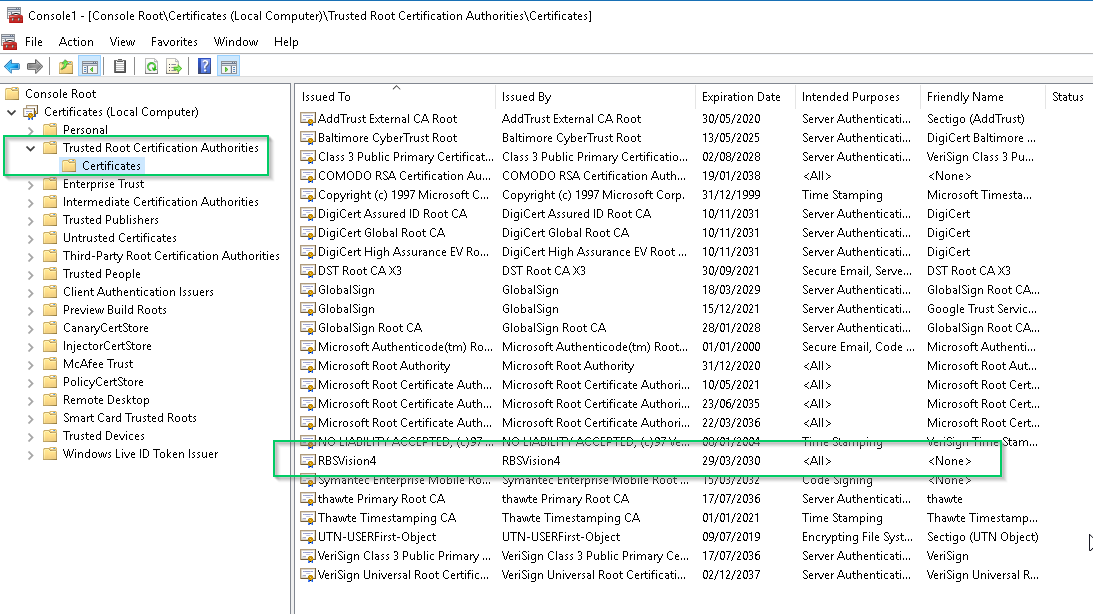
* Review the information displayed and click on ***Finish***.



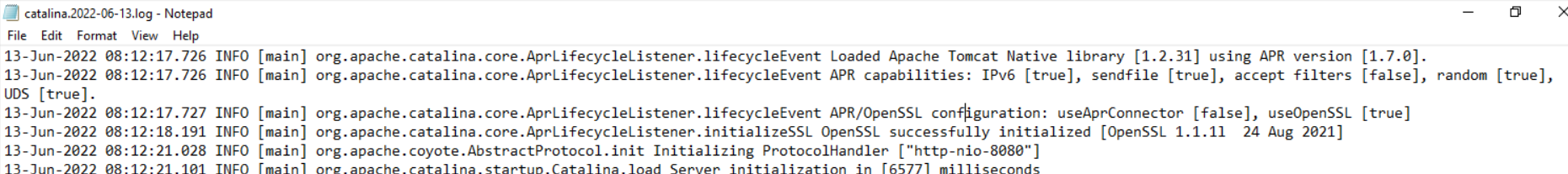
* Clikc on ***OK*** when the import success message is displayed



* In the left-hand pane, left-click on **Certificates** (under Trusted Root Certification Authorities) and verify that the certificate has been correctly imported.

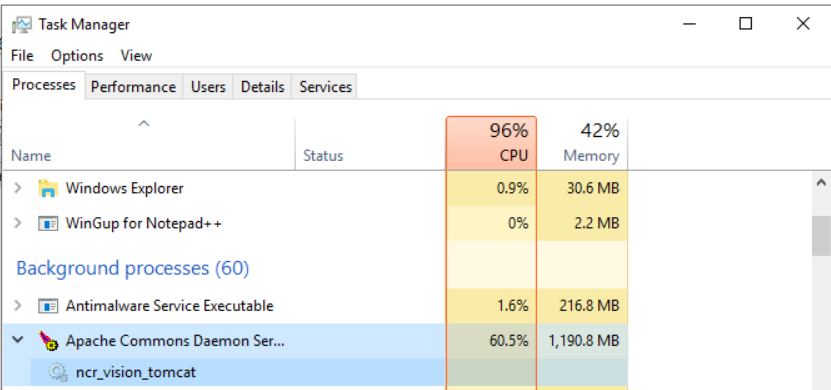


* Exit the Console window. Select ***No*** when prompted to save settings
* Restart the ***ncr\_vision\_tomcat*** service and verify that there are no errors in the current error log file (Locate in ***C:\ncr\vision\products\ncr\_vision\_tomcat\logs***). The entry should look similar to the following:

