

Vermont Oxford Network – eNICQ 6 Documentation

eNICQ 6.2 Test Installation Guide

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eNICQ 6.2 Test Installation Guide

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eNICQ 6.2 Test Installation Guide

Introduction

Welcome to the eNICQ 6 Infant Data Entry System. The software was developed to assist your hospital enter, store, and submit the data for Vermont Oxford Network's reporting. It will allow users to manage data entry, submissions, and corrections, plus users will be better able to check data for completeness and accuracy.

eNICQ 6 Features

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 items
- 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

eNICQ 6 Installation Planning

The eNICQ 6 Infant Data Entry System consists of a Windows client and a SQL Server database. This design offers many benefits. For example, the database can be installed on a central computer or server for security and backup. Another benefit is 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.

Discuss an installation plan with your hospital's IT or IS department to determine 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 possible.

If no SQL Server instance is available, a copy of SQL Server® Express 2012 is packaged in the eNICQ 6 installer. **This guide is to assist with installing a test version of eNICQ 6 either locally or with the database on a network server. It can then be used by your IT department for testing potential changes or upgrades to the environment without risk to your actual eNICQ 6 database. None of the data entered into a test installation of eNICQ 6 is submitted to VON.**

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 which can be installed locally on a workstation computer with the client application.

SQL Server® Standard or Enterprise Edition installed on server (Recommended)

The eNICQ 6 client application can be installed on one or more workstations. The eNICQ 6 database is hosted by your existing SQL Server® Standard or Enterprise Edition.

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

SQL Server® Express Edition installed locally

The eNICQ 6 client application and SQL Server® Express database are installed on a single workstation.

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

eNICQ 6 Test Logins

With a test installation you can only use a manual login. Active Directory is not an option. During installation it will create a single administrator account. The login credentials for that account are:

Username: e6testuser@vtoxford.org

Password: testUserPassword

eNICQ 6 Test Center Numbers

Test installations of eNICQ 6 do not use actual VON center numbers. Instead, with a VLBW installation, 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.

System Requirements

eNICQ 6 Client Software, installed locally

- Supported Operating Systems: Windows® 11*
- Microsoft® .NET Framework version 4.6.1 or higher
- 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 port 443. This connection must accommodate a RESTful API web service (.svc)
- User must have both "Read" and "Read & Execute" permissions to the C:\ProgramData folder

Microsoft® SQL Server® Express 2019, installed locally

- Supported Operating Systems: Windows 11
- 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® 2017 or newer, existing Standard or Enterprise Edition

- Supported SQL Server® Versions: 2017, 2019, 2022, & 2025
- Maximum anticipated database size of 1 GB

Download Installer

The eNICQ 6 installer 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.

Diagram: SQL Server® Standard or Enterprise Edition installed on server
(Recommended)

