Info HQ Manager v2.1

IMPLEMENTATION GUIDE

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Preface

This implementation guide contains instructions on how to install and configure the Abbott Point of Care (APOC) Info HQ Manager system.

The operating information provided in this manual describes the functional responsibilities and procedures for administrators in successful operation of the Info HQ Manager and its associated components.

Intended use

Info HQ Manager is a web-based data-management software application that enables healthcare professionals to manage and share results from point-of-care diagnostic testing devices throughout the healthcare system.

Info HQ Manager is designed to facilitate regulatory compliance, track operator training on diagnostic testing devices, monitor device performance, and manage the test results that are collected from point-of-care (POC) testing devices.

For details about which devices are supported, refer to the *Info HQ Manager Specification Sheet*.

About this guide

This manual is organized as follows:

Section 1: Info HQ Manager system overview and structure planning	Description of the Info HQ Manager system's features and capabilities, guidance for planning the system, and the process for creating hierarchy maps.
Section 2: Installing the Info HQ Manager system	Detailed instructions for system setup and initial configuration, requirements and steps for installation, and prerequisites for installing the Info HQ Manager application.
Section 3: Info HQ Manager basics	Login procedures, system navigation, and an overview of the various Info HQ Manager screens.
Section 4: Initial setup and configuration	Descriptions of user accounts, connection settings, default system settings, and settings for email.
Section 5: Creating the system location hierarchy	Instructions for creating multiple levels of the system hierarchy where devices, operators, and test results are managed.
Section 6: Populating system components	How to configure settings that help manage devices, operators, certification, and cartridge inventories within the Info HQ Manager system.
Section 7: Database maintenance	Database maintenance procedures designed to ensure data integrity.
Section 8: Technical support	Guidance on contacting technical support resources and how best to prepare for troubleshooting.
Index	Listing of names, titles, and topics, and where they can be found in this manual.

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1 - Info HQ Manager system overview and structure planning

1.1 Point-of-Care testing (POCT) and the data management system

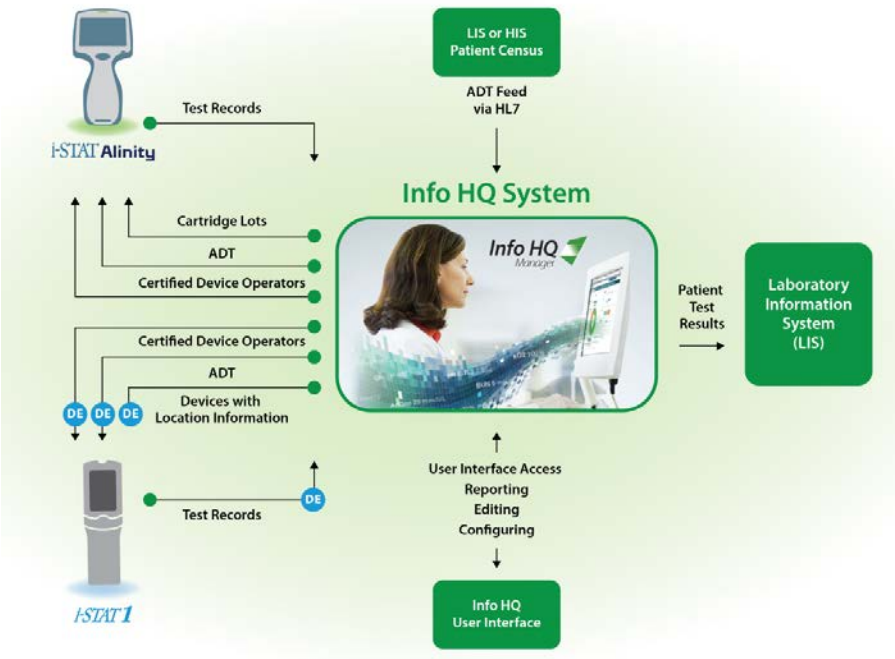
Point-of-care testing (POCT) generally refers to medical diagnostic testing within a healthcare facility that is performed in close proximity to the patient. Point-of-care tests usually fall within one of two categories: waived or moderately complex. The healthcare facility must be licensed from the necessary accrediting agencies to perform these POC tests, and any member of the medical staff that performs the tests (operators) must be certified on the testing device.

Granting of the license typically requires that the laboratory or the healthcare system administer the appropriate training to operators on the proper use of various POCT methods in use by the healthcare system, and monitor the appropriate use of devices by operators after training. It also requires the monitoring of proper device functioning.

Info HQ Manager is a web-based POC data management system, deployed on the organization's LAN or WAN, typically behind the health system's firewall. Info HQ Manager is designed to facilitate regulatory compliance by managing test results collected from POC testing devices, tracking operator training on diagnostic testing devices, and monitoring device performance. Info HQ Manager forwards the test data it collects to external systems (LIS, EMR, LMS, and so forth) and provides tools to correct and resend data to those external systems. Operator and regulatory compliance are easily maintained, and exceptions are easily located and can be addressed using the simple user interface.

Figure 1-1: System overview is a high-level illustration of the possible connections with the Info HQ Manager system. It is not necessary that all of these connections be in place with any given installation. A functioning system consists of a minimum of POC testing devices, a POC data management system, and a user accessing the data management system.

Figure 1-1: System overview



i-STAT Alinity communicates with Info HQ Manager directly through the POCT1-A2 communication protocol. Setup and customization via the CWi application is required for communication between i-STAT Alinity and Info HQ Manager. See the i-STAT Alinity documentation for detailed information about setup and customization. i-STAT1 communicates with Info HQ Manager through i-STAT/DE.

1.2 Info HQ Manager technical overview

Info HQ Manager is built using the following technologies. (See the *Info HQ Manager Specification Sheet* for detailed Info HQ Manager requirements and specifications.)

- Microsoft® Windows Server®
- Microsoft® Internet Information Services (IIS)
- Microsoft® SQL Server™
- Microsoft® .NET

1.3 Features and capabilities

The Info HQ Manager system allows healthcare professionals to collect, analyze, correct, and share information about a health system's point-of-care testing program — including the ability to route patient test results, as appropriate, to external information systems.

The following sections describe specific features and capabilities of the Info HQ Manager system.

Management of devices and storage of results

The Info HQ Manager system can manage the Abbott Point of Care (APOC) family of devices. Info HQ Manager allows users to view, add, delete, and organize devices within the user interface. Information about devices can be emailed and reports generated. Info HQ Manager also collects all test results generated by compatible POC devices, stores them, can forward patient test results to the LIS, and allows them to be managed and reported on.

Positive patient identification

Info HQ Manager can receive Admission, Discharge, and Transfer (ADT) information, typically initiated by the HIS or by a registration application, and forward the ADT information to POC devices that can accept patient demographic data. This communication helps ensure positive patient identification at the point of care.

Tools for reporting and analysis

Info HQ Manager provides tools for analyzing and reporting on data that has been collected and stored. These tools are designed so that POC administrators can use the system to meet all regulatory requirements for POC testing in their geographic area.

Protocols for communication

Info HQ Manager uses the following standard communication protocols:

- Web service to communicate with i-STAT/DE for i-STAT data
- Health Level Seven (HL7) to communicate with the LIS
- HL7 over TCP/IP to communicate with the HIS/EMR

1.4 Implementation team

Abbott's extensive Implementation Program includes project planning, performance verification, data management and interfacing, training, and support through "Go Live" delivered by seasoned clinical and technical experts with years of experience and success. Implementation of the Info HQ Manager system involves coordination with other personnel within the healthcare system. The following sections describe the roles and responsibilities of these members for a typical implementation of the Info HQ Manager system onto the healthcare facility’s network environment.

Point-of-Care Coordinator/Quality Assurance Manager

The point-of-care coordinator (POCC), Quality Assurance Manager, or designee is normally the primary end user of the Info HQ Manager system. This person will need to make key decisions during the implementation phase of the Info HQ Manager system and is often relied on to be the single point of contact within the organization that is driving the implementation.

Information technology (IT) personnel

Involvement from the IT team is critical to the successful implementation of the Info HQ Manager application on the healthcare system's network. The IT team will need to provide the wireless and network information, network access, site infrastructure, remote access, and device connections.

Laboratory personnel

Involvement from lab personnel is also essential to the implementation of Info HQ Manager. Lab personnel will need to provide LIS test codes along with testing and validation assistance to ensure that site-specific interface rules are functional, satisfy the point-of-care coordinator's requirements, and meet the healthcare system's needs.

Abbott field support services

Abbott's experienced Implementation Team provides guidance through every step of the process, from pre-sales to "Go Live," to deliver world-class point-of-care testing solutions. Abbott Point of Care includes follow-up support to reinforce the healthcare system's ongoing success. A single project manager will be assigned to have ultimate responsibility for the successful deployment of the Info HQ Manager system.

1.5 System structure planning

Before installing and configuring the Info HQ Manager system, it is recommended that time be taken to create several "map" files. The purpose of the map files is to gather all information about the healthcare system that is needed to create the following components that make up the Info HQ Manager system structure:

Location hierarchy	The facilities, departments, and areas within the healthcare system

Operators	The individuals who are certified to perform the tests that are tracked by Info HQ Manager, and certifications the operators may have.
Devices	The instruments that operators use to perform tests.

Mapping out this information ahead of time will make it easier to create each of these components, as described in section 5, *Creating the system hierarchy*, and section 6, *Populating system components*.

The information needed for the map files will likely require the assistance of the nursing staff, the POCC, laboratory staff, and the IT team.

The following sections describe how to create each of these map files.

Create a location hierarchy map

The location hierarchy is a logical arrangement in the Info HQ Manager user interface of the named healthcare-system facilities (such as hospitals), the departments within each facility, and areas within each department. Creating these location entities in the Info HQ Manager is critical because data delivered to the LIS/EMR by the Info HQ Manager can be based on this hierarchy.

There are four possible levels in the location hierarchy─ Healthcare System, Facility, Department, and Area (sometimes referred to as *Location*). The highest level in the location hierarchy is the Healthcare System level. This location entity is automatically created during the Info HQ Manager installation and is assigned the name *Home*.

The location hierarchy map file is to contain all data that will be needed to create the other three levels of the location hierarchy. It is recommended that the location hierarchy map be created using Microsoft® Excel® , so that the data can later be used to automatically create these location entities using the Info HQ Manager upload function after Info HQ Manager is installed.

Note: Creating the map file does not create the locations entities. It is merely the gathering of all location information needed to create the locations entities later in the implementation process.

Here is an example of a location hierarchy map.

Figure 1-2: Example location hierarchy map

Facility	Department	Location
Downtown Hospital	DT ICU	DT.ICU.West
Downtown Hospital	DT ICU	DT.ICU.East
Downtown Hospital	DT.EP	
Downtown Hospital	DT.ER	
IVIS	IVIS-ER	
PCM	PCM-ER	
Test3.a.15	L21	
Test3.a.15	Test3-ER	
Unassigned		
Uptown Hospital	Radiology	

Follow these steps to create a location hierarchy map file:

1. Create a new spreadsheet in Microsoft® Excel®.
2. In the first row of the spreadsheet, enter the following headings for columns A through C, in the order listed, as shown in the example location hierarchy map:

   A: Facility
   B: Department
   C: Location

3. Using the example map as a guide, enter each location that makes up the healthcare system. A location can be made up of just a facility, or a facility and a department, or a facility, department, and area. Note the following when entering the information:
   - Each location must be on a separate row.
   - Location names cannot include the ampersand (&) or tilde (~) characters.
   - Enter the name to assign to each Facility into column A, the name to assign to the Department within the Facility into column B, and the name to assign to the Area within the Department into column C.
   - The name assigned to each Facility, Department, and Area should be descriptive yet relatively brief, for example:
     - Townsend Med Center or Downtown Hospital for a facility
     - Pediatrics or ER for a department
     - Surgical room 1 or ICU_ward1 for an area within a department
   - The name assigned to each Area must be unique for the entire healthcare system. For example, the name *ER_ward1* can be used in only one Department within one Facility.
   - Facilities do not have to specify Departments and Areas if there are none to be created.
   - Departments must specify the Facility under which they reside, but they do not have to specify Areas if there are none to be created.
   - Areas must specify the Department and Facility under which they reside.
4. Save the map file to a location on the local file system where it can be retrieved later. Then close the file.

Creating the location hierarchy using this map file is covered in *section 5: Creating the system hierarchy*.

Create a certification map

One or more of the operators that will be added to the Info HQ Manager system might already be certified on devices that are used to conduct patient tests. These certifications must be identified in the Info HQ Manager system. Prior to installing Info HQ Manager, it is easier to first gather all the data necessary to grant the appropriate certifications to each operator in the system and record that data in a certification map (a Microsoft® Excel® spreadsheet file). The certification map can then be used after Info HQ Manager is installed to automatically grant these certifications to the operators using the Info HQ Manager upload function.

Note: Creating the map file does not grant the certifications. It is the gathering of all the certification data needed to create the certificates later in the implementation process.

Here is an example of an operator certification map.

Figure 1-3: Example certification map

FirstName	MiddleName	LastName	HomeDepartment	OperatorID	MgrOperatorID	Email	IsManager	WorkPhone	DeviceModel	InitialCertDateFormatted	StartDateFormatted	ExpirationDateFormatted	Active
James	D	Reids	DT.ICU	T10001		reids.jd	FALSE	609-454-111	i-STAT Alinity	5/16/2016	5/16/2016	5/16/2016	TRUE
Linda	E	Town	DT.ICU	T10002		town.le	FALSE	609-454-111	i-STAT Alinity	5/16/2016	5/16/2016	5/16/2016	TRUE
John	A	Bailey	DT.ICU	T10003		bailey.j	FALSE	609-454-111	i-STAT Alinity	5/16/2016	5/18/2016	11/18/2016	TRUE
Dora	X	Smith	DT.EP	T10004		smith.d	FALSE	609-454-111	i-STAT1	5/18/2016	5/18/2016	11/18/2016	TRUE
Kayla	P	Jones	DT.EP	T10005		jones.k	FALSE	609-454-111	i-STAT Alinity	5/16/2016	5/16/2016	5/16/2016	TRUE
George	S	Rodriguez	DT.EP	T10006		rodrigu	FALSE	609-454-111	i-STAT1	5/15/2016	5/15/2016	5/15/2016	TRUE
Madison	O	Wolf	DT.ER	T10007		wolf.m	FALSE	609-454-111	i-STAT1	5/15/2016	5/15/2016	5/15/2016	TRUE
Clareece	W	Mann	DT.ER	T10008		mann.c	FALSE	609-454-111	i-STAT1	5/15/2016	5/15/2016	5/15/2016	TRUE
Dawn	C	Hernandez	DT.ER	T10009		hernan	FALSE	609-454-111	i-STAT1	5/15/2016	5/15/2016	5/15/2016	TRUE
Tom	D	Chang	DT.ER	T10010		chang.t	FALSE	609-454-111	i-STAT1	5/15/2016	5/15/2016	5/15/2016	TRUE
Charles	Y	Lee	UT.ER	T10011		lee.cha	FALSE	609-454-111	i-STAT1	5/15/2016	5/15/2016	5/15/2016	TRUE
Roger	F	Annavajala	UT.ER	T10012		annava	FALSE	609-454-111	i-STAT1	5/15/2016	5/15/2016	5/15/2016	TRUE
Lois	D	Wang	UT.ER	T10013		wang.ls	FALSE	609-454-111	i-STAT1	5/15/2016	5/15/2016	5/15/2016	TRUE
Wendy	J	Cooney	UT.Surgical	T10014		cooney	FALSE	609-454-111	i-STAT1	5/15/2016	5/15/2016	5/15/2016	TRUE
Lloyd	A	White	UT.Surgical	T10015		white.ll	FALSE	609-454-111	i-STAT1	5/15/2016	5/15/2016	5/15/2016	TRUE
Ayana	B	Johnson	UT.Surgical	T10016		johnsor	FALSE	609-454-111	i-STAT1	5/15/2016	5/15/2016	5/15/2016	TRUE

1. Create a new spreadsheet in Microsoft® Excel®.

2. In the first row of the spreadsheet, enter the following headings for columns A through N, in the order listed, as shown in the example certification map:

   A: FirstName
   B: MiddleName
   C: LastName
   D: HomeDepartment
   E: OperatorID
   F: MgrOperatorID
   G: Email
   H: IsManager
   I: WorkPhone
   J: DeviceModel
   K: InitialCertDateFormatted
   L: StartDateFormatted
   M: ExpirationDateFormatted
   N: Active

3. Using the example map as a guide, enter the operator information. Note the following when entering the information:

   - Each certification (even for the same operator) must be on a separate row.
   - Operator names cannot include the ampersand (&) or tilde (~) characters.
   - The FirstName, MiddleName, and LastName columns identify the operator for whom the certification is to be granted.
   - Information is required for the FirstName, LastName, and OperatorID columns. All other columns can be left blank, if desired.
   - Initial certification, start, and expiration dates must be in the date format consistent with the Info HQ Manager system.
   - The name entered for the Device Model must match the name assigned to it in the device map (see section 1: *Create a device map)*.
   - Home Department is the primary Department within a Facility at which the operator works. The name entered for the Department must match the name assigned to it in the location hierarchy map (see *Create a location hierarchy map*), or Info HQ Manager will record the operator's Home Department as *Unassigned*.

4. Save the map file to a location on the local file system where it can be retrieved later. Then close the file.

The process for uploading the certification data using this map file is covered in the *Info HQ Manager User Guide*.

Create a device map

The devices that will pass results data to the Info HQ Manager must be identified in the Info HQ Manager system. Prior to installing Info HQ Manager, it is easier to first gather all data that is needed to add the devices to the system and record that data in a device map (a Microsoft® Excel® file). The device map can then be used after Info HQ Manager is installed to automatically add these devices to Info HQ Manager using the Info HQ Manager upload function.

Note: Creating the map file does not add the devices. It is the gathering of all device data necessary to create the devices later in the implementation process.

Here is an example of a device map.

Figure 1-4: Example device map

DeviceModel_Name	Name	SerialID	IPAddress	Location_Name
i-STAT1	i-STAT1(317028)	317028		DT.ER
i-STAT Downloader	Auto Assigned 1		10.10.90.47	DT.PED
i-STAT Alinity	i-STATAlinity(316531)	316531		DT.CARD

Perform the following steps to create a device map file:

1. Create a new spreadsheet in Microsoft® Excel®.
2. In the first row of the spreadsheet, enter the following headings for columns A through E, in the order listed, as shown in the example device map:

   A: DeviceModel_Name
   B: Name
   C: SerialID
   D: IPAddress
   E: Location_Name
3. Using the example map as a guide, enter the device information. Note the following when entering the information

   - Each device must be on a separate row.
   - Device names cannot include the ampersand (&) or tilde (~) characters.
   - Device names and IP addresses must not exceed 20 characters each.
   - The name entered for the Device Model must match the name assigned to it in the device map.
   - The Device Name is a descriptive name to be associated with the device, such as *ICU i-STAT*.
   - The serial number of the device must be entered to distinguish it from other devices of the same type. The serial number must not exceed 16 characters.
   - For an i-STAT downloader device, enter the static IP address of the downloader under the IPAddress column. For other devices, this column can be left blank.
   - The Location Name is the primary department or area within a department where the device resides. The name of the Area must match the name assigned to it in the location hierarchy map (see *Create a location hierarchy map*) and must not exceed 20 characters.
4. Save the map as a .csv file to a location on the local file system where it can be retrieved later. Then close the file.

Adding devices using this map is covered in *Device setup* in section 6, *Populating system components*.

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2 - Installing the Info HQ Manager system

The following sections describe how to install the Info HQ Manager system.

2.1 Install Info HQ Manager

Info HQ Manager is installed with minimal configuration defaults that enable it to be used for the organization's specific needs. See sections 3 through 8 for information about configuring and using Info HQ Manager.

Prerequisites

These prerequisites are applicable for all new installations and upgrades of Info HQ Manager:

- If you have already verified the version of installed Info HQ Manager components, continue to the next prerequisite. Otherwise, complete the procedure in *Verify installed Info HQ Manager components in Add/Remove Programs*.
- Ensure that all requirements are met. These requirements are listed in the Info HQ Manager Specification Sheet.
- Microsoft® Internet Information Services (IIS) should be installed with following options checked.
  - Application development features:
    - .Net Extensibility
    - ASP.Net
    - ISAPI Extension
    - ISAPI Filters
  - Common HTTP features:
    - Static Content
- Ensure that a default instance of Microsoft® SQL Server, required to host the Info HQ Manager database, is installed on the same computer as the Info HQ Manager software.

