



AXIS-Q™ User Guide



AVIMARK®

IMPROMED®

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Overview

Covetrus® is proud to offer AXIS-Q! AXIS-Q allows customers the freedom to choose the in-house/point of care diagnostic equipment that best fits their practice while enabling an integration that provides an efficient workflow and captures missed charges. By automating the workflow of requesting diagnostic tests and returning the results to the Electronic Medical Record, AXIS-Q:

- Reduces the unnecessary human interaction
- Eliminates steps in the process
- Reduces errors
- Reduces missed charges.

There are multiple components required to utilize AXIS-Q software. Each of these components are included with the installation package and can be installed in your practice. If you have also received hardware with AXIS-Q, this portion may not be necessary. Required components are:

- Microsoft .NET Framework 4.7.2
- Microsoft SQL Express 2022
- MSMQ
- AXIS Service
- AXIS-Q Client
- Universal Lab Reader (AXIS ULR)
- (If applicable) Heska Data Capture Utility v3.0.6 or higher
- (If applicable) Static IP Addresses

Each of these components may be installed on different computers within your practice.

Program Pre-Requisites

Workstations

- Microsoft SQL Express version 2022.
- For hardware, refer to the [Hardware Specifications](#) for your practice management system.
- All Windows® versions must be Professional/Business or Ultimate.

Integrated Analyzers

AXIS-Q currently works with the following lab analyzers:

- Heska Element DC²
- Heska Element HT5²
- Heska Element i²
- Heska Element POC³
- Heska DRI-CHEM 4000²
- Heska DRI-CHEM 7000²
- iSTAT Alinity v
- scil ABC
- scil abc PLUS
- scil Samsung PT10V¹
- scil Solo
- scil SpotChem EL
- scil SpotChem EZ
- VetScan FUSE³
- VetScan Classic
- VetScan VS2
- VetScan VSPro
- VetScan HMII (HM2)
- VetScan HM5 / HM5c
- VetScan HMT
- VetScan Vue
- VetScan SA
- VetScan UA
- VetScan Imagyst

¹ Provides a full bi-directional communication with the Data Capture Utility.

² Requires the Data Capture Utility.

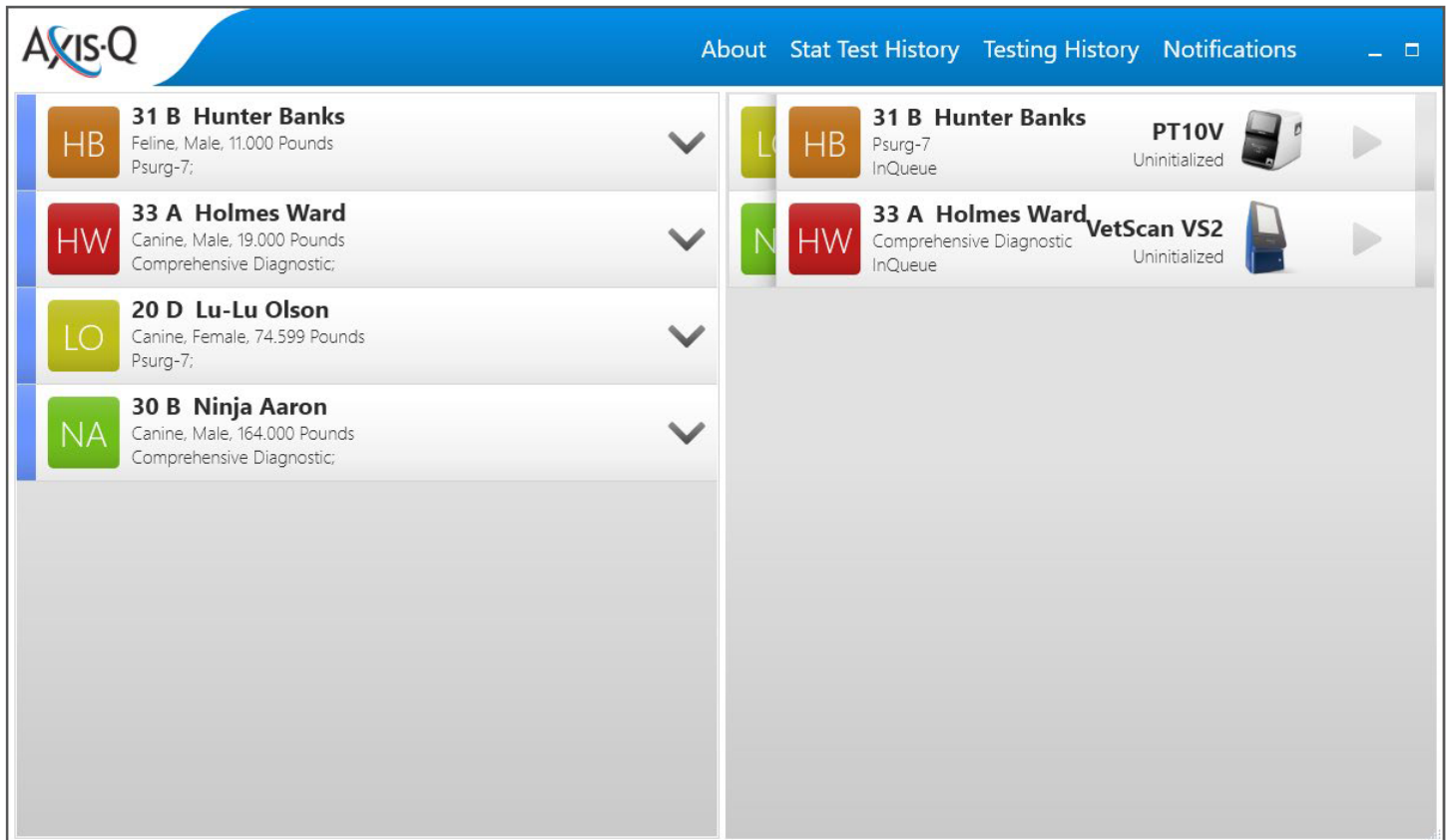
³ Provides a full bi-directional communication.

Thin Client (Remote/Hosted) Environments

AXIS-Q is supported in thin client environments with TCP/IP devices. Any devices where USB or serial connections to a physical computer are required are NOT supported.

Using AXIS-Q

This section covers how AXIS-Q, itself, functions regardless of your practice management software integration.



About

Displays copyright and version details for AXIS-Q.

Stat Test History

Shows a listing of all Stat Tests along with the analyzer, test, values, status, and completed date/time.

Testing History

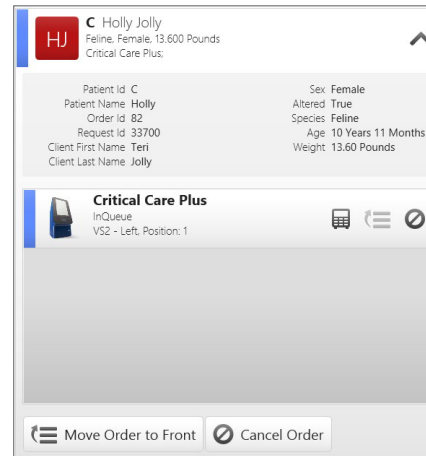
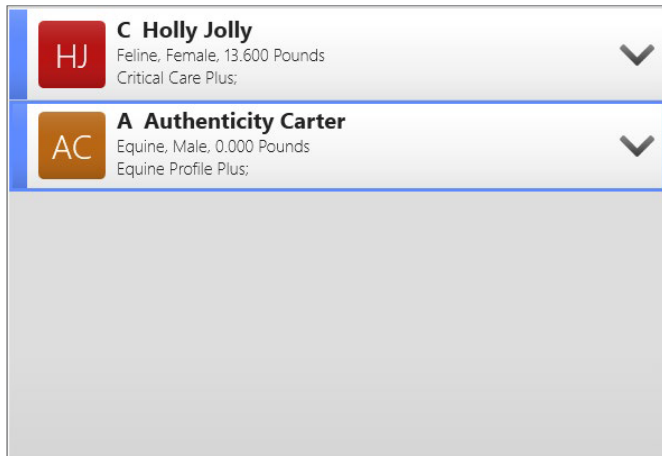
Displays a listing of all standard tests in descending order of received date/time along with patient information, analyzer, test, values, status, received date/time, and completed date/time.

Notifications

Displays any warnings or messages about communication between all of the analyzers and components of AXIS-Q.

Patient Worklist

The left side of AXIS-Q is the Patient Worklist. This side allows you to change the order, view patient information, and cancel the test or order.



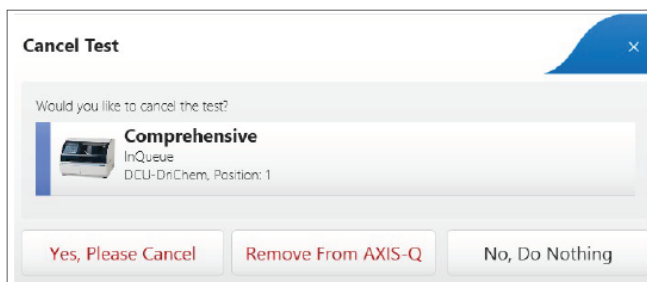
The **Change Analyzer** button allows tests to be moved to another analyzer.



The **Move Order to Front** button pushes the selected test to the front of the queue. If Auto Play is enabled, pausing the device (clicking Stop) activates this button.



The Cancel button prompts for cancel options:

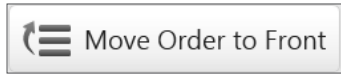


Yes, Please Cancel - Sends a message to your practice management system to cancel the request. This removes the product (and inventory) from the invoice and removes the lab request.

Remove From AXIS-Q - Removes the test from AXIS-Q.

No, Do Nothing - Takes you back to AXIS-Q and leaves the test in the worklist.

AXIS-Q USER GUIDE



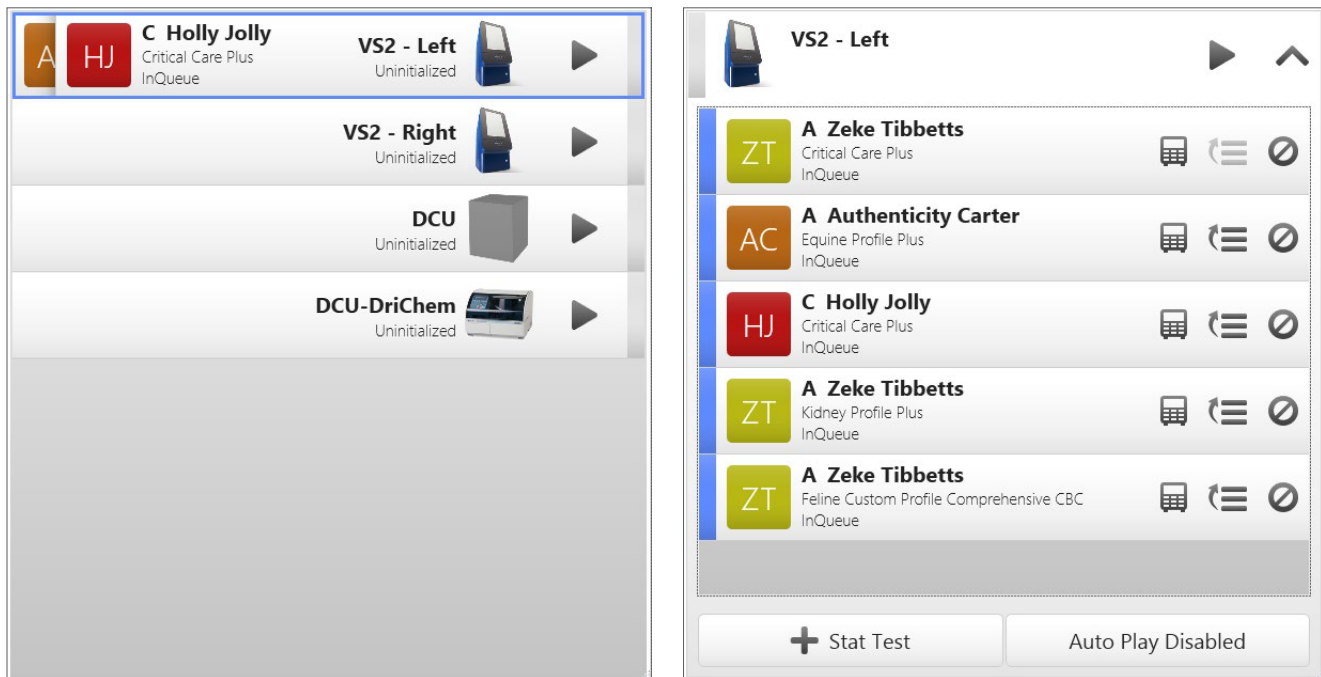
The **Move Order to Front** button pushes the selected order (and tests) to the front of the queue. If Auto Play is enabled, pausing the device (clicking Stop) activates this button.



