

Version: 5.4



Charm novaLINK 5.4

CORPORATE AND NETWORK SUMMARY





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Introduction

This technical document will outline the steps and details necessary to install novaLINK 5.4 system in an Enterprise environment. Many of the steps required to install and deploy this methodology must be coordinated and/or installed by IT professionals with experience in server configuration and SQL management and must also follow corporate policies and guidelines set forth by the corporate IT group.

While remapping and application environments can expand and change as the application structure grows, it is best to plan the application from the onset especially within a corporate environment with shared databases, multiple facilities and upper management overview reporting.

System Requirements

Minimum novaLINK 5.4 Hardware:

- A minimum dual core 2GHz or faster microprocessor with 4GB of RAM and 500MB available hard disk space. Ideally a 1920 x 1080 video display but 1280 x 720 will work as well.

Minimum NovaLink Operating System and support software:

- NovaLink requires Windows 10 and .Net 4.5.2 or greater and Excel 2007 or newer. There is no need for SQL Management studio to be installed but may be a useful tool for the more advanced users or IT professionals.

SQL Express Hardware and Software Requirements:

- You can review the requirements for SQL Express by navigating to the URL below:
[https://technet.microsoft.com/en-us/library/ms143506\(v=sql.120\).aspx#hwsr](https://technet.microsoft.com/en-us/library/ms143506(v=sql.120).aspx#hwsr)
- Additional information on Windows Authentication may be found by navigating to the URL below:
<https://docs.microsoft.com/en-us/sql/relational-databases/security/choose-an-authentication-mode>
- SQL 2014 or higher required. SQL Express may be used.

novaLINK 5.4 Software Installation

A standard setup.exe file is provided on the media which also includes the installer for SQL Express as well as default database. The executable and supporting DLL files are placed in the Program Files (x86) folder in a sub folder named Charm Sciences, Inc and then a

sub folder named NovaLinkV5. The database and other customer specific files reside under Users/Public/NovaLinkV5.

Run the Software Configurator:

Once the software is installed, the Software Configurator Program must be run to setup the services for novaLink 5.4 and each instantiation will have specific settings based on the user requirements. This can be as simple as a single user/ single novaLUM II-X to as complex as multi-user, multi-copy, shared network database, multi-facility with corporate overview. There is no limit to the number of users, instruments and configurations. In the following sections, we will explain some of the many implementations and configurator settings.

Overview of the Configurator:

Configuration Screen:

The screenshot shows the 'Configuration' dialog box with the following settings:

- Company:**
 - Name: [Empty]
 - City: [Empty]
 - Address: [Empty]
 - State: [Empty]
 - Zip: [Empty]
 - Facility ID: Chad
- Database:**
 - Data Source: localhost\NOVALINK
 - Database Name: NovaLink
 - Use Windows Authentication:
 - Username: [Empty]
 - Password: [Empty]
 - Buttons: Test Connection, Import Database, Create Database, Delete Duplicate Data From Database, Merge Database
- Dashboard:**
 - Corporate Only:
 - Enable Corporate Reports:
 - Auto Load Data Events:
 - Show Dashboard Panel Preview:
 - Save Settings: [Button]

The Configurator is typically run only once at install time, no shortcuts have been created to navigate. The Software Configurator for novaLink 5.4, can be run by navigating to C:\Program Files (x86)\Charm Sciences, Inc\NovaLinkV5. Locate the NovaLinkV5ConfigUI.exe application and double click on the name to run it.

The sample run screen shown below has been broken into sections for detail purposes in this document but generally, when you run the Configurator, the sections are scrolled through to the bottom of the page.

The screen images depict a simplified application for a Single User with a Local Database.

Corporate Reporting Screen:

Corporate Reporting

Service Enabled:

Enable Authentication:

SMTP Server:

Port:

Enable SSL:

Username:

Password:

Sender Email:

Corporate Data Receiver

Service Enabled:

Port:

Automatic Backup

Enabled:

Backup Folder: ...

Keep Revisions:

Backup Period:

Logging

Archive Folder: ...