New installations

Installations of Info HQ Manager are considered *new* if Info HQ Manager is not installed on the computer. If you are performing a new installation, see *Install Info HQ Manager 2.1*.

Upgrade installations

Instructions for upgrading and installing are in the following sections.

Verify installed Info HQ Manager components in Add/Remove Programs

Complete this procedure before performing an upgrade to ensure that the upgrade is successful.

Important: For direct upgrades to v2.1, Info HQ Manager v1.6 must be installed, and v1.3 must **not** be displayed in Add/Remove Programs. Even if the computer was upgraded from v1.3 to v1.4 or v1.6, v1.3 will still be listed in Add/Remove Programs. These two requirements must be met or the v2.1 installer will stop the installation.

To determine whether the computer meets the requirements for upgrading to Info HQ Manager 2.1, complete the following steps:

1. Click the Windows **Start** button, and select **Control Panel**.
2. Click **Programs**. The Programs window opens.
3. Click **Programs and Features**. The Programs and Features window opens.
4. In the list, scroll down to Info HQ Manager, and complete one of the following steps depending on the versions installed:
   - If version 1.3 is displayed in Add/Remove Programs, see *Upgrade from Info HQ Manager v1.3 to v2.1*.
   - Otherwise, if the latest version installed is v1.6 or v2.0, see *Install Info HQ Manager 2.1*, for instructions on upgrading from v1.6 or v2.0 to v2.1.
   - Otherwise, if the latest version installed is v1.4, see *Upgrade Info HQ Manager v1.4 to v2.1*.

Install Info HQ Manager v2.1

Complete this task if Info HQ Manager is not currently installed on the computer or if v1.6 or v2.0 is the latest version installed and v1.3 is **not** displayed in Add/Remove Programs.

Note: If this is an upgrade installation, back up the current operational database before proceeding with the installation. Operational data stored in Info HQ Manager will continue to be available after the upgrade.

To install the Info HQ Manager v2.1 software and make it ready for use:

1. If you have already verified the version of installed Info HQ Manager components, continue to the next step. Otherwise, complete the procedure in *Verify installed Info HQ Manager components in Add/Remove Programs.*
2. Place the Info HQ Manager software DVD into the computer's DVD drive.
3. In the Info_HQ_Manager\Install\ directory of the DVD, double-click setup.exe.
4. Follow the installation prompts, accepting the terms and conditions when prompted to do so.

   Note: The Complete install option is selected by default. Accept this selection and continue.

5. In the Database Server window, specify values as follows:

   Database server that you are installing to: Accept the default value: *(local)*.
   Connect using: Specify the authentication method Info HQ Manager will use to connect to the server. For SQL Server authentication, log in using the user name *sa* and the proper password for the SQL server.
   Name of database catalog: Accept the default name, IVISDM. Then click **Next** to begin the installation.
   An informational message is displayed when the installation of Info HQ Manager is complete.

6. If you want to use a date format other than MM/DD/YYYY, see the topic, *Change the Info HQ Manager date format*, otherwise, restart the computer to complete the installation.

Upgrade from Info HQ Manager v1.3 to v2.1

If Info HQ Manager v1.3 is listed in Add/Remove Programs, complete this procedure to upgrade the computer to Info HQ Manager 2.1.

Important: For direct upgrades to v2.1, Info HQ Manager v1.6 must be installed, and v1.3 must **not** be displayed in Add/Remove Programs. Even if the computer was upgraded from v1.3 to v1.4 or v1.6, v1.3 will still be listed in Add/Remove Programs. These two requirements must be met or the v2.1 installer will stop the installation.

To upgrade from Info HQ Manager v1.3 to v2.1, complete the following steps:

1. If you have already verified the version of installed Info HQ Manager components, continue to the next step. Otherwise, complete the procedure in .

   Note: make sure Info HQ Manager v1.6 is installed.
2. Complete the procedure in the topic, *Back up the Info HQ Manager database.*
3. Complete the procedure in the topic, *Uninstall Info HQ Manager*.
4. Complete the procedure in the topic, *Install Info HQ Manager v1.6*.
5. Complete the procedure in the topic, *Restore the Info HQ Manager database.*
6. Complete the procedure in the topic, *Install Info HQ Manager v2.1*.

Back up the Info HQ Manager database

1. On the Info HQ Manager server, open a command prompt window.
2. At the command prompt, type ipconfig.
3. Press the Enter key to run the command.
4. Record the IPv4 Address.
5. Close the command prompt.
6. Launch IE (Internet Explorer).
7. Navigate to the following website: http://[IP Address of Data Manager machine]/Data Manager.
8. Log in with the credentials for the Admin user.
9. Click the Tools primary tab.
10. Click DB Maintenance secondary tab.
11. Click Backup Now.
12. Click OK in the dialog window.
13. Wait several minutes.
14. Close Info HQ Manager.

Restore the Info HQ Manager database

1. Launch the Info HQ Manager.
2. Log in with the credentials for the Admin user.
3. Click the Tools primary tab.
4. DB Maintenance secondary tab.
5. Click the Restore tertiary tab.
6. In the File to Restore field, select the database backup created previously.
7. Click Restore Database.
8. Click Submit.
9. Close Info HQ Manager.
10. Wait several minutes for the database to restore.
11. Complete the procedure in Install Info HQ Manager 2.1.

Uninstall Info HQ Manager

1. Click the Windows Start button.
2. Select Control Panel.
3. Select Programs.
4. Select Programs and Features.
5. Uninstall v1.6 of the Info HQ Manager.
6. Uninstall v1.4 of the Info HQ Manager.
7. Uninstall v1.3 of the Info HQ Manager.

Install Info HQ Manager v1.6

1. Launch the Info HQ Manager v1.6 full installer.
2. Complete the prompts to install the full version of 1.6 (selecting defaults).
3. Click Finish when the installation is complete.
4. Click the Windows Start button.
5. Select Control Panel.
6. Select Programs.
7. Select Programs and Features.
8. In the list of programs and features, locate Info HQ Manager.
9. Review the Version column for Info HQ Manager.
10. Close the Programs and Features window.

Upgrade from Info HQ Manager v1.4 to v2.1

If the latest version of Info HQ Manager is v1.4, and Info HQ Manager v1.3 is **not** listed in Add/Remove Programs, complete this procedure to upgrade to v2.1.

Important: For direct upgrades to v2.1, Info HQ Manager v1.6 must be installed, and v1.3 must **not** be displayed in Add/Remove Programs. Even if the computer was upgraded from v1.3 to v1.4 or v1.6, v1.3 will still be listed in Add/Remove Programs. These two requirements must be met or the v2.1 installer will stop the installation.

To upgrade Info HQ Manager from v1.4 to v2.1, complete the following steps:

1. If you have already verified the version of installed Info HQ Manager components, continue to the next prerequisite. Otherwise, complete the procedure in .
2. Insert the Info HQ Manager 1.6 installation DVD into the computer's DVD drive.
3. Open the UpgradeInstall directory, and double-click setup.exe.
4. Follow the installation prompts, accepting the terms and conditions when prompted to do so. (The Complete install option is selected by default. Accept this selection and continue.)
5. In the **Database Server** window, specify values as follows:

   Database server that you are installing to: Accept the default value: (local).

   Connect using: Specify the authentication method Info HQ Manager will use to connect to the server. For SQL Server authentication, log in using the user name *sa* and the proper password for the SQL server.

   Name of database catalog: Accept the default name, IVISDM. Then click Next to begin the installation.

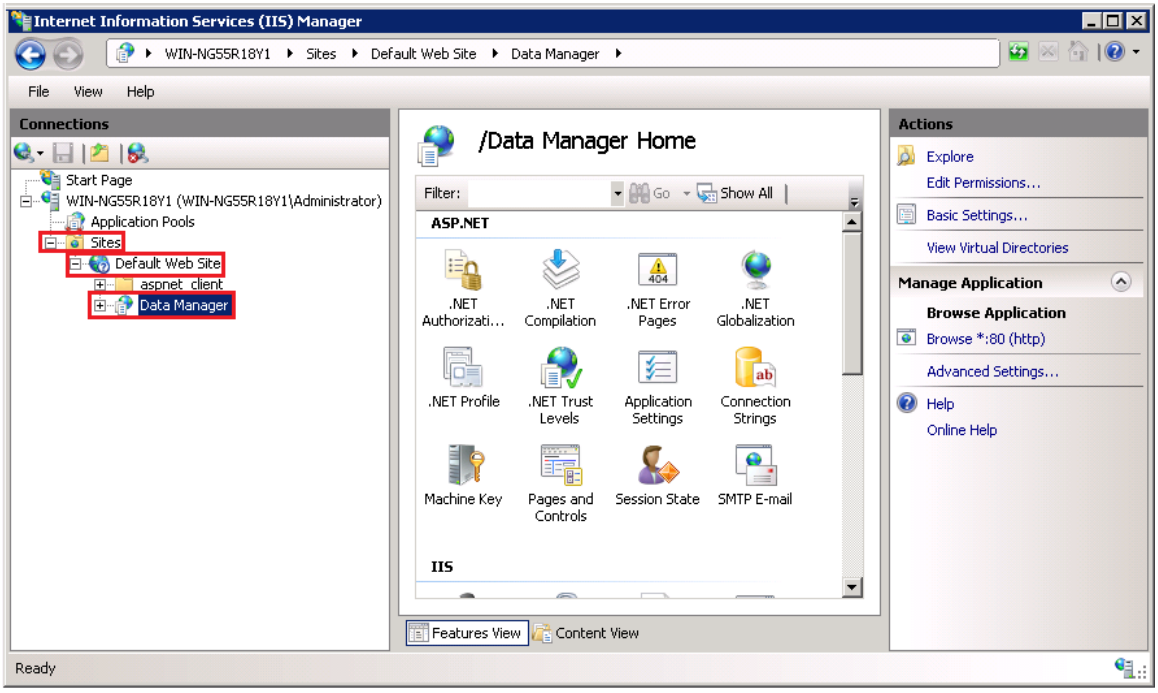
   An informational message is displayed when the installation of Info HQ Manager is complete.
6. Restart the computer.
7. After the computer has restarted, replace the Info HQ Manager 1.6 installation DVD with the 2.1 installation DVD.
8. Complete the procedure, *Install Info HQ Manage v2.1*.

Change the Info HQ Manager date format

For customers that require date formats other than MM/DD/YYYY in the Info HQ Manager user interface, set the date format in IIS; otherwise skip this step.

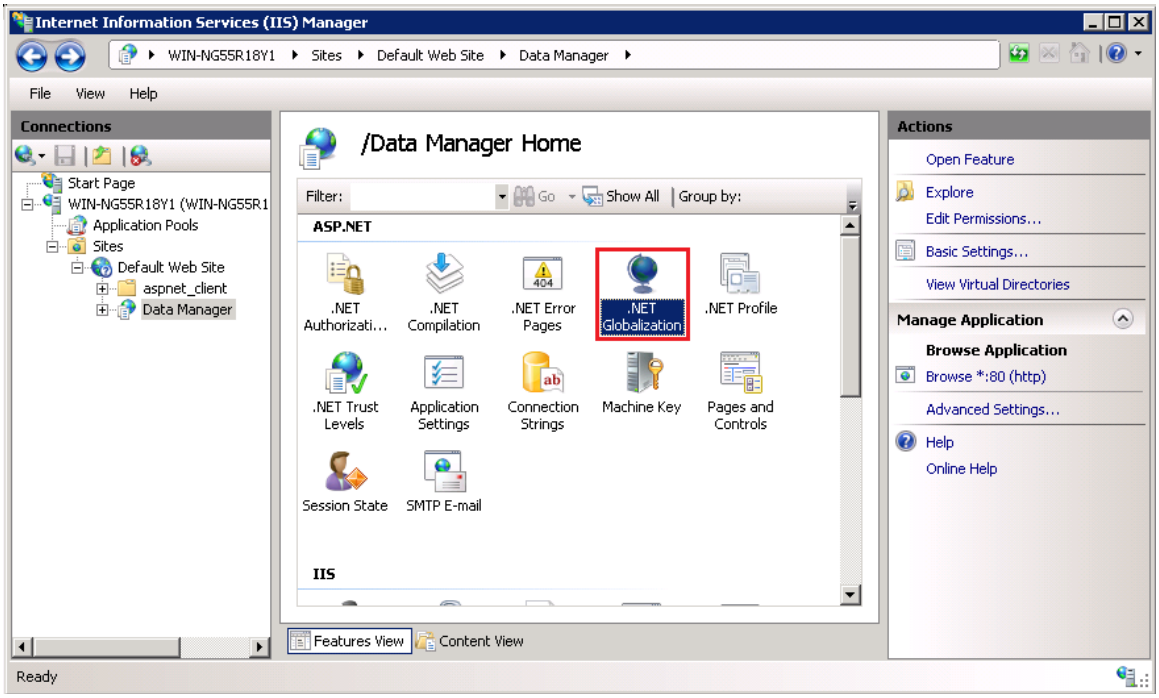
1. Restart the computer.
2. After the computer is restarted, click Start.
3. Click Internet Information Services (IIS) Manager.
4. Navigate to Sites > Default Web Site, and select Data Manager from the Data Manager Home frame.

Figure 2-1: IIS Manager screen: Data Manager



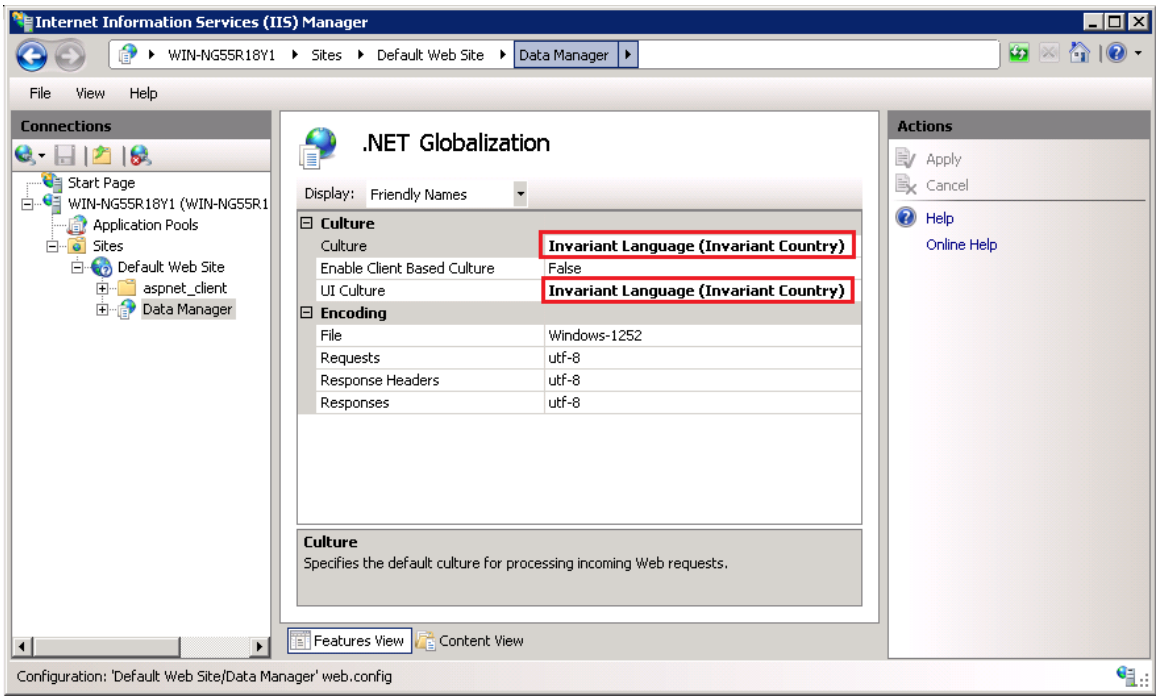
5. Double-click .Net Globalization.

Figure 2-2: IIS screen: .NET Globalization



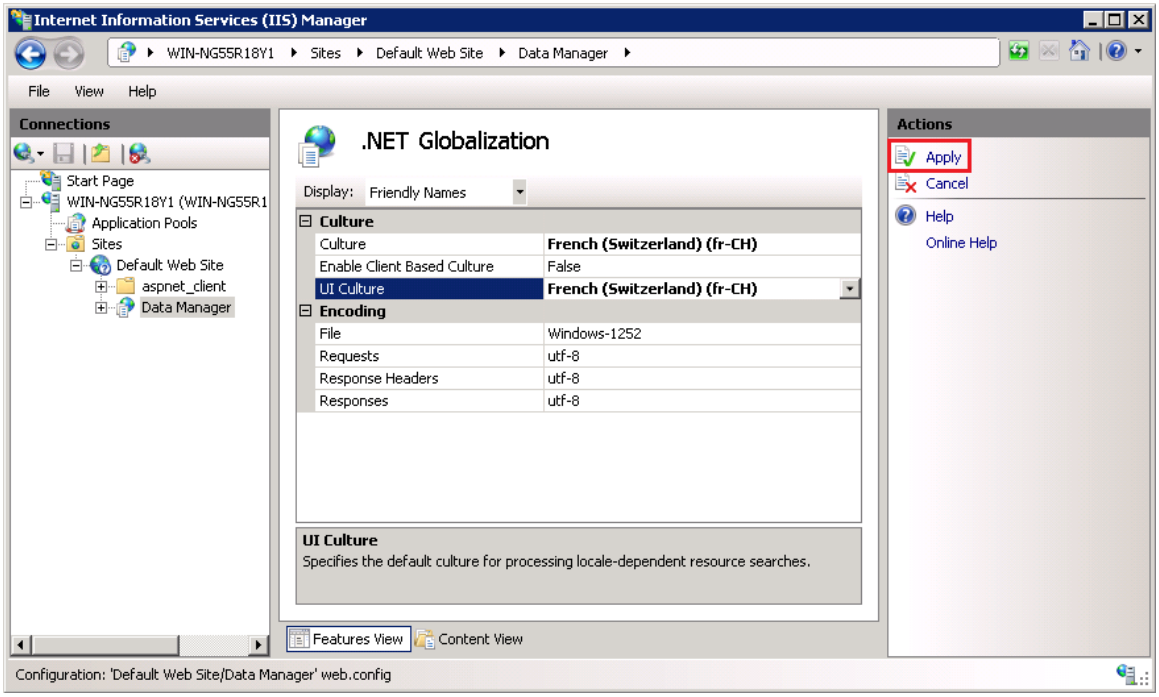
6. In the Culture and UI Culture fields, click on the input field, and select the desired language. Both fields must be identical.

Figure 2-3: IIS screen language selection



7. In the Actions frame on the right side, click Apply to save your changes.

Figure 2-4: IIS screen: Apply changes



8. Restart the computer.

   The time formats in Information HQ Manager will be displayed in the appropriate format for the language selected after the system is restarted.

Verify the installation

Verify a proper and complete installation by checking the following things.

Note: This checklist is applicable for verifying both new and upgrade installations.

To verify the installation, complete the following steps:

1. The Data Manager folder exists at C:\inetpub\wwwroot.
2. The Data Manager folder exists at C:\Program Files\APOC.
3. The following folders exist at C:\Program Files\APOC\Data Manager:
   - Bin
   - Configuration
   - db_backup
   - LogFiles
4. The following Info HQ Manager services are listed in the Control Panel at **Administrative Tools > Computer Management > Services and Applications > Services**:

Table 2-1: Info HQ Manager services

Name	Status	Startup Type	Log On As
APOC.DataManager.Communicator	Started/ Running	Automatic (Delayed Start)	Local System
APOC.DataManager.ConnectivityManager	Started/ Running	Automatic (Delayed Start)	Local System
APOC.DataManager.iSTATAlinityConnectivity	Started/ Running	Automatic (Delayed Start)	Local System
APOC.DataManager.ServiceManager	Started/ Running	Automatic (Delayed Start)	Local System

5. Verify that Info HQ Manager 2.1 is listed in Add/Remove Programs.

After verifying the installation, start Info HQ Manager by launching it in a web browser. See *Start Info HQ Manager* in section 3, *Info HQ Manager basics*.