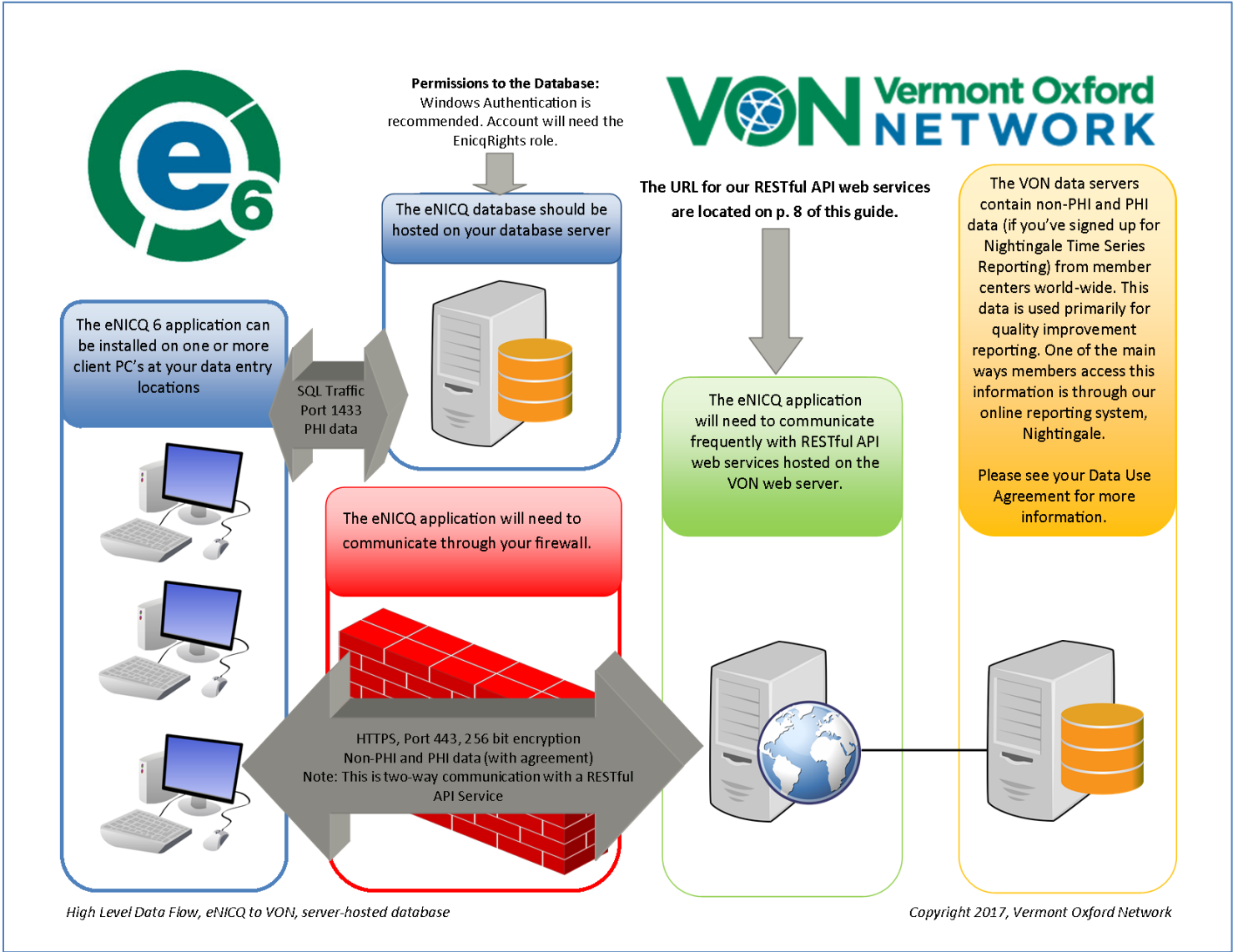


Figure 1

Diagram: SQL Server® Express Edition installed locally

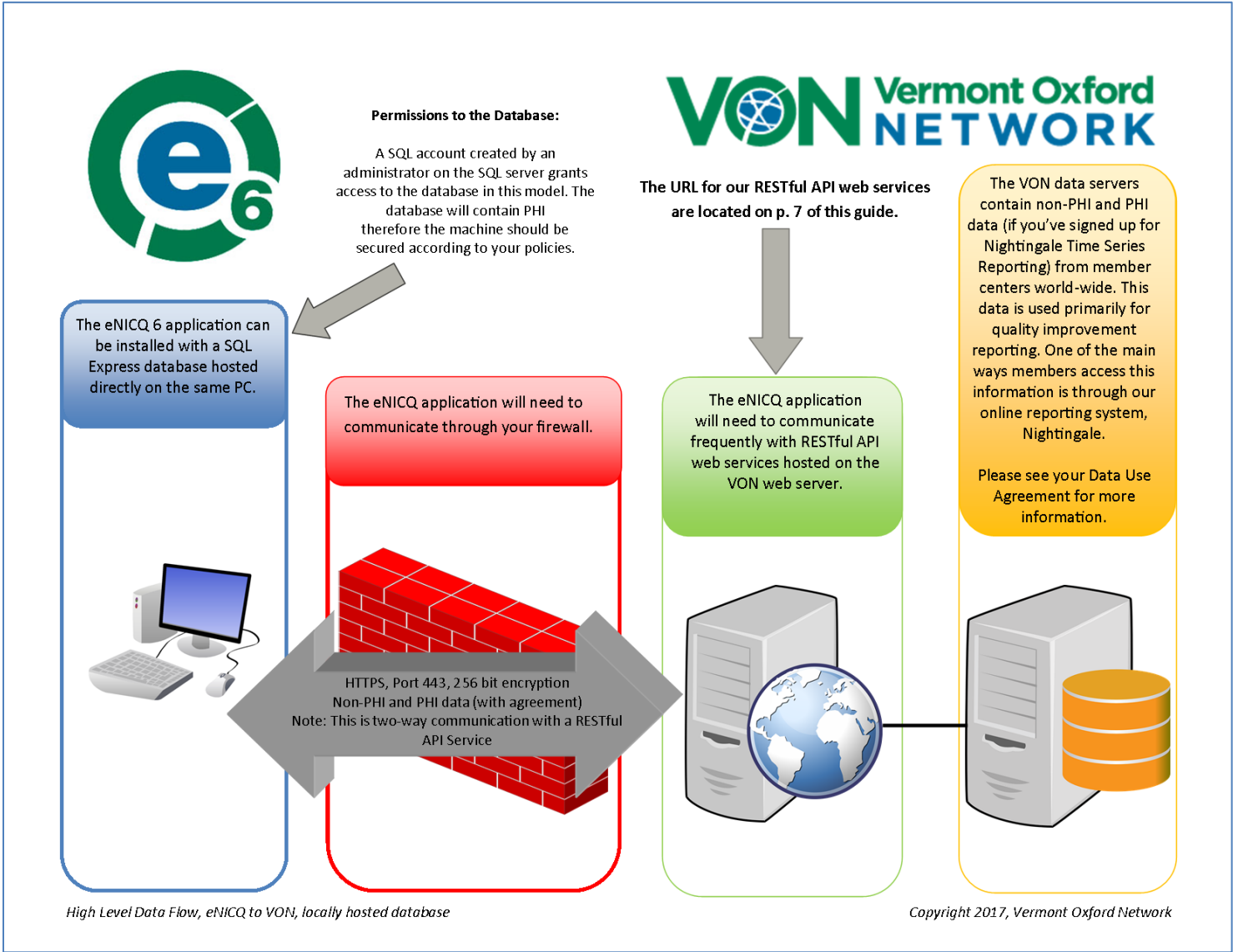


Figure 2

eNICQ 6 Web Services

eNICQ 6 is designed to allow for data fields and definitions to be updated through our web services. It uses RESTful API web services. You may need to update your firewall settings to allow eNICQ 6 to connect with them.

The specific URLs eNICQ 6 needs to connect with are subject to change with any major revision. The root location <https://services.vtoxford.org> is NOT subject to change. We recommend “safe-listing” the root URL recursively to allow access to any new or renamed services in the future.

If you are having issues connecting with our web services VON offers a Web Services Tester from our Help Center which you can download from the [VON knowledge base](#). There is a complete list of the URLs the eNICQ 6 installer and the client need to connect with on the tester’s instructions page.

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](#), 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.

eNICQ 6 Installation Support

If you have any questions or require any assistance with the installation of the software, you can contact VON Support by emailing us at support@vtoxford.org or calling (802) 865-4814 ex.240. Our business hours are 9:00 am to 5:00 pm Eastern Standard Time, Monday through Friday.

We also have a robust knowledge base which contains articles on almost every issue that has been reported to VON Support. You can access the KB at <https://vtoxford.zendesk.com/hc/en-us/categories/200178697-eNICQ-6-Support>.

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.
 - When doing a test installation you will have the option of selecting VLBW (Very Low Birth Weight) or Expanded. You will want to select whichever your center is certified for with VON. Feel free to contact VON Support if you do not know which to select.
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:

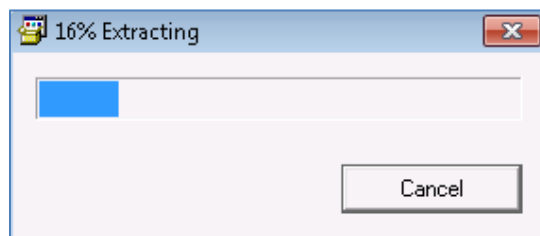


Figure 3

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.

