eNICQ 6 Installation Guide

Release 1.8
Published August 2019
Introduction

Welcome to the eNICQ 6 Infant Data Entry System. This software has been developed to help your hospital enter, store, and submit Vermont Oxford Network data. This software will allow you to manage your data entry, submissions, and corrections, and you will be better able to check your data for completeness and accuracy.

Features of the eNICQ 6 software include the following:

User Features

- Immediate feedback on errors and warnings as data items are entered
- The ability to browse, correct, and complete data entry without printing
- Context-sensitive help, including data item definitions and ranges embedded within the data entry form
- The ability to sort, filter, and group records on the Patient Log
- Administrative settings automatically configured when you enter your center information during eNICQ 6 setup
- The capability to enter and submit data for multiple Vermont Oxford Network centers in the same database
- Allowance for multiple concurrent users in a network environment
- Continuous data submission regardless of record status
- Continuous updates of rules and data entry form
- Integrated security model
- Consolidated form with a single status code
- Highly interactive data fields - fields will only display if they are required.
- Streamlined process to get a Still Hospitalized status
- Current Disposition has been consolidated
- Streamlined navigation

Technical Features

- Built on the Microsoft® .NET Framework
- SQL Server® database, either using SQL Server® Express or your own SQL Server® installation (recommended)
- Use of Windows® installer technology in all installations and upgrades
- Functionality supporting ongoing data interface from your electronic medical record system
- Secure data submission to the Vermont Oxford Network through streaming XML over HTTPS
This document offers step-by-step guidance for each of the installation options offered by the eNICQ 6 installer file:

**Page 10**  
[Chapter 1: SQL Server® Express Database and eNICQ 6 Client Installation on the Same Computer]
- This chapter describes the process of installing both the database and client application on one computer.

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[Chapter 2: Database Installation on an Existing SQL Server®]
- This chapter describes the creation of the eNICQ 6 database on an existing full version of SQL Server®. The process should only be performed by an IT professional with the necessary skills and permissions.

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[Chapter 3: eNICQ 6 Client Installation]
- This chapter describes how to install the client application on a workstation after the database has been installed elsewhere.

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[Chapter 4: Installation of SQL Server® Management Studio Express]
- This chapter describes an optional installation of management tools for SQL Server® Express.

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[Chapter 5: Test Installation of eNICQ 6]
- This chapter describes installing a test version of the eNICQ 6 database and client.

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[Appendix A: Multi-Center Installations]
- This chapter describes an installation for multiple centers sharing a single eNICQ 6 database.
The eNICQ 6 Infant Data Entry System consists of a Windows client and a SQL Server database. This design offers many benefits. First, the database can be installed on a central computer or server for security and backup. Second, once the eNICQ 6 database is made available over the network, the client software can be installed on as many computer workstations as you need.

You should begin by discussing an installation plan with your center’s IT or IS department in order to decide where the database will be installed, how many workstations will have the client software installed, and how database backups will be accomplished. We recommend that your center installs the eNICQ 6 database on an existing instance of SQL Server® if at all possible. If no SQL Server instance is available, a copy of SQL Server® Express 2012 is packaged in the eNICQ 6 installer. For detailed descriptions of each installation option, please read the next section of this guide. More information on database installation and security can be found in the eNICQ 6 System Administrator’s Guide.

**eNICQ 6 Installation Options Overview**

This overview describes the available installation options and the technical skill and permissions required for each scenario.

Vermont Oxford Network recommends using an existing Standard or Enterprise Edition SQL Server installation to host the database for the additional security, stability, and extensibility that option offers. If you do not have the resources or IT staff to support a server hosted database, the installer contains a free version of SQL Server Express 2012 that can be installed locally on your client computer.

**SQL Server® Express Edition installed locally**

The eNICQ 6 client application and SQL Server® Express database are installed on a single workstation. See [Chapter 1](#).

**Advantages:**
- Easy to install, can often be implemented with minimal IT support

**Disadvantages:**
- Risk of data loss if the local machine is damaged, upgraded, replaced
- Establishing a reliable backup protocol will require additional IT support
- Security of PHI data depends on securing access to the machine itself
- Can only have one client machine for data entry
**SQL Server® Standard or Enterprise Edition installed on server (Recommended)**

The eNICQ 6 client application is installed on one or more workstations. The eNICQ 6 database is hosted by your existing SQL Server® Standard or Enterprise Edition. See [Chapter 2](#) and [Chapter 3](#).