.

3 - Info HQ Manager basics

The following sections describe how to log in and out of Info HQ Manager, how to navigate within Info HQ Manager, and an overview of the Info HQ Manager screens.

3.1 Start Info HQ Manager

Before starting Info HQ Manager, ensure that the following system services are running on the Info HQ Manager server:

- APOC.DataManager.Communicator
- APOC.DataManager.ConnectivityManager
- APOC.DataManager.iSTATAlinityConnectivity
- APOC.DataManager.ServiceManager

Info HQ Manager runs in a web browser. (Browser requirements are listed in the *Info HQ Manager Specification Sheet*.)

To launch:

1. Enter the Info HQ Manager URL (*Server name or IP address*/Data Manager/Login.aspx) into the browser's address bar.
2. Press **Enter**. The Info HQ Manager login screen opens.

   Bookmark the Info HQ Manager web page or save it to Favorites for easy access in the future.

3.2 Log in to Info HQ Manager

When Info HQ Manager is started (*Start Info HQ Manager*), the user login screen is displayed.

Figure 3-1: User login screen

Follow these steps to log in.

Note: When Info HQ Manager is installed, the Administrator account is automatically created with a username of *admin* and password of *admin123*. After the first login, it is strongly recommended that this password be changed using the procedure in *Change a user account password* in section 4, *Initial setup and configuration*.

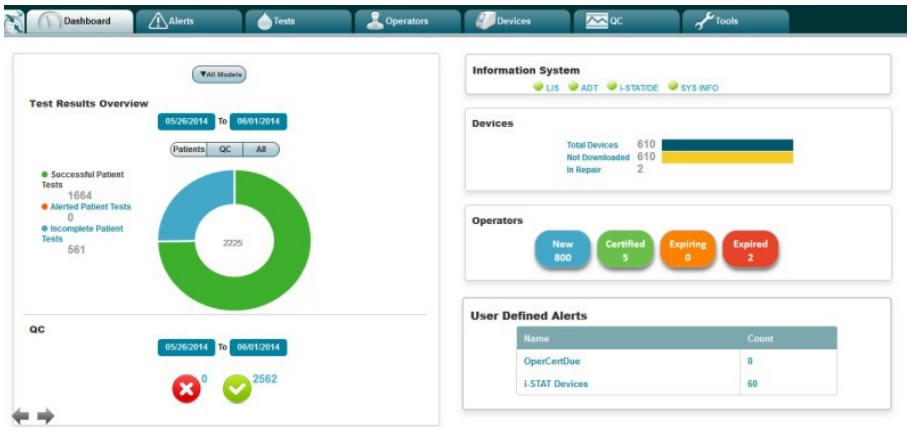
1. Enter the username and password for the account.

   If necessary, click the **Forgot Password?** link to reset the password.

2. Click **Login**.

Info HQ Manager starts and the Dashboard opens, as shown.

Figure 3-2: Dashboard screen



3.3 The Info HQ Manager user interface

Screens within Info HQ Manager user interface vary in appearance, depending on the function being performed. *Figure 3-2: Dashboard screen* shows the look of the screen when the Dashboard is displayed, and *Figure 3-3: Main areas of the screen* shows the look when the **Operators** screen is displayed.

While the look might vary, many Info HQ Manager screens have a look and structure similar to what is shown here.

Figure 3-3: Main areas of the screen

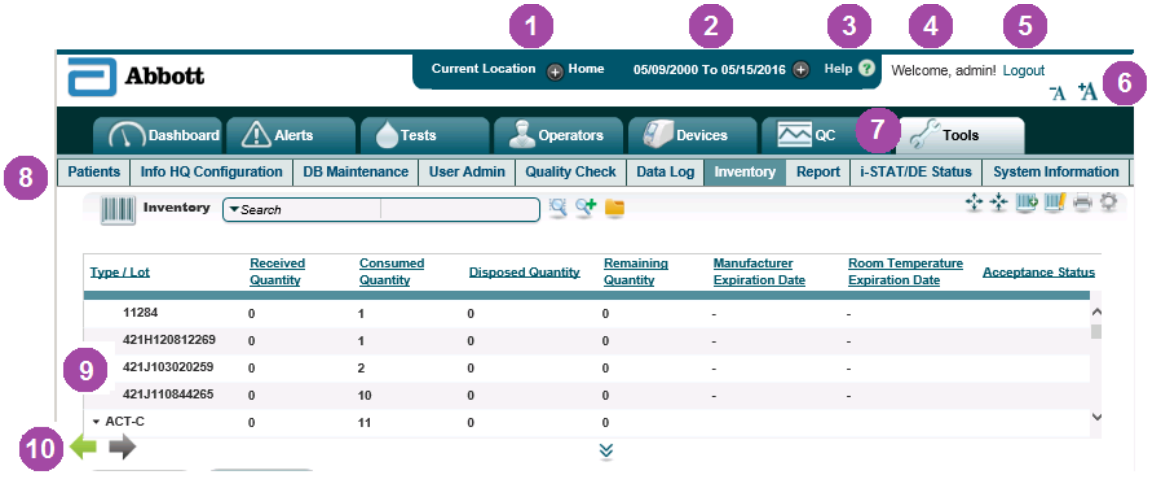
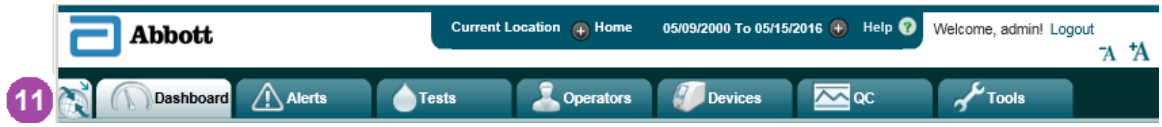


Figure 3-4: Location tree



The following table describes each area.

Table 3-1: Main areas of the screen

Item	Description
1	**Location Breadcrumb** The location (Healthcare System, Facility, Department, or Area) that is currently selected. Data elements in the various tabs are filtered and displayed based on the location selected.
2	**Date Range** The date range for the data that is being displayed. Click the date or the plus sign to change the date as needed.
3	**Help** Opens documents that provide details and instructions on the use of the Info HQ Manager software: On Screen Help, *User Guide*, *Specification Sheet*, and *Implementation Guide*.
4	**Current Logged In User** The name of the currently logged in user.
5	**Logout** Logs the currently logged-in user out of the system.
6	**Font Buttons** Decreases or increases the font size of certain data and labels.
7	**Primary Screen Tabs** Displays each main area of the Info HQ Manager application. The name of each tab indicates the type of data to display.
8	**Secondary Screen Tabs** (available with some, but not all screens) Secondary tabs further divide the data into logical sections, with the name of each secondary tab indicating the type of data to display.
9	**Display Area** The primary area for displaying data. The look of the Info HQ Manager screens varies, based on which primary and secondary tabs are selected. Screens might have any of the following additional elements in the display area: • Search options to help locate or filter the information displayed. • Icons that vary based on the screen, with rollover tooltips to identify the action of the icon. • Buttons that vary based on the screen, to perform functions on data that is selected in the display area (for example, Send to LIS, Acknowledge). Some screens do not contain any buttons.

Item	Description
10	**Back/Forward Buttons** Navigate to the previous page, or navigate one page forward. These buttons work like the web browser's Back and Forward buttons. **Note:** The web browser's Back and Forward buttons cannot be used with the Info HQ Manager application.
11	**Location Tree** (available with some, but not all screens) An expandable and collapsible list of the available locations in the organization, accessed by clicking the  icon. The Tree can remain visible, or it can be hidden to allow more information to be displayed on the display area. The Tree is located on the left side of the screen and is synchronized with the Location breadcrumb at the top of the user interface.

3.4 Basic navigation

The Dashboard, shown in *Figure 3-2: Dashboard screen*, is the first screen that is displayed after login. This screen is a graphical snapshot of the overall activity of the Info HQ Manager system. Each section of the Dashboard has hyperlinks. Use these hyperlinks to navigate to the screens that contain the information relating to each Dashboard section.

Above this graphical display area is a row of tabs. Navigating Info HQ Manager is also done using these tabs (Dashboard, Alerts, Tests, and so forth) combined with the Location Breadcrumb and Date Range selectors.

The Info HQ Manager screens have built-in Forward and Back buttons for navigation. Do not use the web browser's Forward and Back buttons with the Info HQ Manager application.

Primary tabs

The primary tabs, located above the display area, are the main way of navigating to the major functional screens of Info HQ Manager. Each tab displays a specific kind of information.

Figure 3-5: Primary tabs

The primary tabs are as follows:

Dashboard	A graphical summary of the system activities.
Alerts	Buttons that identify the number of currently active alerts for each of the nine types of alerts.
Tests	Patient test results data.
Operators	Operator information and certification status.
Devices	Information for the devices that have been registered in the system.
QC	QC testing data from the devices that have been defined in the system.
Tools	Various tools for setting up and managing the Info HQ Manager system, including reports.

Secondary tabs

When some primary tabs are selected, the screen displays a secondary set of tabs. These tabs provide additional functions and screens, and are another means of navigating in Info HQ Manager. Here is an example showing the secondary tabs that are displayed when the Tools primary tab is selected.

Figure 3-6: Secondary tabs

3.5 Exit Info HQ Manager

A user remains logged into Info HQ Manager until he or she logs out, or until the session reaches 30 minutes of inactivity — after which the user is logged out automatically.

Note: To adjust the timeout security setting based on your facility's policy, change the *Session Time Out* configuration setting. Refer to *System configuration settings* in section 4, *Initial setup and configuration*, for instructions on how to change system configuration settings.

To log out of Info HQ Manager:

1. In the upper right corner of the Info HQ Manager window, click **Logout**.

Figure 3-7: Logout option

The login screen is displayed again.

2. Optionally close the browser window.

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4 - Initial setup and configuration

To use the Info HQ Manager system effectively, it is necessary to set up and configure the following:

- User account for the POCC, the primary user of the Info HQ Manager system
- Connection settings for devices and information systems that interact with the Info HQ Manager system
- System settings for displaying and managing test records and data, based on the needs of the organization
- Email settings for sending email notifications
- Device operators, devices, and location hierarchy (see section 5, *Creating the system hierarchy*)
- Database maintenance tasks that will help ensure data integrity (see section 7, *Database maintenance*)

Note: When Info HQ Manager is installed, the Administrator account is automatically created with a username of *admin* and password of *admin123*. After the first login, it is strongly recommended that this password be changed using the procedure in *Change a user account password* elsewhere in this section.

4.1 Create user accounts

Different individuals within the healthcare system access the Info HQ Manager system to manage test results, manage operator certifications, enter cartridge lot information, generate reports for their departments, and perform other routine tasks. These individuals can include point-of-care coordinators, nursing managers, bench technicians, educators, IT and Biomed staff, and others. A user account must be created for each individual who will use the Info HQ Manager system.

Info HQ Manager users gain access to functional areas within the Info HQ Manager user interface through the use of roles, and to data through the use of locations. (Data access is permitted only for the assigned facilities within the healthcare system.)

Info HQ Manager is configured with four roles: Administrator, POCC, Nurse Manager, and Service. The following two tables identify the functional areas within the Info HQ Manager user interface to which each role has access.

Table 4-1: Access based on role: primary tabs

Functional area	Roles and access - primary tabs			
	Administrator	**POCC**	**Service**	**Nurse Manager**
Dashboard	Yes	Yes	No	No
Alerts tab	Yes	Yes	No	No
Tests tab	Yes	Yes	No	No
Operators tab	Yes	Yes	No	Yes
Devices tab	Yes	Yes	Yes	No
QC tab	Yes	Yes	No	No
Tools tab	Yes	Yes	Yes	No

Table 4-2: Access based on role: secondary tabs

Functional area	Roles and access - secondary tabs within Tools			
	Administrator	**POCC**	**Service**	**Nurse Manager**
Patients	Yes	Yes	No	No
Info HQ Configuration	Yes	Yes	Yes	No
DB Maintenance	Yes	No	Yes	No
User Admin	Yes	No	No	No
Quality Check	Yes	Yes	No	No
Data Log	Yes	Yes	No	No
Inventory	Yes	Yes	Yes	No
Report	Yes	Yes	No	No
i-STAT/DE Status	Yes	Yes	No	No
System Information	Yes	Yes	Yes	No

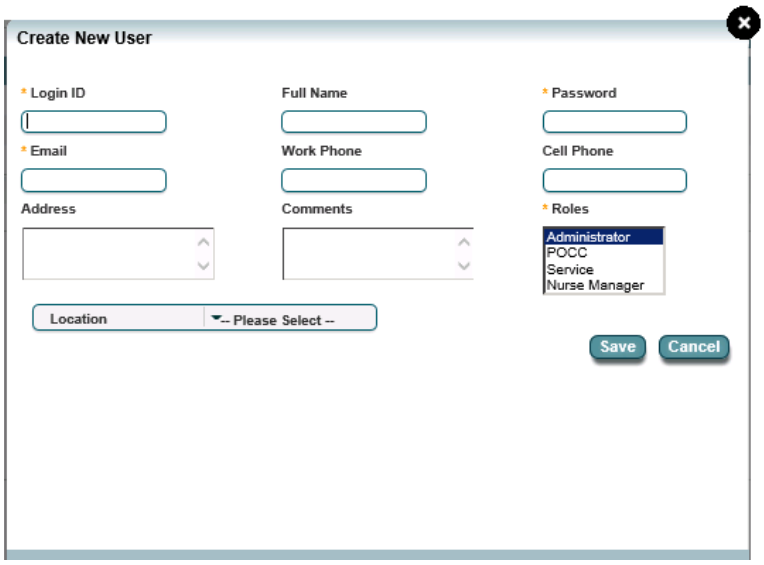
Perform the following steps to create a user account:

1. Gather or create the following information about each person:
   - Login ID or user name (required—see restrictions in *step 4*)
   - Password (required—see restrictions in *step 4*)
   - Full Name (First and last name)
   - Mailing address
   - Email address
   - Work phone number
   - Cell phone number
   - User role (required; use *Table 4-1: Access based on role: primary tabs* and *Table 4-2: Access based on role: secondary tabs* as a guide)
   - Locations to assign to the user
2. Click the Tools tab, then click the User Admin secondary tab.

Figure 4-1: User Admin secondary tab

3. Click to display the **Create New User** dialog box, as shown.

Figure 4-2: Create New User dialog box



Note: Fields with an asterisk (*) are required fields and must be completed.

4. In the **Login ID** and **Password** fields, enter the desired user name and password for the account.

For the **Login ID**, note the following:

- Is limited to a maximum of 20 characters
- can contain special characters
- cannot contain the following characters:
    - Ampersand (&)
    - Tilde (~)
    - Single quote (‘)
    - Semicolon (;)
    - Consecutive hyphens (--)
    - Comma (,)
    - Blank space

For the **Password**, note the following:

- Is limited to a maximum of 20 characters
- Must contain the following:
    - Minimum of six characters
    - Minimum of one upper-case letter (A - Z)
    - Minimum of one lower-case letter (a - z)
    - Minimum of one number (0 - 9)
- can contain special characters
- cannot contain the following characters:
    - Ampersand (&)
    - Tilde (~)
    - Single quote (‘)
    - Semicolon (;)
    - Consecutive hyphens (--)
    - Comma (,)
    - Blank space

5. Complete the remaining fields using the information gathered in step *1*. Note the following:
   - Only one role can be assigned to the user.
   - One or more locations can be selected.
6. Click **Save** to create the user account.
7. Click **OK** in the confirmation box.
8. Repeat these steps for each user account.

After the user accounts are created, provide the appropriate user name and password to each user, along with the Info HQ Manager URL if necessary.

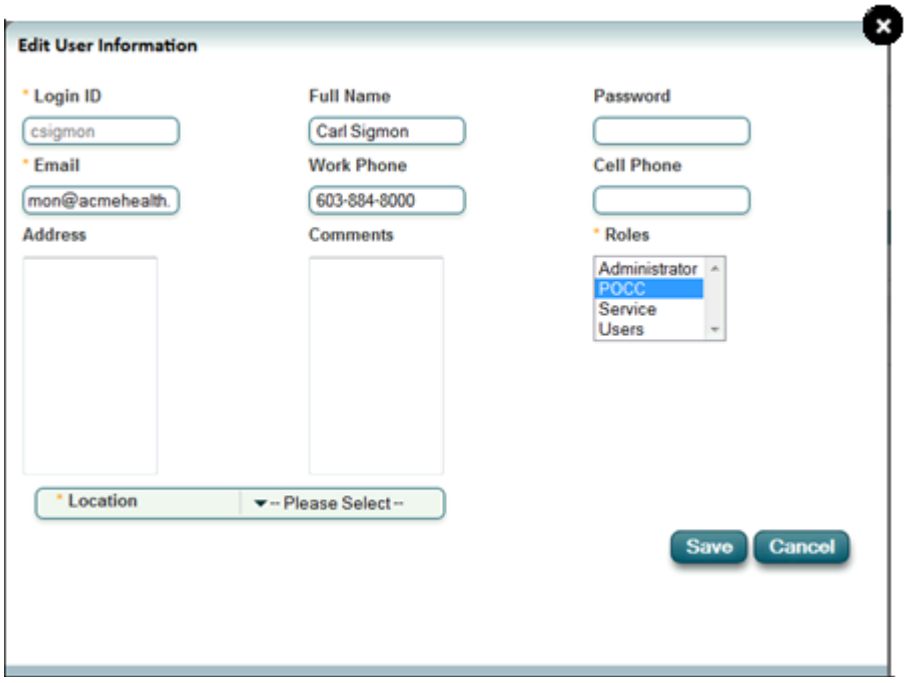
Update user accounts

Individuals move between departments, get new telephone numbers, and assume different roles. Events like these might require an update to an individual's Info HQ Manager user account.

Follow these steps to update a user account:

1. Click the Tools tab.
2. Click the User Admin secondary tab.
   The **User Admin** screen lists all user accounts.
3. Select the user account to update.
4. Click  to display the **Edit User Information** dialog box.

Figure 4-3: Edit User Information dialog box



5. Update the fields as needed, then click **Save**.
6. Click **OK** in the confirmation box.

Delete a user account

When a user account is no longer needed, it should be deleted. Follow these steps to delete a user account:

1. Click the Tools tab.
2. Click the User Admin secondary tab.
   The **User Admin** screen displays all user accounts.
3. Select the user account to delete.
4. Click  .
5. Click **OK** to confirm deletion.

4.2 Change a user account password

Info HQ Manager user passwords can be changed by an administrator using the User Admin secondary tab within Tools, or by users at the Info HQ Manager login screen.

Note: Info HQ Manager will:

- Support user password complexity: A mix of numbers and letters (lower-case and upper-case)
- Prompt users to change their passwords after 90 days
- Prevent users from reusing the last password
- Allow administrators to configure the password expiration duration (default is 90 days)

Complete the following steps to change the password for a user account:

1. Log in to Info HQ Manager as an administrator.
2. Click the Tools tab.
3. Click the User Admin secondary tab.
   The **User Admin** screen displays, with a list of all user accounts in the Info HQ Manager system.
4. Select the desired user account and click the Edit User Information () icon. The **Edit User Information** dialog box opens.
5. In the **Password** field, enter the new password for the account.

   Note: See the requirements for a password in *Section 4.1 Create User Accounts, step 4*.
6. Click **Save**.
7. Click **OK** in the confirmation box.

Change a user password at the login screen

Info HQ Manager users can change their passwords from the login screen, if a valid email address is saved in their user profile.

1. Enter the Info HQ Manager URL (*Server name or IP address*/Data Manager/Login.aspx) into the browser's address bar.
2. Press **Enter**.
   The Info HQ Manager login screen opens.
3. Click **Change password** to the right of the Login button.
4. In the **Change Password** page, enter the user name and the current password in the appropriate boxes. Enter the new password twice.

   Note: See the requirements for a password in *Section 4.1 Create User Accounts, step 4*.
5. Click the **Change Password** button.

A confirmation message displays.

6. Click **Go to Login**.
7. Log in to Info HQ Manager using the new password.

Change a forgotten password

Info HQ Manager users can change their passwords from the login screen, if a valid email address is saved in their user profile.