The **Cancel Order** button cancels the entire order and all tests. The Cancel options are universal between canceling tests or orders.

Analyzer Worklist

The right side of AXIS-Q is the Analyzer Worklist. This side allows you to change the order for the analyzers, use Auto Play, enter Stat Tests, and cancel the test or order.



The **Play** (or Run) button activates AXIS-Q to receive results for the patient in the queue. This can be left on when Auto Play is Enabled.



The **Stop** (or Pause) button allows changes to the list order.



Auto Play Enabled puts AXIS-Q into a permanent ready to receive results state.



Auto Play Disabled releases AXIS-Q from its permanent ready to receive results state.



The **Change Analyzer** button allows tests to be moved to another analyzer.



The **Move Order to Front** button pushes the selected patient to the front of the queue. If Auto Play is enabled, pausing the device (clicking Stop) activates this button.



The **Cancel** button cancels the test. The Cancel options are universal between canceling tests or orders.



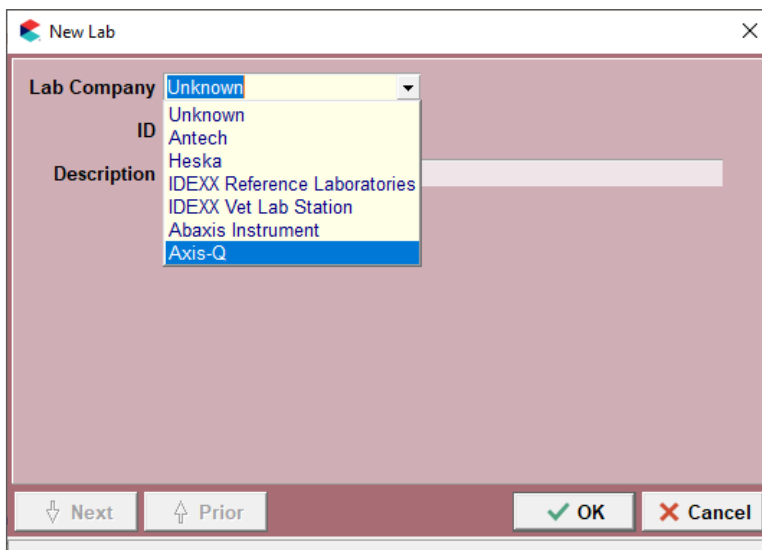
Allows for a **Stat Test** to be added into the queue for the analyzer.

Using AXIS-Q with Avimark

Linking Treatments to AXIS-Q

Before using AXIS-Q with Avimark, begin by linking treatments to AXIS-Q.

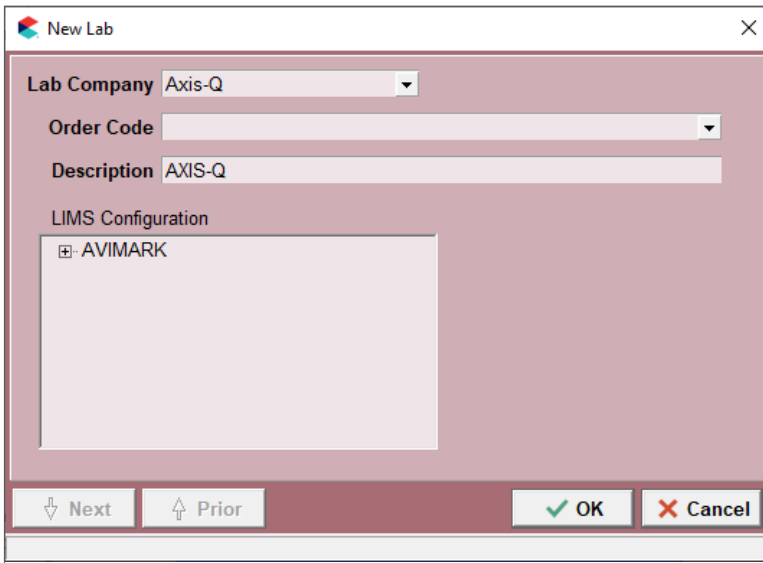
1. From the CID, click on **Work with > Treatment List**.
2. On the treatment to link to AXIS-Q, **right-click > Change**.
3. Click on **Laboratory** tab > **Labs** sub-tab.
4. **Right-click > New**. The New Lab dialog box opens.



5. From the **Lab Company** drop-down list, select **AXIS-Q**.

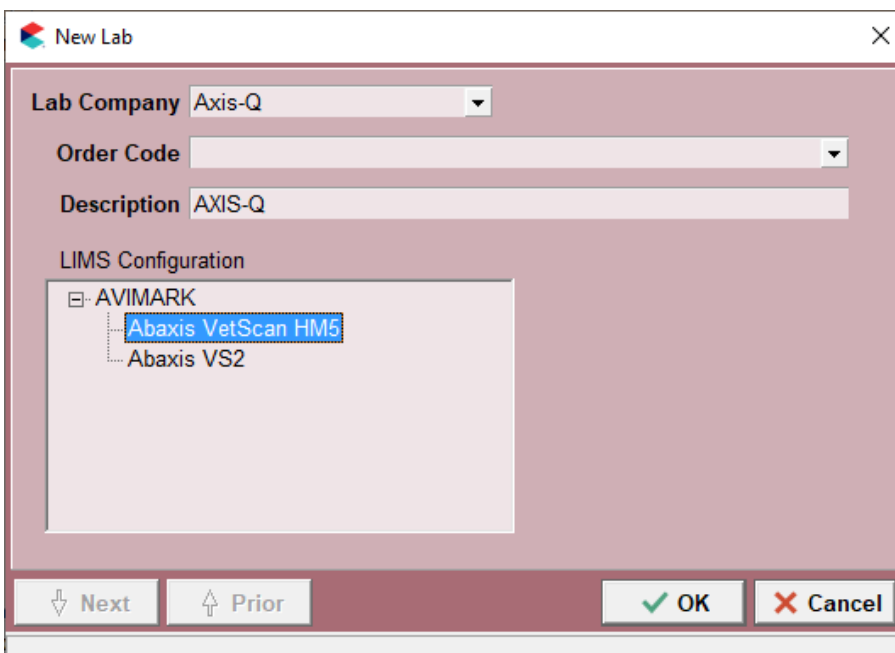
AXIS-Q USER GUIDE

6. Click on the plus sign (+) in the LIMS Configuration to expand Avimark.

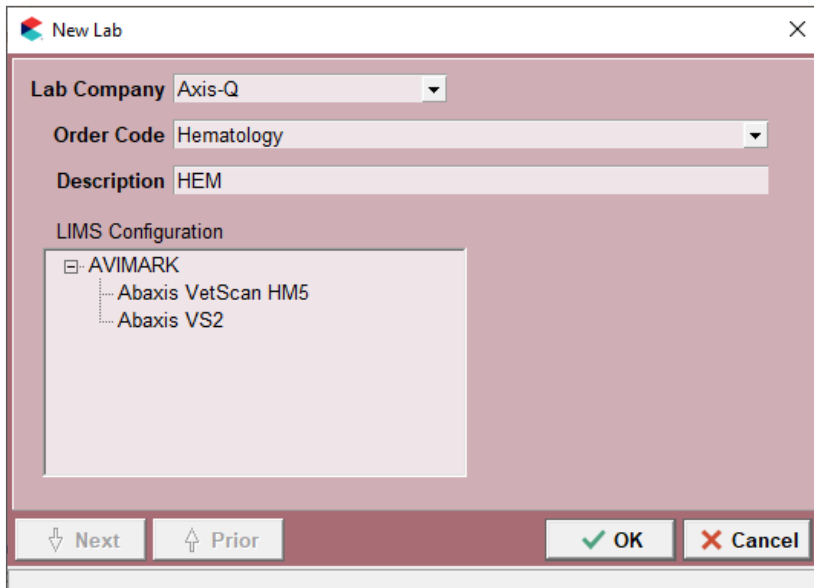


7. Select the analyzer.

Example: The VetScan® HM5.



8. From the Order Code ID, select **Hematology** then click **OK**.



New Lab

Lab Company Axis-Q

Order Code Hematology

Description HEM

LIMS Configuration

- AVIMARK
 - Abaxis VetScan HM5
 - Abaxis VS2

Next Prior OK Cancel

To link a comprehensive or different test for the Vetscan VS2, repeat the steps above until you select the machine under the LIMS Configuration. You will click the + next to Avimark, and select Abaxis VS2.

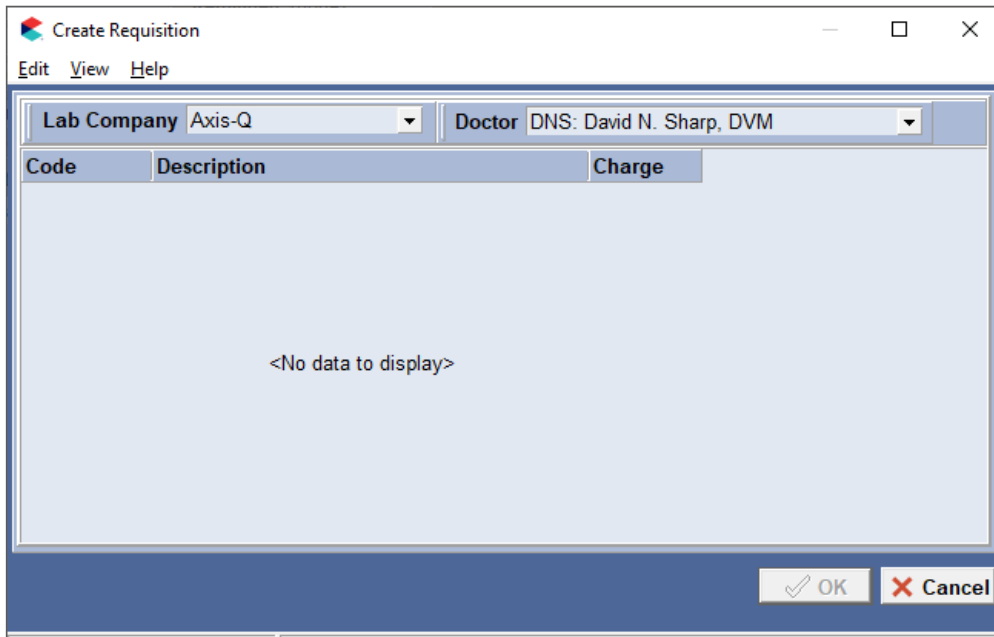
Create an AXIS-Q Requisition

A requisition can be created from the **right-click > Requisition** menu in Medical History or by creating a new medical history entry.

