



## SELF-SERVICE UPGRADES

### *TECHNICAL WHITE PAPER*

FOR INSTRUMENT MANAGER™

Intended for:

This document is intended as a comprehensive supplement to the Instructions for use for Data Innovations direct Instrument Manager users and/or IT teams. It includes considerations for upgrading Instrument Manager with limited assistance from Data Innovations.

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## Overview

This guide provides directions on Pre-Upgrade, Upgrade, and Post-Upgrade phases, including a general timeline, who to contact, where to find more information, and what resources are needed. Each phase begins with a checklist, followed by detailed segments.

## Definitions

- IM: Instrument Manager
- EE: EP Evaluator
- DI: Data Innovations
- Territory Sales Manager: The assigned Data Innovations sales representative for your facility
- Production: The live and in-production instance of Instrument Manager
- InterSystems: Vendor for the databases Instrument Manager utilizes
- IT: Information Technology
- OS: Operating System
- LIS: Laboratory Information System
- ISO: Optical Disc image
- DMS: Data Management System
- CAP: College of American Pathologists
- ODBC: Open Database Connectivity
- Driver: software developed by DI to connect laboratory devices and information systems

## Why Upgrade?

Do you want to take advantage of the latest and greatest Instrument Manager™ (IM)? Are you interested in staying up to date with new features? Do you want to ensure your Cybersecurity posture is as robust as it can be while using IM?

If you are uncertain about the first steps toward change, Data Innovations has you covered!

This guide provides directions on Pre-Upgrade, Upgrade, and Post-Upgrade phases, including a general timeline, who to contact, where to find more information, and what resources are needed. Each phase begins with a checklist, followed by detailed segments.

To have a dedicated resource assist you with the upgrade, contact your Territory Sales Manager directly or contact your region's sales representative. These resources can provide a quote for DI Technical & Professional Services.

**NOTE:** Support for upgrade operations during non-business hours does not qualify for 24-hour emergency support. Customers receive core software update media at no additional charge; however, you may be directed to DI Sales in the event a technical consulting service is required that is not covered under your Maintenance and Support agreement.

## Upgrade Assistance

At Data Innovations, our Technical & Professional Services and Customer Support teams are here to make your success a priority.

### About Customer Support

Data Innovations Customer Support is designed to be your first line of defense for common technical issues or system “breaks.” The Customer Support team demonstrates technical expertise, patience, and professionalism while promptly responding to your needs, providing tools and education to improve your experience. Customer Support (CS) can answer questions about your upgrade on a ticket-by-ticket basis. CS cannot be booked ahead of time for an upgrade or go-live.

To get in touch with your regional Customer Support, [email, call or log a case](#) with your contact information, IM-license number, and nature of the request.

### About Technical & Professional Services

The Data Innovations Technical & Professional Services team provides consulting and implementation expertise to ensure project success from start to finish.

Benefits of these services include:

- Training on new features.
- Troubleshooting as needed while you execute your validation plan for the upgrade and go-live.
- Dedicated remote go-live support for up to eight hours during normal business hours.
- Project Management.
- Delivery of a clearly defined schedule for the service.
- Validation phase troubleshooting and consultation.
- Escalation pathways.

If you would like dedicated assistance with a consultant, please contact your Territory Sales Manager directly or contact your region’s sales representative to get a quote for DI Technical & Professional Services to perform the upgrade with you.

## Pre-Upgrade Tasks

Task	Complete?
<a href="#">Confirm Maintenance and Support eligibility</a>	
<a href="#">Build an upgrade team</a>	
<a href="#">Determine completion of site security forms</a>	
<a href="#">Identify your current version of IM</a>	
<a href="#">Determine and obtain the upgrade version of IM</a>	
<a href="#">Obtain and review the available Upgrade materials</a>	
<a href="#">Identify what features are currently licensed</a>	
<a href="#">Acquire new license files</a>	
<a href="#">Prepare a data migration plan</a>	
<a href="#">Provision servers</a>	
<a href="#">Upgrade test server</a>	
<a href="#">Plan to upgrade thin clients</a>	
<a href="#">Update drivers</a>	
<a href="#">Planning for validation</a>	
<a href="#">Coordinating External Interface validation</a>	
<a href="#">Updating ODBC driver</a>	
<a href="#">Evaluate EP Evaluator Compatibility</a>	
<a href="#">Planning contingencies ahead of upgrade</a>	
<a href="#">Set an upgrade date</a>	

### Confirm Maintenance and Support eligibility

Ensure that your Maintenance and Support agreement is active to guarantee eligibility for software upgrades and assistance with software issues. Customers receive core updates at no additional charge; however, you may be directed to DI Sales in the event a billable service is required that is not covered under the Maintenance and Support agreement and depending on the needs of your organization. If you have any questions about the status of your Maintenance and Support agreement, contact your Territory Sales Manager directly or contact your region's DI Sales representative.