Archive Period:

Corporate Data Uploader

Service Enabled:

Host:

Port:

Synchronization Server Screen:

Synchronization Server

Service Enabled:

Port:

Breaking Down the Configurator and Parameters:

Company

Name:

City:

Address:

State:

Zip:

Facility ID:

Enter the company name and address and a facility ID name. Keep in mind that the chosen facility ID will link the novaLUM II-X to the facility database. In many cases, a database will be shared within a facility with multiple copies of the software so that individual users can run reports and generate swabbing plans etc. The Name, Address and facility ID should be consistent amongst all copies of the software sharing the same database.

Database

Data Source:

Database Name:

Use Windows Authentication:

Username:

Password:

In the section to the left, the database location and access credentials is defined. You can also test the database connection or import/create a database. In a shared environment the (computer name)\NOVALINK convention is used to locate the central database. If necessary the database can be renamed to allow for multiple databases in one shared environment.

Dashboard

Enable Corporate Reports:

Clicking the check box allows for this copy of the software to produce corporate reports enabling an icon on the dashboard to allow this action. These corporate reports are basically copies of the dashboard charts and graphs formatted and scheduled as emails.

Corporate Reporting

Service Enabled:

Enable Authentication:

SMTP Server:

Port:

Enable SSL:

Username:

Password:

Sender Email:

Corporate reporting, as mentioned above, are summary charts and graphs similar to those produced on the dashboard which are scheduled and formatted as emails sent at regular intervals. Only one copy (server) within a shared database group should enable this service since all copies enabled will try to send the same emails from the same database.

Corporate Data Receiver

Service Enabled:

Port:

This service should be enabled if this copy of the software will be receiving data pushed up from lower level copies/facilities. This will be enabled in a corporate copy/edition where data is regularly received from multiple facilities/copies. See “Enterprise Corporate Level copy” below for additional details.

Automatic Backup

Enabled:

Backup Folder: ...

Keep Revisions:

Backup Period:

This feature will create automatic backups of the database for historical data protection. The Backup Period is in days.

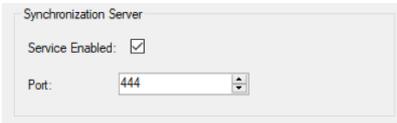
Corporate Data Uploader

Service Enabled:

Host:

Port:

This is the push feature that will push new database data up to the corporate copy/ database. Enable this service when a corporate copy is listening for data to collect into its upper level database. See “Enterprise Corporate Level copy” below for additional details. Only one copy (server) within a shared database group should enable this service since all copies enabled will try to push the same data from the same database.



The synchronization server should be enabled when WiFi SYNC is to be used. Only one copy (server) within a shared database group should enable this service since all copies enabled be open to synchronization which will result in contention.

Setting up a Server Based Networked Environment

Prerequisites:

- Operating System: Server 2012R2 – Server 2019, Windows 10.
- novaLINK 5.4 Installed
- Microsoft SQL server (2014 or later) installed and configured for TCP/IP connections
- Microsoft SQL Management Studio installed
- Empty database created for Novalink 5.4 to use
- SQL User created with DBO rights to above name database

SQL Server Database and User Configuration:

- Expand the Server Object if it is not already expanded
- Right click on Databases and select New Database
- Type in novaLINK for the database name field (or a name that matches your naming scheme)
- Click ok
- Expand Security, right click on Logins and select New Login
- Type in Novalink (or a name that matches your naming scheme)
- Select SQL Server Authentication

* Charm recommends SQL user over windows auth for any install that will be running novaLINK Reports, novalink Corporate Uploader, novaLINK Corporate Receiver, novaLINK Synchronization Server

- Type in a password for this user account
- Under User Mapping, check the box for the database we created above.
- Give the rights of db_owner to this user
- Click ok

novaLINK 5 Configuration:

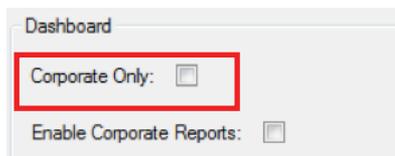
The installer for novaLINK by default sets up the software to connect to a locally hosted SQL Server instance

1. Run the NovaLinkV5ConfigUI.exe application (installed in the same folder as NovaLink, in C:\Program Files (x86)\Charm Sciences, Inc\NovaLinkV5\)
2. Under Database:
 - a. Fill in the remote server address (or host name) and SQL Instance name for Data Source I.E. SQL1srv\SQLEXPRESS
 - b. If the port is not the default port you need to specify the port using this format: ADDRESS, PORT
 - c. If using SQL Server Authentication, uncheck Use Windows Authentication and fill in the Username and Password fields using the username and password that were created on SQL Server.