From the Requisition Menu

From the Avimark CID:

1. Select the client and patient for the request.
2. In the Medical History area, **right-click > Requisitions > Create New Requisition**.
3. Select **AXIS-Q** as the **Lab Company**.
4. Select the desired test.
5. Select the appropriate doctor.

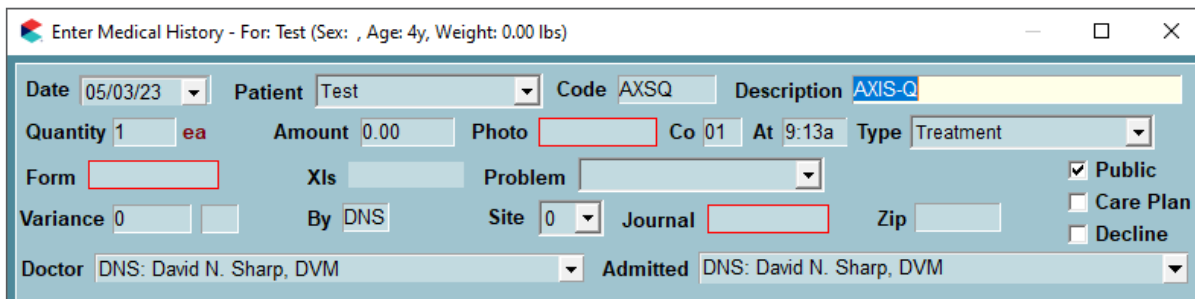


6. Click **OK** to generate the requisition and place it in Medical History.

The request has now been sent to AXIS-Q, where a staff member can select the tests to be performed.

From a New Medical History Entry

A requisition can also be created by doing a **right-click > New** in Medical History.



A prompt will display asking if the user would like to create a requisition for the lab. Click **Yes** on the prompt. The requisition will appear in Medical History and AXIS-Q.

Requisition in Medical History

avimark Client Information Display - David N. Sharp, DVM

Clients Work with Services Applications View Utilities Help

CLIENT: Test No. 14

Last Test First Title Mr./Mrs. Added 08/03/18
 Address Phone 573 Codes A Fax no.
 Work Class 01 County Wayne
 City Piedmont State MO Spouse Balance 0.00
 Zip Code 63957 E-mail Cell Folder 0 Co. 01
 Referral Spouse Cell

Attachments
 Accounting
 More Stuff
 Notes
 Payment Accounts
 Referrals

PATIENT: Test No. 1418

Name Test Codes Sex Added 08-03-18 7406 Rabies Vaccine 08-03-18
 Birthday 08-03-18 Age 4y Rabies Reminded (none) 404 Canine DA2PP 6-8 Weeks 09-14-18
 Breed (unspecified) Plan Deceased (none) 436 Rabies Vaccination, Puppy 10-26-18
 Color (unspecified) Weight 0.00 in lbs Microchip
 Species Canine Allergy (none) Relation (none)

Reminders Follow-ups Estimate Ownership Schedule

Medical History

Date	Time	Dr.	Type	Code	Description	Qty	Amount	By	Photo	Public?
05-03-23	9:13a	DNS	S	AXSQ	AXIS-Q	1	0.00	DNS		Yes
04-28-23	8:11a	DNS	T	LABTEST	Lab Test	1	0.00	DNS		Yes

Attachments
 Dental Chart
 Form
 Inventory Used
 Medical Condition
 More Stuff
 Notes
 Photograph
 Attachments
 Alert
 Vaccination
 Tests
 Radiographs
 Hoof Chart
 GVL Coggins

Chronological Diagnoses Diet Injections Lab Rx Reminder Surgery Vaccs X-Ray SOAP Photos Notes Public Problems Attachments Dental

Test

Requisition in AXIS-Q.



The screenshot shows the AXIS-Q interface. At the top, there is a navigation bar with the following links: About, Stat Test History, Testing History, and Notifications. Below the navigation bar, there is a requisition card for a dog named 47948 Tester Buttercup Veterinary Ho. The card displays the following information:

- Patient Information:** 47948 Tester Buttercup Veterinary Ho: Canine, Male, 0.000 lbs, HEM;CDP;
- Test Results:** HEM, CDP, both InQueue and Uninitialized.
- Machine Information:** VetScan HM5c and VetScan VS2.

Once the blood is run in the machine, it will leave the screen and appear under the Test box under Attachments in Medical History.

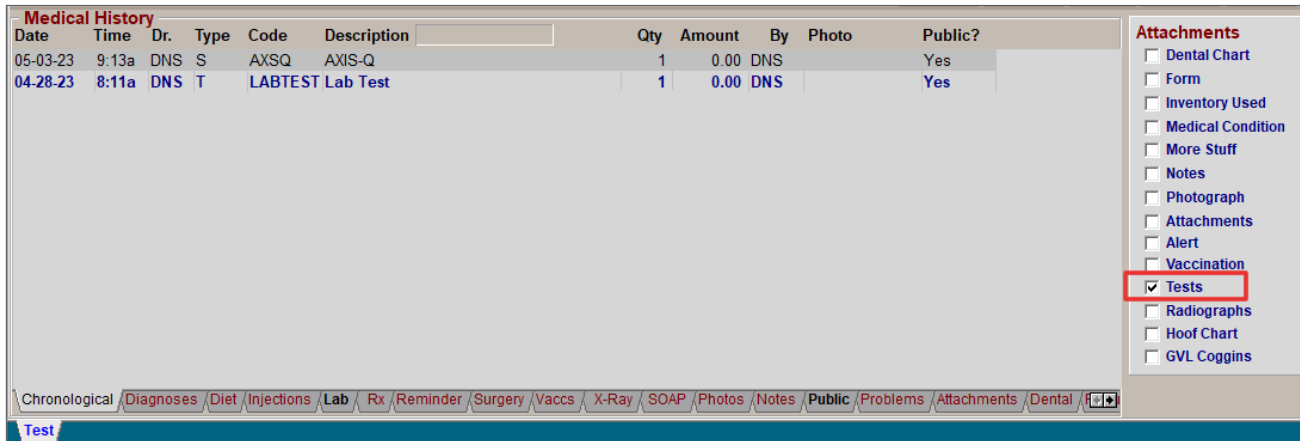
Activating the Request

From the Windows Desktop:

1. Double-click  to open AXIS-Q.
Requests are processed in the order they are received, but can be reordered when necessary.
2. Click the Play () button to have AXIS-Q wait for the results to finish.

Viewing AXIS-Q Test Results

Test results from AXIS-Q are downloaded automatically to the Avimark software and saved to patient records. To view results, select the **Tests** Attachment checkbox in Medical History for the AXIS-Q line entry.



The screenshot shows the 'Medical History' window with a table of test results and an 'Attachments' sidebar. The table has columns for Date, Time, Dr., Type, Code, Description, Qty, Amount, By, Photo, and Public?. The 'Attachments' sidebar lists various categories with checkboxes, and the 'Tests' checkbox is highlighted with a red box.

Date	Time	Dr.	Type	Code	Description	Qty	Amount	By	Photo	Public?
05-03-23	9:13a	DNS	S	AXSQ	AXIS-Q	1	0.00	DNS		Yes
04-28-23	8:11a	DNS	T	LABTEST	Lab Test	1	0.00	DNS		Yes

Attachments

- Dental Chart
- Form
- Inventory Used
- Medical Condition
- More Stuff
- Notes
- Photograph
- Attachments
- Alert
- Vaccination
- Tests
- Radiographs
- Hoof Chart
- GVL Coggins

Chronological / Diagnoses / Diet / Injections / Lab / Rx / Reminder / Surgery / Vaccs / X-Ray / SOAP / Photos / Notes / Public / Problems / Attachments / Dental / [v]

Test

Using AXIS-Q with Impromed

The AXIS-Q integration lets an Impromed operator generate test requisitions using Lab Requests. Once the request is generated, the requisition is sent to AXIS-Q for the specimens to be processed using your analyzers, while invoicing the client for the tests performed.



The steps in this guide are based on Impromed version 23.10.0.

The Impromed Lab Requests feature provides a means to request (order) lab work for a patient. Lab requests then reside in a queue in which the status of each request is reported back. The requests list can be filtered by requesting provider (Impromed employee), date, and/or the status of the requested lab work.


Additionally, the Lab Requests feature offers these enhancements:

- Lab results, from select lab equipment providers, can be automatically imported into a patient's record.
- Imported lab results can be viewed from the Lab Requests tab in the Lab Imports module.
- A fully bi-directional communication between AXIS-Q and ["Integrated Analyzers"](#).

Ordering In-house Lab Tests

Creating a requisition for individual test orders



From the Desktop:

3. Click  > **Modules** > **Lab Integrations**.
4. Select the client and patient for the request.
5. Click the **New** button then choose **New Request (Travel Sheet)** from the drop-down menu.
6. Select **AXIS-Q** from the **Selected Sheet**.
7. Select an Employee as the **Provider**.
8. If desired, select Business, Destination, and SuperMode.
9. Select the tests to perform and invoice.

Activating the Request

Below are the basic steps to activate a request within AXIS-Q. For additional options, please review [“Using AXIS-Q” on page 6](#).


From the Windows Desktop:

1. Click **Start** > **AXIS-Q** > **AXIS-Q** or double-click .
2. Requests are processed in the order they are received, but can be reordered when necessary.
3. Click the **Play**  button to have AXIS-Q wait for the results to finish.
4. At this point, the sample can be processed on your analyzer.

Monitoring Test Request Status

If the import is successful, the status of the result changes to Imported.

A result status of Imported means the result has been processed, the patient's medical record has been updated with the results, and the results are ready to be reviewed.

To review an imported result, double-click the request line or highlight the request and click **Show Results**. Clicking the Show Request button will also display the Lab Requests Sheet for the selected request. If a test is cancelled from AXIS-Q, the request will be updated and displays  next to the product.

Viewing AXIS-Q Test Results

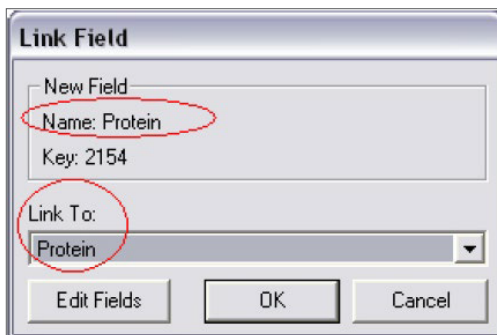
Test results from AXIS-Q are downloaded automatically to your software and saved to patient records. Test results, where an electronic request could not be used, are automatically downloaded to Impromed as well, however, there is action required to view the results.

Linking fields for results to import

While importing a lab, a screen may appear asking to Link Fields. This screen displays when the type of lab being imported does not match any fields in Impromed for that specific type of result.

Example: Protein from AXIS-Q must match to the Protein field in Impromed for the result to display properly. When the Link Fields Screen displays, the Name Field should match the Link To field.

This screen may display multiple times for the same lab; however, once a field has been linked, it does not need to be linked again.