### Build an upgrade team

DI recommends forming a strong upgrade team at your facility that ensures the ease of your upgrade and validation efforts. While certain titles may not align with those in your current organization, these resources offer expertise in IM and clinical laboratory workflows. Along with your site's IT, these resources can assist with the architecture and permissions required to upgrade.

Consider adding these roles to your upgrade team:

- **A primary point of contact** (likely the application administrator) leading the upgrade, who is familiar with available documentation and processes and can communicate timelines to your facility.



- **IM analyst(s)** who are trained and familiar with the facility's IM.
- **Information Technology (IT)/Network individuals** with elevated permissions and Operating System (OS)/server knowledge.
- **Laboratory Information System (LIS) analyst(s)** who can assist with validation efforts.
- **Lab resource(s)** to assist with validation efforts.

## Determine completion of site security forms

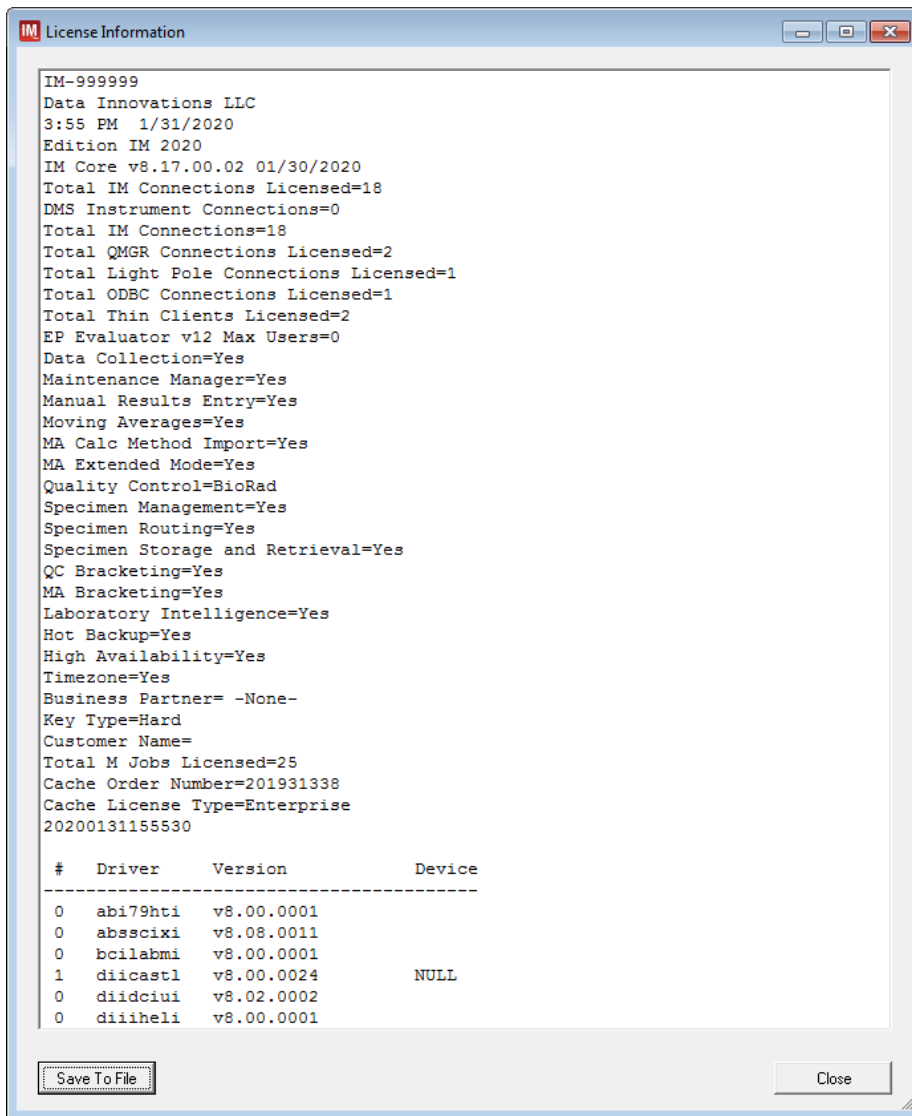
Some facilities have security forms that need to be completed ahead of server provisioning and prior to upgrading or installing Instrument Manager. It would be beneficial to ask your project resources if there is a security form of some kind that needs to be completed by the vendor ahead of upgrading.

If you require security information from DI for your project, contact your Territory Sales Manager directly or contact your region's DI Sales representative.

## Identify your current version of IM

Different upgrade journeys exist depending on which version of IM you use, so it is important to identify the version.

One way to identify your version of IM is by logging in to Instrument Manager, selecting **Reports**, and then **License Information**. The version and edition (if available) are displayed in the License Information report.