1. Enter the Info HQ Manager URL (*Server name or IP address*/Data Manager/Login.aspx) into the browser's address bar.
2. Press **Enter**.
   The Info HQ Manager login screen opens.
3. Click **Forgot password?** to the right of the Login button.
4. In the **Forgot Password** page, enter the user name and click the **Reset Password** button.
   A confirmation message displays and an email message is sent to the address associated with the user.
5. Retrieve the new password from the email message.
6. Click **Go to Login**.
7. Log in to Info HQ Manager using the new password.

4.3 Connectivity settings

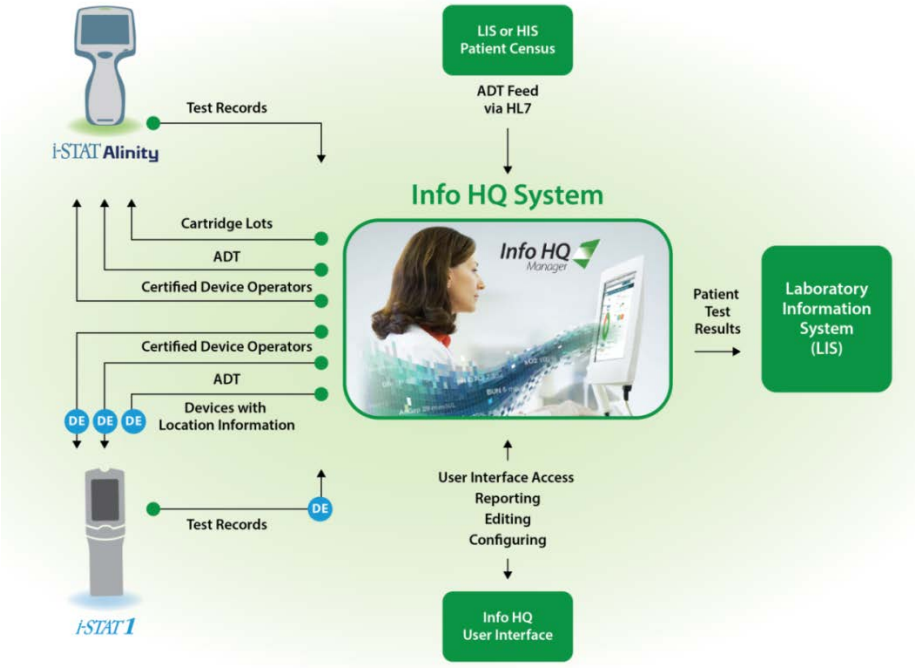
Info HQ Manager can be configured to communicate with POC devices, Laboratory Information Systems (LIS), Hospital Information Systems (HIS), and other external systems.

- Connectivity to POC devices is bi-directional — data must flow from the devices to Info HQ Manager and vice versa. i-STAT 1 devices, communicate through i-STAT/DE. i-STAT Alinity communicates with Info HQ Manager directly through the POCT1-A2 communication protocol. Setup and customization via the CWi software is required for communication between i-STAT Alinity and Info HQ Manager. See the i-STAT Alinity documentation for detailed information.
- Connectivity to an LIS is bi-directional — Info HQ Manager can send and receive communications with the LIS.
- Communication with an Admission, Discharge, and Transfer (ADT) system is unidirectional. Info HQ Manager supports inbound communication from the ADT system for patient demographic data.
- Communication with an external system (like an LMS) is usually accomplished by file transfer or through a custom interface.

Info HQ Manager communicates only with the following device types: i-STAT 1 (also known as i-STAT 300) and i-STAT Alinity.

Connection with an LIS, HIS, or other external system is optional. However, Info HQ Manager must be configured to connect with one or more POC devices.

Figure 4-4: Info HQ Manager connection overview



Connectivity with point-of-care testing devices

Connectivity with POCT devices enables Info HQ Manager to send and receive data to and from the devices, as illustrated in *Figure 4-3: Info HQ Manager connection overview*.

Communication between Info HQ Manager and i-STAT 1 is managed by i-STAT/DE, which is the communication and customization software for the i-STAT 1 device.

i-STAT Alinity communicates with Info HQ Manager directly through the POCT1-A2 communication protocol. Setup and customization via the CWi software is required for communication between i-STAT Alinity and Info HQ Manager. See the i-STAT Alinity documentation for detailed information.

Connectivity with i-STAT downloaders is done by registering the downloader in Info HQ Manager. Register i-STAT downloaders before adding i-STAT 1 devices. See *i-STAT downloader registration* for connectivity information for the i-STAT downloader.

Connectivity with POCT devices is done by registering each device in Info HQ Manager. There are two ways to register a device: manual and automatic.

Manual registration

With manual registration, devices are added using the Info HQ Manager user interface. Refer to *section 6: Add an individual device* for steps on how to manually register and add a device with Info HQ Manager.

Automatic registration

Automatic registration is available for Abbott Point of Care (APOC) devices. With automatic registration, the device registers itself when it communicates with Info HQ Manager.

When a device automatically registers with Info HQ Manager, the device does not set its location within the Info HQ Manager location hierarchy. Info HQ Manager generates an alert that a new device has been added and that the device's location is unknown. Follow these steps to assign a location to the device for test result management and to ensure proper communication between the APOC device and Info HQ Manager:

1. Click the Devices tab to display a list of all devices currently registered in Info HQ Manager.
2. In the upper pane of the screen, select the device to change.

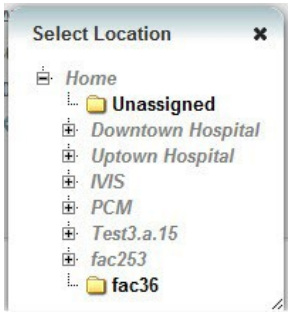
   Note that the device might not be listed on the first page of listed devices. If necessary, use the page widget near the upper-right of the screen, shown here, to scroll through the pages to locate the new device.

   Figure 4-5: Widget for selecting pages

3. In the lower pane, click the Device tab.
4. Click to display the **Select Location** pop-up.

   Figure 4-6: Select Location pop-up

5. Expand the location hierarchy, using the plus icons, until the desired location is listed.

   Then click the location.

   The **Devices** screen refreshes and updates the device with the new location.
6. Repeat step *2* through step *5* for each device that is automatically registered.

i-STAT downloader registration

i-STAT 1 devices are directly managed by the i-STAT/DE. Info HQ Manager communicates with the i-STAT/DE, which then communicates with an i-STAT 1 device when it is docked on the i-STAT downloader. Info HQ Manager uses a web service to communicate with the i-STAT/DE.

i-STAT downloaders must be registered with Info HQ Manager, either automatically or manually.

- When an i-STAT downloader is registered automatically, it is given an initial default location of *Unassigned*. This generates a device alert until a valid location is assigned manually.
- For manual registration, the downloader's IP address is used to identify the specific i-STAT 1 device during communication between Info HQ Manager and i-STAT/DE. To set up connectivity for the i-STAT downloader, perform the following steps in order.

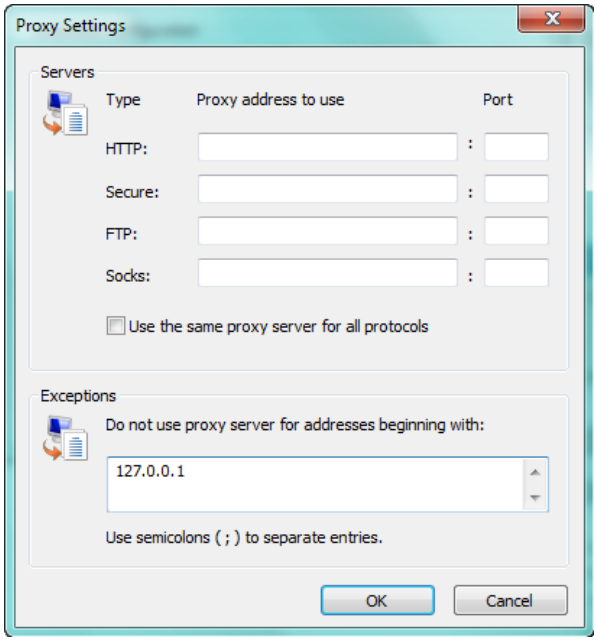
1. Register the i-STAT downloader devices within Info HQ Manager. See *Add an individual device*.
2. Register all other POCT devices. See *Connectivity with point-of-care testing devices*.

3. Ensure that all devices and all operator accounts specify a location.
4. Enable i-STAT/DE configuration settings. See *Change i-STAT/DE configuration settings*.
5. If the Info HQ Manager system uses a proxy, set the browser to bypass the proxy for the i-STAT/DE web service URL.

   (If necessary, work with the IT team to accomplish this.)

   a) In Internet Explorer, click the Tools icon:
   b) Click **Internet Options**.
   c) On the Connections tab, click **LAN Settings**.
   d) In the Proxy Server panel, check **Use proxy server for your LAN** and click **Advanced**.
   e) In the Exceptions panel, in the text box labeled **Do not use proxy server for addresses beginning with**, type the i-STAT/DE web service URL. (The IP address shown in this illustration is for demonstration purposes only.)

Figure 4-7: Proxy Settings dialog box



   f) Click **OK** three times to save changes and exit the Tools dialog.

When these steps have been completed, if Info HQ Manager is able to establish connection with the i-STAT/DE, the i-STAT/DE status indicator on the Info HQ Manager Dashboard turns green. Otherwise, the status indicator is red. (If i-STAT/DE is not enabled in the Info HQ Manager configuration, the Dashboard indicator is gray.)

Figure 4-8: Information System area

Change i-STAT/DE configuration settings

System configuration settings control how Info HQ Manager functions. When Info HQ Manager is first installed, these system settings are pre-configured to enable Info HQ Manager to be launched and functional immediately after installation. The following system configuration settings control Info HQ Manager's communication with the i-STAT/DE for i-STAT 1 devices:

Table 4-3: i-STAT/DE settings

Parameter	Description	Default setting
i-STAT/DE Enabled	Whether Info HQ Manager is able to connect to the i-STAT Data Exchange web service.	No
i-STAT/DE Instruments Upload Interval	How often Info HQ Manager will send downloader and i-STAT device data to the i-STAT/DE, between 5 minutes and 1440 minutes (1 day).	15 minutes
i-STAT/DE Operator Upload Interval	How often Info HQ Manager will send operator data to the i-STAT/DE, between 5 minutes and 1440 minutes (1 day).	15 minutes
i-STAT/DE Patient Upload Interval	How often Info HQ Manager will send patient data to the i-STAT/DE, between 3 minutes and 1440 minutes (1 day).	15 minutes
i-STAT/DE Web Service Host Name	IP address of the i-STAT/DE web service.	127.0.0.1

At a minimum, to enable Info HQ Manager to communicate with i-STAT/DE, **i-STAT/DE Enabled** must be set to *Yes* and **i-STAT/DE Web Service Host Name** must include the IP address of the i-STAT/DE system. To change the i-STAT/DE configuration settings, follow these steps in order:

1. Click the Tools tab.
2. Click the Info HQ Configuration secondary tab.
3. Click the System Config tab.
4. In the **Module Selection** drop-down list, click **i-STAT/DE**.
   The **Info HQ Configuration** screen displays all current system configuration settings for i-STAT/DE.

   Note: Before proceeding, ensure that **i-STAT/DE Enabled** is set to *No*.
5. Set **i-STAT/DE Web Service Host Name**:
   a) Click to the right of the configuration option to activate the field.
   b) Enter the host's IP address into the input field.
   c) Click to save the change.
6. Set **i-STAT/DE Enabled** to *Yes*:
   a) Click to the right of the configuration option to activate the field.
   b) Select *Yes* from the drop-down list.
   c) Click to save the change.
7. Optionally change the i-STAT/DE upload interval options in the same manner, entering the number of minutes in accordance with the healthcare system's policies.

Change i-STAT Alinity communication parameters

i-STAT Alinity has two communication parameters that can be changed if the default values are incompatible with the PC on which Info HQ Manager is installed. For example, if the default listening port is already in use, or if the computer has more than four cores and you want to allocate additional threads, changes to the i-STAT Alinity communication configuration become necessary. These parameters are stored by default in the c:\Program Files\APOC\Data Manager\Bin\ directory in the DM.DragonflyConnectivityWS.exe.config file.

Note: If more than four cores are used, additional Microsoft SQL Server licenses are required and must be purchased from Abbott Laboratories or its distributors.

Table 4-4: i-STAT Alinity default communication settings

Parameter	Default Value	Function
listeningPort	13000	Defines which computer port is used to receive communication from the device.
numberOfStagingThreads	4	Defines the number of threads used to capture messages from the device before it is written to the Info HQ Manager database. Staging threads run indefinitely and compete for CPU power, so it is recommended to allocate no more than one thread per core and no more than 8 threads total. In most cases, the default value of 4 is sufficient.

To configure the i-STAT Alinity communication parameters:

1. Click **Start > Administrative Tools > Computer Management** to open the Computer Management screen.
2. Expand the Services and Applications tree, and select **Services**.
3. In the list of services, double-click the **APOC.DataManager.iSTATAlinityConnectivity**.
4. Click, **Stop** to stop the service. It is necessary to stop the service before changing the i-STAT Alinity configuration file.
5. Open the DM.DragonflyConnectivityWS.exe.config file in a text or XML editor. The file is located in the c:\Program Files\APOC\Data Manager\Bin\ directory by default.
6. Locate the parameter or parameters that need to be changed, and adjust their values as needed.

Figure 4-9: DM.DragonflyConnectivityWS.exe.config file

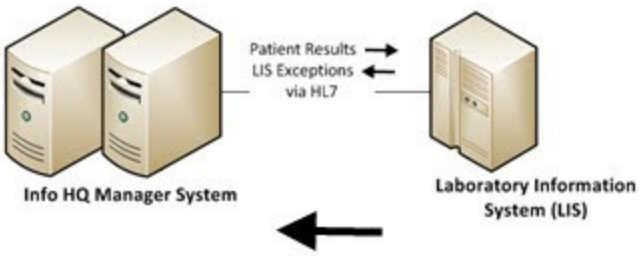
```
<?xml version="1.0" encoding="utf-8"?>
<configuration>
  <appSettings>
    <add key="listeningPort" value="13000" />
    <add key="numberOfStagingThreads" value="4" />
    <add key="ClientSettingsProvider.ServiceUri" value="" />
  </appSettings>
```

7. Save and close the file.
8. In the Windows Services screen, click **Start** to re-start the service. The configuration changes are now active.

Connectivity with an LIS

Connectivity with an LIS enables Info HQ Manager to send patient identification information, operator identification information, and test result data over a network connection to the LIS. Info HQ Manager supports bi-directional LIS connectivity using HL7 protocol, and a single inbound ADT connection using HL7 protocol natively. When used with a third-party interface engine, it can support additional outbound channels and connections.

Figure 4-10: Connectivity with an LIS



Connect to an LIS with an HL7-Network connection

Before the LIS connection can be configured in Info HQ Manager, the IT team must configure the LIS server so that it can contact the Info HQ Manager server.

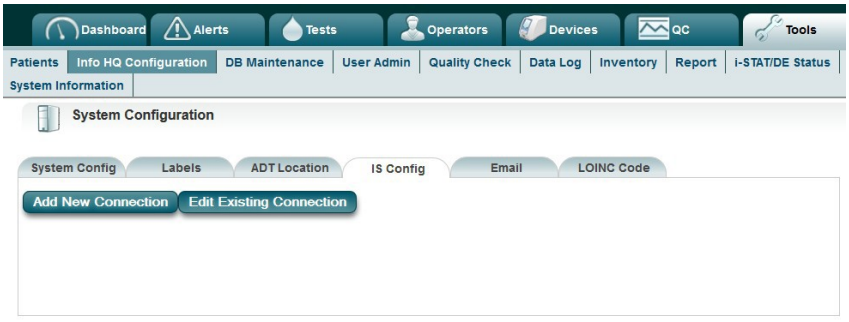
Note: Both the Info HQ Manager server IT team and the LIS server IT team need to be involved in the process of setting up this connection.

Follow these steps when connecting to the LIS using the HL7 protocol:

1. Gather the following information from the IT team responsible for the LIS server:
   - Host address (TCP/IP address) of the LIS server
   - Communication port (listening port) for which the LIS server is configured
2. Verify that the LIS IT team has registered Info HQ Manager in the LIS registry, to ensure that the LIS server is aware of the Info HQ Manager server.
3. Click the Tools tab.
4. Click the Info HQ Configuration secondary tab.
5. Click the IS Config tab.

   The **Info HQ Configuration** screen displays with IS Config information, as shown here.

Figure 4-11: Info HQ Configuration screen: IS Config tab



6. Click **Add New Connection**.

The first set of **Add New Connection** fields display.

Figure 4-12: Info HQ Configuration screen: IS Config tab (first set of fields for adding new connection)

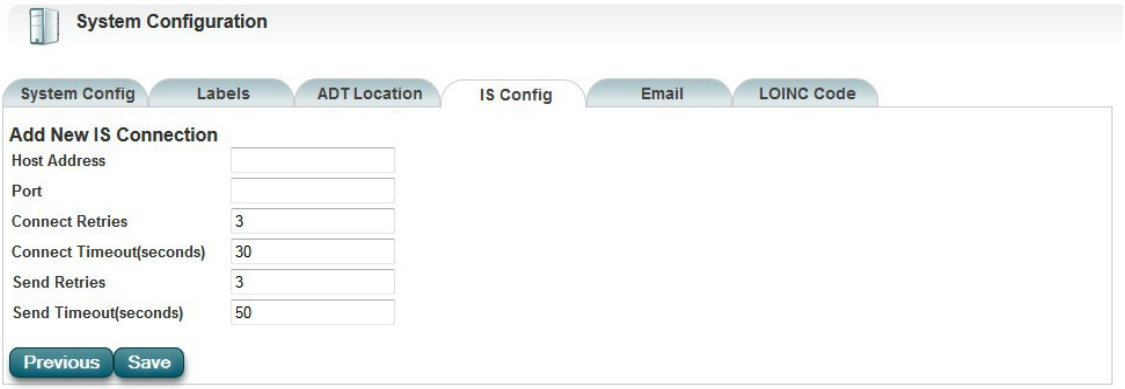
7. Complete the first set of fields, providing a name and description to associate with this LIS connection.

   Click **Next** when finished to display the next set of fields.

8. Continue to complete each set of fields as prompted, clicking **Next** after completing each set. The following settings are recommended.
   - ISType: LIS
   - CodingType: Select the naming standard being used at your facility (for example, LOINC), or select NONE.
   - Protocol: HL7
   - Message Type: The HL7 message format being used at your facility (ORUR30 or ORUR31)
   - LinkType: Network
   - Channel: OutBound
9. Use the data collected in Step *1* for Host Address and Port.

   It is strongly recommended that default values be used for the Retries and Timeout parameters.

Figure 4-13: Info HQ Configuration screen: IS Config tab (last set of fields for adding new LIS connection)



10. When complete, click **Save**, as shown.
11. Click **OK** in the Save confirmation box.

When the new connection has been defined, Info HQ Manager attempts to connect to the LIS. If Info HQ Manager is able to establish connection with the LIS, the status indicator on the Info HQ Manager Dashboard turns green (click the Dashboard tab to display the Dashboard).

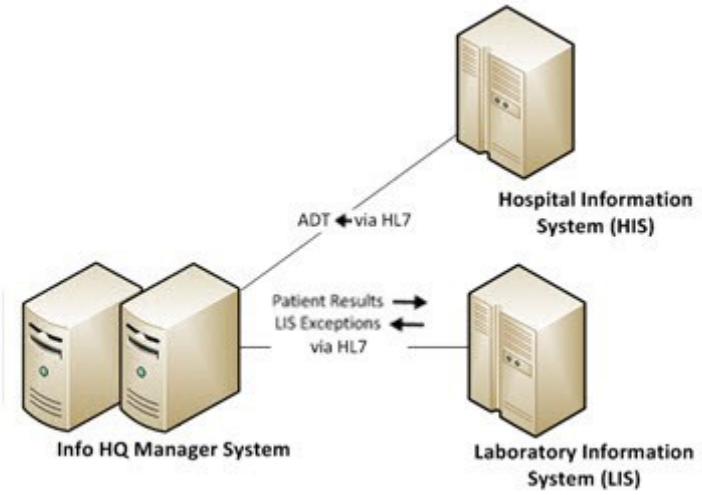
Connectivity with an HIS

Connectivity with an HIS or Electronic Medical Record (EMR) system enables Info HQ Manager to receive patient Admission, Discharge, & Transfer (ADT) data from the HIS/EMR. Info HQ Manager uses the HL7 protocol for network communication with the HIS.