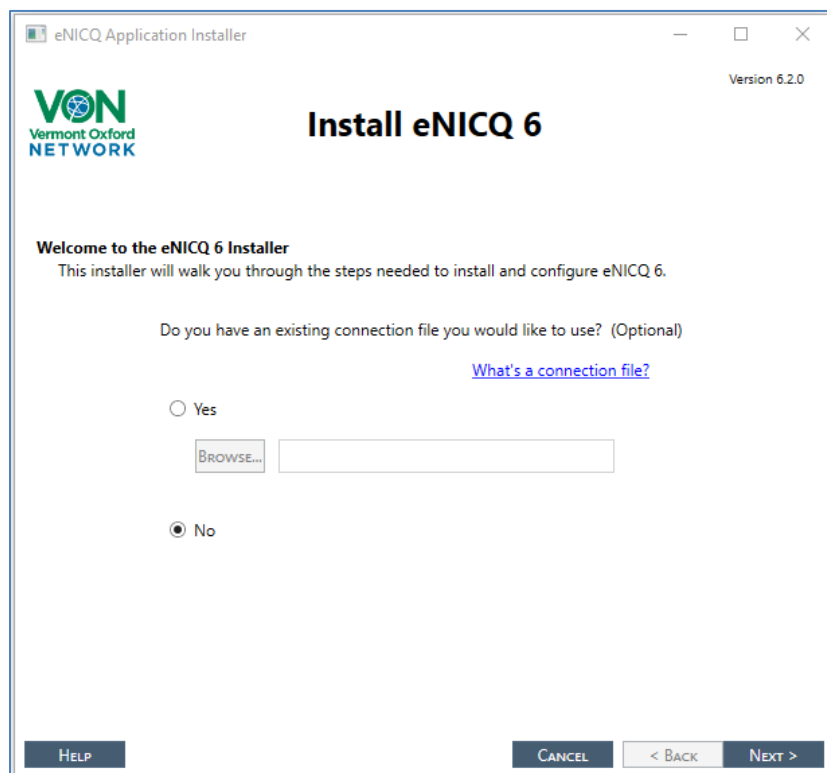


Figure 4

3. Select Test Install at the bottom and then select whether you would like it to be VLBW or Expanded. Click Next.

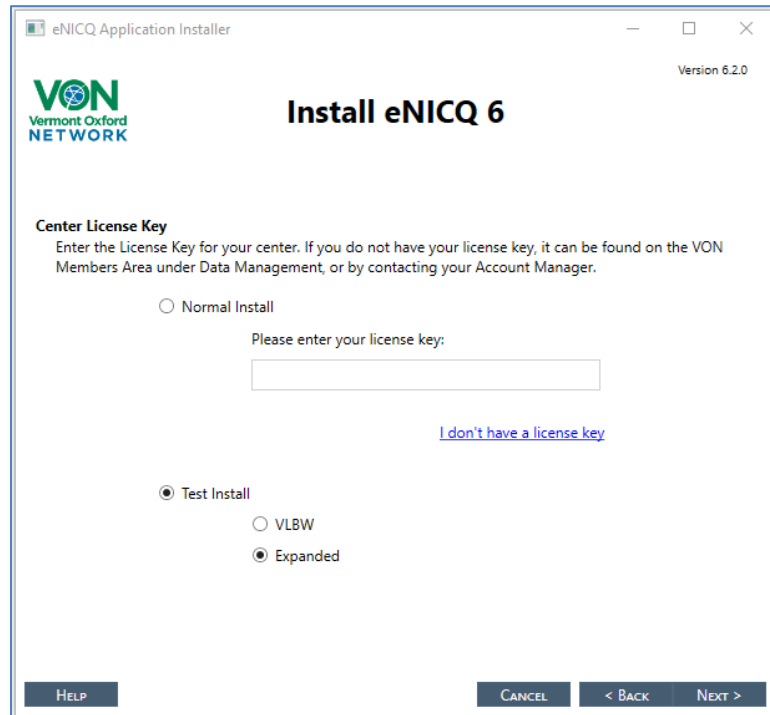


Figure 5

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®.

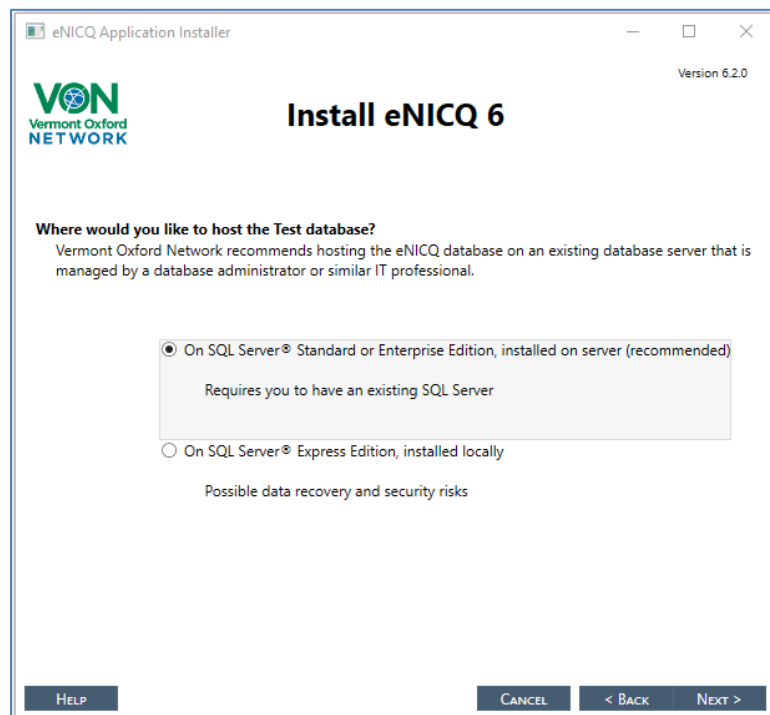
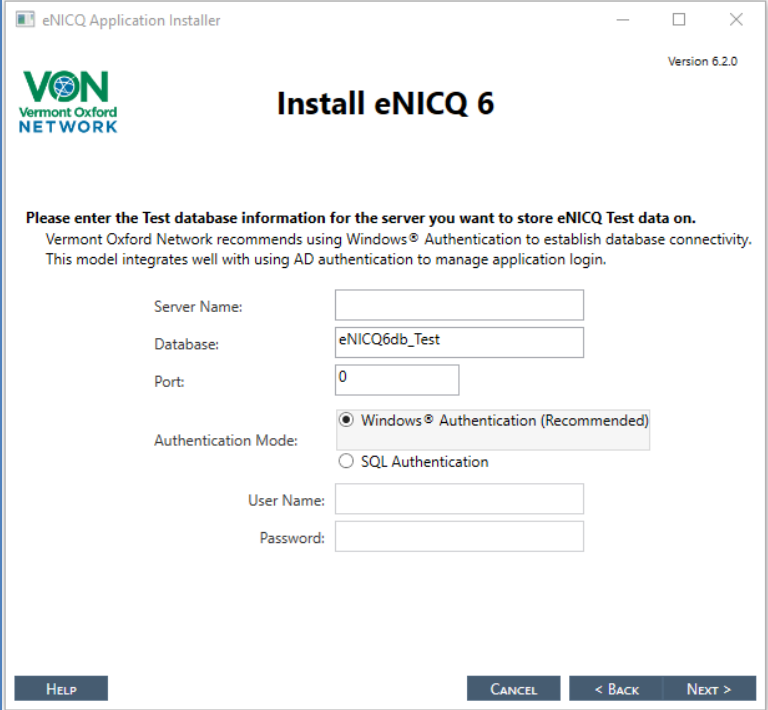


Figure 6

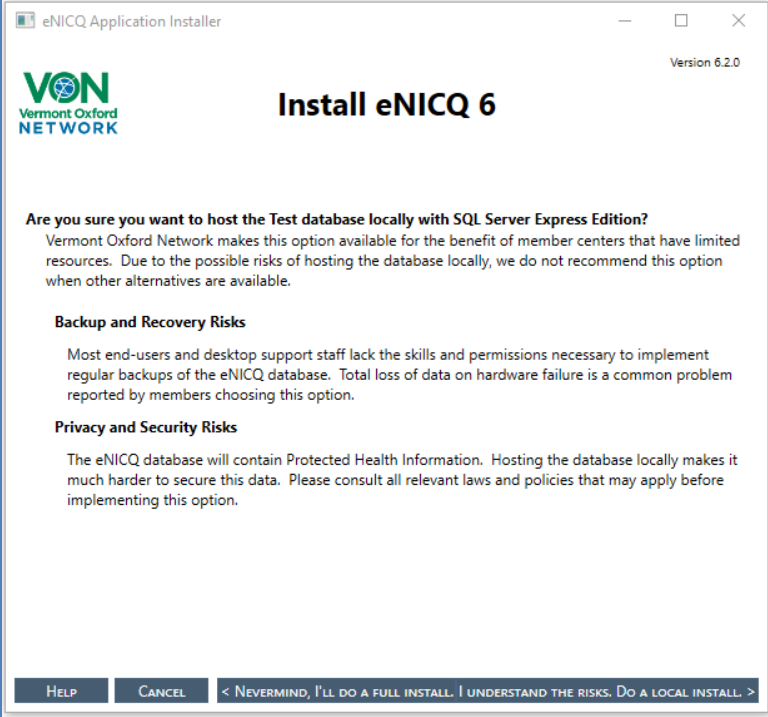
5. If you are installing the database on a SQL Server® Standard or Enterprise Edition, you will then be prompted to enter in the server information. After entering the server information click Next (skip to step 8).



The screenshot shows the 'eNICQ Application Installer' window, Version 6.2.0. The title is 'Install eNICQ 6'. Below the title, it says 'Please enter the Test database information for the server you want to store eNICQ Test data on.' and 'Vermont Oxford Network recommends using Windows® Authentication to establish database connectivity. This model integrates well with using AD authentication to manage application login.' The form has fields for 'Server Name:', 'Database:' (containing 'eNICQ6db_Test'), 'Port:' (containing '0'), 'Authentication Mode:' with radio buttons for 'Windows® Authentication (Recommended)' (selected) and 'SQL Authentication', 'User Name:', and 'Password:'. At the bottom are buttons for 'HELP', 'CANCEL', '< BACK', and 'NEXT >'.