## Determine and obtain the upgrade version of IM

From the Data Innovations website, select “Products” and then “Instrument Manager” to access the [Instrument Manager page](#). This page lists the latest version of IM available for the public, supporting documentation about compatibility and system specifications for the version you will upgrade to. In addition, on this page are two tools to give you a high-level overview of larger jumps in IM core versions, the [Instrument Manager Version Calculator](#) and [Instrument Manager Version History](#).

Once you have identified the version of IM you will be upgrading to log in to My DI Community to obtain the installer for this version. The version of IM is bundled into an optical disc image (ISO) for download, along with other supporting materials that you should evaluate prior to upgrading.

For assistance, please contact [Data Innovations Customer Support](#) with your contact information, IM license number, and nature of the request.



## Obtain and review the available upgrade materials

Familiarizing yourself with the available user guides will help expedite the upgrade experience and give time to ask questions you may have before being in the thick of the upgrade. Data Innovations offers customer upgrade guides to facilitate the upgrade journey.

Within My DI Community, find the upgrade materials for **the version of IM you are upgrading to**, not the version you are currently operating on. You will want to search the help file for references to *Upgrading from an Earlier Version* or user guides pertaining to the Release Notes, Quick Reference Guide, Mirroring User Manual, and the Upgrade Manual.

DI provides release notes with every version of IM for review. This should be reviewed prior to upgrading to make sure you consider any changes that may impact your current workflows. Data Innovations provides a complementary Validation Guidebook, available from your regional sales representative, to help you determine testing criteria for the release notes.

The Upgrade Reference Guide provides an upgrade checklist and downtime considerations while the Upgrade Manual covers different ways of upgrading your IM. If you want to do an upgrade on the same server running in Production, refer to the Upgrade Manual chapter *Upgrading Instrument Manager*. If you want to move IM and upgrade, see the chapter *Installing Instrument Manager on New Hardware*. If you have a pre-existing mirror set you need to upgrade as well, see *Upgrade a Mirror Set/Upgrade Hot Backup to Mirror set*.

You may consider downloading and reviewing the Mirroring User Guide from My DI Community to refresh on its relevant content. If you are upgrading a mirror set across new hardware, you must set up a mirror on your new hardware once you have upgraded the New Acting Primary with databases.

For assistance obtaining the upgrade materials, contact [Data Innovations Customer Support](#) with your contact information, IM license number, and nature of the request.

## Identify what features are currently licensed

To identify what features you currently have licensed and to obtain your license number, log in to IM, and from the menu, select **Reports**, then **License Information**.

This window shows information such as:

- The license number (IM-#####).
- How many total IM connections you have licensed and can be on at one time (Total IM connections).
- How many Data Management System (DMS) connections you have licensed (DMS Instrument Connections).
- Which modules or mirroring you have available in IM (anything other than **No** means you have that feature licensed).
- How many thin clients can be connected to your IM at a given time (Total Thin Clients Licensed).

- Whether you have a Software Security Key “softkey” or hard key (Key Type).

You can save the license information report by using the “Save To File” button from this window.



## Acquire new license files

Depending on the version you were on and the version you are going to, you may be required to obtain new license files. As a best practice, it is worthwhile to keep your IM license files synchronized with your version to ensure accurate record keeping and proper future license delivery. This would be a good time to consider if you want to make some changes to features you have available to you through IM or plan for future connectivity needs.

Review your license to see if this meets the needs of your organization. Some considerations include:

- Softkey vs. Hard key.  
**NOTE:** Beginning with edition IM 2020 MR2, a software security key replaces the physical hard key. You must upgrade to the software security key when updating IM software or server hardware. Switching from a hard key to a softkey will require a modification to the license file.
- Enabling new modules.
- Version changes.

- Additional connections.
- DMS connections.
- Thin clients.
- Mirroring (either through Disaster Recovery or High Availability).
- Purchase and/or upgrade your Test Server.

Contact your Territory Sales Manager directly or contact your region's DI Sales representative to obtain new license files or discuss modifications to your license files.

## Prepare a data migration plan

Upgrades happening in place on the original servers will utilize your current databases and retain your specimen and patient data. Upgrades across hardware can be done in a way to retain your data. If you wish to do this, see the Upgrade Manual section *Installing Instrument Manager on New Hardware*.

**NOTE:** If you are setting up new production servers but not bringing over your current live databases, consider migrating the IM archive database (if enabled and in use) at a minimum for regulatory compliance.

A Drive Space and Usage Report provides the current fixed drive information of your server today, identifies which folder your Windows OS is installed on, and provides information about the size of your current databases. Access this report from the Reports menu item within IM. Retaining a copy of this report to evaluate without logging into IM is advisable.