Connect to an HIS/EMR with an HL7-Network connection

Info HQ Manager currently supports inbound network communication for ADT data and updates. The HIS/EMR sends Info HQ Manager patient ADT data to the ADT module in Info HQ Manager. When confirmed patient test records are received from the devices, Info HQ Manager forwards that data to the HIS/EMR.

Figure 4-14: Network connectivity to HIS/EMR using HL7



Note: Both the Info HQ Manager server IT team and the HIS server IT team need to be involved in the process of setting up this connection.

Follow these steps when connection to the HIS/EMR uses the HL7 protocol and a network connection:

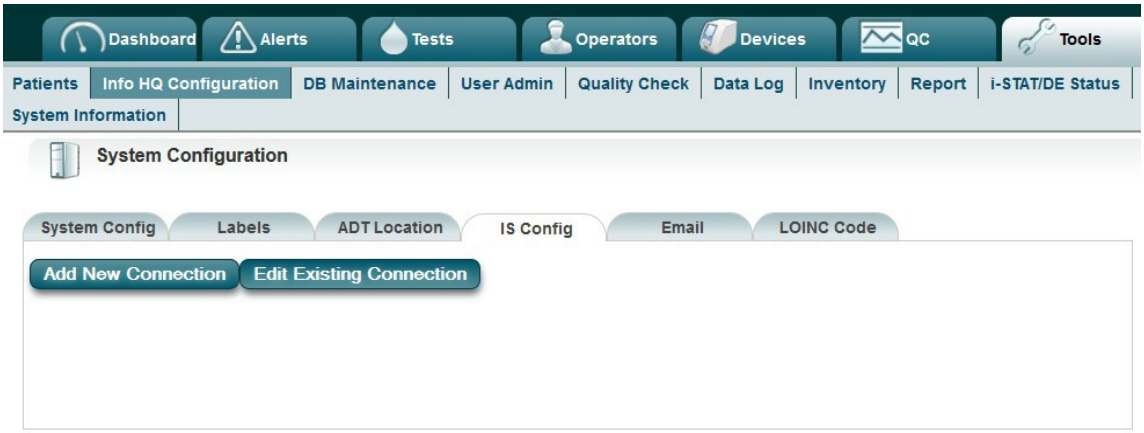
1. Gather the following information from the Info HQ Manager IT team, then provide it to the IT team responsible for the HIS server:
   - Host address (TCP/IP address) of the Info HQ Manager server
   - Communication port for which the Info HQ Manager server is configured

   Note: See *ADT facility level mapping* for more information about the ADT location configuration.

2. Click the Tools tab.
3. Click the Info HQ Configuration secondary tab.
4. Click the IS Config tab.

   The **Info HQ Configuration** screen displays with IS Config information, as shown here.

Figure 4-15: Info HQ Configuration screen: IS Config tab



5. Click **Add New Connection**.
   The first set of **Add New Connection** fields is displayed.

Figure 4-16: Info HQ Configuration screen: IS Config tab (first set of fields for adding new connection)

6. Complete the first set of fields, providing a name and description to associate with this HIS connection.

   Click **Next** when finished to display the next set of fields.

7. Continue to complete each set of fields as prompted, clicking **Next** after completing each set. The following settings are recommended.
   - ISType: HIS
   - Protocol: HL7
   - LinkType: Network
   - Channel: InBound
   - Port: The TCP/IP network port, for example *20001*

   It is strongly recommended that default values be used for the Retries and Timeout parameters.

Figure 4-17: Info HQ Configuration screen: IS Config tab (last set of fields for adding new HIS connection)

8. When finished, click **Save**.
9. Locate and click the System Config tab.
10. In the list of Info HQ System settings, make sure that **Support ADT** is set to *Yes*.

When the new connection has been completed, Info HQ Manager opens its incoming port and the Info HQ Manager ADT module listens to inbound messages sent from the HIS server. If the Info HQ Manager ADT module is able to establish connection with the HIS server, the status indicator on the Info HQ Manager Dashboard turns green.

4.4 Configuration settings

Configuration settings control how Info HQ Manager functions. Info HQ Manager can be configured to meet the specific needs of a healthcare system. Setting up and adjusting configuration settings is done from the Info HQ Configuration secondary tab, which is available from the Tools tab.

The following sections describe the tabs on the **Info HQ Configuration** screen, except the IS Config tab. The IS Config tab is used to configure information systems, such as an LIS, and is described in the *Connectivity settings* section.

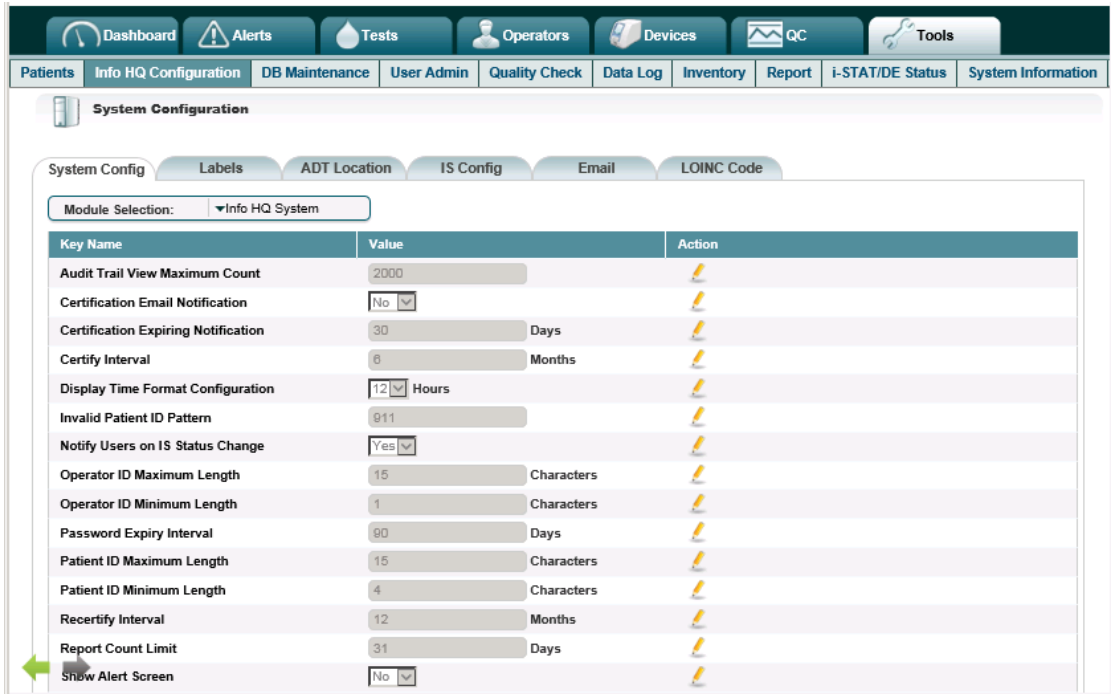
System configuration settings

System configuration settings control how Info HQ Manager functions, how it interacts with patient testing devices and information systems, and even the options available within the Info HQ Manager user interface.

When Info HQ Manager is first installed, these system settings are pre-configured to enable Info HQ Manager to be launched and functional immediately after installation. These settings can be changed to meet the specific needs of a healthcare system. After making any change to the configuration settings, the system should be restarted.

1. Click the Tools tab.
2. Click the Info HQ Configuration secondary tab.
3. Click the System Config tab.

Figure 4-18: Info HQ Configuration screen: System Config tab



Use the **Module Selection** drop-down list to filter the list and find the desired parameters more easily. The following tables provide descriptions of each parameter:

Table 4-5: Info HQ System settings

Table 4-6: Comments settings

Table 4-7: i-STAT/DE settings

Table 4-8: Organization Info settings

Table 4-9: Advanced settings

4. Click or next to a parameter to change its current setting.

   denotes a free field entry or a single-select setting.

   denotes a setting for which multiple options can be added or removed from the Info HQ Manager user interface.

Note: Configuration items shown may vary depending upon availability of configuration settings in Info HQ Manager.

Table 4-5: Info HQ System settings

Parameter	Description	Default setting
Audit Trail View Maximum Count	Total number of audit trail records, between 500 and 5000, that Info HQ Manager can return. If a larger number of audit trail records are requested, a notification message displays and only the number of records equal to the maximum count are returned.	2000
Certification Email Notification	Whether Info HQ Manager will send a daily email notification to the operator and manager that a certification has expired or is expiring based on the Certification Expiring Notification period.	No

Parameter	Description	Default setting
Certification Expiring Notification	Number of days in advance, between 0 and 365, that an alert will be generated and email notification to the operator and manager will begin before an operator certification will expire.	30 days
Certify Interval	Number of months, between 0 and 1000, that an initially granted certification will remain active before it expires.	6 months
Display Time Format Configuration	The format used to display time in the user interface.	12 hours
Invalid Patient ID Pattern	A pattern or template, used to verify that each patient ID is valid. Applies when Info HQ Manager is not configured to receive patients' Admission, Discharge, & Transfer (ADT) data.	911
Notify Users on IS Status Change	Whether Info HQ Manager sends email notification when there is a connection change between Info HQ Manager and an information system (LIS or HIS-EMR).	Yes
Operator ID Maximum Length	Maximum number of characters, between 1 and 30, allowed for an operator ID.	15
Operator ID Minimum Length	Minimum number of characters, between 1 and 30, required for an operator ID.	1
Password Expiry Interval	Number of days, between 1 and 360, before which Info HQ Manager users are required to change their passwords.	90 days
Patient ID Maximum Length	Maximum number of characters, between 1 and 16, allowed for a patient ID.	15
Patient ID Minimum Length	Minimum number of characters, between 1 and 8, required for a patient ID.	4
Recertify Interval	Number of months, between 0 and 1000, that a renewed certification remains active before expiring.	12 months
Report Count Limit	Number of days between selected start date and end date allowed for list report.	31 days
Show Alert Screen	Whether alerts are displayed in Alerts view instead of the table-like List view.	No
Support ADT	Whether Info HQ Manager supports the receipt of ADT data from an external system.	Yes
Test View Default Date Period	Default date range Info HQ Manager uses to display results.	This Week
Web Session Time Out	Number of minutes before a user account is automatically logged out due to inactivity, between 10 and 1440 minutes (1 day).	30 minutes

Table 4-6: Comments settings

Parameter	Description	Default setting
Predefined Cartridge Lot Comments	Predefined comments that can be added to cartridge lots.	No Default
Predefined Device Comments	Predefined comments that can be added to device records. Users will be able to see these comments in the Devices tab.	Device Maintenance
Predefined Operator Comments	Predefined comments that can be added to operator records. Users will be able to see these comments in the Operators tab.	Add new certificate
Predefined Patient Test Comments	Predefined comments that can be added to test results records. Users will be able to see these comments in the Tests tab.	Repeat
Predefined QC Comments	Predefined comments that can be added to QC records. Users will be able to see these comments in the QC tab.	Wrong controls

Table 4-7: i-STAT/DE settings

Parameter	Description	Default setting
i-STAT/DE Enabled	Whether Info HQ Manager is able to connect to the i-STAT Data Exchange web service.	No
i-STAT/DE Instruments Upload Interval	How often Info HQ Manager will send downloader and i-STAT device data to the i-STAT/DE, between 5 minutes and 1440 minutes (1 day).	15 minutes
i-STAT/DE Operator Upload Interval	How often Info HQ Manager will send operator data to the i-STAT/DE, between 5 minutes and 1440 minutes (1 day).	15 minutes
i-STAT/DE Patient Upload Interval	How often Info HQ Manager will send patient data to the i-STAT/DE, between 3 minutes and 1440 minutes (1 day).	15 minutes
i-STAT/DE Web Service Host Name	IP address of the i-STAT/DE web service.	127.0.0.1

Table 4-8: Organization Info settings

Parameter	Description	Default setting
City	City for the highest level in the location hierarchy (the Healthcare System level).	No default
Fax	Fax number for the highest level in the location hierarchy (the Healthcare System level).	No default
Name	Name used to identify the highest level in the location hierarchy (the Healthcare System level).	Home
Phone	Phone number for the highest level in the location hierarchy (the Healthcare System level).	No default
State	State for the highest level in the location hierarchy (the Healthcare System level).	No default
Street Address	Number and street for the highest level in the location hierarchy (the Healthcare System level).	No default
Web URL	Website for the highest level in the location hierarchy (the Healthcare System level).	No default
Zip Code	Zip code for the highest level in the location hierarchy (the Healthcare System level).	No default

Table 4-9: Advanced settings

Parameter	Description	Default setting
ADT Age	Number of days after the ADT discharging date, between 2 and 30, that ADT data is cleared.	5 days
ADT View Count Limit	Maximum number of Patient ADT records, between 100 and 40,000, returned.	2000
Analyte Result Extract Count Limit	Maximum number of patient results written to Analyte Result Extract report.	5000
Cartridge Lot QC Enabled	When the value of this setting is Yes, the quality of cartridge lots can be managed through the following Info HQ Manager user interface features: **Dashboard:** The Cartridges area is displayed. **Tools > Inventory:** • Cartridge lot QC columns are displayed by default. • When a cartridge type is selected in the Type/Lot column of the list view, the Details and Audit Trail tabs are displayed in the Details area. • When a cartridge lot is selected in the Type/Lot column of the list view, the Details, QC Tracking, QC History, Audit Trail, and Comments tabs are displayed in the Details area. • Report options include: Cartridge Lot QC Compliance (available only when a cartridge lot is selected), and Reagent Cartridge Lot Inventory report is available when either cartridge type or lot is selected. • The Configure QC Criteria icon is available in the toolbar. If the value of this setting is No, the corresponding user interface features are hidden.	Yes
CWi URL	The URL for CWi. CWi is an application for setting up and customizing i-STAT Alinity. See the i-STAT Alinity documentation for detailed information.	http://www.abbottpointofcare.com/

Parameter	Description	Default setting
Data Download Grace Period	Number of hours, between 1 and 200, after which a synchronously connected device should download test data to the Info HQ Manager. If this grace period is exceeded, an alert is generated.	24 hours
Database Backup Path	Path to the folder in which database backup files (.BAK) are placed.	C:\program files\apoc\data manager\db_backup
HIS Allowable Inactivity Period	Number of minutes, between 2 and 3600, allowed since the last ADT download from the HIS. If this period of time is exceeded, an alert is generated and the ADT status indicator on the Dashboard changes to orange.	30 minutes
Info HQ Manager App Logging Path	Path to the folder where the system data log is located. All Info HQ Manager Windows application log files are located here. **Important:** Changing this path could cause the Info HQ Manager application to malfunction.	C:\program files\apoc\data manager\LogFiles
Info HQ Manager Implementation Guide URL	URL where users can access the Info HQ Manager *Implementation Guide*	http://www.abbottpointofcare.com/Customer-Info_Center/User-Documentation.aspx
Info HQ Manager Spec Sheet URL	URL where users can access the Info HQ Manager *Specification Sheet*	http://www.abbottpointofcare.com/Customer-Info_Center/User-Documentation.aspx
Info HQ Manager User's Guide URL	URL where users can access the Info HQ Manager *User Guide*	http://www.abbottpointofcare.com/Customer-Info_Center/User-Documentation.aspx
Info HQ Manager Website Logging Path	Path to the folder where the Info HQ Manager data log is located. This log records every action taken by Info HQ Manager users. **Important:** Do not change this path unless absolutely necessary.	C:\inetpub\wwwroot \DataManager\LogFiles
IS AutoNotification Emails	Additional email addresses to which Info HQ Manager sends an email notification when there is an LIS, HIS/EMR, or i-STAT/DE alert.	No default
i-STAT Alinity Full Download Interval	The number of minutes after which a full list of operators is sent to i-STAT Alinity devices.	7200 minutes (5 days)

Parameter	Description	Default setting
LIS App Timeout	The timeout interval for the LIS application to acknowledge receiving test records.	60 minutes
OCM Enabled	When the value of this setting is Yes, operator competency can be managed through the following Info HQ Manager secondary tabs on the Operators primary tab: • Competency Tracker • Competency Profile • Competency Criteria If the value of this setting is No, the secondary tabs on the Operators primary tab are not displayed.	Yes
PV Data Extract Enabled	Enables extracting patient test results or QC data (only liquid control and cal/ver) into a delimited file for performance verification.	No
Record Display Count Limit	Total number of records, between 100 and 10,000, that Info HQ Manager can return. If the number of records returned exceeds this amount, a notification message is returned and only the number of records equal to the count limit are returned.	2000
Send QC Results to LIS	Enables sending or resending QC results to the LIS.	No

5. Click to save changes, or click to discard changes.
6. Repeat these steps as needed to change other settings.

ADT facility level mapping

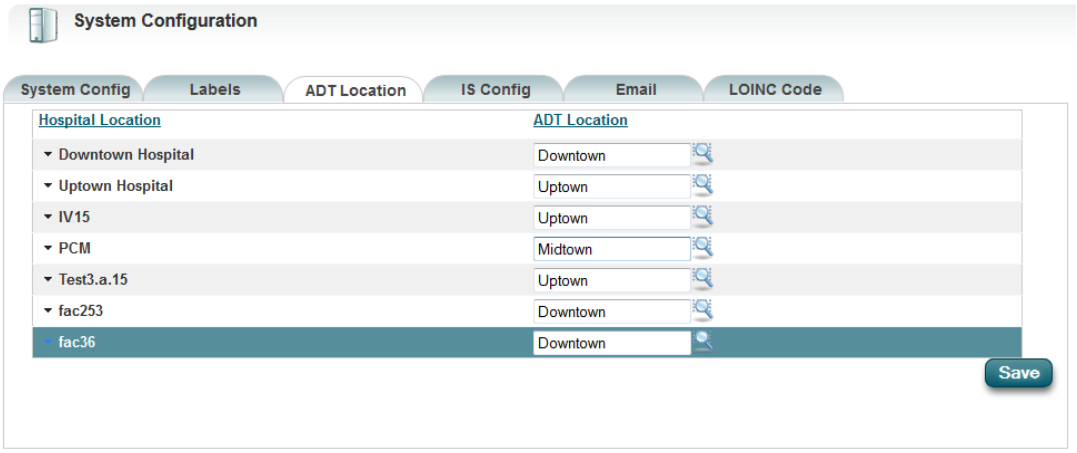
When Info HQ Manager receives ADT data from an HIS/EMR system, the names of the facility locations defined in the ADT data might not match the names used in Info HQ Manager. Use the ADT Locations screen to map Info HQ Manager facility location information to corresponding location names in the HIS/EMR system.

Note: Support from the IT or LIS department might be required to complete these steps.

1. Click the Tools tab.
2. Click the Info HQ Configuration secondary tab.
3. Click the ADT Location tab to display the current ADT location mappings.

   Info HQ Manager locations are listed in the left column and are mapped to the HIS/EMR locations listed on the right.

Figure 4-19: Info HQ Configuration screen: ADT Location tab



4. Locate the Info HQ Manager Facility location to map.
5. Under the ADT Location column, enter the corresponding HIS/EMR location.
6. Click **Save**.

Labels

Labels can be used to mark or identify specific test records within the Info HQ Manager user interface. For example, a test record could be marked for *Follow-up*, *Inquiry*, or *Correction*. A label requires text and a color selection.

Labels are particularly useful in reminding a POCC or authorized user that a patient test record requires further action. Labels are available only for patient test records, not for QC records. While there is no specific limit to the number of labels that can be created, the number of different colors available for labels is 16.