Figure 7

6. If you choose to install locally, you will next receive a disclaimer explaining the risks of installing. After reading through the warning, if you still 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.”.



The screenshot shows the 'eNICQ Application Installer' window, Version 6.2.0. The title is 'Install eNICQ 6'. Below the title, it asks 'Are you sure you want to host the Test database locally with SQL Server Express Edition?' and provides a disclaimer: 'Vermont Oxford Network makes this option available for the benefit of member centers that have limited resources. Due to the possible risks of hosting the database locally, we do not recommend this option when other alternatives are available.' It lists 'Backup and Recovery Risks' and 'Privacy and Security Risks'. At the bottom are buttons for 'HELP', 'CANCEL', and '< NEVERMIND, I’LL DO A FULL INSTALL. I UNDERSTAND THE RISKS. DO A LOCAL INSTALL. >'.

Figure 8

7. If you have selected to install locally, the SQL Server install Setup Files wizard will appear followed by a series of other windows. Do not interrupt.

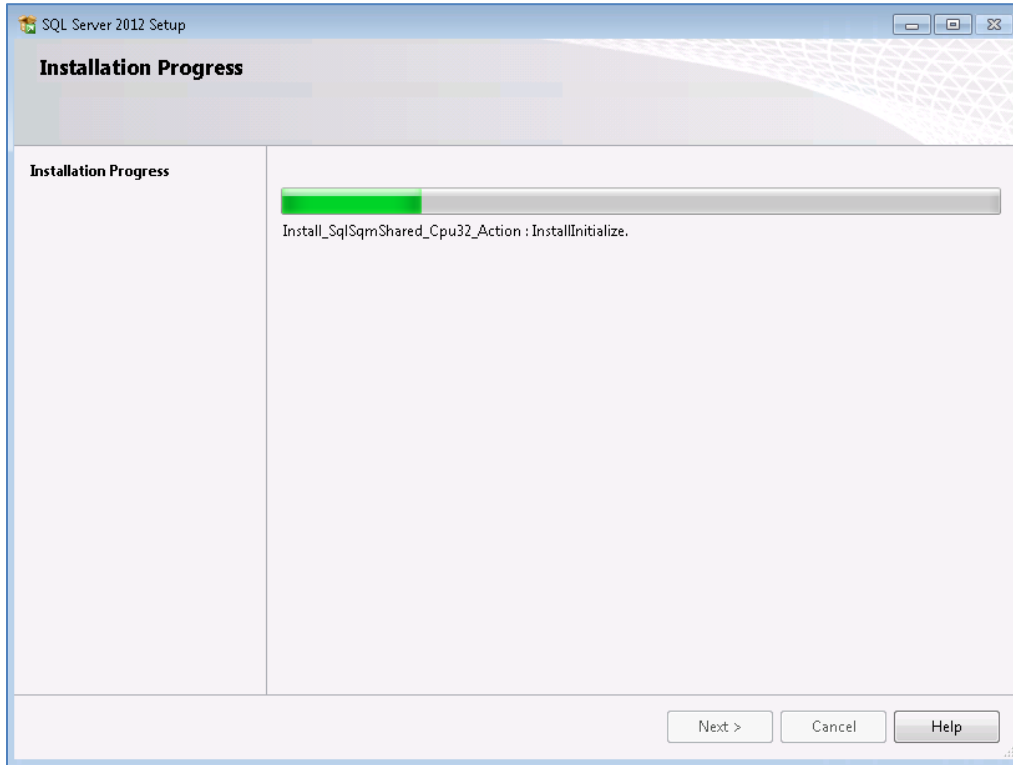


Figure 9

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

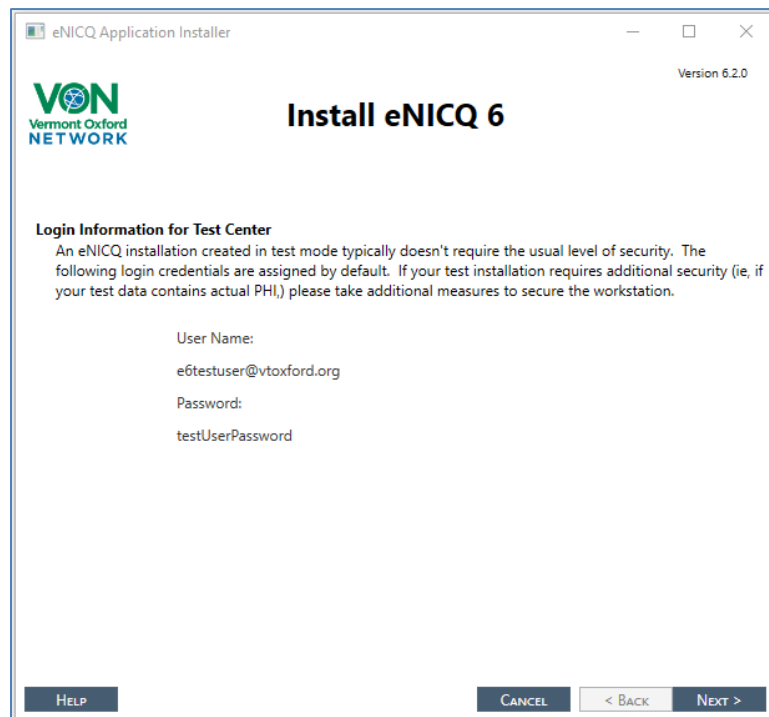


Figure 10

9. You will then be given three options for installing the client application. Select how you would like to install the client and click Next.

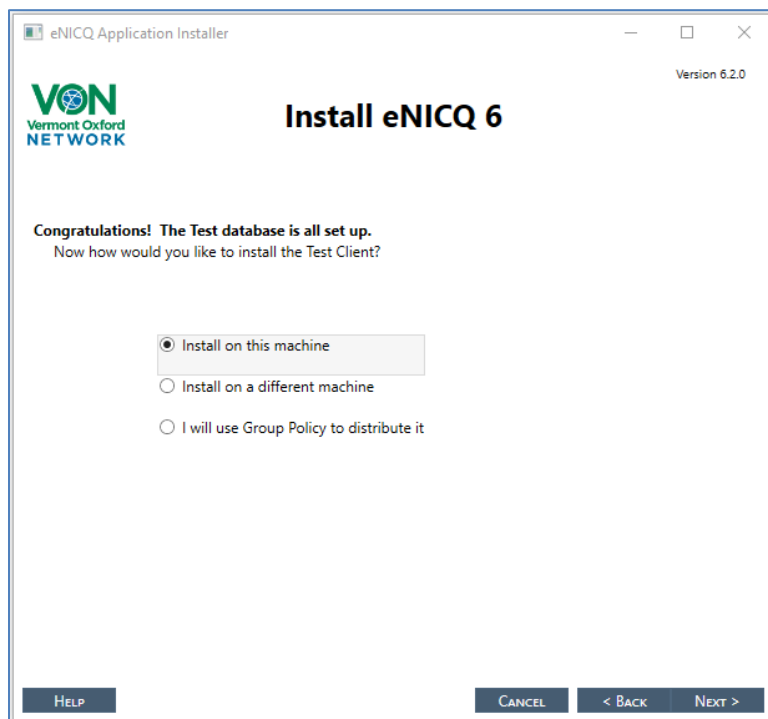


Figure 11

10. After successfully installing the eNICQ 6 client 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. The installation is completed at this point.