**Advantages:**

- No risk of data loss if the local machine is damaged, upgraded, replaced
- Backups can be managed at the server level by a Database Administrator
- Security of PHI data can be managed at the server level
- Can have multiple client machines for data entry

**Disadvantages:**

- Requires professional IT support to implement

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**eNICQ 6 Logins**

There are two different ways you can handle the login to eNICQ 6: the standard logins, where each time the user would need to enter their username and password, or Active Directory logins, where eNICQ will use their Windows credentials to automatically log into the program. There are some changes to both types of logins from previous versions of eNICQ.

The standard or VON logins are now going to be the same as the user’s login for the Member Portal on the VON website. This means that a VON Services Administrator for each center will need to go to the Manage Users page in the Member Portal to give people either administrator or user permissions to eNICQ. The eNICQ 6 users will log in using the same credentials as they would to log into our website.

If you choose to use Active Directory logins, your System Administrator will need to create an AD group for users, and one for administrators prior to installing eNICQ 6. You can use whatever naming conventions for these groups that work best for your center. During the installation process, if you select to use Active Directory for the type of login, you will get a page to enter in the names of the AD groups your Systems Administrator created. They will then get added to the eNICQ 6 database with the appropriate client permissions (you will still need to add the SQL permissions after the database installation – see p. 25).

Please make sure there are no spaces in the AD group names, otherwise they will not work. Also, eNICQ 6 will check the Users group first when logging someone into eNICQ 6, so if someone should be an administrator in the eNICQ 6 client application make sure they are only in the Admin group. If they are in both they will only see the User options when they log into eNICQ 6.

Unlike previous versions of eNICQ, administrators no longer necessarily have access to each center added to the eNICQ 6 database. They need to be given access on a center-by-center basis in the Member Portal. Even if you are using Active Directory logins when you add a new center you will be given the opportunity to add new AD groups for that center.
Permissions to the Database:
A SQL account created by an administrator on the SQL server grants access to the database in this model. The database will contain PHI; therefore, the machine should be secured according to your policies.

The eNICQ 6 application can be installed with a SQL Express database hosted directly on the same PC.

The eNICQ application will need to communicate through your firewall.

The URL for our RESTful API web services are located on p. 8 of this guide.

The eNICQ application will need to communicate frequently with RESTful API web services hosted on the VON web server.

The VON data servers contain non-PHI and PHI data (if you’ve signed up for Nightingale Time Series Reporting) from member centers world-wide. This data is used primarily for quality improvement reporting. One of the main ways members access this information is through our online reporting system, Nightingale.

Please see your Data Use Agreement for more information.

HTTPS, Port 443, 256 bit encryption
Non-PHI and PHI data (with agreement)
Note: This is two-way communication with a RESTful API Service

High Level Data Flow, eNICQ to VON, locally hosted database
Permissions to the Database:
Windows Authentication is recommended. Account will need the EnicqRights role.

The eNICQ 6 application can be installed on one or more client PC’s at your data entry locations.

The eNICQ database should be hosted on your database server.

The URL for our RESTful API web services are located on p. 8 of this guide.

The eNICQ application will need to communicate frequently with RESTful API web services hosted on the VON web server.

The eNICQ application will need to communicate through your firewall.

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Please see your Data Use Agreement for more information.
System Requirements

**eNICQ 6 Client Software, installed locally**
- Microsoft® .NET Framework version 4.6.1
- At least 400 MB of free disk space
- At least 1 GB of RAM
- Installer and client require Internet connection open to vtoxford.org and all subdomains on ports 80 and 443. This connection must accommodate a RESTful API web service (.svc)

*Depending on configuration, Windows® 8, Windows® 8.1, Windows® 10 may require installation of .NET Framework version 4.6.1

**Microsoft® SQL Server® Express 2012, installed locally**
- 32-bit systems
  - Computer with Intel or compatible 1GHz or faster processor (2 GHz or faster is recommended.)
- 64-bit systems
  - 1.4 GHz or faster processor
- Minimum of 512 MB of RAM (2 GB or more is recommended.)
- 2.2 GB of available hard disk space
- For more information on SQL Server® Express 2012, please visit the Microsoft® site: https://www.microsoft.com/en-us/download/details.aspx?id=29062

-or-

**Microsoft® SQL Server® 2012 or higher, existing Standard or Enterprise Edition**
- Supported SQL Server® Versions: 2012 or higher.
- Maximum anticipated database size of 1 GB

**Download Installer**

The eNICQ 6 installer file is available for download on the Vermont Oxford Network website: https://public.vtoxford.org/enicq/. It contains both the client installer and database installer in one package.