Use Info HQ Manager to create, edit, and delete labels. To create a label, perform the following steps:

1. Click the Tools tab.
2. Click the Info HQ Configuration secondary tab.
3. Click the Labels tab.

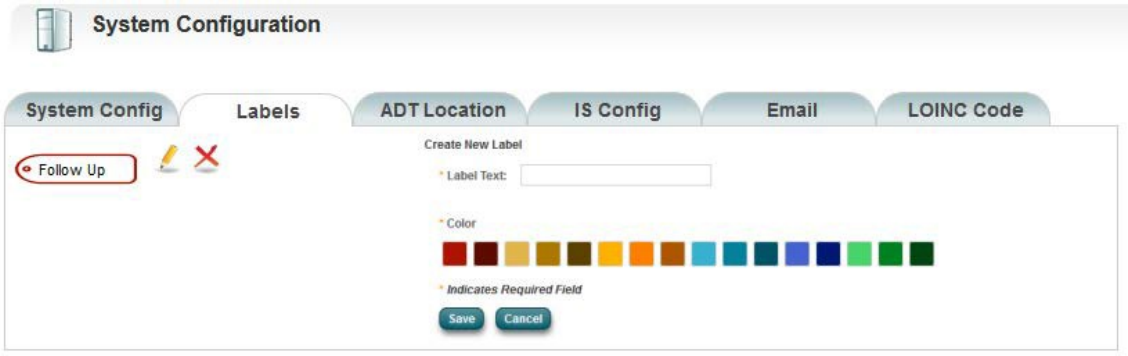
   The **Labels** screen opens.

Figure 4-20: Info HQ Configuration screen: Labels tab

4. Click the **Create New Label** button.

   The **Create New Label** fields display, as shown.

Figure 4-21: Labels tab: Create New Label fields



5. In the **Label Text** field, enter the text to be used for the label, for example *Consult*.
6. In the **Color** field, click a color to use as a border around the label.
7. Click **Save**.
   The label is created and is displayed in the list of labels on the left.

Figure 4-22: Labels tab: New label added

- To edit a label, click to the right of the label in the **Labels** screen. Make the desired changes, then click to save.
- To delete a label, click to the right of the label in the **Labels** screen. Then click **OK** to confirm deletion. Deleting a label will remove it from any test results in the system to which it has been added.

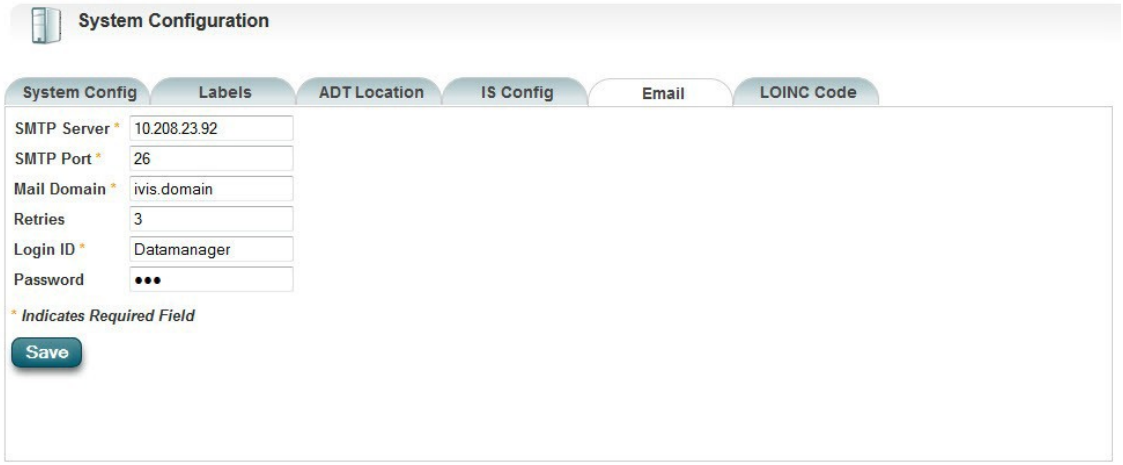
Email configuration settings

Users of the Info HQ Manager system can send emails from within the system to users or operators who have valid email addresses defined within the Info HQ Manager system. Many of the screens in the system offer the ability to send email. The *Info HQ Manager User Guide* describes how to send emails within the system.

Info HQ Manager can also send email when certain events take place, such as an operator certification nearing expiration. Use these steps to configure email for the Info HQ Manager system.

1. Verify with the IT team that an email account exists for Info HQ Manager.
2. Click the Tools tab.
3. Click the Info HQ Configuration secondary tab.
4. Click the Email tab to display the email configuration fields, as shown.

Figure 4-23: Info HQ Configuration screen: Email tab



5. Obtain the following information from the IT team and enter it into the corresponding fields.

Table 4-10: Email configuration settings

Option	Description
SMTP Server	IP address or hostname of the remote SMTP server (required).
SMTP Port	Port on which SMTP is enabled on the remote server (required).
Main Domain	Domain for which the SMTP server is hosting, for example *acme.com* would be the main domain for *test@acme.com* (required).
Retries	Number of repeated attempts to send out email.
Login ID	Login name for the Info HQ Manager email account that will send the emails (required).
Password	Password for the Info HQ Manager email account.

6. Click **Save**.

LOINC codes

The LOINC tab can be used by the POCC or other authorized user to configure Info HQ Manager to recognize Logical Observation Identifiers Names and Codes (LOINC) codes according to the facility's standards.

Support for LOINC codes is enabled as part of the LIS setup. For more information about LIS setup see *Connectivity with an LIS*.

To configure LOINC settings, perform the following steps:

1. Click the Tools tab.
2. Click the Info HQ Configuration secondary tab.
3. Click the LOINC Code tab. The **Info HQ Configuration** screen displays with LOINC Code information.

Figure 4-24: Info HQ Configuration screen: LOINC Code tab

Specimen types are listed according to analyte. The current LOINC code is listed for each specimen.

4. To change a code, click to the right of the setting.
5. In the text boxes, enter a property and change the code.
   Optionally, click the **Default** radio button to indicate that this is the default specimen type for its analyte.
6. Click to save changes.
7. Repeat these steps as needed to change other LOINC settings and set defaults for other analytes.

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5 - Creating the system hierarchy

The system hierarchy is a logical arrangement of the named facilities (such as hospitals), departments, and areas within the healthcare system or organization. Identifying these entities in the Info HQ Manager system is important because the results data that Info HQ Manager collects, manages, and transfers is based on the location that is currently set.

The location names assigned to each Facility, Department, and Area must be unique for the entire healthcare system or organization. For example, it is not possible to assign the name *ER_north* to two different locations, even if they are in different facilities.

The sections that follow provide instructions on how to create each of the four levels of the system hierarchy.

Note: The creation of the fourth level (Area) is optional ─ only the first three levels are required.

Note: The task of creating levels requires Administrator privileges (see *Log in to Info HQ Manager* in section 3, *Info HQ Manager basics*) and the hierarchy map (see *System structure planning* in section 1, Info HQ Manager *system overview and structure planning*).

5.1 Create the Healthcare System level

The first level of the hierarchy is the Healthcare System level. This is typically the organization's name. The Info HQ Manager installation automatically creates this first level and assigns it the name *Home*. Optionally, this name can be changed to reflect the name of the organization.

Follow these steps to change the Healthcare System name:

1. Click the Tools tab.
2. Click the Info HQ Configuration secondary tab.
3. Click the System Config tab.
4. Select **Organization Info** in the **Module Selection** drop-down list.
5. Locate the *Name* parameter.
6. Click to the right of the parameter, then change the setting to reflect the name of the healthcare system.

   Note: The location hierarchy map contains the information for the Healthcare System level.
7. Click .
   The Info HQ Manager screen refreshes. The change takes immediate effect and can be seen in the location breadcrumb.
8. Update the other location parameters for the Healthcare System level (Street Address, City, State, Zip Code, Phone, Fax, Web URL) in the same manner, as needed.

5.2 Create the Facility level

The second level of the location hierarchy is the Facility level. This level identifies the facilities within the organization, for example *Downtown Hospital*.

The Facility locations can be created all at once using the Info HQ Manager upload function or they can be created individually. If the upload function is used, the Department and Area levels are also created as part of the upload. The following sections describe both methods.

Create the location hierarchy using the upload function

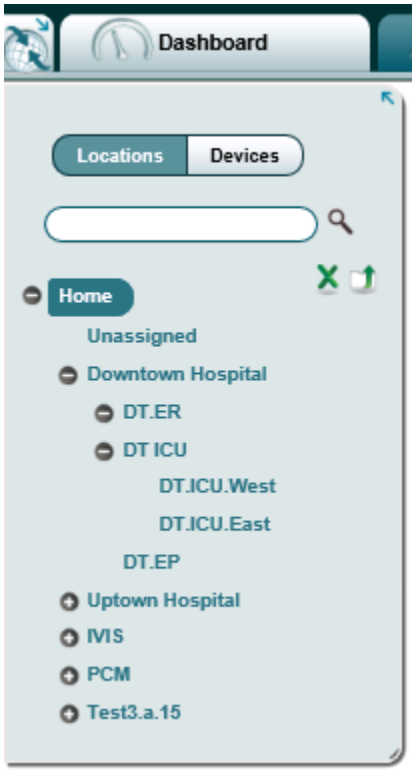
Use the following procedure to create the Facility, Department, and Area location entities at once using the upload feature. These steps include exporting a template file, entering location data into the template, and then uploading the template into Info HQ Manager.

Note: The location hierarchy map is needed for this procedure. For more information, see *Create a location hierarchy map* in section 1, *Info HQ Manager system overview and structure planning*.

1. Click  to display the location tree.

   Note: The  icon is not shown in the Tools screens. To access it, click one of the other primary tabs.

   Figure 5-1: Location tree

2. From the location tree, click  to export the template.
3. In the Open dialog box, choose **Save File** and click **OK**.

   The template file is saved to the current computer's Downloads folder. The file has a .csv file extension.
4. Locate and open the template file in Microsoft® Excel®.
5. Locate and open the location hierarchy map file.
6. Starting at the first row **below** the column headings, copy and paste the contents of the location hierarchy map into the template file **below** the column headings in the template. Note that both the template file and the location hierarchy map file should have the same columns.
   The template should now look similar to the location hierarchy map file, as shown in the following example.

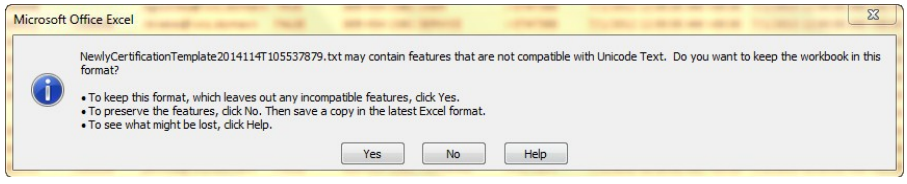
Figure 5-2: Example Locations template

Facility	Department	Location
Downtown Hospital	DT ICU	DT.ICU.West
Downtown Hospital	DT ICU	DT.ICU.East
Downtown Hospital	DT.EP	
Downtown Hospital	DT.ER	
IVIS	IVIS-ER	
PCM	PCM-ER	
Test3.a.15	L21	
Test3.a.15	Test3-ER	
Unassigned		
Uptown Hospital	Radiology	

7. Using the example in Step *6* as a guide, enter each location that makes up the healthcare system. A location can be made up of just a facility, or a facility and a department, or a facility, department, and area. Note the following when entering locations:
   - Each location must be on a separate row
   - Location names cannot include the ampersand (&) or tilde (~) characters.
   - Enter the name to assign to each facility into column A, the name to assign to the department within the facility into column B, and the name to assign the area within the department into column C of the spreadsheet
     - The name assigned to each facility, department, or area should be descriptive but relatively brief, for example:
       - Townsend Med Center or Downtown Hospital for a facility
       - Pediatrics or ER for a department
       - Surgical room 1 or ICU_ward1 for an area within a department
   - Facilities do not have to specify departments and areas if there are none to be created
   - Departments must specify the facility under which they reside but do not have to specify areas if there are none to be created
   - Areas must specify the department and facility under which they reside
8. Save the template file.

   If presented with a dialog box similar to the one shown here, click **Yes**.

Figure 5-3: Microsoft® Excel® compatibility dialog



9. From the location tree, click to upload the locations template.
10. Click **Browse**, navigate to the folder containing the locations template file, then click **Open** in the dialog box.
11. Click **Submit**.

    If the import is successful, the message *Database has been updated* is displayed.

Create the facilities individually

Follow this procedure to manually create the facility locations one at a time.

Note: To complete this procedure, the location hierarchy map is needed. The map contains information required to complete the dialog box for each Facility within the Healthcare System level. For more information, see *Create a location hierarchy map* in section 1, *Info HQ Manager system overview and structure planning*.

Note: In this task, the Healthcare System level of the location breadcrumb is named *Home*. The name might be different if it was changed (see *Create the Healthcare System level*).

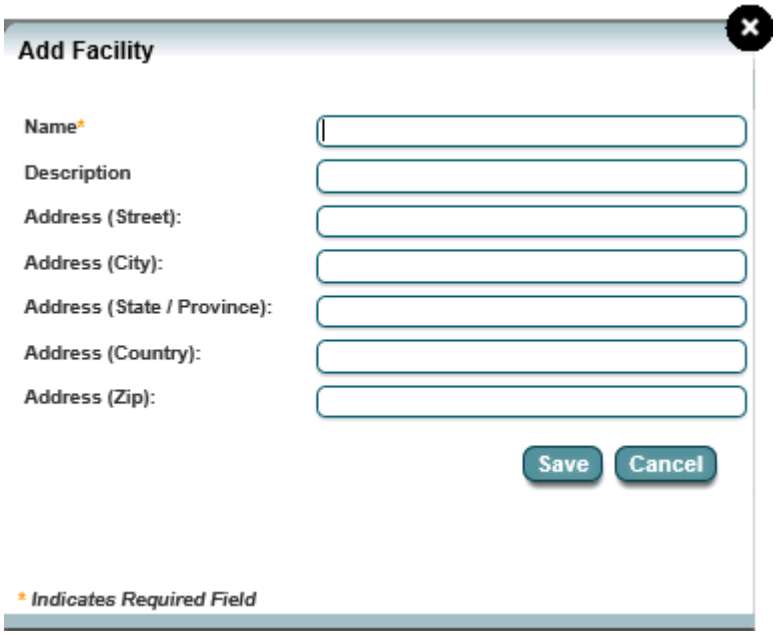
1. Click **Home** in the location breadcrumb at the top of the screen.

Figure 5-4: Location breadcrumb

2. Click .

   The **Add Facility** dialog box opens.

Figure 5-5: Add Facility dialog box



3. Complete the dialog box using the location hierarchy map, then click **Save**.
   The Facility is added to the location breadcrumb drop-down list.
4. Repeat these steps for each Facility within the Healthcare System level.

5.3 Create the Department level

The third level of the location hierarchy is the Department level. This level identifies each Department within each Facility, for example the *Pediatrics* department within the *Townsend Medical Center* facility.

Note: This task can be skipped if the Facility, Department, and Area levels were created using the upload function described in *Create the location hierarchy using the upload function*.

Note: In this task, the Healthcare System level of the location breadcrumb is named *Home*. The name might be different if it was changed (see *Create the Healthcare System level*).

Note: To complete this procedure, the location hierarchy map is needed. The map contains information required to complete the dialog box for each Department within each Facility.

1. Set the current location to the **Facility** in which to add the department.

   a) Click **Home** in the location breadcrumb at the top of the screen.

Figure 5-6: Location breadcrumb

   b) Select the desired Facility from the location drop-down list.

2. Click the Facility in the location breadcrumb, for example *Downtown Hospital*.

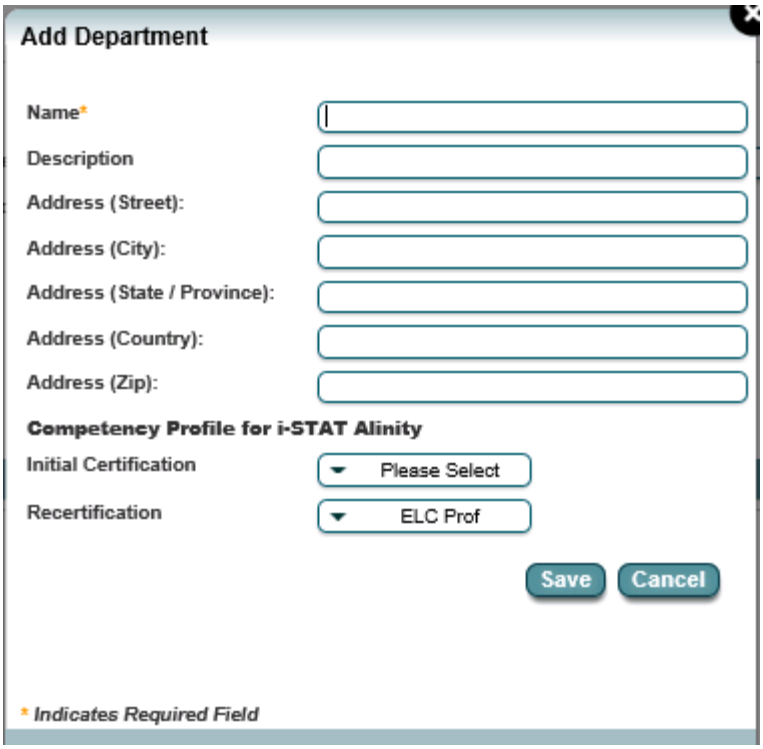
Figure 5-7: Location breadcrumb: List of facilities

3. Click  .

   The **Add Department** dialog box opens.

   Note: The dialog box contains the Competency Profile for i-STAT Alinity section only when Operator Competency Management (OCM) is enabled.

Figure 5-8: Add Department dialog box



4. Complete the dialog box, optionally using the location hierarchy map. Then click **Save**.
   The Department is added to the Facility and is a selectable location within the location breadcrumb drop-down list. If a competency profile is selected in the Initial Certification or Recertification drop-down lists, it is saved and assigned to the new department.
5. Repeat these steps for each Department to add within each Facility.

5.4 Create the Area level

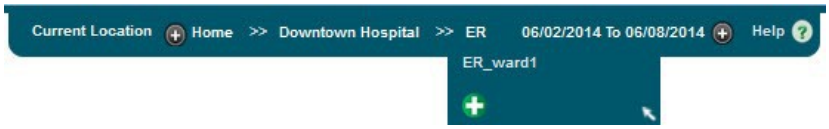
The fourth level of the location hierarchy is the Area level. This level identifies the Areas within each Department, for example *Room 1* within the *Pediatrics* Department.

Note: The creation of the Area level is optional. Additionally, it can be skipped if the Facility, Department, and Area levels were created using the upload function described in *Create the location hierarchy using the upload function*.

Note: In this task, the Healthcare System level of the location breadcrumb is named *Home*. The name might be different if it was changed (see *Create the Healthcare System level*).

1. Set the current location to the **Department** in which to add the Area.
   a) Click **Home** in the location breadcrumb at the top of the screen.
   b) Continue to select the appropriate Facility, then the appropriate Department within the location breadcrumb. The current location is set to the Department in which to add the new Area.
2. Click the Department in the location breadcrumb, for example *ER*.

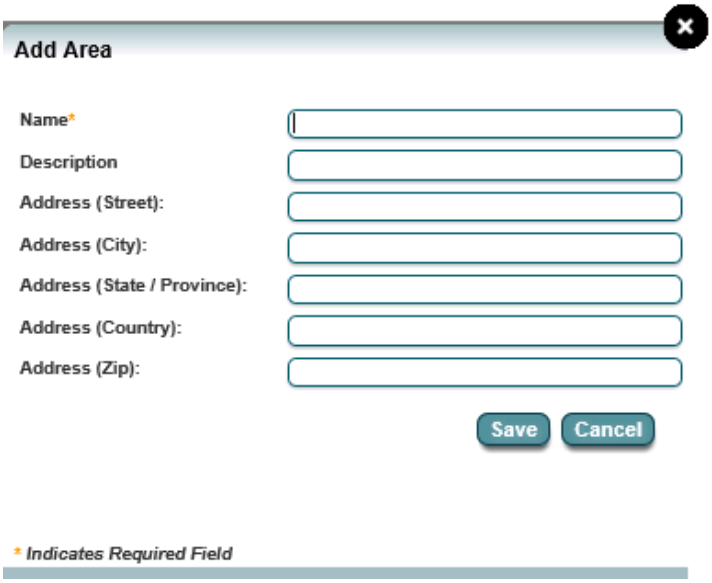
Figure 5-9: Location breadcrumb: List of areas



3. Click .

   The **Add Area** dialog box opens.