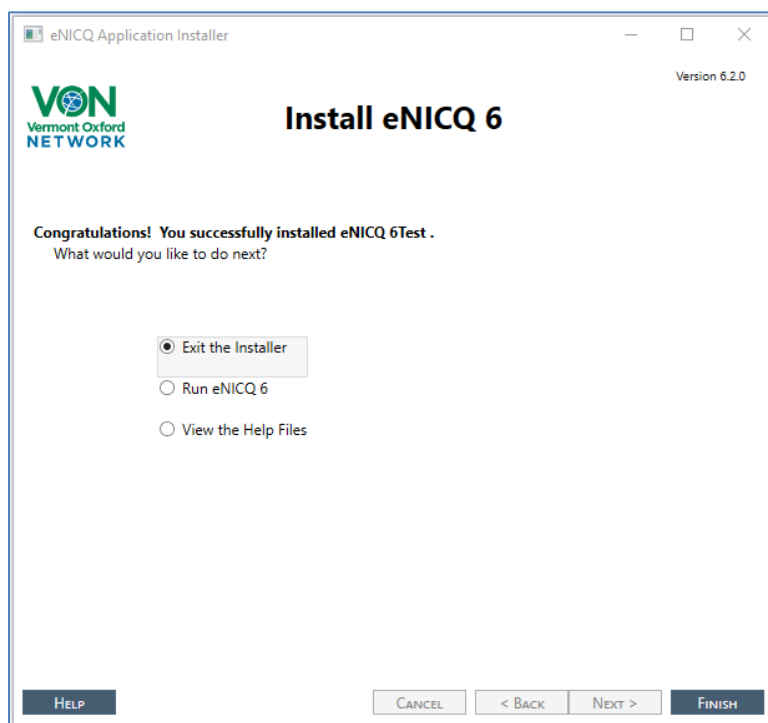


Figure 12

SQL Server® Management Studio Server-Side Actions

NOTES:

- 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.
- To perform the following actions, you will need to have SQL Server® Management Studio (SSMS) installed and connected with the instance of SQL Server® where the eNICQ 6 Database resides. If you do not already have a copy you can download the installer for SQL Server® Management Studio Express from Microsoft's website, <https://learn.microsoft.com/en-us/sql/ssms/download-sql-server-management-studio-ssms?view=sql-server-ver16>. Microsoft
- 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: There is also a Security folder at the database level under the eNICQ6db database. That is not the correct Security folder to perform these actions.
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...**

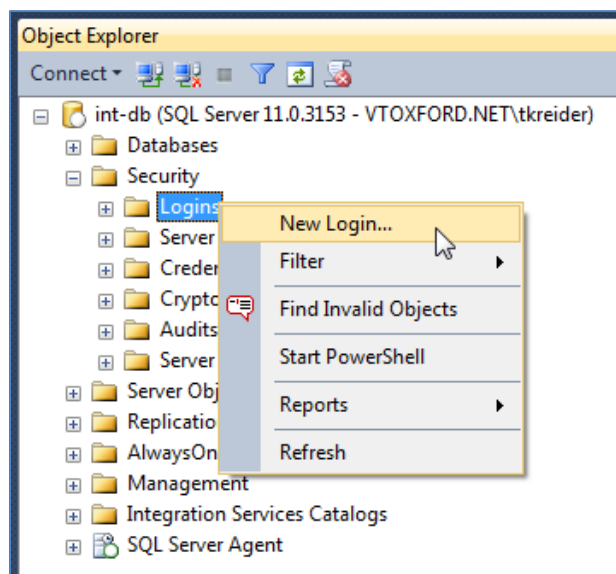


Figure 13

If the users have already been given permissions to another database on this server, they will show in Logins already. Right click on them and select **Properties** and skip to step 19.

- 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.

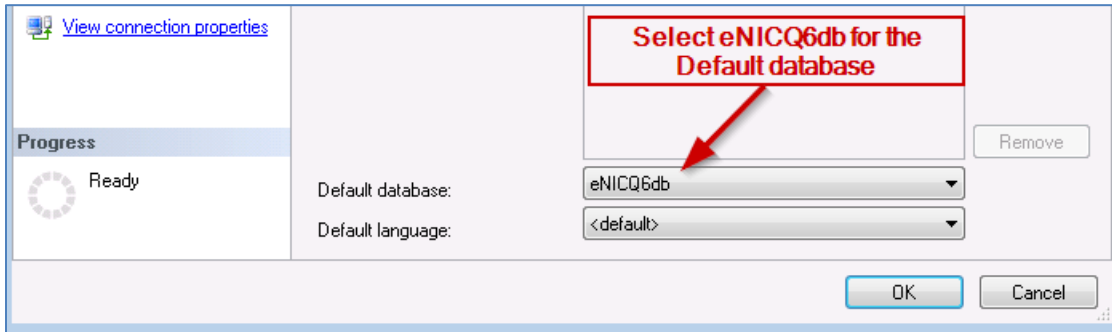


Figure 14

- Select the **Windows authentication** radio button.

- Click the **Search** button

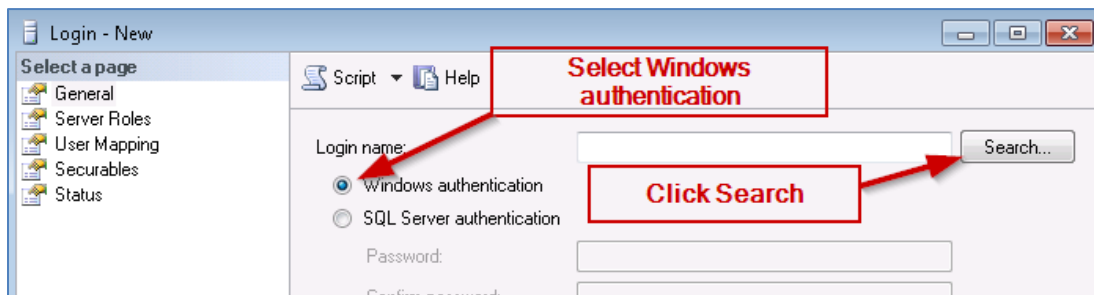


Figure 15

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

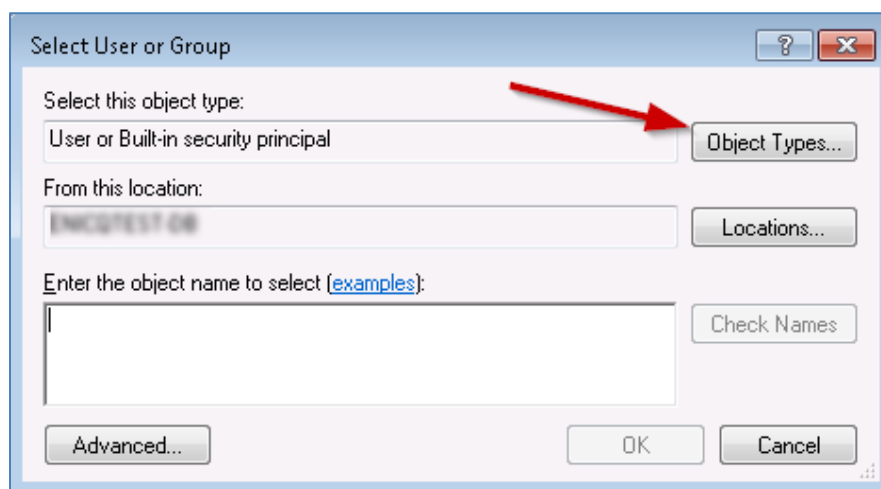


Figure 16

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.