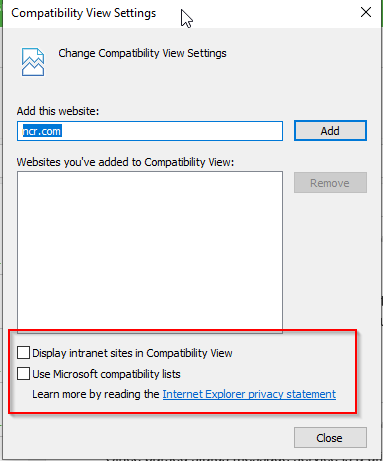
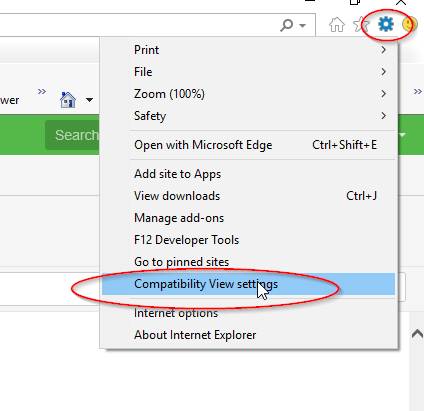


* Restart the ***Application Server*** (this is needed to configure various Windows Environment variables required for the rest of the installation process).

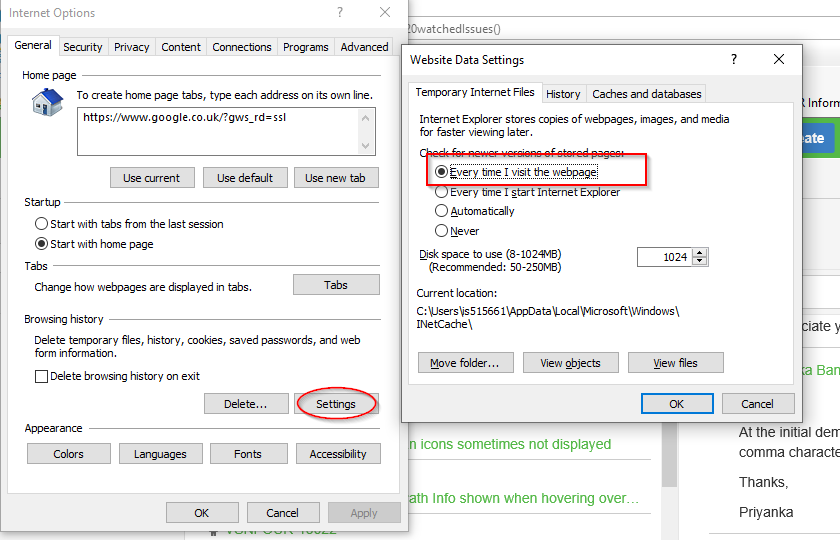
**\*\*\* Note:** Whenever any Vision related service is restarted (or if the Vision application server has been restarted), it is a best practice to use ***Windows Task Manager*** to monitor CPU utilisation. Vision services typically use a lot of processing resources when started. Do not attempt to use the Vision system until CPU % stabilises to a low % (2 or 3% typically)



1. Configure Internet Explorer as follows:
2. The Display Internet Sites in Compatibility View feature must be turned **OFF**