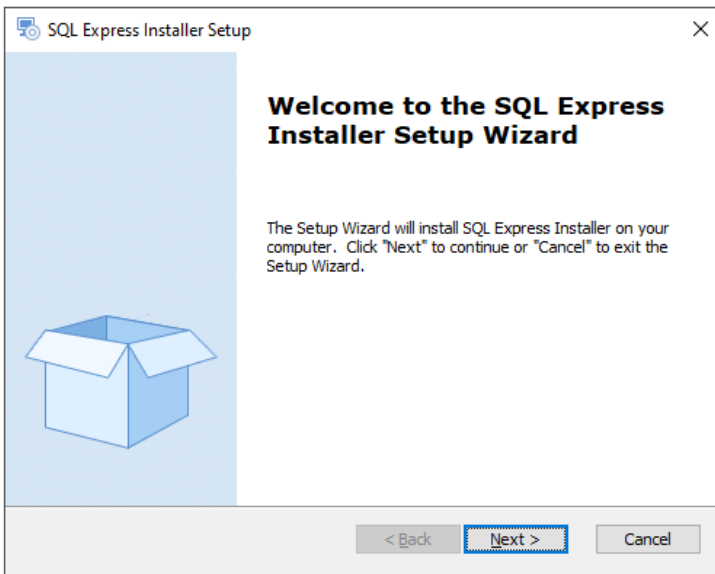


The screenshot shows a 'Link Field' dialog box. It has a title bar 'Link Field'. Inside, there is a 'New Field' section with a text box containing 'Name: Protein' and 'Key: 2154'. Below this is a 'Link To:' dropdown menu with 'Protein' selected. At the bottom are three buttons: 'Edit Fields', 'OK', and 'Cancel'. Red circles highlight the 'Name: Protein' text and the 'Link To:' dropdown.

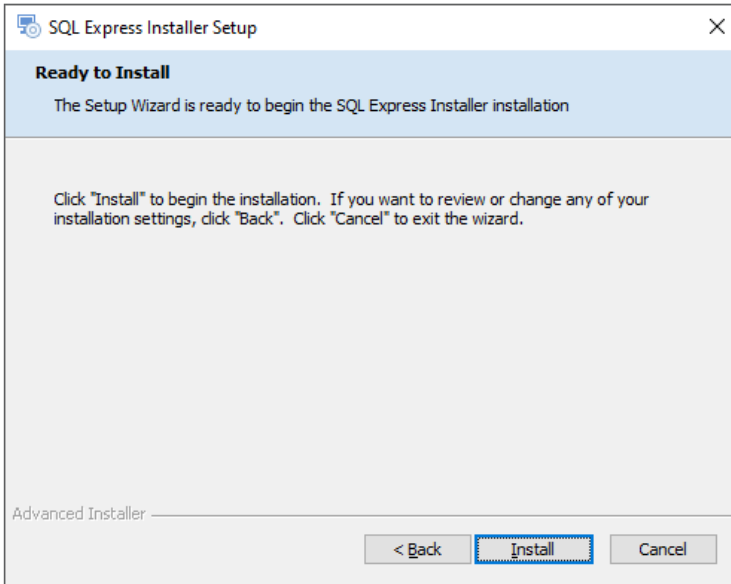
Appendix A: Installation Instructions

Install AXIS-Q

1. When access to the AXIS-Q installation folder has been provided, extract the folder onto the computer desktop.
2. Open the **SQL Express 2022** folder.
3. Double-click **SQLInstaller.exe**.

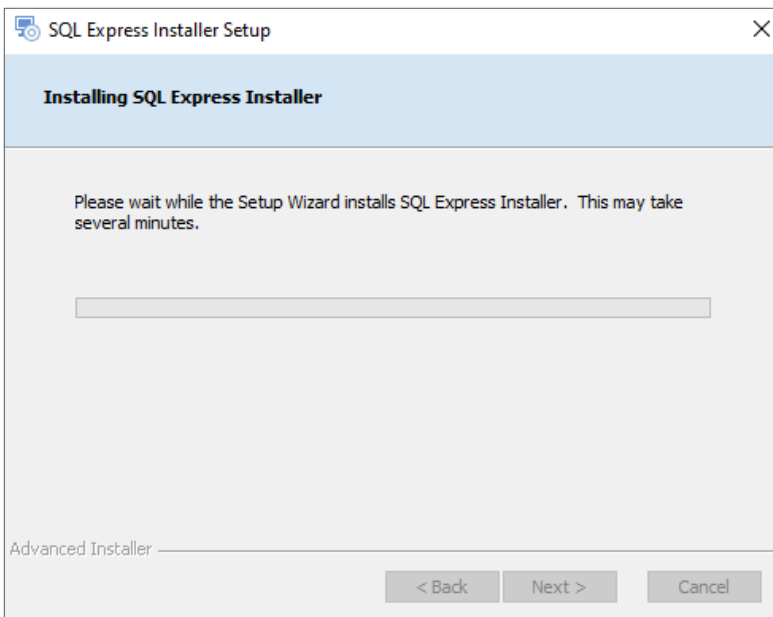


4. Click **Next**.

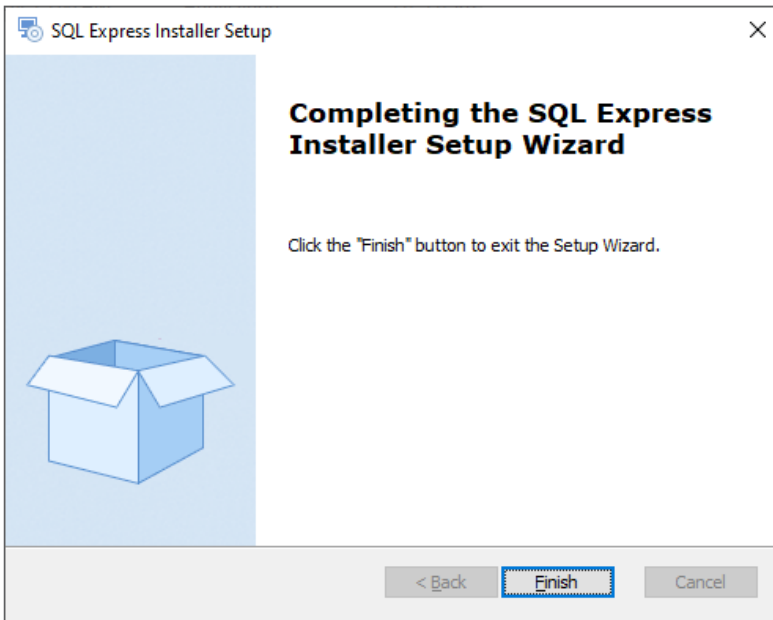


5. On **Ready to Install**, click **Install**.

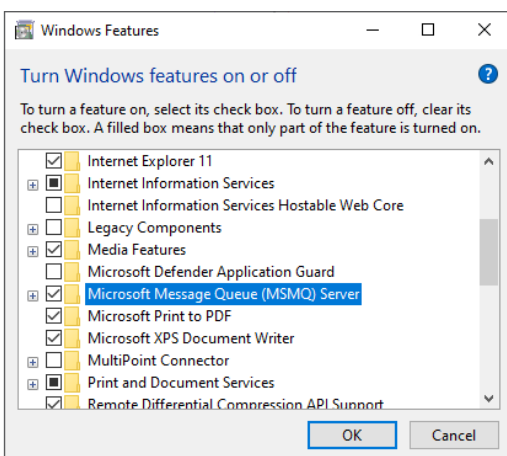
This next phase will take some time to run.



6. When the installation is complete, click **Finish**.

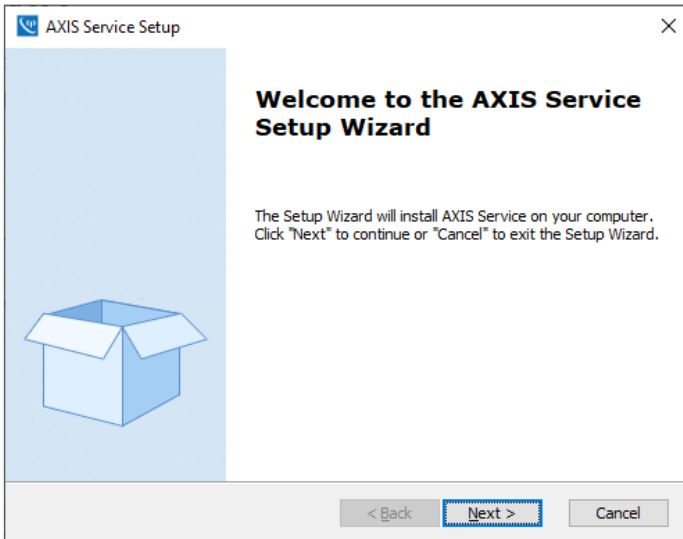


7. Activate **Microsoft Message Queue**:
 - a. Open the **Control Panel**.
 - b. Click on **Programs and Features**.
 - c. Click the link for **Turn Windows features on or off**.
 - d. Check **Microsoft Message Queue (MSMQ) Server**.
 - e. Click **OK**.
 - f. Close the Control Panel (Programs and Features).

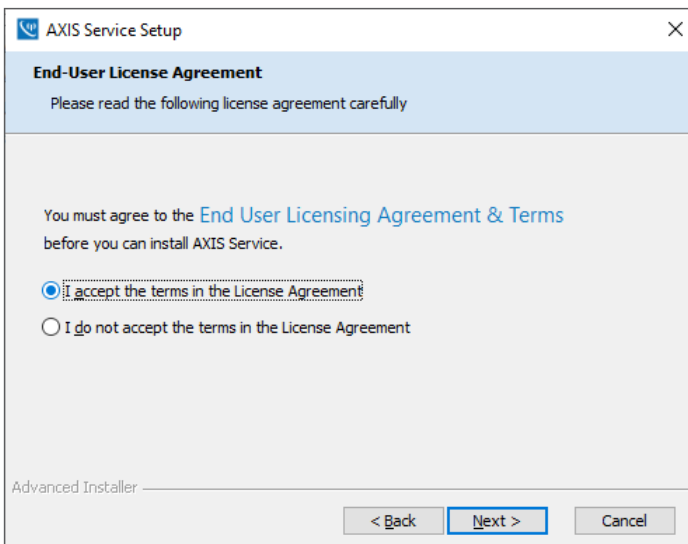


Install AXIS Service

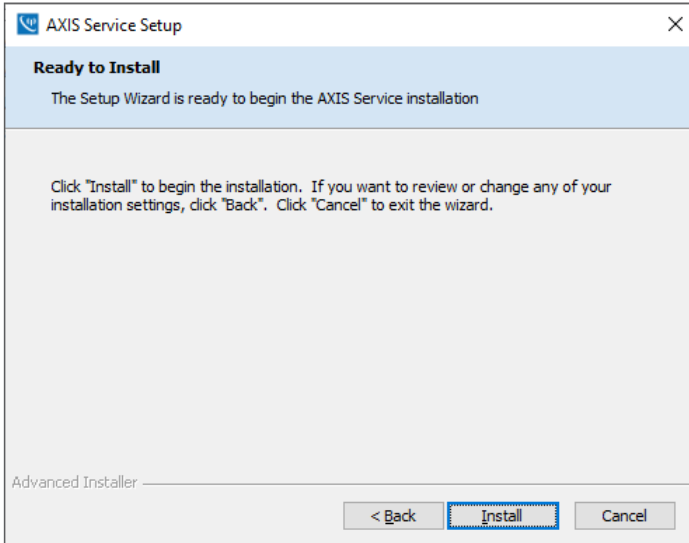
1. Return to the AXIS-Q installation folder.
2. Double-click on **Setup AXIS Service.exe**.
3. On the Welcome screen, click **Next**.



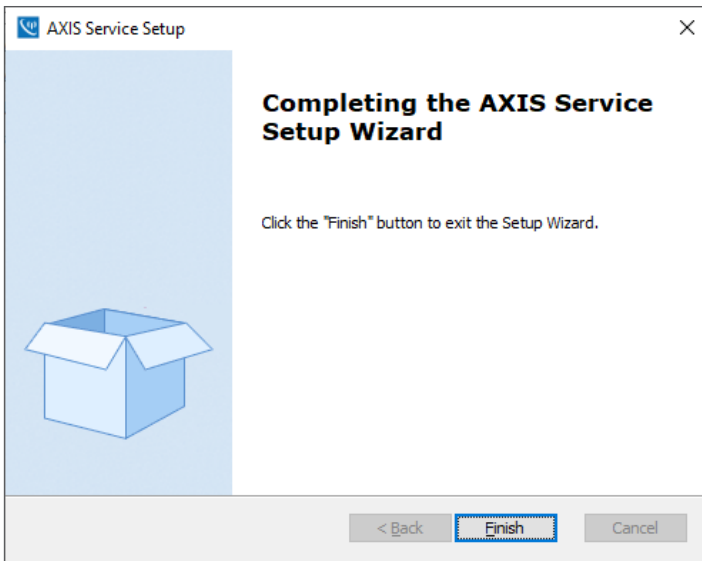
4. On the End-User License Agreement screen, **accept the terms** then click **Next**.