In order to download this file you will need your center number and License Key. The License Key is found in the Data Management Section of the Member's Area on the Vermont Oxford Network website. Once you have downloaded the installer and you know where you will install the database and client(s), you are ready to begin.
Web Services URLs for eNICQ 6

eNICQ 6 is designed to allow for data fields and definitions to be updated through our web services. It uses RESTful API instead of WCF web services. You may need to update your firewall settings to allow eNICQ 6 to connect with each of the following URLs:

- https://services.vtoxford.org/codes/InfantError
- https://services.vtoxford.org/codes/ApplicationError
- https://services.vtoxford.org/codes/FieldRelationship
- https://services.vtoxford.org/codes/BacterialPathogen
- https://services.vtoxford.org/codes/CongenitalInfection
- https://services.vtoxford.org/center/installtype
- https://services.vtoxford.org/center/logintype
- https://services.vtoxford.org/center/testcenters
- https://services.vtoxford.org/center/addcenter
- https://services.vtoxford.org/Error
- https://services.vtoxford.org/codes/FieldValues
- https://services.vtoxford.org/center/center
- https://services.vtoxford.org/sqlschemaservice/SqlSchemaChange
- https://services.vtoxford.org/codes/transfer
- https://services.vtoxford.org/codes/Surgery
- https://services.vtoxford.org/codes/BirthDefect
- https://services.vtoxford.org/codes/state
- https://services.vtoxford.org/codes/country
- https://services.vtoxford.org/Version/Version
- https://services.vtoxford.org/codes/field
- https://services.vtoxford.org/Record/Enicq
- https://services.vtoxford.org/user/user

These URL’s are subject to change with any major revision to eNICQ 6. The root location https://services.vtoxford.org is NOT subject to change. We advise “safelisting” the root URL recursively to allow access to any new or renamed services in the future.
Protected Health Information and HIPAA

Confidential patient data items are stored in your local eNICQ 6 database. Patient identifiers are protected health information as specified in the US Health Insurance Portability and Accountability Act of 1996 (HIPAA) and the regulations implementing HIPAA. eNICQ 6 has been designed to ensure that patient identifiers cannot be sent to Vermont Oxford Network (“VON”) unless the submitting member has the appropriate agreement(s) in place with VON. Hospitals in the US must implement measures to protect protected health information from unauthorized access, as specified in the HIPAA Privacy and Security regulations. Users of eNICQ software should be sure to comply with local hospital policies and good information security practices to protect data in the eNICQ database. Hospitals outside of the US should work with their legal and information security departments to determine the appropriate safeguards required in their jurisdiction(s).

To avoid access to the eNICQ 6 tables by unauthorized personnel, system administrators should review the security options available in the eNICQ 6 System Administrator’s Guide, available at https://enicq.vtoxford.org/, and ensure that the application is implemented to be accessible only to hospital staff members who have permission to access the data.

If you are unsure about the sufficiency of your information security safeguards, or have any difficulty implementing the instructions in the guide, please consult your IT department or a qualified information security professional for assistance, in order to avoid and prevent HIPAA violations and potential breaches of information security.
Chapter 1: SQL Server® Express Database and eNICQ 6 Client Installation on the Same Computer

NOTES:

- All installation tasks must be performed using an account with local administrator rights.
- If there will be multiple users logging in with different Windows accounts to use eNICQ 6 the person who does the actual installation will need to install SQL Server Management Studio Express (see Chapter 4 of this guide), and give each user the EnicqDBUser role on the database (see p.25 of this guide).
- Because of where the Connection.enicq file, error logs, and import logs are saved all users will need to have the “Read and end execute” permission on the C:\ProgramData folder.

1. To begin installation, double-click on eNICQInstaller.exe. A warning message may ask if you want to allow the program to make changes to the computer. Click Yes. A dialog will appear describing the eNICQ 6 Installer archive. Click OK to continue. The installer self-extraction process will begin:

2. When the extraction process is complete, a Welcome screen will appear:
3. When installing a new eNICQ 6 database you will not have an existing connection file. Confirm that No is selected and click Next.

Installing the database will create a connection file located C:\ProgramData\VON. ProgramData is a hidden folder so you may need to unhide it from Control Panel\Appearance and Personalization before you can view it. **We recommend saving a copy of the connection file in a secure location.**

4. Select Normal Install, enter your License Key, and click Next. If you do not know your License Key click the “I don’t have a license key” link for instructions on where to find it:
5. If you are choosing to install the database locally on a workstation (the advantages and disadvantages of a local installation are p.3 of this guide) select “On SQL Server Express Edition, installed locally” and click Next.