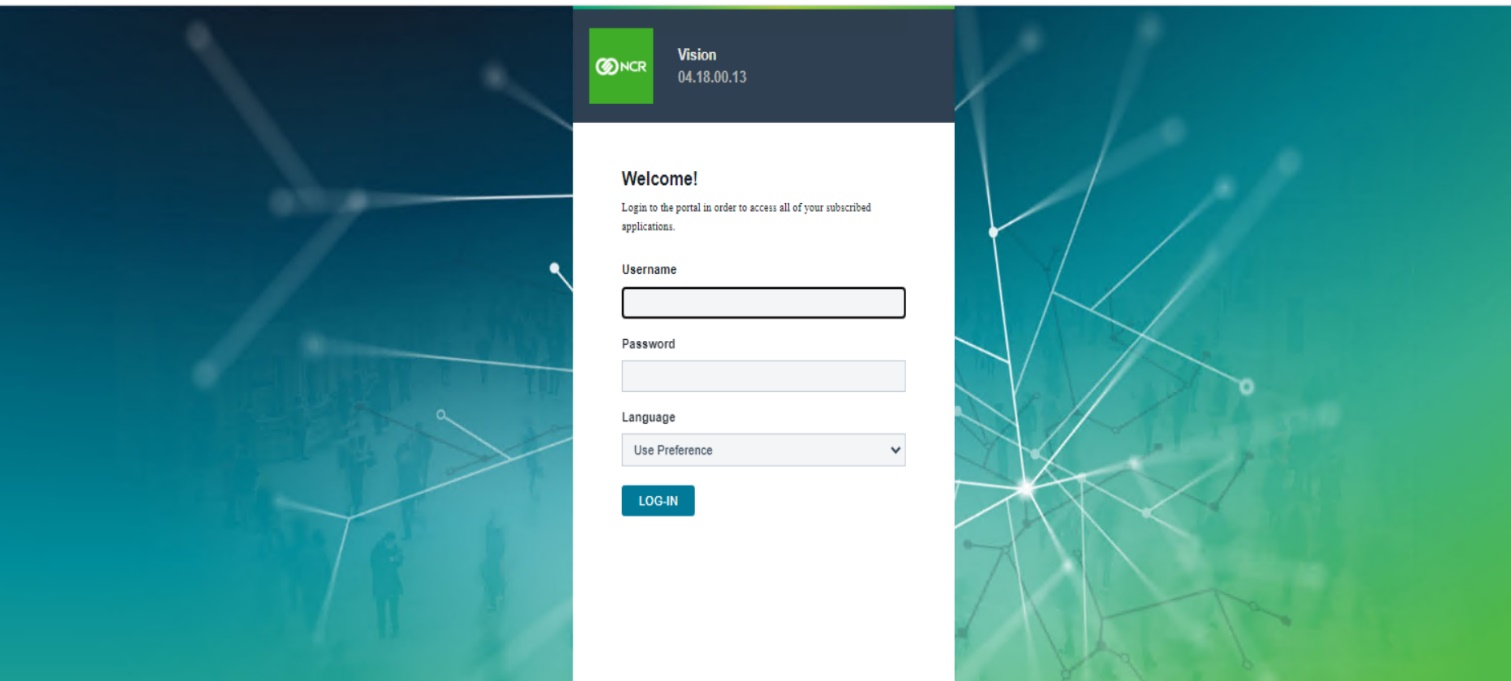
1. **Website Data Settings** must be configured to check for new versions every time the webpage is visited:



1. Once the Vision web services have finished loading (monitor using Windows Task Manager), you can log on to the website via the load balancer URL as previously defined.

https:// slim418sql/cxp-core-webapp/login

**\*\*\* Note**: The use may need to disable **IE Enhanced Security Configuration**



* Default username: admin
* Default password: Password-100

1. Change the password for the admin user as prompted on the first login
2. Create a new user and assign Admin privileges
3. Log out and log in with the new user created in the previous step
4. Log out when you have verified the new user login works correctly
5. Vision Configuration

## 10.1 Security Role

Create security roles as required. Recommended roles would be:

* Administrator (defined by the system on installation)
* Serviceline user
* Serviceline power user (remote commands?)
* Serviceline administrator
* Pulse user

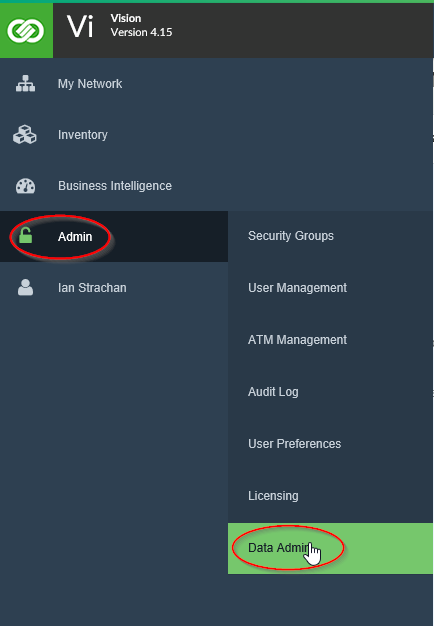
## 10.2 Users

Define system users as required and assign these to the relevant Security Roles(s)