Of additional consideration, migration of databases between servers takes time. These databases can be sizeable, and, depending on how you migrate the data, you may experience varying speeds of file transfer. It is ideal to coordinate with your local IT what mechanisms of transport between servers exist and the best times to do this transfer to inform your go-live planning. If you anticipate downtime for IM ahead of upgrading, you may want to test a transfer of a database across systems by making a copy and utilizing the mechanism for transfer that your site has setup.

**NOTE:** InterSystems databases are in use when InterSystems Caché® or InterSystems IRIS is on. If you are intending to move and use a database between systems, both IM and the InterSystem programs need to be shut down.

## Provision servers

Upgrading is an excellent opportunity to evaluate your current server specifications and determine if they are still right for you.

Server provisioning is the process of setting up and configuring server hardware, software, and network resources to make them ready for use. It involves tasks such as installing operating systems, software applications, and security settings, as well as allocating system resources like memory, storage, and

processors. Server provisioning ensures that servers are properly configured and optimized to meet Data Innovations' requirements for deploying into test and production environments.

Data Innovations provides Server Provisioning and [System Specifications](#) documents to help guide customers in standing up new servers. Your regional DI Sales representative can provide you with the Server Provisioning document.

## Upgrade test server

A test Instrument Manager server provides an occasion for a dry run of an upgrade using available user guides. Once upgraded, you can familiarize yourself with the new version of IM outside of impacting production. If available, upgraded test servers could be used to validate workflows on current drivers or newly updated driver versions without drastically impacting production. For the test server, it is recommended to restore the current production global configuration. The global configuration retains all the configuration options, rules, mappings, workspaces and connection assignments. Often, this is used to replicate your production environment without the need to move over your databases.

**NOTE:** Data Innovations recommends that you be prepared to freeze the global configuration in your current production system. If you must make a change in the current [live] global configuration, that change should also be made in the test system global configuration.

**NOTE:** You may want to turn off **Start on System Start** for each of your connections in Test. This step could prevent connectivity clash if you restart this system at the same time production starts up.

If you do not have a test server and would like to discuss purchasing one, please contact your Territory Sales Manager directly or contact your region's DI Sales representative.

## Plan to upgrade thin client

Thin clients are lightweight computing devices that rely on a central server to perform most of the processing and data storage, allowing users to access applications and data remotely while minimizing the hardware and maintenance requirements on the client side.

Thin clients use resources from the Instrument Manager base server. The [System Specifications](#) document provides details on the thin client requirements for the thin clients for your version of IM. Because thin-client stations will need to be upgraded, identify how many you have set up and their locations before upgrading.

Thin clients use the same installer as the IM core upgrade. Workstations must be "viewable" to the IM server.

**NOTE:** Consider communicating with your IT team about how to update the thin clients if you use browser-based or Citrix deployment options. DI does not provide documentation or information for thin client deployment in these environments.



For questions about thin clients, contact [Data Innovations North America Customer Support](#) with your contact information, IM license number and nature of the request.

## Update drivers

Upgrading is an excellent opportunity to evaluate your current versions of drivers for updates you may want. To evaluate which versions of drivers you have on your system, from the IM menu, select **Reports**, then select **Available Drivers**. You can save the report to a file.

To determine the latest version of driver available and download the driver, access the Drivers menu in My DI Community. From here, you can search for the driver name and select it to be able to download the driver files in a zipped format. Driver help files have the release notes of that particular driver, which include any changes or fixes that have occurred between the version of driver you are currently running to the latest available.

Although updating drivers to the latest version is always recommended, you may not want to update the LIS driver due to the overall impact to the system. If you decide to update your LIS driver, it is recommended to get a test server to do validation on. Budget time in your project plan for testing and troubleshooting with any driver upgrade.

**NOTE:** Some versions of IM are incompatible with some versions of specific drivers, requiring an update to continue to use the driver post-upgrade. Information about these drivers is available on the [Instrument Manager Product page](#).

For information on loading and configuring drivers for your IM, see IM Help topic *Loading and Configuring Drivers*.

For questions about drivers, contact [Data Innovations North America Customer Support](#) and provide your contact information, IM license number and nature of the request.

## Planning for validation

Validation is key to ensuring your software change did not impact laboratory testing. Validation scope, procedure, and efforts are typically site dependent. Planning for what needs to be validated, how long that is estimated to take, and how many resources are required to have it occur are great ways to achieve your go-live date. DI provides Release Notes for every version of IM. Review the Release Notes before upgrading to identify changes that affect your current workflows. The supplemental Validation Guidebook includes specific testing criteria.

To obtain the Validation Guidebook, contact your regional sales representative. Work with your laboratory staff identify validation that must be completed, methods of validation, and approval. Your testing may include (but not be limited to) connections and connectivity, version updates, rules, and governing agency requirements.

If you have a test server, consider testing peripheral server components such as light poles, printers, and scanners) since they may be workflow-dependent.

If you have a mirror, also consider including failover testing during your go-live to evaluate its functioning during your scheduled downtime.