6. A window will pop up reminding you of the risks with a local installation of the database. Please read them and make sure you understand. If you are still certain this is what you would like to do click “I understand the risks. Do a local install”: 
7. A window will appear while the temporary files are opening followed by a message asking for you to please wait while the current operation, the installation of SQL Server® Express 2012, is being processed. Do not interrupt.

8. The Install Setup Files wizard will next appear on its own. Let this run until completed:
And you will get this message again:

**SQL Server 2012**

Please wait while Microsoft SQL Server 2012 Setup processes the current operation.

Then it will show you the installation progress for SQL Server 2012:
9. When it’s finished installing SQL Server® Express 2012 you will then be prompted to select which login type you would like to use (see page 4 for more information on the types of logins). If you select “Use my VON Login” skip to step 11.

![Image of Install eNICQ 6 dialog box]

**How would you like to log into eNICQ?**
Vermont Oxford Network recommends integrating the eNICQ application with Active Directory services to maximize control and security.

- Use Active Directory (recommended)
  Requires a System Administrator to configure Groups.
- Use my VON login
  Requires your VON Web Administrator to grant you access.

![Image of Active Directory groups entry screen]

10. If you choose **Active Directory** you will get a screen to enter the Active Directory Group names. Your System Administrator should have created the Active Directory groups and provided you with the names of each prior to running the installer. Here you just need to enter the group names into the appropriate fields.
11. You should then see a dialog box showing you the installation time for the eNICQ 6 database.

12. If you selected to use Active Directory you will then be asked where you would like to install the eNICQ 6 client application. Select which option you would like. If you are planning on having multiple clients connecting with the database you cannot do a local install. The database will need to be installed on an existing SQL Server® (see Chapter 2).
13. After successfully installing eNICQ 6 you will see the “Congratulations!” page of the installer. You can select to simply exit the installer, run eNICQ 6, or to view the help files at this point. If you are going to run eNICQ 6 you will need to make sure that you are able to login either using Active Directory or with the same login you would use for the Member’s Area.
Chapter 2: Install Database on an Existing SQL Server®

NOTES:

- This chapter describes eNICQ 6 database installation on a central server, and should be performed only by IT staff with the necessary skills and permissions. The procedures in this chapter accomplish the following:
  
  o Database creation on the server, including all database objects
  o Registration of the database through a GUID with the Vermont Oxford Network
  o Establishment and saving of database connectivity information on the client
  o Creation of end-user accounts for database access on SQL Server®

- eNICQ 6 is designed to work with a SINGLE instance of the eNICQ database. If you require a second instance for a test environment, please see Chapter 5, Test Installation of eNICQ 6.

INSTRUCTIONS FOR CLIENT SIDE ACTIONS:

1. Working with the Database Administrator, determine which server will be used to host the eNICQ database.

2. Your database Administrator will need to give you SA level permissions to that server in order to allow creation of the database. This is for installation only. The end user will not need SA level permissions and future upgrades will not require SA level permissions.

3. If you will be installing the eNICQ 6 client on multiple workstations we recommend running the installer from the server and then using the MSI to push the client to the workstations using group policy. If you’re only doing a single instance of the client application then you should just run the installer from on the workstation.

4. When you run the installer a warning message may ask if you want to allow the program to make changes to the computer. Click Yes.

5. A dialog box will appear showing the extraction progress:
6. When the extraction process is complete, the Welcome to the eNICQ 6 Installer page will appear:

![Welcome to the eNICQ 6 Installer](image)

7. When doing a new installation of the eNICQ 6 database you will not need a connection file. Confirm that No is selected and click Next.

Installing the database will create a connection file located at `C:\ProgramData\VON`. ProgramData is a hidden folder so you may need to unhide it from Control Panel\Appearance and Personalization before you can view it. We recommend saving a copy of the connection file in a secure location.
8. Select Normal Install and enter your License Key and click Next. If you do not know your License Key click the "I don't have a license key" link for instructions on where to find it.

9. On the "Where would you like to host the database?" page select “On SQL Server® Standard or Enterprise Edition, installed on server (recommended)” and click Next:
10. Enter the Server Name where you want to install the database. The Database name will default to “eNICQ6db” but you can change that to fit whatever naming conventions your center may use. If the server is on a different domain, enter the server’s fully qualified domain name. Enter the SQL Server® port number if needed (such as when connecting remotely). For dynamic ports, enter “0”. Select Windows Authentication. Click Next:

**NOTE:** If you prefer to use SQL Authentication, select SQL Login and enter the User Name and Password. This Login must have full Admin rights on the SQL Server® in order to configure the database correctly. For more information regarding SQL vs. Windows® authentication, please refer to the eNICQ 6 System Administrator’s Guide.