5. On the Ready to Install screen, click **Install**.



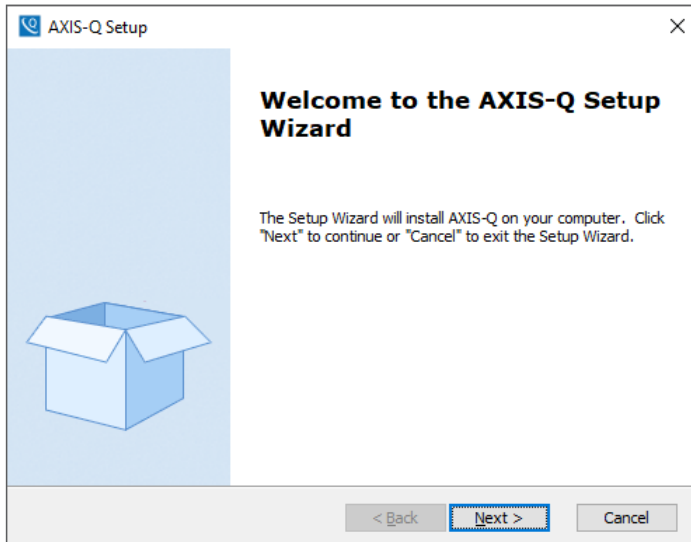
6. When the installation is successful, click **Finish**.



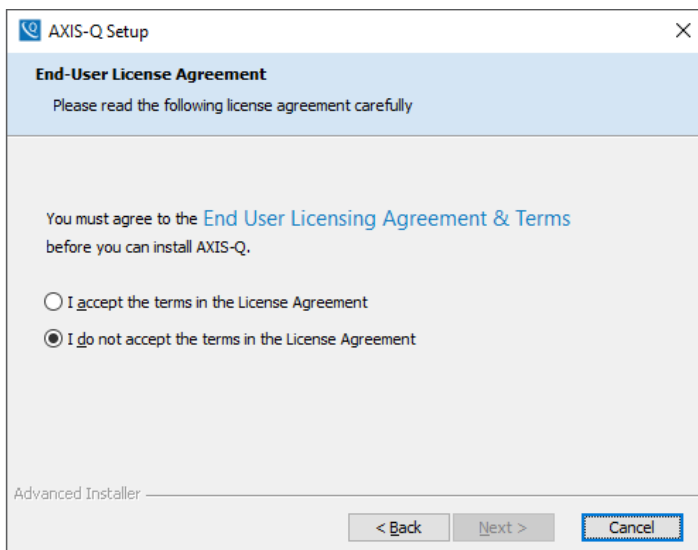
7. Continue with installing AXIS-Q on the following page.

Install AXIS-Q

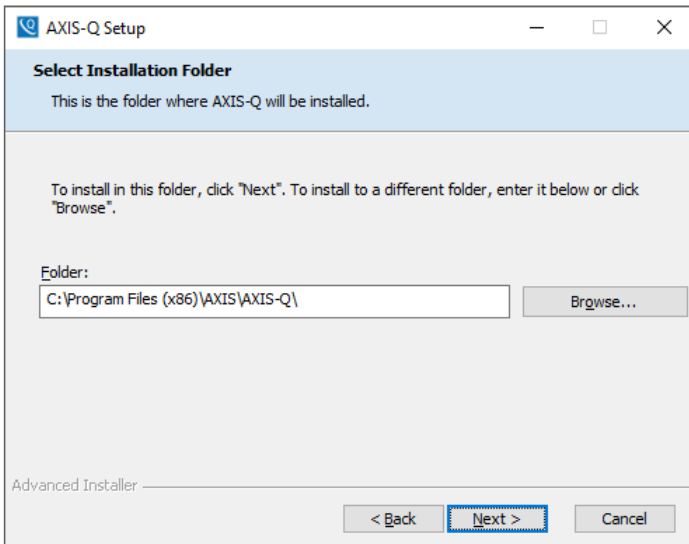
1. Return to the AXIS-Q installation folder.
2. Double-click on **Setup AXIS-Q.exe**.
3. On the Welcome screen, click Next.



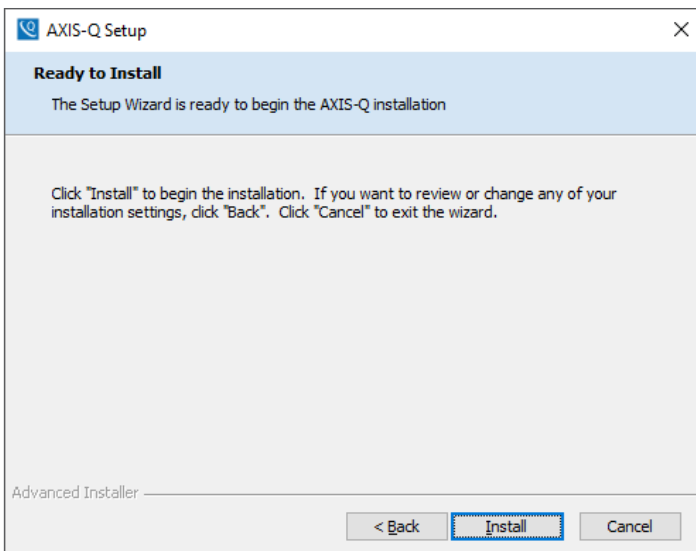
4. On the **End-User License Agreement**, accept the terms then click **Next**.



5. On the **Select Installation Folder** screen, click **Next** to accept the default folder location.



6. On the **Ready to Install** screen, click **Install**.

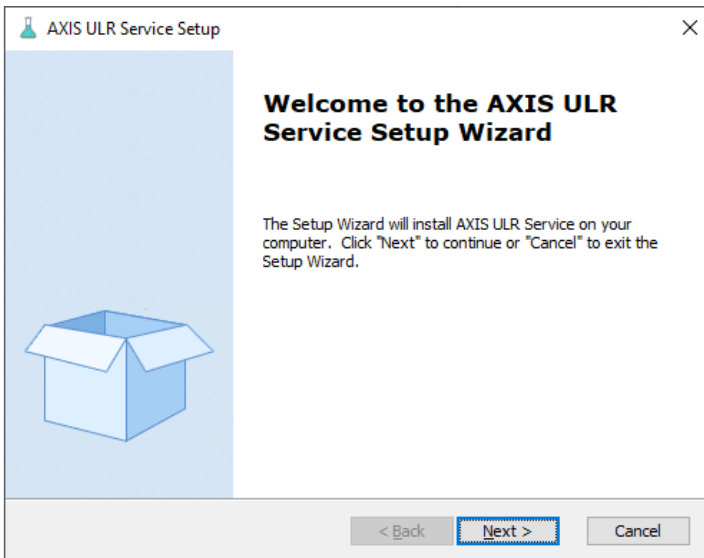


7. When the installation is complete, click **Finish**.

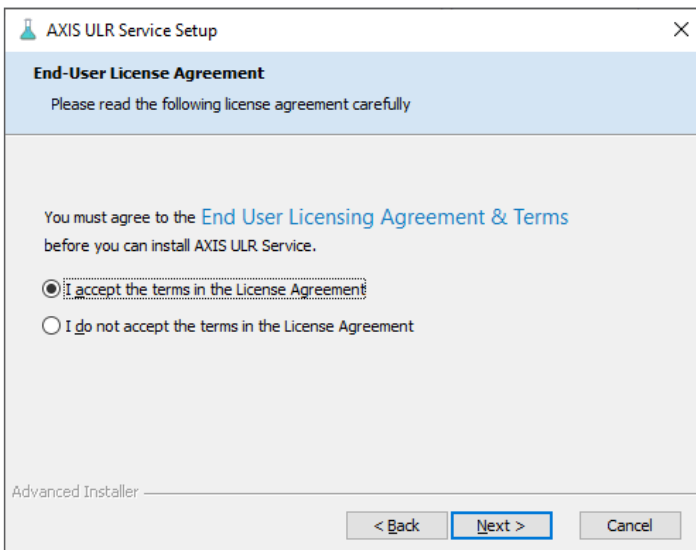
Install the ULR Service

Follow the steps below to install the AXIS ULR Service.

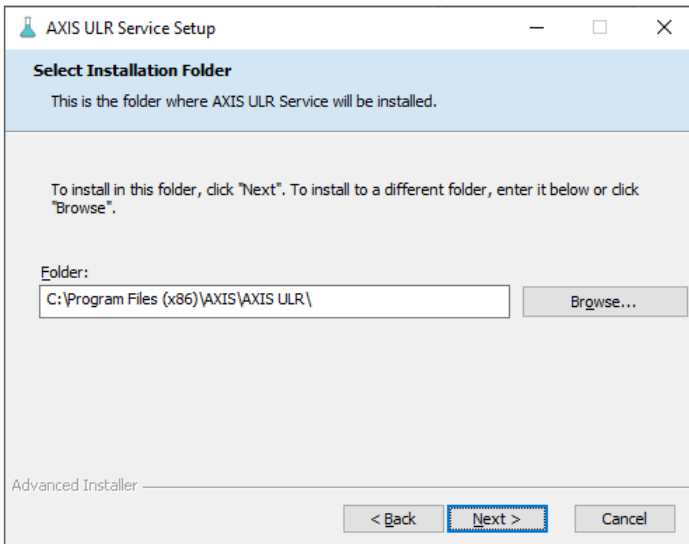
1. Return to the AXIS-Q installation folder.
2. Double-click on **Setup ULR Service.exe**.
3. On the Welcome screen, click **Next**.



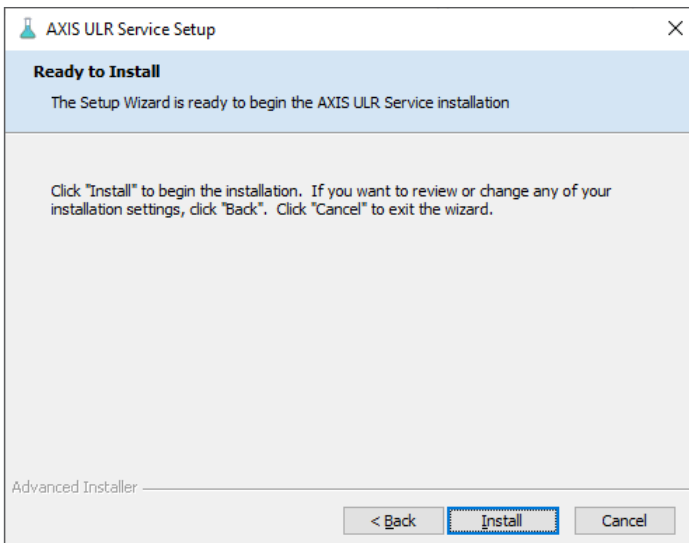
4. On the End-User License Agreement, **accept the terms** then click **Next**.



5. On the Select Installation Folder, click **Next** to accept the default folder location and proceed with the next step.