## Coordinating External Interface validation

As part of planning, do you presently communicate with external interfaces like Bio-Rad or College of American Pathologist (CAP) that may need to be informed of your upgrade timelines? If yes, you may want to reach out to them and determine if they assist with validation and troubleshooting. These activities may need to be incorporated into your project timeline.

## Updating ODBC driver

Open Database Connectivity (ODBC) drivers are installed during the IM installation process; however, anyone using ODBC access to IM via a thin client may need to update their ODBC drivers.

For information on installing ODBC drivers, see the IM Help topic *Install an ODBC Driver*.

## Evaluate EP Evaluator compatibility

Data Innovations EP Evaluator is the leading instrument performance verification solution in the industry. If you are using EP Evaluator and it is installed on the same server as your current Instrument Manager, consider upgrading EP Evaluator or allow time to install, activate and test the software on the new servers you are setting up for your IM upgrade.

There may be some impacts to EP Evaluator depending on the version of IM you upgrade to. DI recommends evaluation of the EP Evaluator [“Installation and Activation Guide”](#) or [Compatibility](#) documentation for the upgrade version of Instrument Manager.

If you have questions about EP Evaluator, contact [Data Innovations North America Customer Support](#) and provide your contact information and account name.

## Planning contingencies ahead of upgrade

It is important to anticipate how any issues that could occur during a change might be addressed.

The first course of action is to remediate any issue that arises. If it appears that it cannot be remediated within an acceptable amount of time, plan to reinstate your current server until a fix can be found and a new go live date and time can be determined.

List your contingency plan steps. For example:

- Troubleshooting errors and/or issues



- Determining the timeline of a fix
- Working with your team to determine acceptable or maximum downtime
- Reinstating your old system if the issue cannot be resolved on schedule

Be sure to review this plan with your team and their individual roles in its implementation.

**Warning** Taking your Instrument Manager system down for an upgrade during nonbusiness hours does not qualify for 24-hour emergency support. Ensuring you take a backup ahead of the upgrade and storing the key files off the server can allow for a Data Innovations support representative to repair your IM system, in the event of a problem.

If you would like to have a dedicated resource made available to assist you with the upgrade, contact your sales representative directly or DI Sales by phone (888) 299-1750, option 2, or email [northamerica-sales@datainnovations.com](mailto:northamerica-sales@datainnovations.com) to discuss a quote for DI Technical & Professional Services.

For issues that arise during the upgrade, please contact [Data Innovations North America Customer Support](#) with your contact information, IM-license number, and nature of the request.

## Set an upgrade date

Finally, identify an appropriate go-live date for your upgrade. Communicate regularly with the project team and any affected facilities to prepare them for the event.

# Upgrade Tasks

## Upgrade across hardware

Task	Complete?
Confirm Server build(s) have been completed according to server sizing build specifications and are ready for Instrument Manager installation	
Confirm a member of the team has local admin access to the server(s) where the Instrument Manager application will be installed	
Access is available on new Instrument Manager server to drivers or driver folder from former server was copied to new server	
Confirmation from IT/Network resources that instruments and Instrument Manager can communicate in a stable fashion	
Modifications to ACL/Firewall security is in place for ports and trusted sites have been applied to your browser on the new server	
Availability of Instrument Manager Full Installation (ISO) file on server desktop(s)	
Receipt, accuracy review and availability of upgrade License Files on server	
Run windows updates before installation	
Create a backup of databases and IMOPTION.INI file in case of emergency	
Save off communication trace data you may want before you upgrade	
Release all results that are held for verification that you can before you upgrade	
Ensure date/time of servers are set correctly and match	

Before you start the upgrade, confirm your pre-upgrade tasks are done. Double-check your server builds are completed according to the specifications. Ensure that the date and time of the servers are correct and all match between systems. Make sure the ISO for the installer is on the servers and that there is a member of your team running the installer as an administrator.

Ensure that you any drivers that will be loaded into IM are available on the new servers. Ensure that you also have the current license files. Record the IM version of your current IM system as you will need it later.

Ahead of installation, you may want to install any Windows security updates on your server.

Before database migration, save any communication trace data to access after your upgrade as well as review and release results that are held for verification.