*If using SQL Server Authentication, uncheck Use Windows Authentication and fill in the Username and Password fields using the username and password that were created on SQL Server
 - d. Click Save Setting
 - e. If using an existing Database, click import database and select the database file. You do not have to back up the existing database, unless there is existing data you would like to keep.
 - f. If creating a new database, click create database. You do not have to back up the existing database, unless there is existing data you would like to keep.

Enterprise Corporate Level Copy

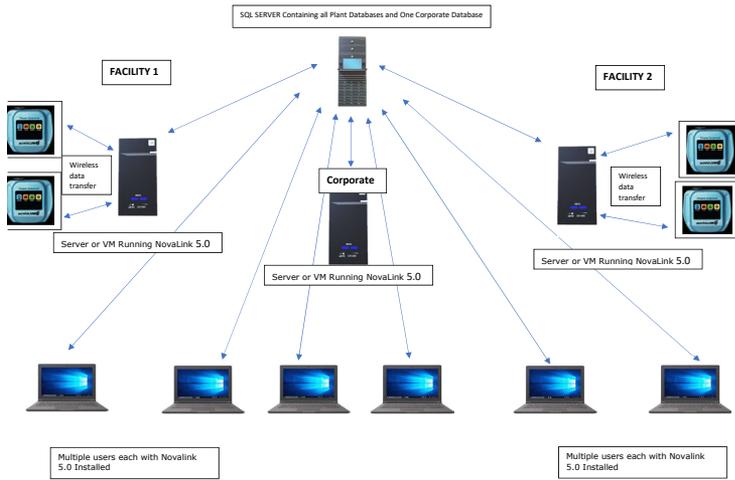
The Corporate version of novaLINK 5.4 can be enabled through the NovaLinkV5ConfigUI.exe which is located in the installation directory (Default location in 64-bit Windows 10 is C:\Program Files (x86)\Charm Sciences, Inc\NovaLinkV5).



This limits what this copy of novaLINK 5 can do in Dashboard, Corporate Reporting, Plan customizations, adding/removing/modifying Operators (used for Operator specific dashboard

views), adding/removing/modifying Canned Notes, and modifying the software settings password.

The diagram below represents how the Corporate Data Uploader and Corporate Data Receiver transfer data between multiple facilities to a corporate instantiation/database.



At each facility a server runs the Corporate Data Uploader which is the standard novaLink 5 client configured for Corporate uploading. When the Corporate Data Uploader determines there is data in the database that needs to be uploaded it connects to the Corporate Data Receiver and transfers the data. The Corporate Data Receiver stores the transferred data to the Corporate Database.

The Corporate Database can be setup like it is at a Facility. An empty novaLink 5 database (That includes the tables but no data) can be loaded into the corporate database. The corporate data receiver will then populate the database with data it receives from the facilities.

The corporate copy is installed the same way as a normal novaLink 5 client. After the software is installed, the database can be configured for either local or remote connection (using the same procedure above for a remote database). To enable the Corporate Data Receiver, you will need to open the NovaLinkV5ConfigUI tool located in C:\Program Files (x86)\Charm Sciences, Inc\NovaLinkV5.

Select Service Enabled and set the Port that you wish to use (Default is 6572) and save the changes.

On each copy of novaLink 5 that acts as the master, you will need to open the NovaLinkV5ConfigUI tool located in C:\Program Files (x86)\Charm Sciences, Inc\NovaLinkV5. Scroll down to Corporate Data Uploader and input the host name/IP and the Port number (if changed from the default of 6572). Select Service Enabled and save the settings. Click Test Connection. If the Corporate Data receiver is running in the Corporate office, the test should return successful.

The novaLINK 5 users that are connected to the Corporate Database can filter the data based on the Facility ID's stored in the Assay. This will allow them to Include or Exclude certain facilities from their reports.



Charm Sciences Contact Information

Charm Sciences' Technical Support staff can be contacted by telephone (978-687-9200), fax (978-687-9216) or email (techsupport@charm.com). During non business hours the calls will be forwarded to a beeper service. Please leave a message with your name, call back number, company information and problem, and the on call Technical Service Representative will call back as soon as possible.

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