11. When asked “How would you like to log into eNICQ?” you will need to select whether you are going to use your VON login or if you will be using Active Directory logins. If you are using VON logins, your VON Services Administrators will have to give you permissions from the Edit User Permissions page in the Member’s Area of the VON website, [https://admin.vtoxford.org/](https://admin.vtoxford.org/).

If you are going to be using Active Directory logins, your Systems Administrator will have to create the Active Directory login groups prior to running the installer. Unlike with previous versions of eNICQ, there will not be any prenamed AD groups in the database. Your Systems Administrator will need to create AD groups, one for users with administrator permissions and one for regular users. When installing eNICQ you would just need to enter them into the appropriate fields in step 12.
If you are using the standard VON logins rather than Active Directory skip to step 13.

12. If you select Use Active Directory, the next page will ask you to enter the Active Directory group names. There will be a field to enter the AD group for standard eNICQ 6 users and one for Administrators:
13. It will take a minute or two for the database to be created. The installer may become inactive during this time. Do not interrupt this. After the database has been created, you will then be asked how you will like to install the Client.

14. If you select “Install on this machine” and click Next you should see a dialogue window asking you to wait while the client is being installed:
15. When the client is finished installing, you will see the “Congratulations! You successfully installed eNICQ 6” page.

![eNICQ Application Installer](image)

**Install eNICQ 6**

*Congratulations! You successfully installed eNICQ 6.*

What would you like to do next?

- [ ] Exit the Installer
- [ ] Run eNICQ 6
- [ ] View the Help Files

[Help] [Cancel] [< Back] [Next >] [Finish]

END OF CLIENT SIDE ACTIONS
NOTE ON SQL SERVER® CONFIGURATION: The eNICQ 6 application performs database transactions using the following isolation levels: RepeatableRead, ReadUncommitted, Snapshot, ReadCommitted. The SQL Server® database must allow usage of each of these isolation levels.

INSTRUCTIONS FOR SERVER SIDE ACTIONS

The following instructions should be carried out in SQL Server® Management Studio by a database administrator or IT professional with equivalent skills and permissions. These instructions focus on using Windows Authentication to manage database access. Additional options and tips are available in our documentation on troubleshooting database connectivity in eNICQ 6.

1. Open SQL Server® Management Studio.
2. Locate the Security folder at the server level in the object explorer. 
   Note that there is also a Security folder at the database level under the enicqdb database, but that is not the Security folder that you are looking for.
3. Expand the Security folder. Under the Security folder you will see the Logins folder.
4. Right-click on the Logins folder and choose New Login…
5. At the bottom of the Login – New dialogue, set the Default database to eNICQ6db unless you named it something other than the default name. In that case select the actual name of the database.
6. Select the **Windows authentication** radio button.

7. Click the **Search** button

8. Click the **Object Types** button on the **Select User or Group** dialog.

9. Uncheck **Built-in security principals**.

10. Check **Groups** and/or **Users**, whichever you are using. For multiple users, managing through group membership is recommended.
11. Click **OK** to continue.

12. Click **Locations…** on the **Select User, Service Account or Group** dialog.

13. Select the location for the Windows account or group.

14. Click **OK**.

15. Enter the user or group in the space provided and click **Check Names**.
16. If you have been unable to identify the correct user or group, click **Advanced...** on the **Select User, Service Account or Group** dialog for more search options. Otherwise, continue to step 19.

17. Use the advanced features to find your user or group.

- Click **Find Now**
- Enter the object name to select (examples):
- **Enter Search Parameters**
- **Select the correct user or group**
18. Please contact your System Administration team for assistance if you have difficulty with any of the following:
   - Locating the correct user or group.
   - Creating a user or group.
   - Adding or removing users to or from a group

19. On the **Login – New** dialog, click the **User Mapping** page.

20. Check the *eNICQ6db* database in the upper panel or what you named it if you chose not to use the default database name.

21. Check the roles *EnicqDBUser* and *public* in the lower panel.
22. Click OK to complete Login creation.

23. Test the end-user’s database authentication capability from the client machine by having the end user launch the application once it has been installed (See Chapter 3).

24. Set up SQL backups and secure your data according to your organization’s policies.

END OF SERVER SIDE ACTIONS
Chapter 3: eNICQ 6 Client Installation

NOTE:
This chapter describes the installation of the eNICQ 6 client application. It requires that the SQL database for eNICQ 6 has already been installed at your center and for you to have a copy of the Connection.enicq file. This file will be found in C:\ProgramData\VON on the server or workstation where the eNICQ 6 installer was first run. Because of where the Connection.enicq file needs to reside, and because of where the error and import logs are saved, all users will need to have the “Read and execute” permission to the ProgramData folder.