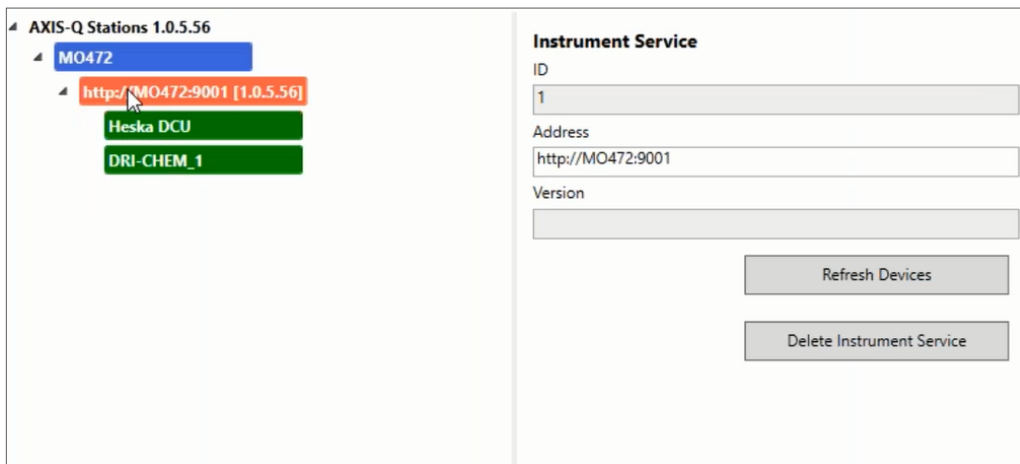
6. Click **Install**.



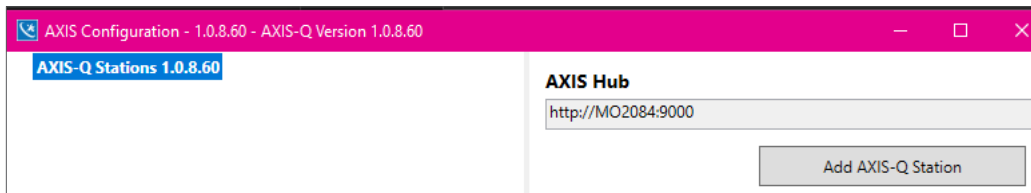
7. When installation of the ULR Service is successful, click **Finish**.
8. Close the installation folder.

AXIS Configuration

1. To open AXIS Configuration, from the **Start** menu, navigate to **AXIS-Q** then click on **AXIS Configuration**.



2. After it finishes loading all analyzers, highlight **AXIS-Q Stations**.



3. In the **AXIS Hub** field, highlight the URL and **copy the path** (right-click > Copy or Ctrl+C).
4. Click **Save Changes**.
5. Click **OK**.
6. Open the AXIS-Q Client on the Desktop.

Appendix B: Lab Analyzers

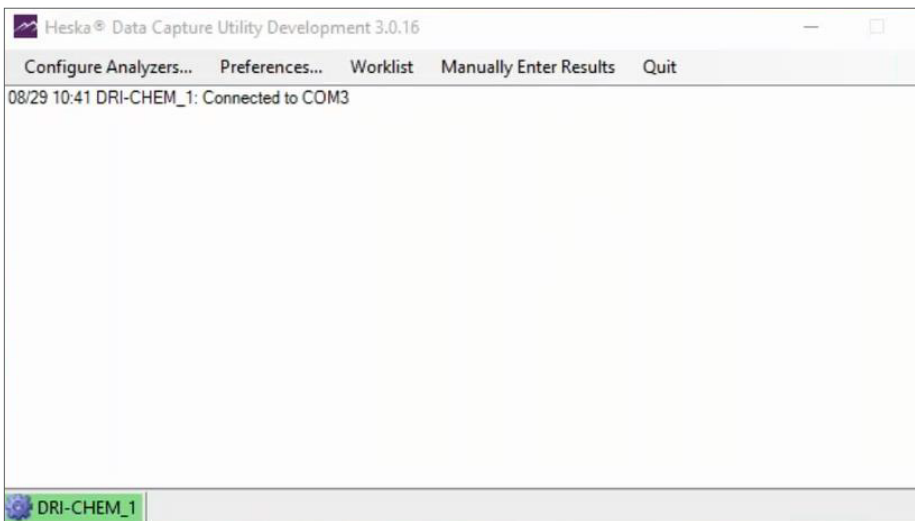
For any device using network connections, we recommend the device is assigned a static IP address, along with the workstation where the AXIS Universal Lab Reader is installed.

Heska® DCU Configuration

If the clinic uses the Heska DCU for labs, follow the steps to setup with Lab Services.

Confirm Heska DCU is Functioning

1. Open Heska Data Capture Utility.



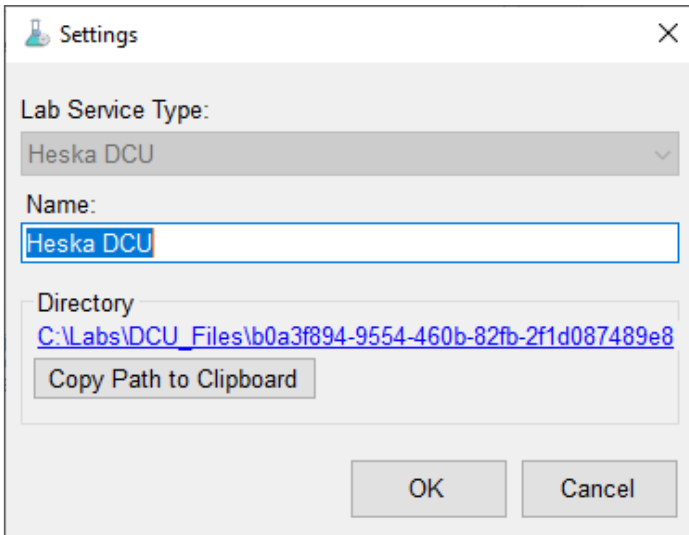
2. Each analyzer will show connected. If Error or any color other than green, **contact Heska**.

Configure the ULR Lab Services for Heska DCU

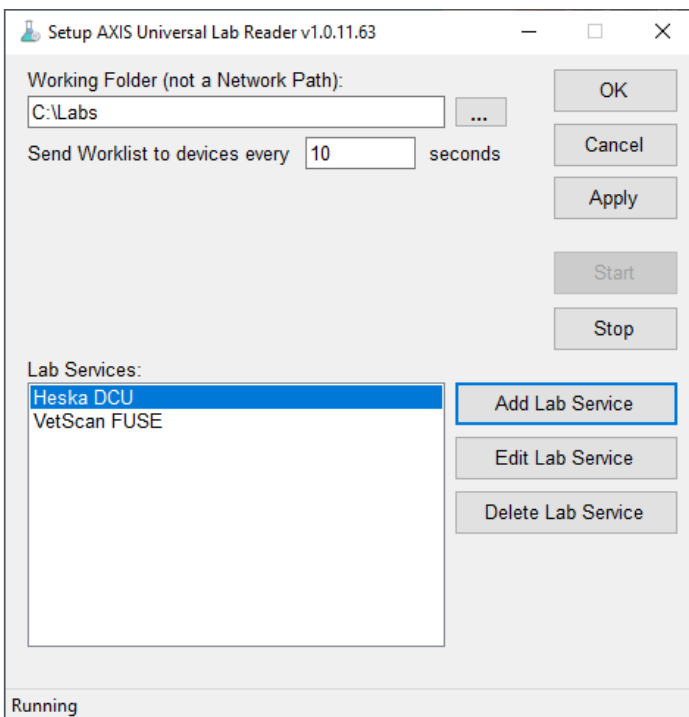
1. From the computer, click the **Start** button and search for **AXIS ULR Service > Configure Lab Services**.
2. In the **Working Folder** field, click the browse button and navigate to the **C** drive.
3. Select the **Labs** folder. If the folder does not exist, click **Make New Folder** and create the folder.
4. Click **Apply**.
5. Click **Stop**.
6. Click **Add Lab Service**.


AXIS-Q USER GUIDE

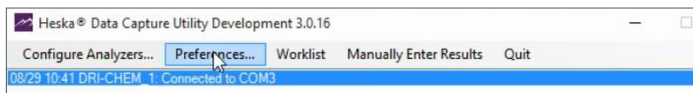
7. From the **Lab Service Type** drop-down list, select **Heska DCU**.
8. Enter **Heska DCU** as the **Name**.
9. Click on the **Copy Path to Clipboard** button.



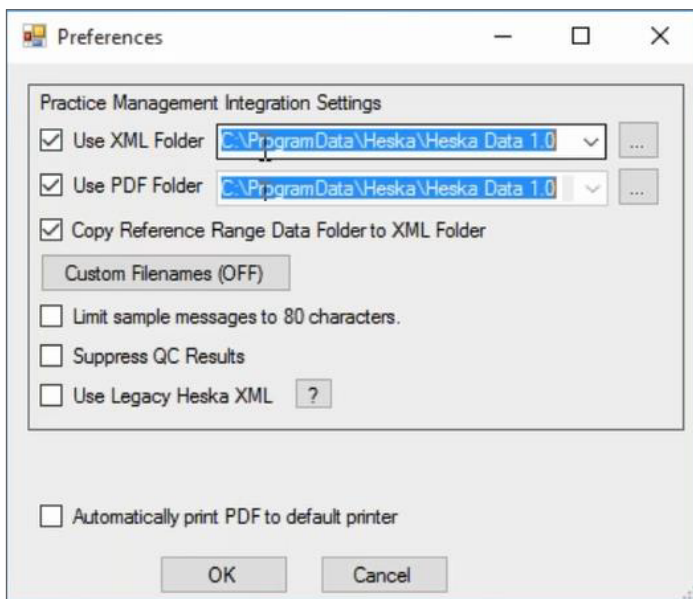
10. Click **OK**.



11. Click **Apply**.
12. Click **Start**.
13. Click **OK**.
14. Open **Heska Data Capture Data** ( on taskbar).
15. Click **Preferences** on the menu bar.



16. In Preferences, verify **Use XML Folder** is selected.

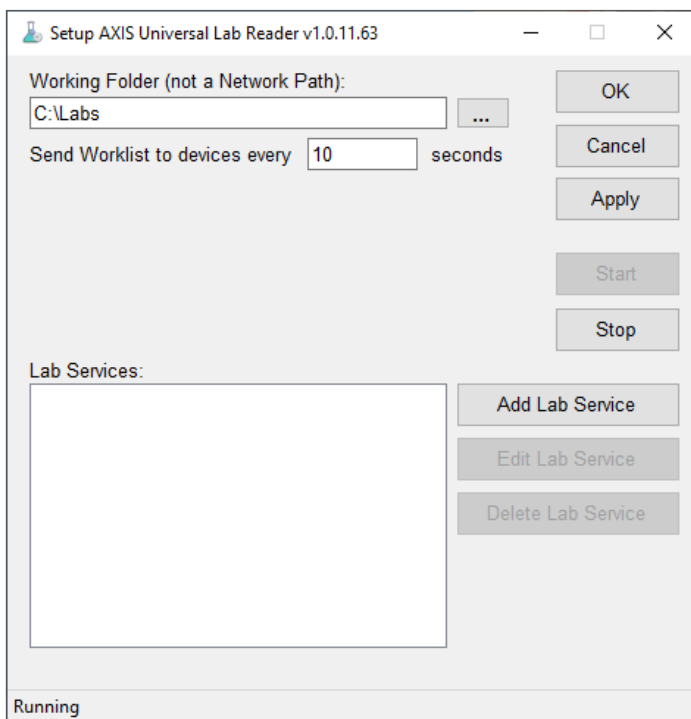


17. Click on the field next to the XML Folder then **right-click > Paste** (or Ctrl + V) to paste the folder path from Lab Services.
18. Check the option to **Use PDF Folder**.
19. Enter the path: **C:\Labs\Heska_PDF**.
20. Click **OK**.
21. Click **Quit** at the top.
22. Confirm the option to quit.