Figure 5-10: Add Area dialog box



4. Complete the dialog box using the location hierarchy map, then click **Save**.
   The location hierarchy map should contain the information required to complete the dialog box for each Area (see *Create a location hierarchy map* in section 1, *Info HQ Manager system overview and structure planning*).

5. Click **Save**.
   The Area is added to the Department and is a selectable location within the location breadcrumb drop-down list.
6. Repeat these steps for each Area to add within each Department.

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6 - Populating system components

After initial setup and configuration are complete, and the system hierarchy has been created, the next step in implementing Info HQ Manager is to populate the system components. This section describes how to populate the following system components:

Devices Describes how to add devices that operators will use to perform tests

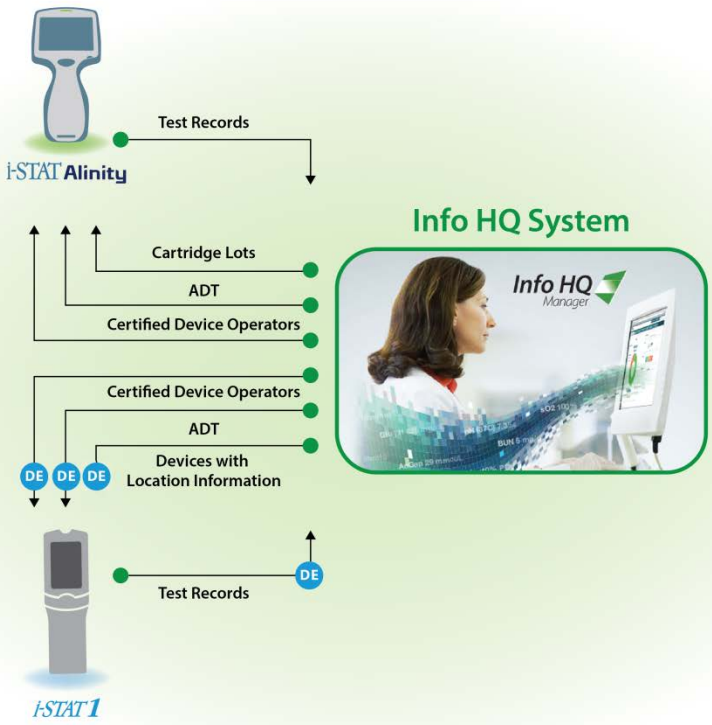
Inventory Describes how to add cartridge inventory to the Info HQ Manager system

6.1 Device setup

Info HQ Manager is designed to both receive test result data from POC devices and push data to them. The devices that interact with Info HQ Manager must be registered within the Info HQ Manager system.

Note: Setup and customization via the CWi software is required for communication between i-STAT Alinity and Info HQ Manager. See the i-STAT Alinity documentation for detailed information.

Figure 6-1: Device and Info HQ Manager flow



These instructions describe how to add devices that the Info HQ Manager system will manage.

There are two methods to manually add devices to Info HQ Manager: using the upload feature to add multiple devices all at once from a Microsoft® Excel® template or individually (that is, one at a time). The following sections describe both methods.

Add a group of devices

When there are multiple devices to add to the Info HQ Manager system, it might be faster and easier to add them all at once using the upload function.

Info HQ Manager includes a devices template, in spreadsheet format (.csv), for automating the addition of multiple devices to the system. The first few steps of this procedure provide instructions on how to download and prepare the template. Here is an example of the template populated with sample device data.

Figure 6-2: Example device template

DeviceModel_Name	Name	SerialID	IPAddress	Location_Name
i-STAT1	i-STAT1(317028)	317028		DT.ER
i-STAT Downloader	Auto Assigned 1		10.10.90.47	DT.PED
i-STAT Alinity	i-STATAlinity(316531)	316531		DT.CARD

Note: This procedure uses the device map described in *Create a device map* in section 1, *Info HQ Manager system overview and structure planning*.

Download the template.

1. Click the Devices tab.
2. Click to export the device template file.
3. From the drop-down list, select a template file, for example DeviceExcelTemplate. Then click **Generate**.
4. In the Open dialog box, choose **Save File** and click **OK**.
   The template file is saved to the current computer's Downloads folder. It has a .csv file extension.

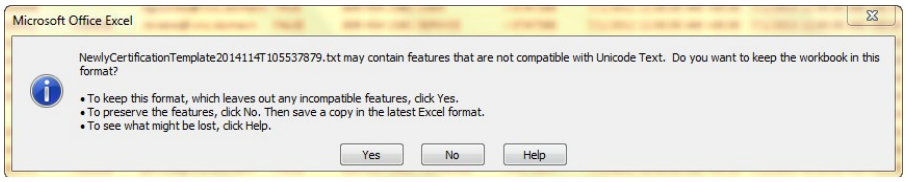
Prepare the template file.

5. Locate and open the template file in Microsoft® Excel® or a similar spreadsheet program.
6. Locate and open the device map file.
   Note that both the template file and the device map file should have the same columns.
7. Starting at the first row **below** the column headings, copy and paste the contents of the device map file into the template file **below** the column headings in the template.

   The template should now look similar to the device map file (see *Figure 6-2: Example device template*).
8. Save the template file.

   If presented with a dialog box similar to the one shown here, click **Yes**.

Figure 6-3: Microsoft® Excel® compatibility dialog



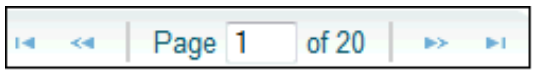
Upload the completed template file to Info HQ Manager, which uses the data in the file to add the specified devices.

9. In the Info HQ Manager **Devices** screen, click to display the **Upload** dialog box.
10. Click **Browse**, navigate to the folder containing the device template file, then click **Open** in the dialog box.
11. Click Submit.
    Depending on how many devices are added, there might be a delay as the devices are added. A completion message inside the **Upload** dialog box indicates the number of devices that were successfully added.

12. Close the Upload dialog box. Verify the results.
13. Click the Devices tab to refresh the **Devices** screen and view the list of devices.

    Note that the new devices might not be listed on the first page of listed devices. If not, use the page widget near the upper-right of the screen, as shown, to scroll through the pages to locate the new device.

Figure 6-4: Widget for selecting pages



Note: i-STAT downloaders are not displayed in the list of devices. To view the downloaders, use the Search filter and the Device Model option to display a list of all i-STAT downloaders.

Add an individual device

Complete this task to add an individual device to Info HQ Manager. For information about uploading a group of devices, see *Add a group of devices*.

Prerequisites:

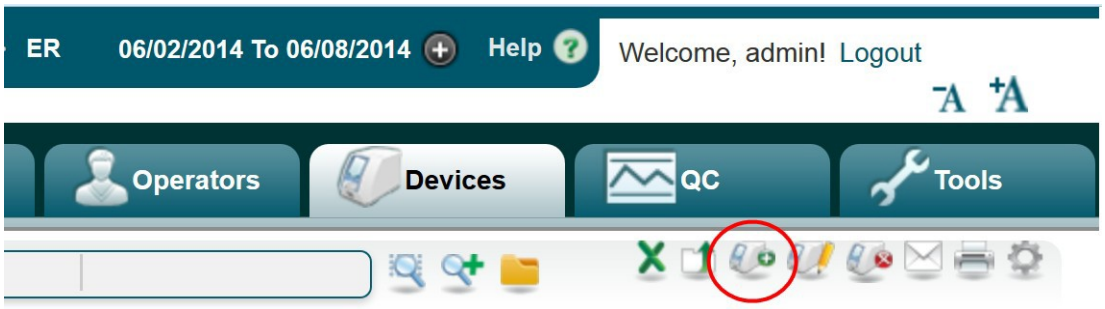
Obtain the following information from the person or team responsible for configuring the device:

- Device model name, for example i-STAT1
- Serial number of the device to distinguish it from other devices of the same type
- For an i-STAT 1 downloader device, obtain the static IP address of the downloader
- The location (department or area) within the healthcare system where the device resides. For example, DT.ER is the ER department in the Downtown Hospital.

Important: For i-STAT 1 or i-STAT 1 downloader devices only, ensure that i-STAT/DE has been configured to communicate with Info HQ Manager. Follow these steps to add a device to the Info HQ Manager system:

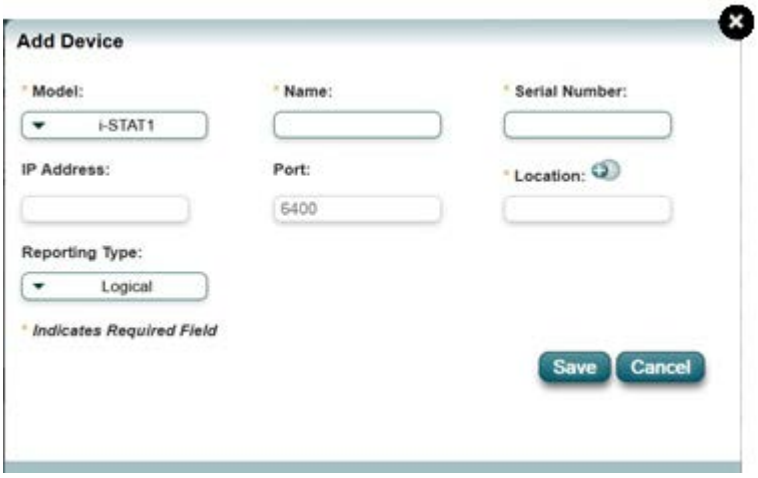
1. Click the Devices tab.
2. Click , near the top-right of the screen.

Figure 6-5: Location of the Add Device icon



The **Add Device** dialog box opens.

Figure 6-6: Add Device dialog box

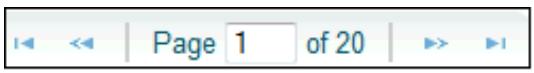


3. Complete the dialog box as follows:
   - In the **Model** drop-down list, select the model of the device to add to the system.
   - In the **Name** field, enter a name to associate with the device. Device names cannot include the ampersand (&) or tilde (~) characters.
   - The **IP Address** field is used only when adding an i-STAT downloader device. Enter the static IP address of the downloader.
   - It is not necessary to complete the **Port** field, which is read-only.
   - The **Reporting Type** field specifies how an i-STAT 1 handheld device will report test results and the location from which it will receive customizations.
     - When Logical (the default) is selected, the handheld device will always report results and receive customizations at the location where it exists in the Info HQ Manager hierarchy.
     - When **Physical** is selected, the handheld device will report test results and receive customizations based on the location of the downloader device from which it transmits data. This means that the **Physical** setting can be used to support a handheld device that roams from one department to another.
   - Use the data gathered in the Prerequisites to complete the **Serial Number** and **Location** fields.

4. Click **Save**.

   The new device is added. Note that the new device might not be listed on the first page of listed devices. If not, use the page widget near the upper-right of the screen, as shown, to scroll through the pages to locate the new device.

Figure 6-7: Widget for selecting pages



Note: i-STAT downloaders are not displayed in the list of devices by default. To view the downloader, use the Search filter and the Device Model option to display a list of all i-STAT downloaders.

Note: Connectivity between Info HQ Manager and an i-STAT device differs depending on the device model. For i-STAT 1, communication occurs through the i-STAT/DE system, while i-STAT Alinity and Info HQ Manager communicate directly with one another.

6.2 Inventory setup

Inventory setup involves adding the initial cartridge inventory to the Info HQ Manager system. Using this feature allows administrators to keep a running total of the specific cartridge quantities and expiration dates. This can help with ordering, disbursement, and reordering of product.

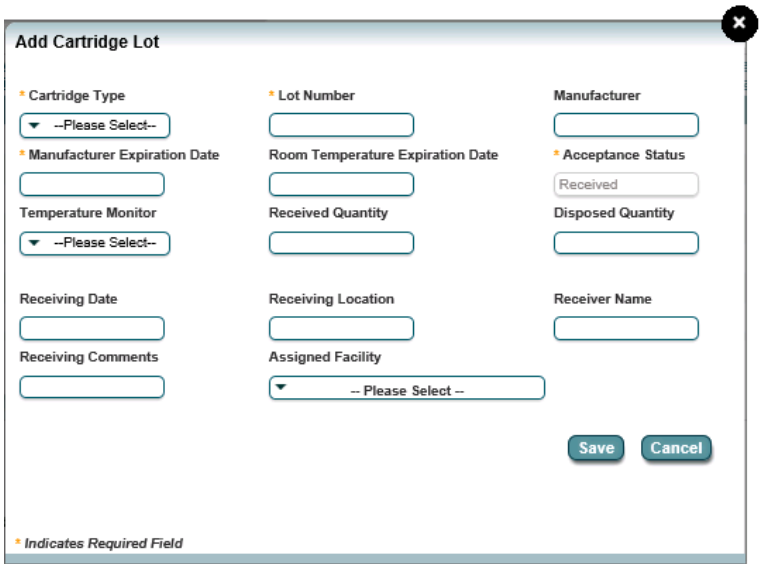
Add a cartridge lot to the inventory

A best practice for adding cartridge lot information to the Info HQ Manager system is to run a successful control test and upload it to automatically register a cartridge lot. Note that the lot number printed on the cartridge box or pouch is just a portion of the full lot number that Info HQ Manager requires.

To add a cartridge lot to the inventory:

1. Click the Tools tab.
2. Click the Inventory secondary tab.
3. Click  .
   The **Add Cartridge Lot** dialog box opens.

Figure 6-8: Add Cartridge Lot dialog box



4. Describe the new cartridge lot by completing the fields as follows.

   Note: Fields marked with an asterisk (*) are required.

   a) Select a cartridge type using the drop-down list.
   b) Enter text to identify the **Lot Number**.
   c) Supply the **Manufacturer Expiration Date** and, optionally, the **Receiving Date** by clicking on each field and using the calendar widget.
   d) If your facility requires verification of the cartridges' temperature upon receipt, select the appropriate value using the **Temperature Monitor** drop-down list: Pass, Fail, or NA.
   e) Complete the remaining fields as needed.
5. Click **Save**.

   The **Add Cartridge Lot** dialog box closes, and the new cartridge lot is added to the main list in the **Inventory** screen.

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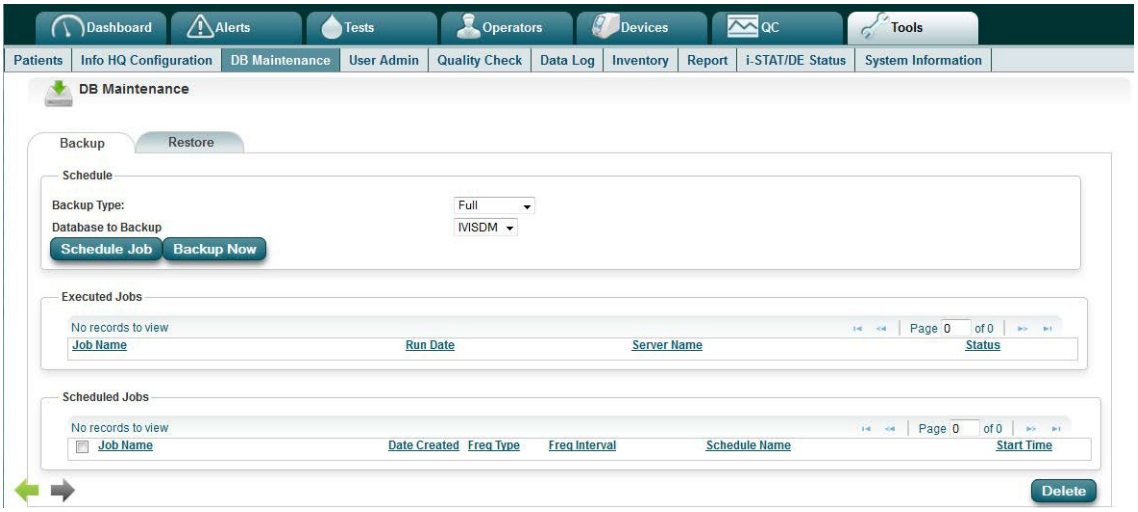
7 - Database maintenance

The Info HQ Manager system is designed to require minimal routine maintenance. Maintenance of the Info HQ Manager database starts from the **DB Maintenance** screen, as shown.

To view the **DB Maintenance** screen:

1. Click the Tools tab.
2. Click the DB Maintenance secondary tab to display the **DB Maintenance** screen.

Figure 7-1: DB Maintenance screen



The following sections describe database maintenance tasks. Perform these tasks, according to your facility's policies and procedures, to ensure data integrity.

7.1 Back up the Info HQ Manager database

Protecting the data stored in the Info HQ Manager database is one of the most important system maintenance tasks. Data stored in Info HQ Manager should be backed up regularly in the unexpected event that data is lost through disk corruption, viruses, operating system failure, or natural disasters.

A backup creates a copy of the data that is in the database at the time the backup runs. There are two ways to back up the Info HQ Manager database: immediately or by scheduling it to run on a specific day and time. Info HQ Manager provides two forms of backups:

- Full — backs up the entire database
- Differential — backs up only new or revised data since the last full backup

Notes:

- Schedule full and differential backups according to your facility's policy. It is recommended that full backups be performed at least once per week with incremental backups at least once per day.
- It is recommended that all backups be performed during off-peak hours.
- A full backup file must exist in the backup folder before the differential option can be used.

By default, Info HQ Manager stores backup files in the folder C:\Program Files\apoc\data manager \db_backup. (This folder location can be changed using the system configuration parameter *Database Backup Path*.)

Info HQ Manager gives the backup file a name that includes the date and time the backup was made, as in this example: BACKUP_IVISDM_FULL_MAY_19_2014_184540.BAK.

Table 7-1: Naming convention breakdown

Component of file name	Meaning
BACKUP_IVISDM	Prefix for all backup jobs.
FULL	String used to distinguish full backups from differential backups. • FULL for full backups • DIFFERENTIAL for differential backups
MAY_19_2014	Date the backup was performed.
184540	Time the backup was performed, in 24-hour format (HHMMSS).
.BAK	File extension.

Do *not* change the file naming convention for backup files.

To conserve disk space and avoid running out of space on the Info HQ Manager computer or network hard drive, it is recommended that full and differential backups be deleted when they are no longer needed.

Normal Info HQ Manager operations and activities can be conducted while a full or differential backup is being performed.

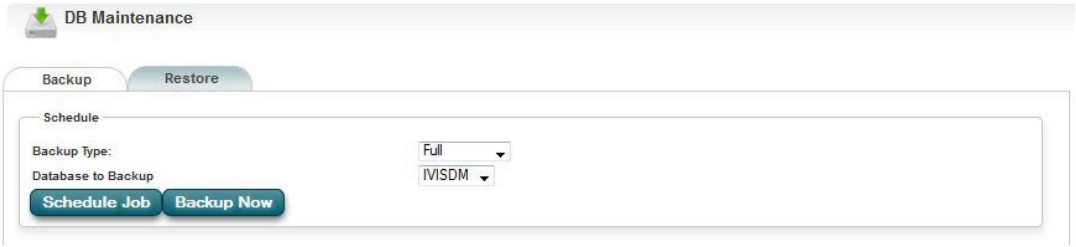
Note: The SQL Server Agent service must be running to use the backup feature.

Perform an immediate backup

Follow these steps to perform an immediate differential or full backup of the Info HQ Manager database.

1. Click the Tools tab.
2. Click the DB Maintenance secondary tab.
   The **DB Maintenance** screen opens. The Backup tab is selected by default.

Figure 7-2: Database Backup screen



3. In the **Backup Type** field, select one of the following:
   - Full — backs up the entire database
   - Differential — backs up only new or revised data since the last backup
4. Leave *IVISDM* in the **Database to Backup** field.
5. Click **Backup Now**.
6. Click **OK** in the confirmation box.

   After a delay of about one minute, to allow time for all database transactions to finish, the backup operation starts.

Schedule a backup

Scheduling a backup is a two-part procedure:

- First, create a backup schedule if an appropriate one does not already exist. A backup schedule identifies the criteria -- day, time, and frequency -- for the backup. Multiple schedules can exist, each having different criteria for a backup.
- After the backup schedule is created, initiate a backup job. Initiating a backup job identifies the schedule to use for the backup and then executes the backup job accordingly.