ProgramData is a hidden folder. To be able to view it you will need to open your Windows Control Panel, select Appearance and Personalization and click on “Show hidden files and folders”:
On the window that pops up select “Show hidden files, folders, and drives” and click Apply:
If you are pushing out the client application to multiple workstations we recommend downloading the MSI and pushing it out to each workstation with the Connection.enicq file using Group Policy. The connection file is found in C:\ProgramData\VON on the computer where you first installed the database and should be saved to that same location on the workstation where the client's being installed.

You can also manually run the MSI on the workstation but you will need to manually create the VON folder under C:\ProgramData and save the Connection.enicq file there. The eNICQ 6 MSI can be downloaded from https://public.vtoxford.org/enicq-6/. It only takes a couple seconds to run and many times you won’t even see a status bar but you can confirm it is done by checking the Windows Start menu for eNICQ 6.

If you are not a database owner then please follow the instructions in the paragraph above on how to use the MSI to install the client. However, if you have db_owner permissions or greater on the database you could also use the steps below to install the client using the eNICQ 6 Installer. This would also apply any updates to an existing eNICQ 6 database if you need to upgrade to a newer version of the database.

1. After you’ve copied the connection file and saved it to the new computer, run the installer and select “Yes”. When it asks if you have an existing connection file, browse to the location of the Connection.enicq file, select it, and click Open. When you are returned to the installer, click Next:
2. On the Center License Key screen enter in your License Key and click Next. If you do not know your License Key click the “I don't have a license key” link for instructions on where to find it:
3. Select the login method to use. If you want to change the login type from what was selected on the initial installation, you can do so here. Please be sure to select the same login method as your original installation otherwise it will change it. Click Next (if you select VON login skip to step 5):

4. If you had already selected Active Directory when you initially installed the eNICQ 6 database the AD groups entered before should automatically populate for you. Click Next:
5. You will then see the client installation page. Select “Install on this machine” and click Next:

![Image of the client installation page](image)

6. A dialog window will appear giving you the status of the client installation:

![Image of the status dialog window](image)
7. Once the dialog box disappears, you will get a window congratulating you on the installation of eNICQ 6 and giving you the options to Exit the Installer, Run eNICQ 6, or View the Help Files:
Chapter 4: Installation of SQL Server Management Studio Express®

NOTES:

- This is an optional installation of management tools for SQL Server Management Studio Express®. All installation tasks must be performed using an account with Administrative permissions.

- If you have an existing instance of SQL Server Management Studio® (such as the 2005 version) that requires upgrade to 2012, please see your local IT department. Typically, it is easier to remove the old version first and do a clean install.

1. First, you will need to download the installer for SQL Management Studio Express 2012 by navigating to this link: https://www.microsoft.com/en-us/download/details.aspx?id=29062

2. On the Microsoft® SQL Server® 2012 Express webpage, click the Download button.

3. Select ENU\x86\SQLManagementStudio_x64_ENU.exe from the list of options to download if you have a 64 bit computer. If it’s a 32 bit computer you will need to select ENU\x86\SQLManagementStudio_x86_ENU.exe. Click Next.

4. Your browser will present you with options to download or run the installer. This will vary from browser to browser. It is fine to use whichever method you prefer to launch the installer.
5. Once you have launched the SQL Management Studio installer, select to do a new installation.

6. On the **Product Updates** page, make sure there are no new updates and click **Next**.
7. On the Installation Type page, make sure “Perform a new installation of SQL Server 2012” is selected and click Next.

8. Read and accept the license terms. Click Next.
9. Make sure “Management Tools – Basic” is selected and click **Next**.

10. On the **Error Reporting** page click **Next**.
11. The installation should begin and the installer should bring you to the Installation Progress page.

![Installation Progress](image1)

12. If there are no issues, you should get this message. You can then close the installer and launch SQL Server Management Studio 2012®.

![Complete](image2)
Chapter 5: Test Installation of eNICQ 6

NOTES:

- This is an optional installation of a test version of eNICQ 6. You no longer need to contact VON to have a test account created.
- All installation tasks must be performed using an account with local administrator rights.