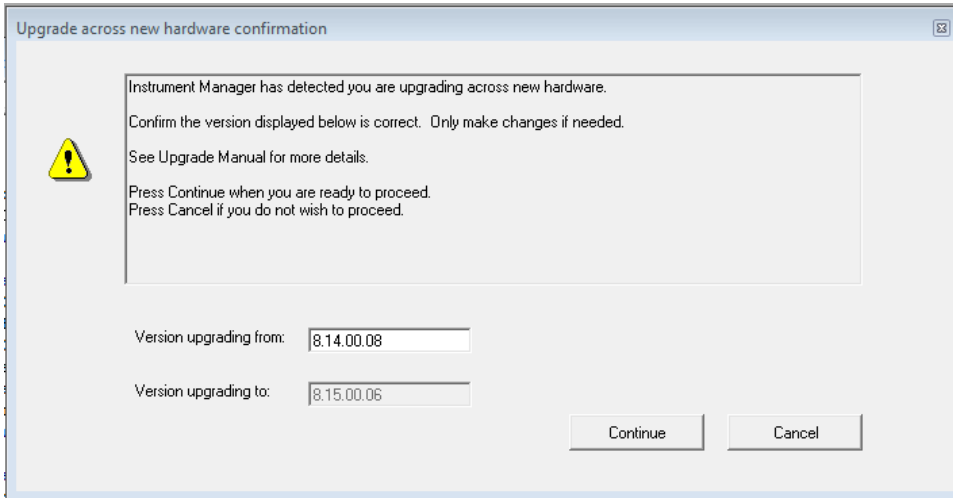
Mount the ISO and begin the installation of Instrument Manager by launching the setup.exe as an administrator. Be sure to input the drive letters to install IM and InterSystems databases. Place the license files and launch IM. Follow the upgrade guides for step-by-step direction.

When IM is installed, to bring your databases from your current production system over to the new system, you will have to shut down IM and InterSystems and copy the databases over to the new system. This will require downtime. Again, follow the upgrade guides for step-by-step direction.



**NOTE:** If upgrading a mirror environment to new hardware, remove your mirror configuration using the instructions in the *Remove a Failover or System from a Mirror Set* Help topic ahead of moving the databases over to your new Instrument Manager version. Install and upgrade one of the new servers that will serve as the new Primary mirror member. Install IM on the other servers as part of the mirror set, set up the mirror, and resynch based on the databases from that new Primary mirror member.

When launching IM, you will be prompted to enter your previous IM Version.



**NOTE:** This image is for reference only. Enter the version of IM you are upgrading from.

This information is in your License Information report. Once upgraded, confirm with your IT/Network resources that IM is able to communicate with other external components in a stable fashion and port exclusions are in place. Make changes to your instruments or interface engines to point to the new system.

**NOTE:** Upon rebooting your server, InterSystems will automatically attempt to start. Once started, all connections that are set to automatically start in Instrument Manager will start, even before Instrument Manager is launched. If you have the same TCP/IP setup between your two production systems, this can result in a connectivity clash where some connections are connected to your former production system and some are connected to your new production system. To avoid this, turn off "Start on System Start" for each of your connections in your former production system. Consider changing your InterSystems startup from Automatic to Manual on the former production server in the event it was unintentionally restarted. This can be done by changing the Caché® Controller for CACHE/IRIS Windows service from **Automatic** to **Manual**. See the *Controller for Windows Service* section of the Getting Started Guide for details.

Congratulations on completing your upgrade! Please continue to the [post-upgrade tasks](#).

If you encounter an issue, please contact [Data Innovations North America Customer Support](#) with your contact information, IM license number, and nature of the request.

**Warning** You may be asked to recover to your previous environment. Support for mirror rebuild during non-business hours do not qualify for 24-hour emergency support.

## Upgrade in place

Task	Complete?
Confirm a member of the team has local admin access to the server(s) where the Instrument Manager application will be installed	
Access is available on new Instrument Manager server to drivers	
Confirmation from IT/Network resources that instruments and Instrument Manager can communicate in a stable fashion	
Modifications to ACL/Firewall security is in place for ports and trusted sites have been applied to your browser on the new server	
Document the Instrument connectivity information (IP addresses, ports, or other connectivity information)	
Availability of Instrument Manager Full Installation (ISO) file on server desktop(s)	
Receipt, accuracy review and availability of upgrade License Files on server	
Verify the installation dependencies are installed	
Run windows updates before installation	
Create a backup of databases and IMOPTION.INI file in case of emergency	
Begin upgrade	

Before you start the upgrade, confirm your pre-upgrade tasks are done. Make sure the ISO for the installer is on the servers and that a member of your team will be running the installer as an administrator.

For failsafe purposes, it is recommended that you take a backup of your IM databases. Make sure that the backup has the critical databases, license files, your imoption.ini, and your drivers. You may want to save a copy of your Available Devices and Their Assignments report from within Instrument Manager.

You also may want to save any communication trace data for access post-upgrade as well as review and release results that are held for verification.

Mount the ISO and begin the installation of Instrument Manager by launching the setup.exe as an administrator. Be sure to input the drive letters to install IM and InterSystems databases. Place the license files and launch IM. Follow the upgrade guides for step-by-step direction.

**NOTE:** if upgrading a mirror environment, you must upgrade Instrument Manager on the Acting Primary first before upgrading Instrument Manager on the other mirror members. See the upgrade guides for details.