Normal Info HQ Manager operations and activities can be conducted while a database backup (full or differential) is being performed.

The following sections describe how to create a backup schedule and how to initiate a backup job.

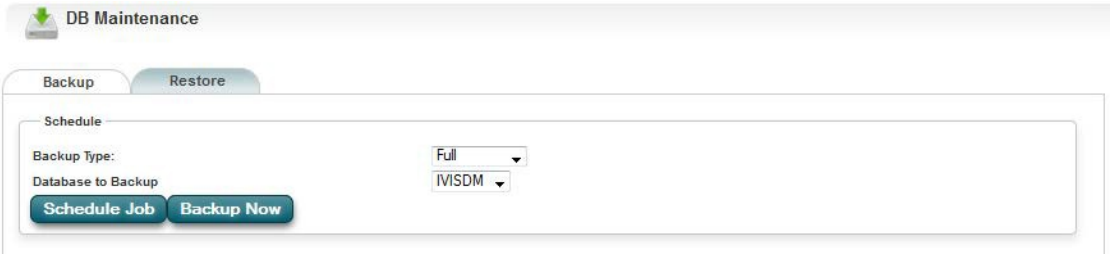
Create a backup schedule

Multiple backup schedules can be created, each having different criteria for a backup. One backup schedule might specify a weekly differential backup on a specific weekday and time, while another differential backup schedule might be created for a monthly backup.

Perform the following steps to create a backup schedule:

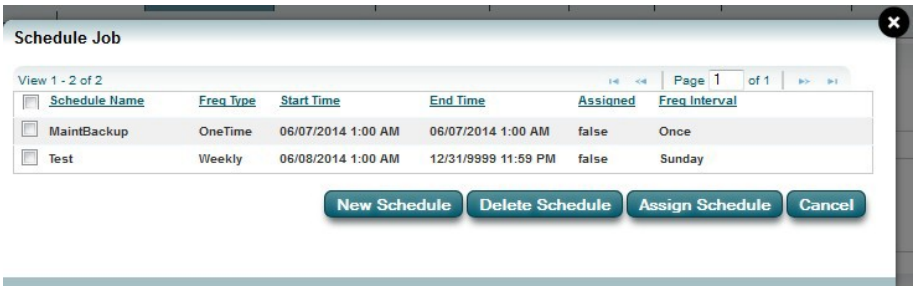
1. Click the Tools tab.
2. Click the DB Maintenance secondary tab.
   The **DB Maintenance** screen opens. The Backup tab is selected by default.

Figure 7-3: Database Backup screen



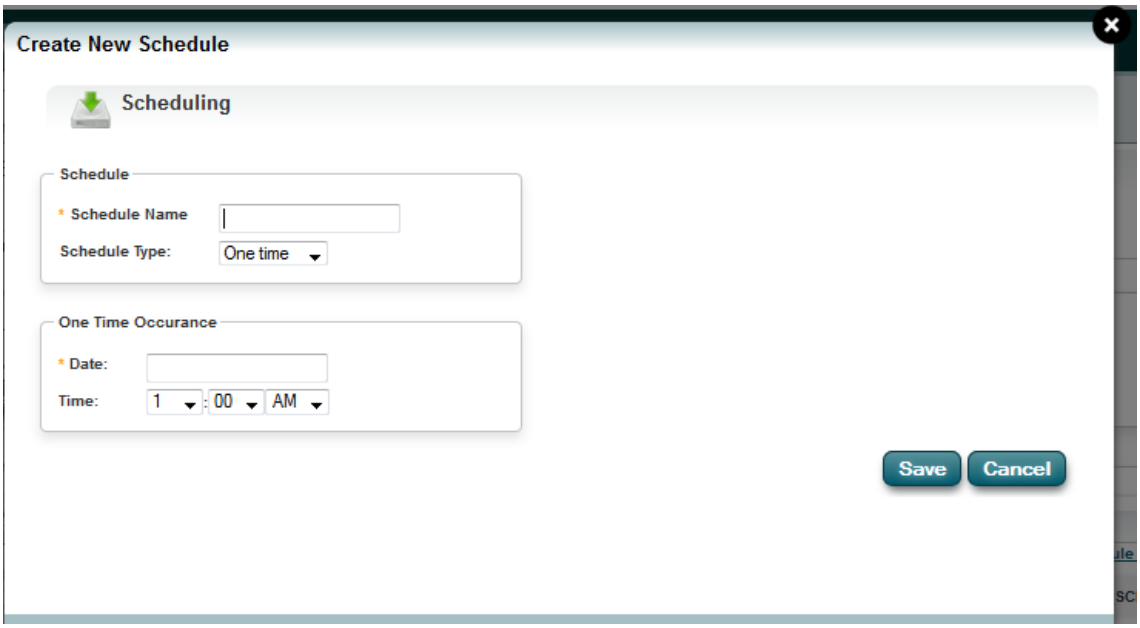
3. In the **Backup Type** field, select one of the following:
   - Full — backs up the entire database
   - Differential — backs up only new or revised data since the last backup
4. Leave *IVISDM* in the **Database to Backup** field.
5. Click **Schedule Job**.
   The **Schedule Job** screen displays the existing backup schedules.

Figure 7-4: Schedule Job screen



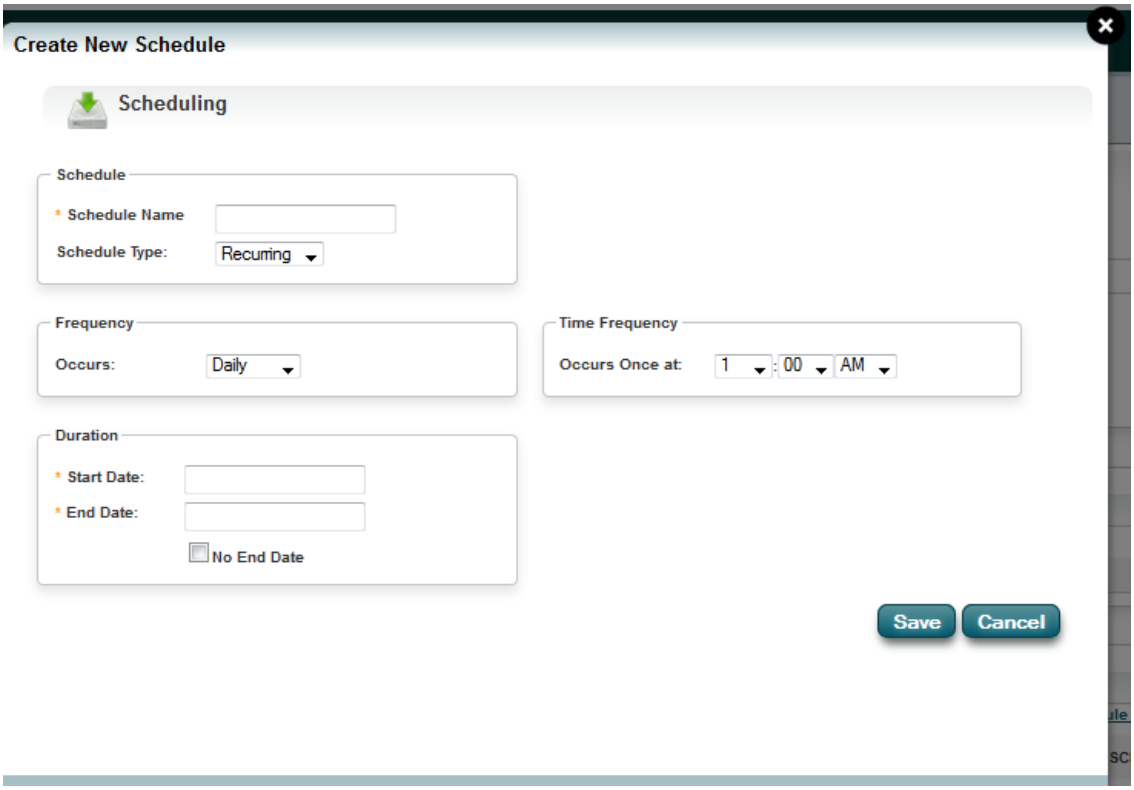
6. Click **New Schedule** to display the **Create New Schedule** dialog box.

Figure 7-5: Create New Schedule dialog box (showing a one-time backup)



7. In the **Schedule Type** field, select one of the following:
   - One time — Performs the backup one time.
   - Recurring — Performs the backup on a recurring basis. When this option is selected, the dialog box updates with different fields, as shown.

Figure 7-6: Create New Schedule dialog box (showing a recurring backup)



8. Complete the remaining fields. If Recurring is selected in step *7*, note the following:
   - Enter information for the Schedule, Frequency, Daily/Weekly/Monthly Frequency, TimeFrequency, and Duration fields.
   - In the Duration field, use the calendar widget to enter the date the schedule is to take effect, followed by the date the schedule is to no longer run. Check **No End Date** if the schedule is to run indefinitely.
9. Click **Save**.
10. Click **OK** in the confirmation box.

A list of scheduled backups displays, with the new backup schedule included. The new schedule will not run until the schedule is initiated. Refer to the *Initiate a backup job* procedure.

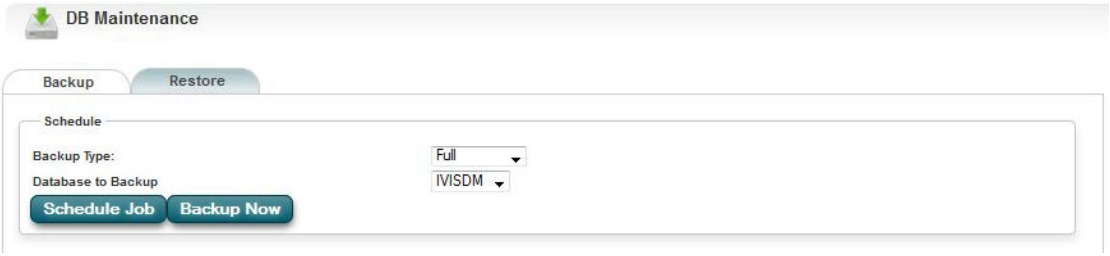
Initiate a backup job

Initiating a backup job activates the schedule that determines the time and frequency with which the job is to run. Follow these steps to initiate a backup job so that it will run according to the selected schedule:

1. Click the Tools tab.
2. Click the DB Maintenance secondary tab.

   The **DB Maintenance** screen opens. The Backup tab is selected by default.

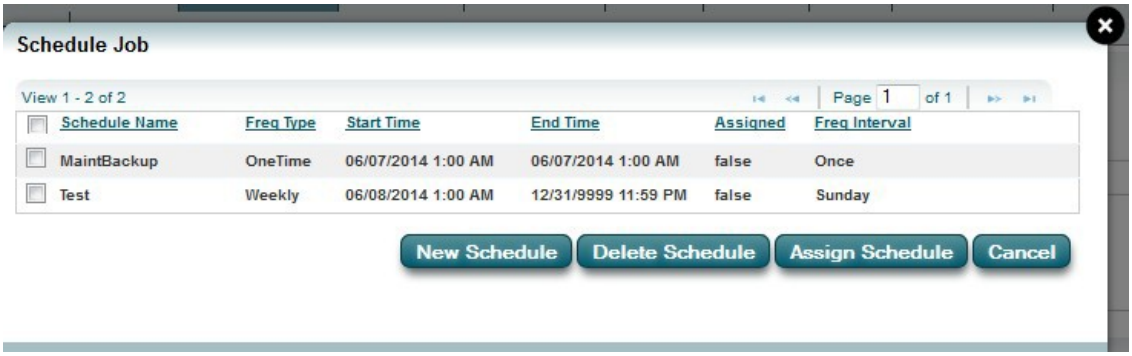
Figure 7-7: Database Backup screen



3. In the **Backup Type** field, select one of the following:
   - Full — backs up the entire database
   - Differential — backs up only new or revised data since the last backup
4. Leave *IVISDM* in the **Database to Backup** field.
5. Click **Schedule Job**.

   The **Schedule Job** screen displays the existing backup schedules.

Figure 7-8: Schedule Job screen



6. Select the schedule to initiate by checking the box next to it.
7. Click **Assign Schedule**.
8. Click **OK** in the confirmation box.

The schedule is initiated and the backup will run based on the time and frequency specified in the schedule.

7.2 Restore the Info HQ Manager database

Restoring an Info HQ Manager database from a backup retrieves data from when the backup was created and makes that data available within the user interface.

Info HQ Manager supports two types of backup restoration: full and differential.

- To perform a full restore, select the full backup file from the drop-down list.
- To perform a differential restore, ensure that a previous full backup resides in the same folder with the differential file backup that is selected. There is no need to restore the full backup separately prior to restoring the differential backup because the application will do this automatically. To perform the restore, select only the differential backup file from the list.

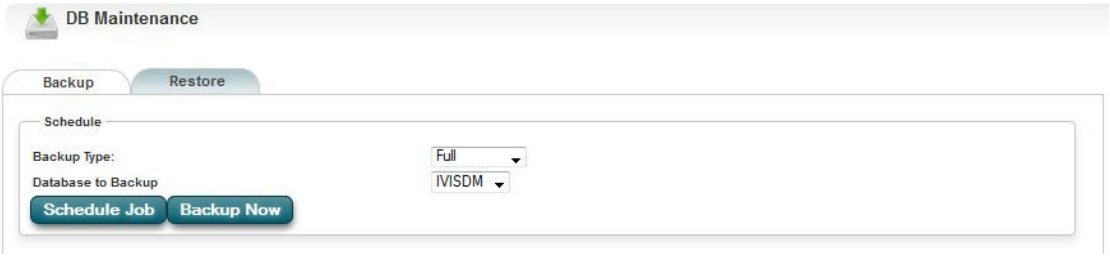
Notes:

- To use the restore feature, the SQL Server Agent service must be running.
- Info HQ Manager cannot be used while the database is being restored. The current user is logged out, and users attempting to log in will receive a message saying that the database is being restored.
- In testing, the restore operation typically takes between 2 and 20 minutes. However, your results might vary depending on several factors — for example, the size of the database, the amount of computer memory, and the disk I/O speed.
- When a restore operation is performed, any data that was added to the database since the last backup will be lost.

Follow these steps to restore the Info HQ Manager database.

1. Click the Tools tab.
2. Click the DB Maintenance secondary tab.
   The **DB Maintenance** screen opens.

Figure 7-9: DB Maintenance screen



3. Click the Restore tab to display the **Restore** screen.

Figure 7-10: Restore screen

4. Select the backup file from the drop-down list.

   Note: For an explanation of the naming conventions for backup files, see *Back up the Info HQ Manager database*.
5. Click **Restore Database**.
   After a delay of about one minute, the restore operation will start.
6. When the **restore** operation has completed, stop and restart the system services associated with Info HQ Manager:
   a) Open the Windows Task Manager
   b) Click the Services tab.
   c) Locate APOC.*DataManager*.*Communicator* in the list, right-click, and then click **Stop Service**.
   d) Right-click again, then click **Start Service**.
   e) Repeat step *6.c* and step *6.d* for the following services:
      - APOC.DataManager.ConnectivityManager
      - APOC.DataManager.ServiceManager
7. Restart Microsoft® Internet Information Services (IIS):
   a) Open the IIS Manager window.
   b) In the navigation pane, click **Default Web Site**.
   c) Under Manage **Web Site**, on the right side of the screen, click **Restart**.
8. Repeat these steps if additional restores, from one or more differential backups, are required.

7.3 Defragment the server disks

Server performance can slow over time when the Info HQ Manager server becomes fragmented. To manage fragmentation, use the server's defragmentation tool to regularly defragment the server disk. The following folders should be excluded during a defragmentation:

- C:\inetpub\wwwroot\Data Manager
- C:\Program Files\APOC\Data Manager

7.4 Run a virus scan

Regular virus scans protect the Info HQ Manager server from viruses — helping to ensure data integrity and prevent the server from passing infections to other systems like the LIS or HIS.

When running a virus scan, exclude the following folders from the scan:

- C:\Program Files\APOC\Data Manager
- C:\inetpub\wwwroot\Data Manager

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8 - Technical support

Abbott Point of Care and its distributors are committed to helping you resolve problems with Abbott Point of Care software, hardware, or testing equipment. For technical assistance within the United States, please call Technical Services at 800-366-8020 toll free. Outside the U.S., please contact your local i-STAT distributor.

Information needed for troubleshooting

Please have the following pertinent information available for review with the technical support representative:

- Description of problem
- When problem first occurred and what has been done so far to resolve the problem
- Serial number of the system or component(s)
- Displayed message and code number
- Frequency of the problem
- Software version
- System and/or environmental conditions (such as OS, VM, or physical server for example)
- Remote access information, if appropriate

Limitation of service

A technical support specialist may be able to assist in restoring the backup file if the file is available and in good condition (that is, not corrupted). In the event that a database backup is not available, additional time and resources will be needed to recover the Info HQ Manager system. Each backup replaces the previous one.

Backup or restore job times depend on the size of the database. Jobs can take just a few minutes but have been known to take as long as 30 minutes or more.

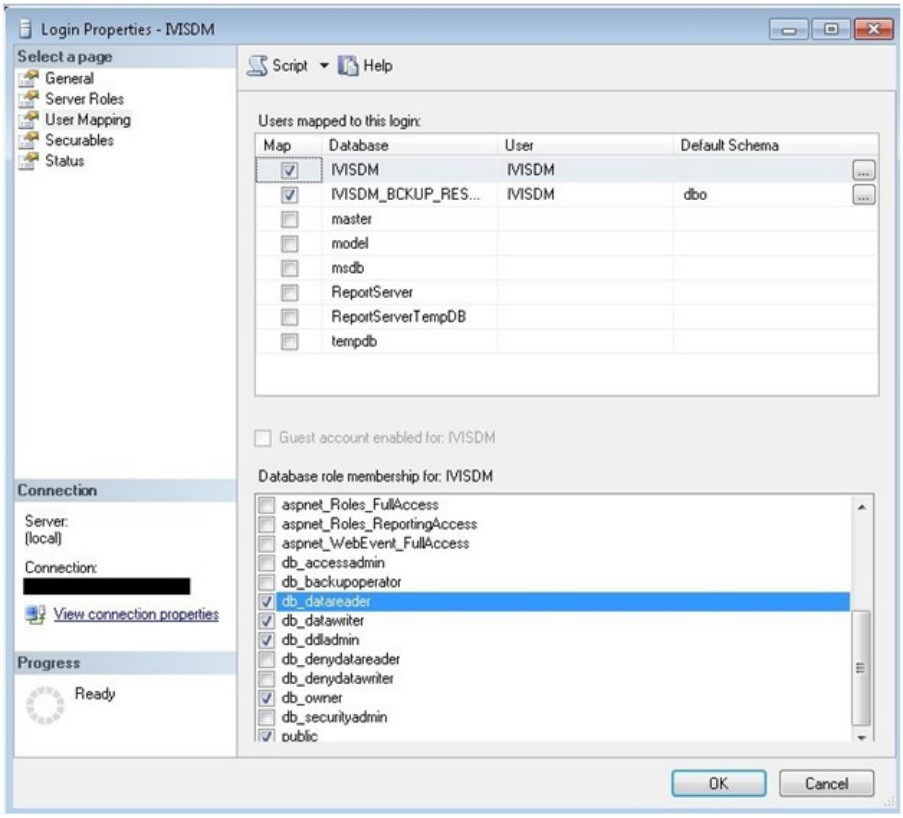
Requirements checklist

When troubleshooting problems, ensure that the system meets all of the following requirements:

- LIS outbound port and HIS listening point
- 20Mbps network bandwidth
- Java Scripting enabled
- Info HQ Manager IP address as proxy exception
- i-STAT/DE IP address as proxy exception
- Firewall exception rule for Info HQ Manager services (multiple servers configuration only)
- User has admin privileges to install Info HQ Manager
- IIS installed
- SQL installed
- .NET installed
- Browser supported for the i-STAT/DE configuration installed. See the *Info HQ Manager Specification* for a list of configurations and supported browsers.

- For database backup and restore, both IVISDM and IVISDM_BACKUP_RESTORE must have the following access levels and permissions:
  - db_datareader
  - dbdatawriter
  - db_ddladmin
  - db_owner
  - executor
  - public

Figure 8-1: Example of permissions (shown for IVISDM)



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