1. To begin installation, double-click on eNICQInstaller.exe. A warning message may ask if you want to allow the program to make changes to the computer. Click Yes. A dialog will appear describing the eNICQ 6 Installer archive. Click OK to continue. The installer self-extraction process will begin:

![16% Extracting](image)

2. When the extraction process is complete, a Welcome screen will appear. With a new installation of the eNICQ 6 test database you will not need a connection file. Click Next:
3. Select Test Install at the bottom and then select whether you would like it to be VLBW or Expanded. Click Next:

![Installing eNICQ 6](image)

4. Select whether you have SQL Server® Standard or Enterprise Edition to install the test database or if you want to install it locally on a workstation (not recommended) using SQL Server Express Edition®:

![Selecting SQL Server Edition](image)
5. If you are installing the database on a SQL Server® Standard or Enterprise Edition, you will then be prompted to enter in the server information (skip to step 8):

6. If you selected to do a local install, you will next receive a disclaimer explaining the risks of installing. If after reading through the warning you wish to install on a SQL Server® click “Nevermind, I’ll do a full install” to go back to the previous page, otherwise click “I understand the risks. Do a local install.”:
7. A window will appear while the temporary files are opening to install SQL Server® Express followed by a message asking for you to please wait while the current operation is being processed. Do not interrupt.

Eventually, you should see the Install Setup Files screen:
Followed by the Installation Progress screen:

8. When the installation is complete, a screen with the test login credentials will appear (Active Directory will not be an option with a test install):

![Screen with test login credentials](image)
9. Clicking Next will bring you to the successful install screen. Here you can select to Exit the Installer, Run eNICQ 6, or View the Help Files:

![Install eNICQ 6](image)

**Congratulations! You successfully installed eNICQ 6.**
What would you like to do next?

- [ ] Exit the Installer
- [ ] Run eNICQ 6
- [ ] View the Help Files

**Note:** Test installations of eNICQ 6 no longer will use your actual center numbers. Instead if you do an installation for VLBW the Center Number will be 9998 and with Expanded it will be 9999. If you are going to be importing data into the test installation please make sure the center number in the file matches the certification type.

Also note that any file exported from eNICQ 5 or 6 will contain Protected Health Information so please follow your hospital’s procedures regarding the handling of PHI.
Appendix A: Multi-Center Installations

The eNICQ application is capable of hosting data for multiple centers. There are several ways this can be accomplished:

1. Hosting multiple centers in a single instance of the database (recommended)
2. Hosting multiple centers in separate instances of the database on a common server and multiple copies of the eNICQ application on SEPARATE client machines
3. Hosting multiple centers in separate instances of the database on separate servers and clients

To determine the model that is best suited for your needs, we suggest you consider the following questions:

- Do any of the end users need to be able to have access to more than one center?
- Do any of the end users need to be able to have access to more than one center from a single machine?
- Are there any legal or policy impediments to hosting center data for multiple centers in a common database?
- Who will be hosting and maintaining the database? Who owns the hardware and employs the staff that will have access to it? Are all necessary legal agreements or releases in place?
- Do your staff members have permission to view data belonging to the different centers or are their permissions limited to a single center?
- Who among your staff would be permitted to view data for all centers and manage center data permissions for other staff members?
- Do the centers currently have an eNICQ database in operation? What versions are any existing databases? Where are these databases located?

If you are uncertain of the answers to any of the above questions, work with your team to reach a better understanding of your situation and what you would like to accomplish.

Option 1: Hosting multiple centers in the SAME database (Recommended)

Vermont Oxford Network’s recommendation is that whenever possible, data in a multi-center installation be hosted in a single instance of the eNICQ database. This model allows user permissions and security to be centrally managed and provides the most reliable maintenance and annual update options. By definition, this model requires co-mingling of data from separate centers in the same database. Access to each center is controlled either by your IT department who will add or remove users from the Active Directory groups or by your VON Services Administrator who can grant access from the Member’s Portal on our website.

Installation

No additional steps are required to install eNICQ under this model. Vermont Oxford Network recommends using a Standard or Enterprise Edition SQL Server® as described in Chapter 2 of the Installation Guide and using AD integration for single sign on as described at the beginning of this guide.
Migrating Center Data
New centers can be added to the database easily. The instructions for this process can be found in the document “Moving the eNICQ Database,” available at https://enicq.vtoxford.org/. Use the instructions in the second section titled “Option 2: Moving the Database by XML.” This procedure involves outputting a text file of the infant records, de-registering the database with our support team, adding the center to the new database, archiving the old database and importing the new data into the combined database. Audit logs from the old database cannot be imported to the new database, but they can be output to text file and archived.