Once upgraded, confirm with your IT/Network resources that IM can communicate with other external components in a stable fashion and port exclusions are in place. Make changes to your instruments or interface engines to point to the new system.

If you encounter an issue, contact [Data Innovations North America Customer Support](#) with your contact information, IM license number and nature of the request. You may be asked to recover to your previous environment. Congratulations on completing the upgrade. Please continue to the [post-upgrade tasks](#).

## Post Upgrade Tasks

Task	Complete?
<a href="#">Verify InterSystems service controller</a>	
<a href="#">Load drivers</a>	
<a href="#">Activate the Software Security Key</a>	
<a href="#">Tuning Memory and Tables in InterSystems</a>	
<a href="#">Review Language Locales</a>	
<a href="#">Perform Validation</a>	
<a href="#">Checking the system</a>	
<a href="#">Check the browser-based features</a>	
<a href="#">Upgrade Thin Clients</a>	
<a href="#">Review supported QC Software packages with IM</a>	
<a href="#">Change driver setting from Test to Production at go-live</a>	
<a href="#">Go-live</a>	

### Verify InterSystems service controller

If your IM server needs to export files to a network share, you will have to setup your database service property. Examples of when to add an administrator account to your InterSystems service controller include:

- You have a driver accessing files from a network share
- You move purged archive files to a network share
- A nightly backup exports out to a network share.

Once your local IT has set up an administrative account for Instrument Manager to grant IM access to run InterSystems processes in elevated permissions, see the *Saving Files to a Network Location* Help topic for details on setting up that service.

For questions, contact [Data Innovations North America Customer Support](#) with your contact information and IM license number.

### Load drivers

If you have new drivers to load or want to ensure that your drivers are loaded into your upgraded IM, confirm that the drivers are in the Instrument Manager Drivers folder. To load the drivers, right-click on the Instrument Manager icon and select **Run as administrator**. For information on how to download, place and load driver files, see the *Loading and Configuring Drivers* Help topic.

**NOTE:** There are some Instrument Manager drivers that use a file path entered in the driver configuration to build or parse files. When upgrading IM to new hardware, ensure that those folders exist on your new systems and that the file path is updated to reflect the driver configuration.

For help loading drivers, contact [Data Innovations North America Customer Support](#) with your contact information and IM license number.

## Activate the Software Security Key

When DI sends the upgraded license file, a temporary Software Security Key (SSK) is provided for operational purposes while the request for your permanent key is processed. This should come with instructions on how to install the temporary SSK along with requesting the permanent Software Security Key. The 90-day window starts once the key is applied, not from when DI generated it. Once upgraded and on the temporary SSK, be sure to send in the request for your permanent Software Security Key. If applicable, request the SSK for members of your mirror set too. If you need to access the steps again to request the permanent SSK, see the IM Help topic *Activate the software security key*.

If you do not receive your 90-day SSK, are having difficulty installing your softkey, or have to run on the seven-day bypass, contact [Data Innovations North America Customer Support](#) with your contact information and IM license number.

## Tuning Memory and Tables in InterSystems

Upon Instrument Manager installation, **Memory and Startup** is set by default to **Automatically**. This setting means the database sets aside an automatically calculated portion of available physical memory, not to exceed 1 GB.

To optimize your memory settings, it is best to calculate the amount of memory available, then change the memory setting to **Manual** and enter your calculated values into InterSystems. Doing this ensures Instrument Manager will use the appropriate amount of available memory.

If you have previously configured these settings and upgraded in place, they will remain set and will not be overwritten by the upgrade process. If you have upgraded your system specifications or upgraded across new hardware, it is advised to recalculate to update your memory settings. For information on calculating your memory settings, search the IM help for the section *Memory Settings*.

During an upgrade of Instrument Manager, the Routines database may be overwritten with updated code. When this occurs, all Tune Table information for the system is overwritten as well. Therefore, after an upgrade, you should perform the Tune Table function. Refer to the *Tune Instrument Manager Tables* section in the Troubleshooting guide.

For questions about tuning or assistance with error resolution, please contact [Data Innovations North America Customer Support](#) with your contact information, IM license number and nature of the request.

## Review Language Locales

The Language Locale feature in IM changes the language of the text displayed in the user interface. If you are using this feature, confirm that the locale is available and can be displayed according to your preference.

You can change the language that displays on both driver screens and on Instrument Manager's main application screens. You can use the Language Locale feature to create, edit, copy, delete, import, and export different language locales. See the IM Help topic *Setup & Use of Language Locales* for more information.

## Perform Validation

When you have finished upgrading IM, it is time to start enacting your validation plans. Validation is key to ensuring your software change did not impact laboratory testing. Validation scope, procedure and efforts are typically site dependent.

**NOTE:** If you used Report or Barcode printers on your former Instrument Manager, work with your IT resource to install them on the new server. You must be able to print from the computer system on which Instrument Manager is installed. You may want to make sure any Report Designer Files you use for report printing are available in your printer driver configuration. If not, find and move these to your new server and the barcode or report printer configuration is setup to use those files.