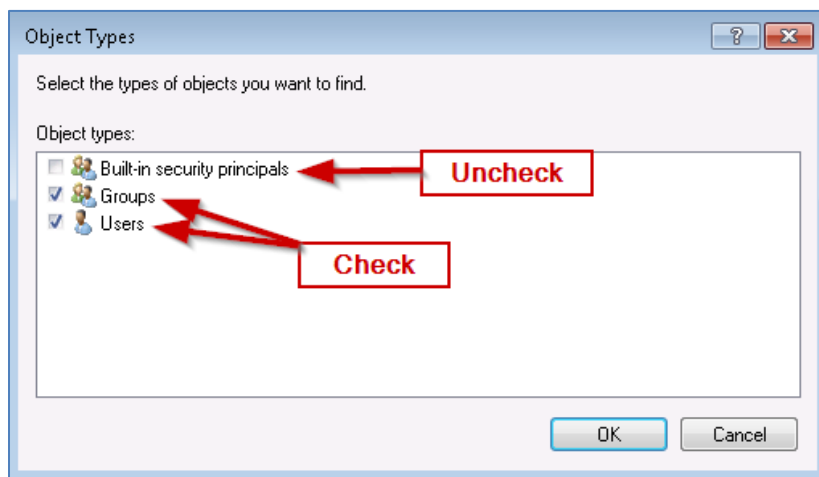


Figure 17

11. Click **OK** to continue.

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

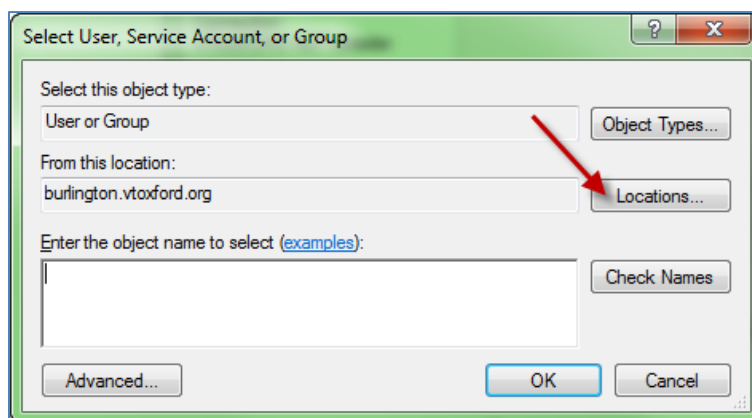


Figure 18

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

14. Click OK.

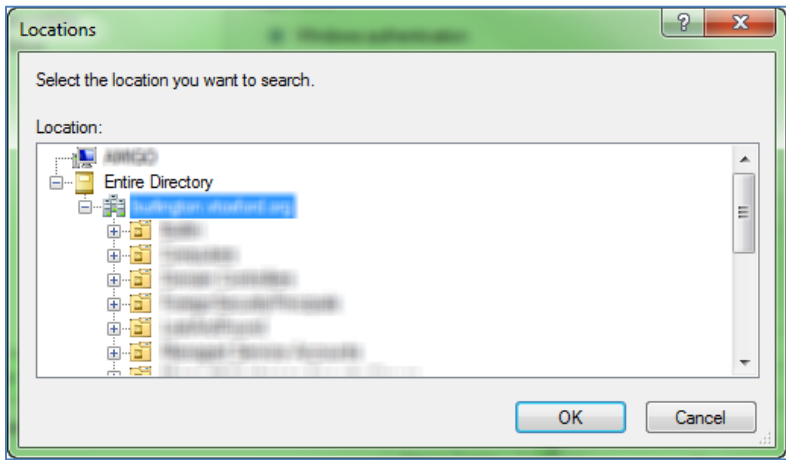


Figure 19

15. Enter the user or group in the space provided and click **Check Names**.

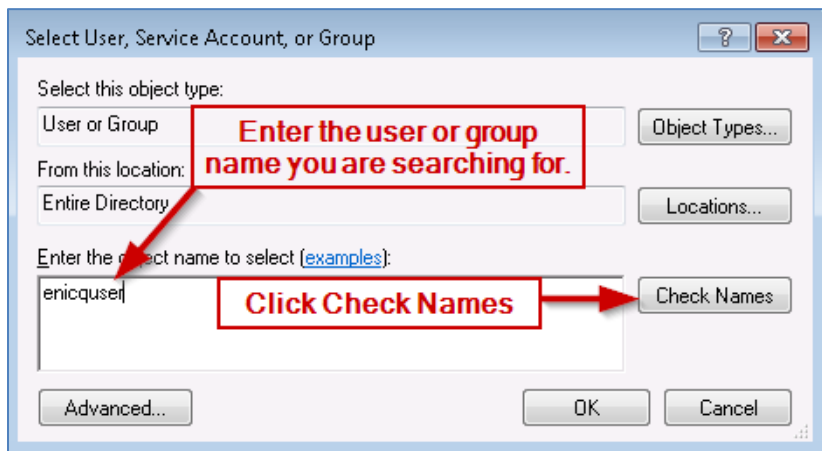


Figure 20

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.