If there is no existing data for the new center, add the center under Advanced Menu Options (the gear icon in the top right)…Center Management…Add New Center button. You’ll first be asked for the License Key for the center being added. If you are using Active Directory logins it will then ask you for the AD group names. With this installation you can use different AD groups for each center even when they are installed on the same database giving users access to specific center’s data if you wanted.

Managing User Access
It is possible to activate or deactivate access to each center for each User level account. If you are using VON logins your staff controls access rights for your users through the Member’s Portal on the VON website. If you are using Active Directory then your IT department would control who has access by adding or removing users from the Active Directory groups. It is up to your centers to determine the access appropriate to each user. Your VON Services Administrators for each center can set up accounts for eNICQ 6 users.

Applying Annual Updates
There are no special requirements for applying updates with this model.

Removing a Center
If it is necessary to later remove a center from the co-hosted model, this can be done by deleting the center. We recommend first outputting the data to a text file for future recovery. See the document “Moving the eNICQ Database” for instructions. If the center data will be put back into production at another location, you should consider outputting a copy of the audit log as well. After securing an archive copy of the data, remove the center by clicking Advanced Menu Options (the gear icon in the top right)…Center Management…Deactivate. This operation requires an Administrator level account in eNICQ.
Option 2: Hosting multiple centers in separate databases on the same server and installing multiple eNICQ applications on SEPARATE client machines

It is possible to set up multiple copies of the database on a single server and connect to them through separate instances of the eNICQ client application. In this model, each client application on each computer will point to only one instance of the eNICQ database that hosts data for a single center. Control of user access under this model is de-centralized and potentially confusing, but can be done successfully with appropriate documentation practices.

Installation
This model requires additional steps during installation to bypass safeguards in the installer intended to prevent accidental creation of multiple databases and multiple copies of the client application.

- To create multiple instances of the database, name (or rename if already existing) your database with the convention “eNICQ6db_” + [center number]. This will allow you to host multiple instances of the database on the same server and to clearly identify those databases by center number.
- When installing the client applications on each machine, it is critical to point the client application to the correct database. Use the installer to set and test database connectivity to the correct database (using the naming convention of “eNICQ6db_” + [center number] to identify the databases.)

Please note that with each eNICQ client pointing to a different database, your encrypted connection files will also be unique and cannot be used interchangeably. Any on-screen tips or tech support advice on reusing or transplanting enicq.connection files should be ignored.

Migrating Center Data
Introducing new center data to this model can be done with the document “Moving the eNICQ Database.” Use the instructions in the first section titled “Option 1: Moving the Database Using Backup and Restore.” After completing the procedure, rename your database with the convention “eNICQ6db_” + [center number].

Managing User Access
This model does not offer centralized management of user access. Each client/database combination must be managed separately for both database access (at the server level) and application access (either with Active Directory groups or by managing the permissions from the Member’s Area of our website depending upon the login type selected during installation).

Please note that the primary means of controlling access to each center with this model begins with whether or not a copy of the client keyed to the center’s database is installed on a user’s computer in the first place. Secondly, access can be controlled at both the database and application levels. Because these steps will need to be repeated for each separate instance of client and database, access control can potentially become confusing and burdensome under this model. Confusion can be mitigated by maintaining accurate documentation of the model.
Applying Annual Updates
There are no special requirements for applying updates with this model.

Removing a Center
Because each center is hosted in a separate database instance in this model, a center can be removed first by logging into the client and clicking **Advanced Menu Options (the gear icon in the top right)…Center Management…Deactivate** and then by detaching the database from the server and deactivating the eNICQ instance that pointed to it. Next, uninstall (using Add/Remove Programs) any instance of the application that pointed to the database.

Documentation
It is essential that you document the aspects of your implementation that are unique. This includes your naming of database instances, the client machines that point to those database instances, as well as the names of the end users and the permissions they are to be granted in each instance. The eNICQ application is subject to mandatory annual updates and it will be difficult to perform these updates without a complete understanding of your implementation.

Limitations of Support
If you have implemented this model, please notify Vermont Oxford Network’s technical support staff of your alternate implementation on all support inquiries so that our assistance can be tailored to your unique situation. Our technical support staff will not be able to adequately serve you without this information.

Option 3: Hosting multiple centers in separate databases on SEPARATE servers and installing multiple eNICQ applications on SEPARATE client machines

If you intend to host multiple centers on separate servers and access them through separate clients, there is no integration to manage. These are essentially completely separate installations even if they exist in the same physical facility. No special instructions are needed. Vermont Oxford Network always recommends that your implementation be documented so that IT staff performing maintenance or upgrades can easily determine which servers, databases, and clients are relevant to different centers and end users.

END OF DOCUMENT