VETSCAN® FUSE Configuration

For a clinic that uses FUSE for labs, follow the steps below to setup FUSE with Lab Services.

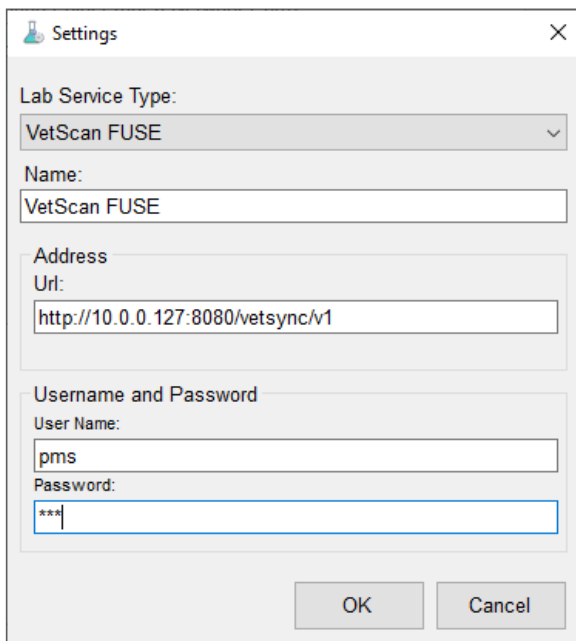
1. From the Windows Taskbar, click **Start**.
2. From the Start menu, locate the **AXIS ULR Service** folder and select **Configure Lab Services**.
3. In the Working Folder field, click the browse button and navigate to the **C** drive.
4. Click on the **Make New Folder** button and add a new folder named **Labs**.
5. Click **OK**.



6. Click **Stop** on the Setup AXIS ULR screen.

AXIS-Q USER GUIDE

7. Click **Add Lab Service**.
8. Select **VetScan FUSE** from the **Lab Service Type** drop-down list.
9. Enter **VetScan FUSE** as the **Name** of the lab service.
10. Open the FUSE on your computer and copy the URL and enter it into the **Url** address field.
11. Backspace to the 8080/ and add **vetsync/v1**. (see the example in the image below)
12. Enter **pms** as the **User Name** and **Password**.



The screenshot shows a 'Settings' dialog box with the following fields and values:

- Lab Service Type:** VetScan FUSE (selected in a dropdown menu)
- Name:** VetScan FUSE
- Address:** Url: http://10.0.0.127:8080/vetsync/v1
- Username and Password:** User Name: pms; Password: ***

Buttons for 'OK' and 'Cancel' are located at the bottom right of the dialog box.

13. Click **OK**.
14. Click **Apply**.
15. Click **Start**.

VetScan Classic Chemistry Analyzer

Connecting the Analyzer

Connect a serial cable from port 1 on the Analyzer to an open serial port on a workstation. This may require a gender changer for the cable. If any problems occur with the driver installation, Abaxis will need to be contacted at (800) 822-2947.

Configure the Lab Service

1. Select **Abaxis VetScan Classic** from the Service Type.
2. Select the correct **Port** for the Analyzer. If needed the Port Number can be located from the Device Manager of the workstation.
3. Select the **Device Date Format** to match the VetScan settings.
4. Click **OK** to save the settings.

VS2 Chemistry Analyzer

Connecting the Analyzer

Connect the USB cable to a Type A connection on the workstation (no power from workstation needed) from the Type B connection on the Abaxis VS2. There is also a driver CD from Abaxis that will need to be installed for the Abaxis VS2 to communicate with the workstation. Directions to install the driver are located on the disc under the instructions folder. If any problems occur with the driver installation, Abaxis will need to be contacted at (800) 822-2947.

Settings on the Abaxis VS2 Chemistry Analyzer

1. Press the **Settings** icon.
2. Press the **More Settings** icon.
3. Press the **Communication Settings** icon. The Set Protocol menu will appear.
4. Check **ASCII**.
5. Press **Home** to save changes.

Configure the Lab Service

1. Select **Abaxis VS2** from the Service Type.
2. Select the correct **Port** for the Analyzer. If needed, the Port Number can be located from the Device Manager of the workstation.
3. If desired, select Import Header Information or Import Footer Information to include the header and footer information from the Abaxis VS2.
4. Click **OK** to save the settings.

VSPRO Chemistry Analyzer

Connecting the Analyzer

The VSPRO uses a network connection to communicate. Please have the RJ-45 network jack available to connect the VSPRO. AXIS-Q does not require the machine and workstation be next to each other with this method of connection. If any assistance is needed with the Analyzer, please contact Abaxis at (800) 822-2947.

Settings on the Abaxis VSPRO Chemistry Analyzer

1. Press the **Settings** icon.
2. Press **Connections**.
3. Press **Network**.
4. Enter the following settings:
 - a. **Data Export** = On
 - b. **IP Address** = Set to the workstation running the Universal Lab Reader (if the IP of the workstation is unknown, use the Tip on the right of this page).
 - c. **IP Port** = Set to Port 850 or the Port matching the configurations set in Configure the Lab Service step 2.
 - d. **IP Origin** = Set to the network configuration. For example, if the network is running as a workgroup, select Fixed and enter the IP information in step e, f, and g. If the network is running as a domain, select Obtain Automatically and steps e, f, and g will automatically be filled in.
 - e. **IP Address** = Enter the IP Address of the VSPRO on the network (skip to step 4 if step d is set to Obtain Automatically).

- f. **Subnet Mask** = Enter the Network Subnet Mask (skip to step 4 if step d is set to Obtain Automatically).
 - g. **Default Gateway** = Enter the Network Default Gateway (skip to step 4 if step d is set to Obtain Automatically).
5. Press **Done** twice to return to the main menu.

Configure the Lab Service

1. Select **Abaxis VSPro** from the Service Type.
2. Enter **850** as the Port Number and click **OK**.


HMII Hematology Analyzer

Connecting the Analyzer

Connect the nine pin serial cable to the open serial port on a workstation. This step requires a null modem cable or serial cable with a null modem adapter connected to the serial cable by an adapter with two female ends. If any problems occur with the cables provided, please contact Abaxis at (800) 822-2947 and choose Technical Support.

Settings on the Abaxis HMII Hematology Analyzer

The HMII has to be set to allow transmission. If any problems occur with the setup of the actual Analyzer, please contact the Abaxis Support Center at (800) 822-2947.

1. Press the nut button ().
2. Select 5 (Settings).
3. Select 2 (Customize).
4. Select 1 (General).
 - a. Baud Rate should be set to 9600 (if that does not work try 19200)
 - b. Serial Protocol should be 3.1 using the serial connection.
 - c. Press OK
 - d. Press Exit
5. Press the Folders button.

6. Press OK button to pick the tests to import. The squares will appear filled in when the records are selected.
7. Press Menu on the screen.
8. Press the down arrow until Manage Selected Records is highlighted.
9. Press OK button.
10. Send selected records should be highlighted, press OK button to send the results.

Configure the Lab Service


1. Select **Abaxis VetScan HMII** from the Service Type.
2. Select the correct **Port** for the Analyzer and click **OK**. If needed, the Port Number can be located from the Device Manager of the workstation.

HM5 Hematology Analyzer

Connecting the Analyzer

Connect the USB cable to a Type A connection on the workstation (no power from workstation needed). There is also a driver CD from Abaxis that will need to be installed in order to have the HM5 communicate with the workstation. When you insert the CD, the instructions pop up and can be printed, if necessary. If any problems occur with the driver installation, Abaxis will need to be contacted at (800) 822-2947.

Settings on the Abaxis HM5 (White) Hematology Analyzer

1. Click the .
2. Click #5 for Settings.
3. Click #2 for Customize.
4. Click #1 for General Settings.
 - a. Change the PC Link to **USB**.
 - b. Change the Serial Protocol Version to **3.1**.
 - c. Change VSxLink to **Offline**.
5. Click **Accept**.

Settings on the Abaxis HM5c Hematology Analyzer

1. Press **Settings**.
2. Press **Measurement**.
3. Press **Settings**.
 - a. Change the PC Link to **Enabled**.
 - b. Change the PC Link Baud Rate to **9600**.
 - c. Change the Automatic Send to **Enabled**.

Configure the Lab Service

1. Select **Abaxis VetScan HM5** from the Service Type.
2. Select the correct **Port** for the Analyzer and click **OK**. If needed, the Port Number can be located from the Device Manager of the workstation.

HMT Hematology Analyzer

Connecting the Analyzer

Connect a serial cable from port 1 on the Analyzer to an open serial port on the workstation. This may require a gender changer for the cable. If any problems occur with the driver installation, Abaxis will need to be contacted at (800) 822-2947.

Settings on the Abaxis HMT Hematology Analyzer

1. From the HMT Ready screen, click the Management Key.
2. Click **System**.
3. Click **Communication**.
4. Click the arrow button to scroll through Serial Port #1 Options.
5. Change **Serial Port Settings**:
 - a. Baud Rate should be set to **19200**
 - b. Data should be set to **8 Bit**
 - c. Parity should be set to **NONE**
 - d. Data should be set to **Auto 1**

Configure the COM port on the Workstation

This section will walk users through configuring a COM port on workstations.

1. From the Windows taskbar, search for **Device Manager**.
2. Expand (click +) **Ports (COM & LPT)**.
3. **Right click** on Communications Port (COM1) (or whichever COM is being used).
4. Click on **Properties**.
5. Click the **Port Settings** tab.
6. Set the **Bits Per Second, Data bits, Parity, Stop bits, and Flow Control** for the lab machine.
7. Click **OK**.
8. Click everything.

Configure the Lab Service

1. Select **Abaxis VetScan HMT** from the Service Type.
2. Select the correct **Port** for the Analyzer and click **OK**. If needed the Port Number can be located from the Device Manager of the workstation.

Heska Analyzers

The installation of the Data Capture Utility should be done on the same workstation as the AXIS Universal Lab Reader. These analyzers all need to have the latest firmware updates available loaded to allow for the worklist option to be available for bi-directional communications: Element HT5, Element DC, Element i, HemaTrue, DRI- CHEM 4000, and the DRI-CHEM 7000.


Install Data Capture Utility (v3.0.6 or higher)

1. Click **Start > Run >** Type in \\ followed by your server name. **Example:** \\pdc1
2. Click **OK**.
3. Open the folder where the Heska Installer is located.
4. Double-click on the **Heska Installer 3.0.6.exe** file.
5. Click **Install** next to Heska Data Capture Utility.
6. Follow the prompts to move through the installation screens.

7. Depending on the analyzers being used:
 - a. Click Install for the drivers used with the EPOC.
 - b. Click Install for the drivers used with the Element DC, DRI-CHEM 4000, and DRI-CHEM 7000.
 - c. Click Install for the drivers used with the HemaTrue.

If any of DRI-CHEM, HemaTrues, or EPOC analyzers are there, please turn the analyzers off until the drivers are installed successfully.

Configure Data Capture Utility

1. If the DCU did not launch automatically, double-click  from the system tray.
2. Connect any Analyzers to the workstation the DCU is installed on.
3. Click the Configure Analyzers button. If the analyzers are configured, please skip to “Step 7”
4. Click **Add** then select the machine being connected.
5. Highlight the machine on the left and select the Port Name (i.e. COM1) on the right.
6. Click **OK** when finished.
7. Click the Preferences button.
8. Click the ... button.
9. From the Windows Start menu locate **AXIS ULR Service > ULR Configuration**.
10. Click **Add Lab Service**.
11. Select **Heska DCU**.
12. Click **Copy Path to Clipboard**.
13. Click **OK** twice.
14. Right-click in the User XML Folder and left-click Paste.
15. Check Copy Reference Range Data Folder to Output Folder.
16. Click **OK**.
17. Close the DCU.

scil ABC

Connecting the Analyzer

Connect cable to Analyzer and workstation. Screw one end of the cable into the compatible serial port connector in the back of ABC Analyzer, just below the silver CE plate. Screw the opposite end into the compatible serial port connector in the back of your workstation.