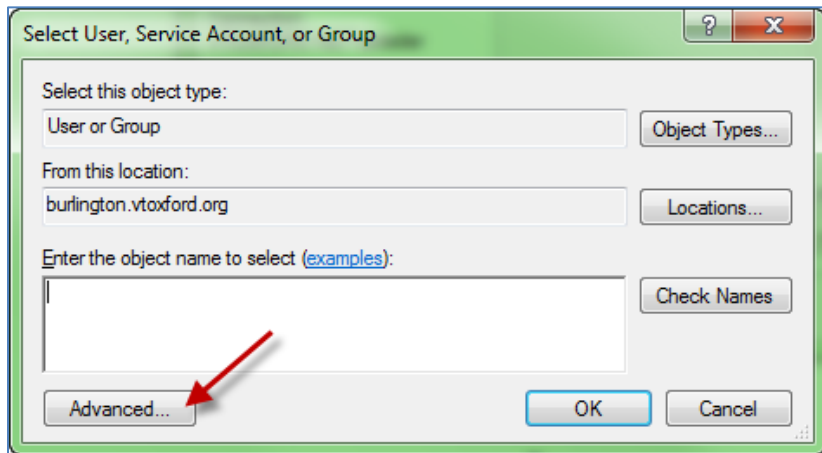


Figure 21

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

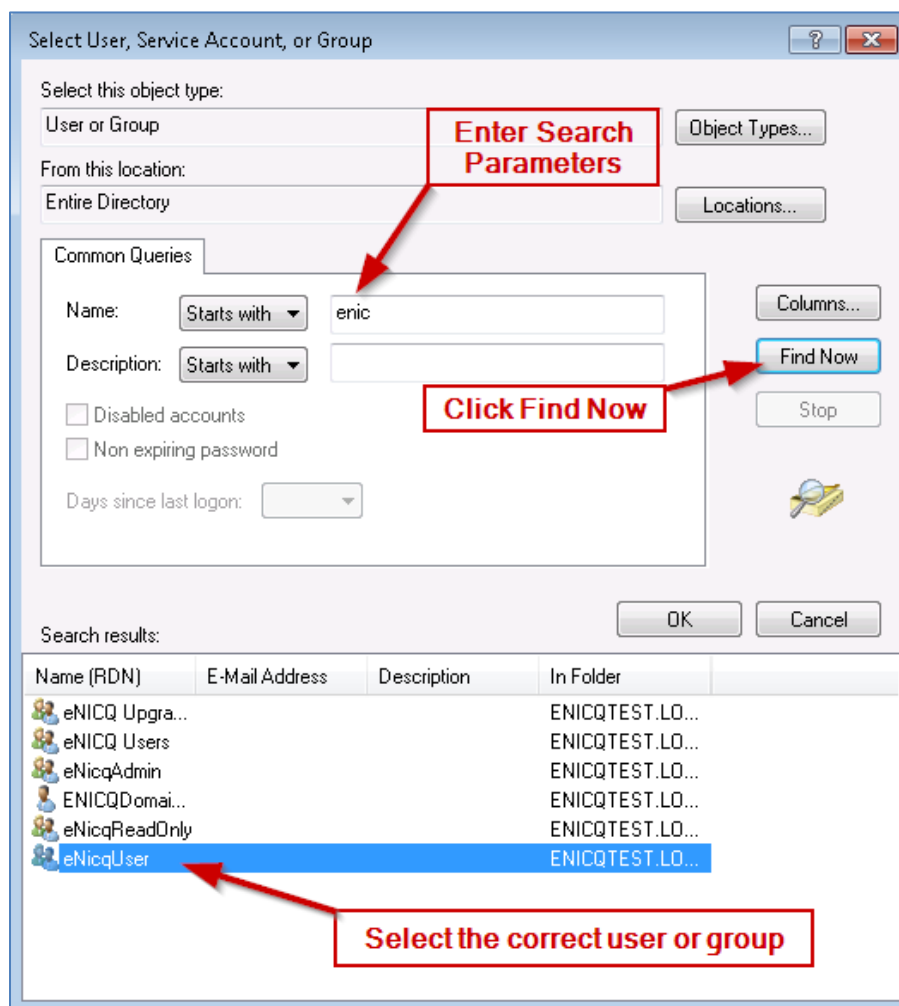


Figure 22

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** screen, or the **Login Properties** screen if you are editing an existing user, click the **User Mapping** page.

20. Check the **eNICQ6db** database in the upper panel if you kept the default name. If changed the name to something other than the default look for that in the upper panel and select it.

21. Check the roles **EnicqDBUser** and **public** in the lower panel.

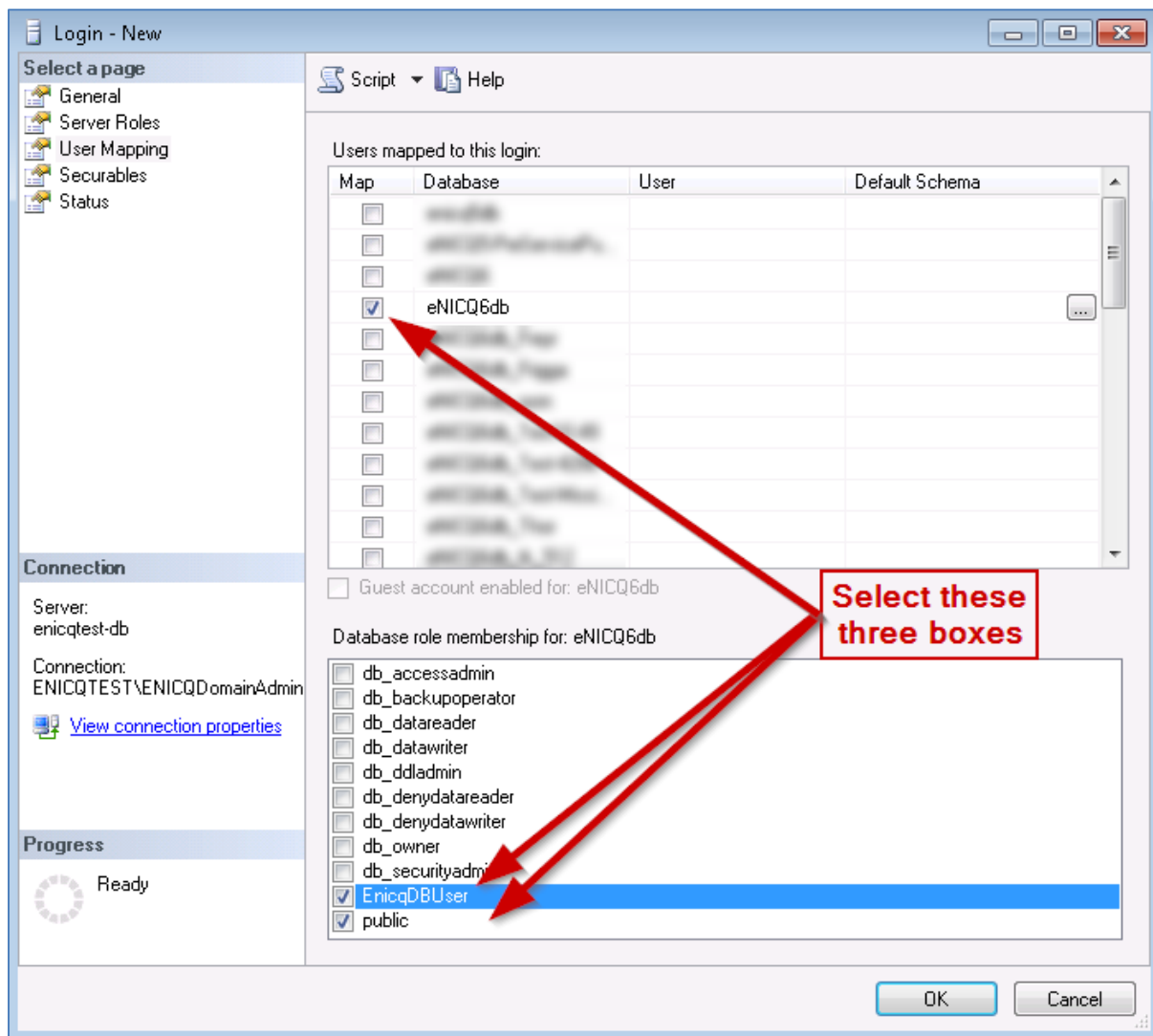


Figure 23

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.

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

END OF SERVER-SIDE ACTIONS

Installation of the eNICQ 6 Client Application

NOTES:

- Users will need to have both the “**Read**” and the “**Read & Execute**” permissions to the **C:\ProgramData** folder.
- **ProgramData** by default is a hidden folder. To find it you may need to go to the View tab the C:\ and select “Hidden items” for it to be visible.
- You only need local administrator permissions on the workstation *if* you run the **MSI** rather than eNICQ 6 Installer. Also, you do *not* need a copy of the eNICQ 6 license key.
- Users are still going to need to have permissions to the database. Please review the previous section, SQL Server® Management Studio Server-Side Actions for the instructions on providing the correct permissions.

Installation of the client application on a workstation when you have an existing database is a straightforward process. The eNICQ 6 MSI does not require permissions to the database, nor does it require the eNICQ 6 License Key. You will need a copy of the Connection.enicq file and local administrator permissions on the workstation where you will be installing it.

1. Get a copy of the **TestConnection.enicq** file which was created during the installation of the database. The file is in **C:\ProgramData\VON**.
2. On the workstation where you are installing the client application open **C:\ProgramData** and there create a new folder called **VON**. Save a copy of the TestConnection.enicq file there. If you cannot find an existing connection file you will need to create a new one with the [eNICQ 6 Connection File Editor](#).
3. Download the [Test eNICQ 6 MSI](#) from our knowledge base. When you click to download it, a new tab may open in your web browser saying “Redirecting.” Please ignore that. The MSI will download to the Downloads folder unless you choose to save it elsewhere.
4. Double click on the **enicq6Test.msi** file to start the installation. There is no installation wizard to install the client using the MSI and it only takes a couple of seconds to run. You will briefly see a progress bar but that will disappear quickly. Once the progress bar disappears the installation is over.
5. Open the Windows Start menu and you will see a Vermont Oxford Network folder. When you expand that you will see an eNICQ 6 shortcut. Neither the MSI nor the installer will create a desktop shortcut so if the user would like a desktop shortcut you will have to manually create one.