## Checking the system

Instrument Manager includes tools to help you confirm that your upgrade was completed successfully.

### System Log

The System Log provides a log of configuration changes made to the system. The System Log records these events, when they occurred, and the user involved. To view the available system log data, from the menu in IM, select **Diagnostics**, then **System Log**.

Use the system log to confirm that the nightly purge and backup on your upgraded system was completed successfully.

### Status Display

The Status Display is a real-time view of the current state of the system and user defined connections. The window also provides information in the Details and Errors panes, the latter of which displays any errors relevant for the connection selected. For information on use of the Status Display window, search the IM Help for the term *Status Display*.

## Archive

The Archiving feature of Instrument Manager allows users to move data to an Archive database so that it can be used later for reference or historical purposes. Archiving data in this way allows you to keep only the data that is necessary for regular workflow, reducing the size of the live database and query time from SM Workspace. To use Archiving, you will need to have the Specimen Management feature licensed. If you have upgraded Instrument Manager and used archiving previously, check to make sure the Archive sendQ from the status screen is not fluctuating or building without decline. When the Archiving feature is enabled, data is automatically copied in real time into the Archive database for items that have been enabled and configured. As you are using Instrument Manager, you may want to check archive data in databases you archive to make sure this is functioning as expected.

To set up archiving for the first time, contact your regional sales representative to discuss purchasing a consultation.

## Mirror Monitor

Monitoring and maintaining your Mirror set regularly is a great way to ensure long-term protection of your Instrument Manager system. You can check your Mirror Member Status from the Status Display in Instrument Manager or by accessing the Mirror Monitor through the InterSystems Management Portal. Both options provide information on the health of your Mirror set. For information on Mirror monitoring, search the IM help for the term *Monitoring and Maintenance*.

**NOTE:** Directions to access Mirror Monitor are found in the *Monitoring and Maintenance* section of the Mirroring guide.

For assistance with error resolution, please contact [Data Innovations North America Customer Support](#) with your contact information, IM license number and nature of the request.

## Check the browser-based features

Some modules and features of Instrument Manager display information using browsers. Post upgrade, you may need to make sure they work as expected. Some areas to check are:

- Folder Browse buttons in Archive Setup and Backup Setup.
- Backup/Restore and clicking the Restore button.
- Moving Average Desktop.
- Laboratory Intelligence locations: User Portal, Cube Registry, Folder Manager, Settings.
- Mirroring Setup.
- DI Gateway.

If you have more questions about the browser-based aspects of IM or need assistance with error resolution, contact [Data Innovations North America Customer Support](#) with your contact information and IM license number.

## Upgrade Thin Clients

If you upgraded your Base Instrument Manager system, you also must upgrade your thin client system. If you have more than one thin client, upgrade them all to the new version of Instrument Manager. Ensure that you are using a supported operating system, have installed the correct service package from the Microsoft Windows Update website, and are logged into the system as a user with Administrative Privileges. Refer to the *Upgrading a Thin Client* section in the Manual for step-by-step directions.

**NOTE:** given the thin client and base IM system versions should match, it would be good to store the ISO you have used to update the thin clients somewhere at your facility. DI does maintenance releases for versions of IM and could have only the latest version of IM available for download which may not be usable with your current version of IM.

For questions about Thin Clients or assistance with error resolution, please contact [Data Innovations North America Customer Support](#) with your contact information, IM license number and nature of the request.

## Review supported QC Software packages with IM

Instrument Manager's open QC framework connects your IM system to any supported QC software package for which there is an IM driver. With open QC framework, quality control setup is accomplished using a driver configuration in Instrument Manager. See the driver help file provided with your Data Innovations QC driver for guidance setting up QC in the driver configuration.

For assistance installing and setting up the supported QC Software Package on IM, DI recommends reaching out to the vendor to coordinate that effort.

## Change driver setting from Test to Production at go-live

Some Laboratory Information Service (LIS) have in their messaging protocol a value to denote the message is Test or Production. As a result, some Instrument Manager LIS drivers have a setting to look for Test or Production in the messaging protocol. If your LIS is going to start to communicate Test versus Production, you want to make sure the driver configuration matches to avoid errors or no orders processing.

For questions about the driver setting or error resolution, please contact [Data Innovations North America Customer Support](#) with your contact information, IM license number and nature of the request.

## Go-live

Last stop on the journey is go-live on this new IM version. Congratulations on the upgrade!



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## About Data Innovations

Data Innovations is a global software company that is passionate about excellence in patient care. Through innovative solutions and world-class service, we enable enterprise management of hospital and independent laboratories. Founded in 1989 with headquarters in Vermont, Data Innovations serves more than 6,000 hospitals and laboratories in 80+ countries.