## 10.3 Category Names

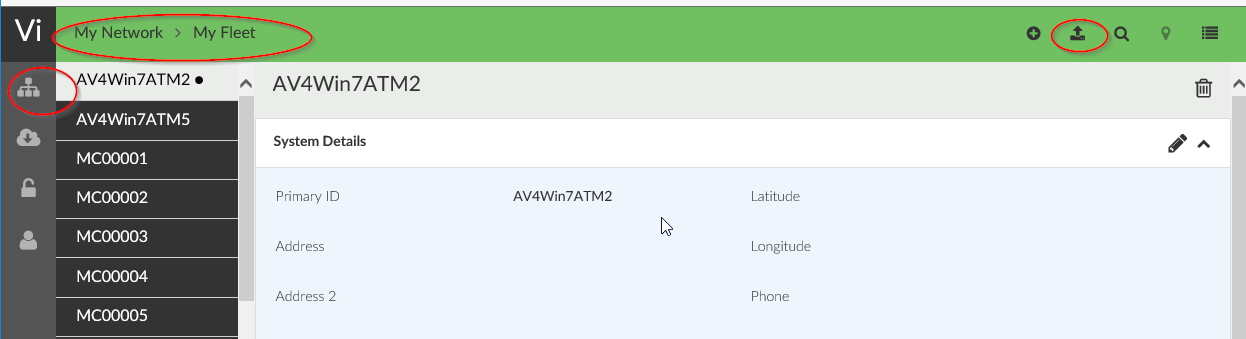
The Category Names will be amended to be the same as the NCB Gasper Vantage v5.5.28 solution.

**10.3.1** Admin | Data Admin



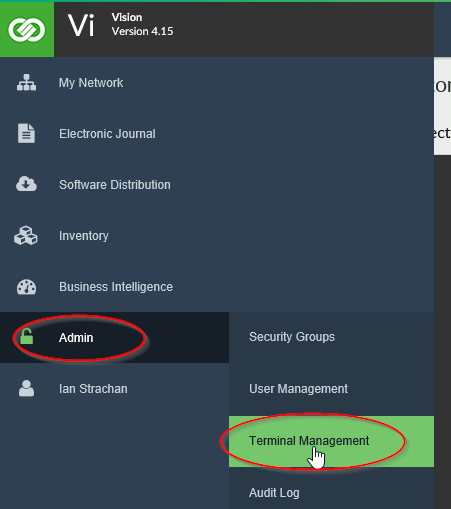
## 10.4 Terminal Definition (Import)

On the My Fleet page, select the ***Terminal Import*** feature. Navigate to locate the NCB Terminal Definition import CSV file. All defined terminals will be imported in Vision.