Appendix A: Multi-Center Installations

NOTES:

- You can do a multi-center installation of eNICQ 6 even with a test install, but the only available test Centers are 9998 and 9999. This means you can have at the most, two centers on your test installation of eNICQ 6. Once you complete the installation for either VLBW (Center 9998) or Expanded (Center 9999) you can add the second center with the following steps.
1. With eNICQ 6 running open the Advance Menu Options by clicking on the gear icon in the top right of the Patient Log.

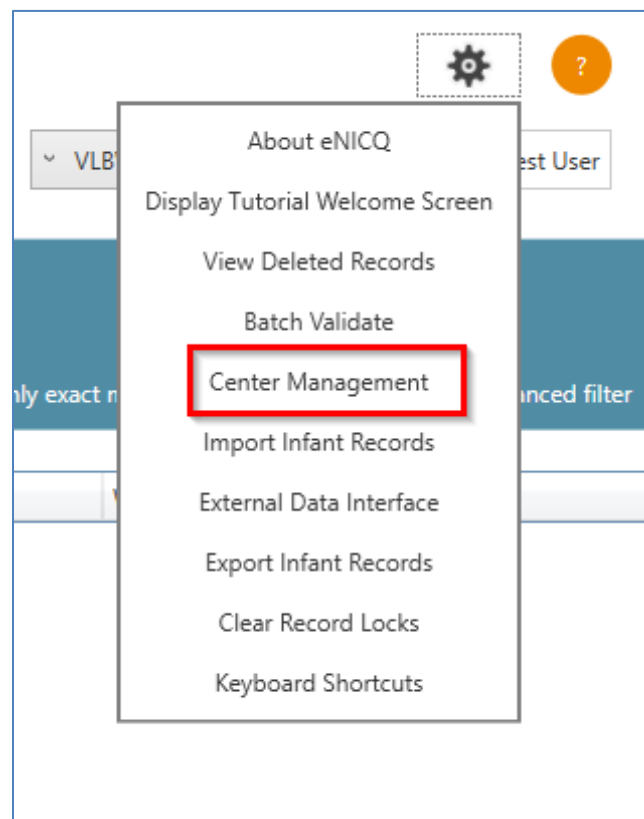


Figure 24

2. Click Add New Center.

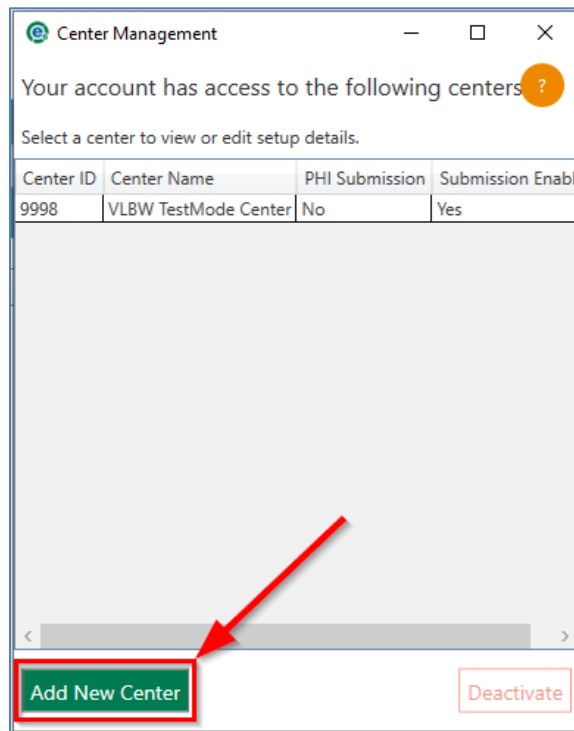


Figure 25

3. On the Center Management screen, you will see the License Keys for both the VLBW and the Expanded TestMode Centers. If you click on the one of the license keys it will highlight in blue and allow you to copy it and then paste it in the License Key field above. **Make sure you copy the license key of the Center that was not selected in the initial test installations** (e.g., if you selected VLBW when running the installer, copy the license key for Expanded here).

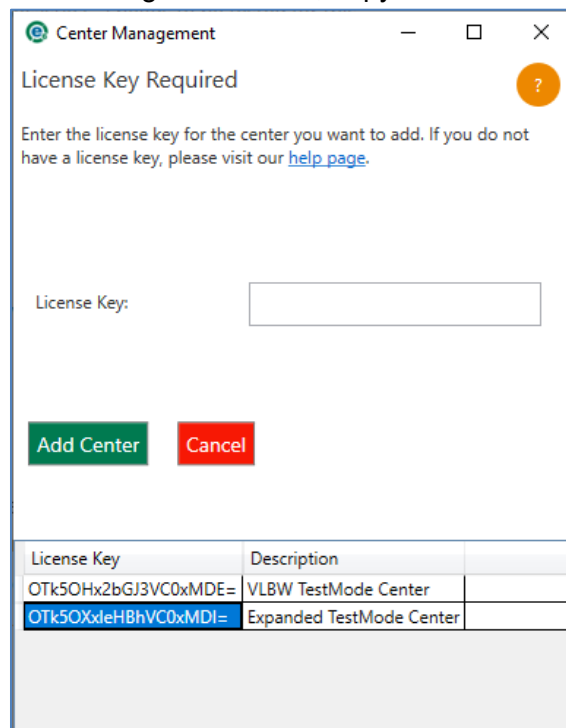


Figure 26

4. After pasting the license key into the License Key field click Add Center. You will then be returned to the Center Management screen where both centers should display. You will need to restart eNICQ 6 before you can select the new center from the center selector on the Patient Log.

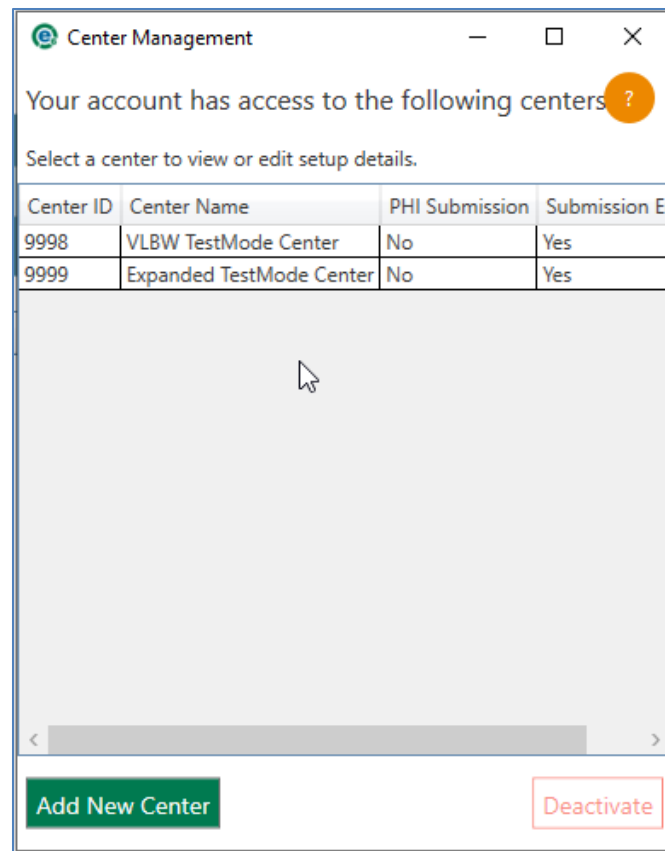


Figure 27

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