Configure the Lab Service

1. Select **scil ABC** from the Service Type.
2. Select the **COM Port**.
3. Click **OK**.

Setup the ABC Analyzer

1. Ensure that the Main Menu is displayed (1 Results, 2 Veterinary).
2. Press the 5 (Setup) key.
3. Press the 5 (Host Option) key again.
4. Press the 1 (Host Comm) key.
5. Press the 3 (Standard) key. The Host Comm menu is displayed again.
6. Press the 2 (Send Limit) key.
7. Press the 2 (On) key. The Send Limit menu is displayed again.
8. Press the 3 (Baud Rate) key.
9. Press the 5 (9600) key. The Baud Rate menu is displayed again.
10. Press the Esc button several times to return to the main menu.

If the client does not want the ABC Analyzer to print a copy of the results, they have the option to turn it off by following the instructions in the next section, otherwise the Print Function section can be skipped.

Turning off the ABC Analyzer Print Function

1. Ensure that the Main Menu is displayed (1 Results, 2 Veterinary).
2. Press the 5 (Setup) key.

3. Press the 1 (Results) key.
4. Press the 4 (Printer) key.
5. Press the 5 (None) key.
6. Press Esc button several times until the Main Menu is displayed again.





Resending Results from the ABC Analyzer







1. Ensure that the Main Menu is displayed (1 Results, 2 Veterinary).
2. Press the 5 (Setup) key.
3. Press the 5 (Host Option) key.
4. Press the 4 (Transmission) key.
5. Press the Enter button.
6. Press Esc button several times until the Main Menu is displayed again.

scil abc PLUS

Currently AXIS-Q integrates with the abc PLUS using a CAT5e network cable connected directly to the RJ45 port which then connects to any open network port. For any device using network connections, we recommend the device is assigned a static IP address, along with the workstation where the AXIS Universal Lab Reader is installed.

Configure the Analyzer

1. Log into the machine as Tech and enter 01HB05 as the password.
2. Press .
3. Press  again on the Serv. screen.
4. Press the Syst. tab.
5. Select Network.
6. Press  at the bottom to edit the settings.
7. Select DHCP. If you are running a workgroup, please select Manual and set the IP address to match the IP address that was written down.
8. The Network Name can be the same as the domain or workgroup name.
9. Press  to save the changes.


10. Press the Periph tab.
11. Select LIS.
12. Press  at the bottom to edit the settings.
13. Choose TCP as the Interface using the Up/Down arrows.
14. Enter the workstation's (running the AXIS Universal Lab Reader) IP Address.
15. Write down the Port number (generally defaults to 4148).
16. Press  to save the changes.
17. Press the Param tab.
18. Select Config.
19. Press  at the bottom to edit the settings.
20. Verify Curves and Automatic patient results are checked under Upload.
21. Press  to save the changes.
22. Press  to enter the shutdown menu.
23. Once any of these settings are changed, the analyzer needs to be properly restarted or shut down, using this menu:
24. Once your selection has been made, press .

Configure the Lab Service

1. Select **scil abc PLUS** from the Service Type.
2. Enter **4148** as the Port Number and click OK.

Retransmit Results

To retransmit results from the abc PLUS, please follow these steps:

1. Press . This lists the results on the machine.
2. Press the magnifying glass to view the results.
3. Press the computer icon (to the left of the printer icon). This transmits the results.

scil Samsung PT10V

The Samsung PT10V uses a network cable and does provide a full bi-directional integration. For any device using network connections, we recommend the device is assigned a static IP address, along with the workstation where the AXIS Universal Lab Reader is installed.

Configure the Analyzer

1. From the Home screen, tap **Settings**.
2. Tap **Network**.
3. Select **Ethernet**.

Wireless adapters may be used with this analyzer. If they are, select Wireless instead of Ethernet in step 3.

4. Choose **Manual**.
5. Enter a **Static IP Address, Subnet Mask, Gateway, DNS Server**.
6. Tap **OK**.

Make note of the IP Address assigned to the device as the AXIS ULR will require this.

7. Click **EMR/Mobile**.
8. Select **ASTM** as the Protocol.
9. Clear **Send the requested results only**.
10. Enter the IP Address from the workstation with the AXIS ULR into the Server IP.
11. Enter **54321** as the Port.
12. Tap **OK**.

Configure the Lab Service

1. Select **scil PT10V** from the Service Type.
2. Enter **54321** from above (Step 11) as the Port Settings.
3. Under the Server IP and Port:
 - a. Enter the IP set on the analyzer.
 - b. Enter **9017** as the Port.
4. Click **OK**.

Firewalls may need to be configured with the port numbers used for the full communication to work successfully.

Configuring Tests

With the bi-directional communication between AXIS-Q and the PT10V, your practice management system will require specific tests to be named for the analyzer to accept orders.

V01^P surg-7^LABGEO	ALT, ALP, CREA, BUN, GLU, TP, ALB, GLOB, A/G, B/C
V02^Comp-13^LABGEO	ALT, ALP, BUN, CREA, B/C, PHOS, CHOL, TRIG, TBIL, Ca, AMY, GLU, TP, ALB, GLOB, A/G
V03^Liver-9^LABGEO	BUN, AST, ALT, ALP, TBIL, GLU, TP, ALB, GLOB, A/G, GGT
V04^Kidn7^LABGEO	ALB, GLU, BUN, CREA, B/C, PHOS, Ca, AMY
V06^Large-10^LABGEO	BUN, CK, AST, ALP, ALB, TBIL, GGT, TP, CREA, GLU, GLOB, A/G, B/C
V20^Elec-3^LABGEO	NA, K, Na/K, CL
V09^Large-14^LABGEO	GLU, BUN, CREA, B/C, TP, ALB, GLOB, A/G, AST, ALP, GGT, TBIL, CK, Ca
V33^Liver-m3^LABGEO	ALT, GGT, TBIL
V34^Kidn-m3^LABGEO	BUN, CREA, B/C, PHOS

Selecting Tests Ordered

1. From the Home screen, tap **Run**.
2. Select the test from the Order List.
3. Tap **Run**.

Retransmit Results



To retransmit results from the PT10V, follow these steps:

1. Press **Results**.
2. Select the result.
3. Click **Send**.
4. Select **EMR/LIS**.

scil Solo


The SOLO uses a standard serial or USB cable for LIS communication.

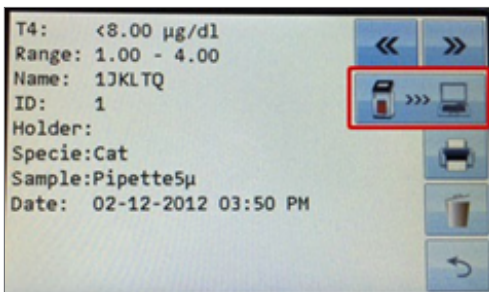
Configure the Analyzer

1. From the Start-up Menu, touch the  to open the Settings menu.
2. Select **Settings** again.
3. Select **Interface**.
4. Select **Host**.
5. Select **Transfer**.
6. Select one of the options:
 - a. **Disable** - results will never be transmitted.
 - b. **Automatic** - results will be transmitted to AXIS-Q after every measurement.
 - c. **On Request** - results will only be transmitted upon request.
7. Tap the  to accept the changes.

Retransmit Results

To retransmit results from the Solo, please follow these steps:

1. Press . This lists the results on the machine.
2. Press the << or >> to scroll through results.
3. Tap the **Transmit** icon on the result to send.



4. Then choose to transmit selected or all. This transmits the results.

scil SpotChem EL and EZ

The SPOTCHEM EL uses a serial cable with one end that has a RJ-11 connector (looks like a telephone cable) while the other end looks like a standard female serial connector. Some of their analyzers could be connected using a multi-port or single port adapters. Please visit the manufacturer's website for drivers if needed.

Configure the Analyzer

1. Ensure that the Main Menu is displayed (1 Measure, 2 Submenu, 3 Calibrate).
2. Press the **MENU** and **STOP** buttons simultaneously.
3. At the password prompt, press the **-/.** button.
4. Type in **4430** for the EZ and **1520** for the EL.
5. Press **-/.** button again.
6. Press the **ENTER** button. The Main Menu is displayed with the "+" sign on the right side.
7. Press the 2 (Submenu) key.
8. Press the 6 (Setup) key.
9. Press the 3 (Communication) key.
10. Press the **-/.** to toggle the Use Function to ON.
11. Press the **ENTER** button.

Pressing Enter moves to the next Communication Function option.

12. Press the **-/.** to set the format to 1.
13. Press the **ENTER** button.
14. Press the **-/.** to set the baud rate to **9600**.
15. Press the **ENTER** button twice until the screen displays "Writing".
16. When the menu reappears, press the **STOP** button several times until "Back to USER MODE?" is displayed.
17. Press the **START** button. The Analyzer undergoes a brief initialization cycle then returns to the Main Menu from step 1.

Turn off the Analyzer print function

1. Ensure that the Main Menu is displayed (1 Measure, 2 Submenu, 3 Calibrate).
2. Press the **MENU** and **STOP** buttons simultaneously.
3. At the password prompt press the **-/.** button.
4. Type **4430**.
5. Press the **-/.** button again.
6. Press the **ENTER** button. The Main Menu is displayed with the “+” sign on the right side.
7. Press 2 (Submenu) key.
8. Press 6 (Setup) key.
9. Press 2 (Printer) key.
10. Press the **-/.** button to toggle the Use Function to OFF.
11. Press the **ENTER** button 4 times to move through the remaining fields.
12. Press the **STOP** button several times until “Back to User Mode?” is displayed.
13. Press the **START** button.

Configure the COM port on the Workstation

This section will walk users through configuring a COM port on workstations.

1. From the Windows Start menu, search for **Device Manager**.
2. Expand (click +) **Ports (COM & LPT)**.
3. Right click on Communications Port (COM1) (or whichever COM is being used).
4. Left click on **Properties**.
5. Click the **Port Settings** tab.
6. Set the following:
 - a. **Bits Per Second** = 9600
 - b. **Data bits** = 7
 - c. **Parity** = Even
 - d. **Stop bits** = 2
 - e. **Flow Control** = None

7. Click **OK**.
8. Click everything.

Retransmit results

1. Ensure that the Main Menu is displayed (1 Measure, 2 Submenu, 3 Calibrate).
2. Press the 2 (Submenu) key.
3. Press the 1 (Results) key.
4. Press the 2 (Send) key.
5. Press the 1 (Labtest) key. This will transmit the last set of tests that were run to the workstation.
6. After transmission, press the **STOP** button several times until the Main Menu is displayed.

Appendix C: Frequently Asked Questions

Q What is AXIS-Q?

A AXIS-Q is a software hub, or command center, that links Avimark or Impromed practice management systems with Abaxis, Heska, and scil devices for a true bi-directional integration.

Devices are limited by the Vendor and if it doesn't work in a true bi-directional integration, AXIS-Q still provides a two-way communication so that results are still sent back to the practice management system.

Q How much does it cost and how can I acquire it?

A AXIS-Q is actually a product that is sold by your Covetrus Territory Manager and they have a variety of sales programs to acquire it.

Q What if I forget to press Play?

A There are components to AXIS-Q that are always open to receiving results from the analyzers while the AXIS-Q software is open. The results should simply appear in the AXIS-Q tab within your practice management system.

Q What if I am not receiving results?

A Please contact the AXIS-Q Support team for assistance in troubleshooting this situation.

Devices are limited by the Vendor and if it doesn't work in a true bi-directional integration, AXIS-Q still provides a two-way communication so that results are still sent back to the practice management system.