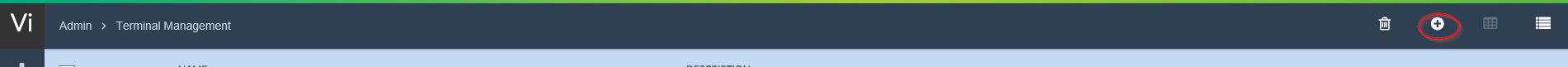


## 10.5Terminal Group Definition

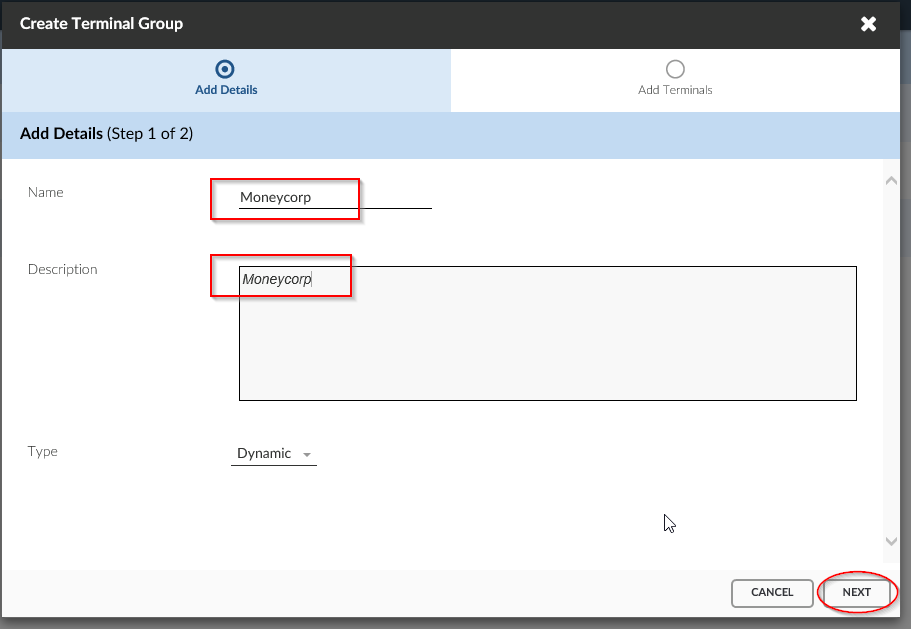
1. Select Admin | Terminal Management



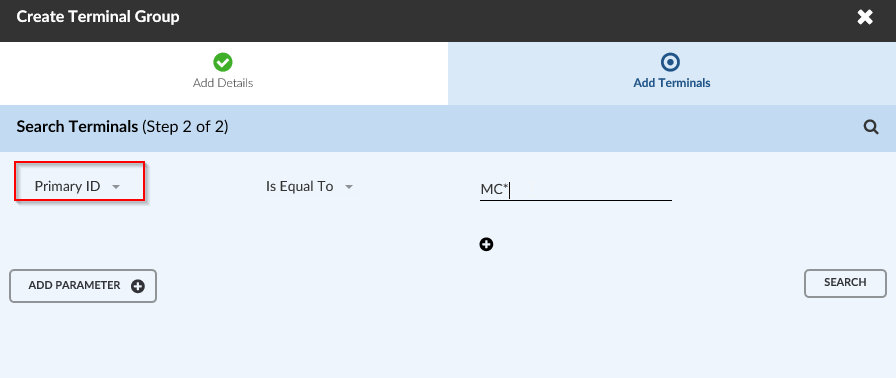
1. Click on the **‘+’** sign at the top right-hand corner to create a new Terminal Group entry



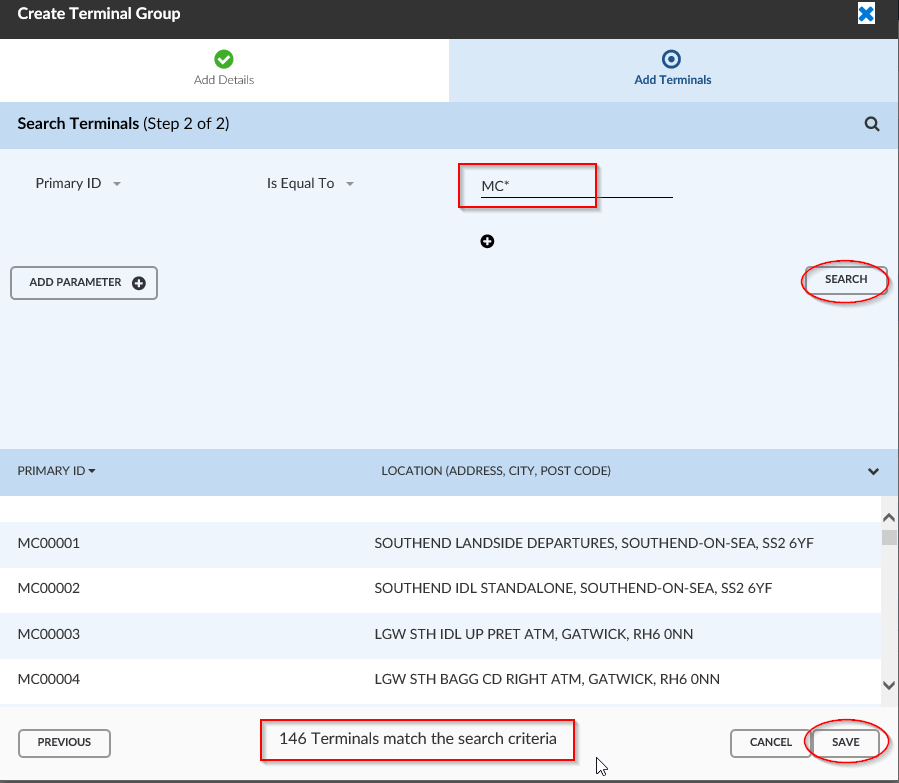
1. Enter the details for NCB and click on ***Next***



1. Select **Primary ID** fromthe drop-down list (which should be selected by default)



1. Enter **MC\*** in the ‘**Is Equal To**’ entry area and click on ***Search***. Verify that all NCB ATMs are displayed in the lower pane (146 Terminals) and click on ***Save***.



1. Repeat steps 2 to 5 and defines Terminal Groups for

* NCB ATMs UK & Events (256 terminals) – use Primary ID mask **RR\***
* NCB ATMs EU (27 terminals) – use Primary ID mask **RI\***

**Note**: Terminal Groups can be assigned to Vision Users as required