# Imaging Protocol Manager

You can't be everywhere at once, but now your protocols can.

Imaging Protocol Manager is a cloud-based, multimodality, protocol-management solution that provides access, insight, and governance for protocols on imaging devices to help providers effortlessly deliver the right exam for each patient and meet regulatory and accreditation requirements in an efficient manner.

Facility A

Facility B
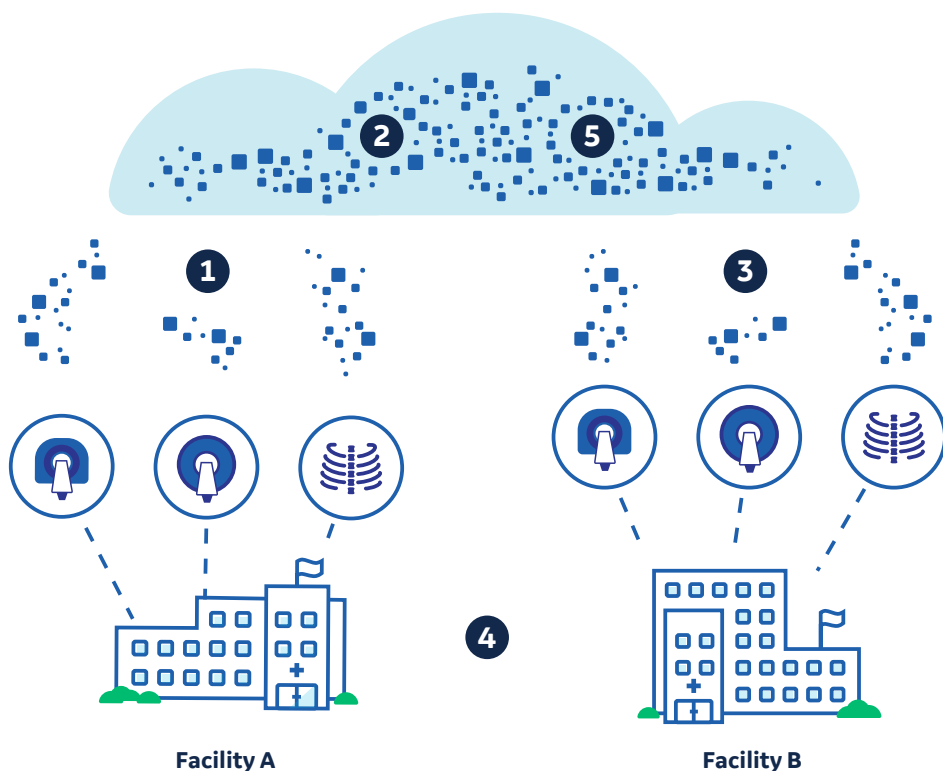
Key capabilities:

1. **PULL** – Import protocols to the cloud library from CT and MR devices

2. **PUBLISH** – View protocols and publish them as "Standard Protocols" for the fleet of the same devices

3. **PUSH** – Distribute protocols to scanners throughout the hospitals within the organization

4. **CLINICAL INSTRUCTION** – Verify positioning guidelines, contrast delivery, and technologist instructions

5. **DEVIATION TRACKING** – Track and monitor protocol deviation between the device and the standard protocol library on the cloud

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What is the GE Health Cloud?

The GE Health Cloud is designed to be a scalable, secure, connected, and interoperable platform, delivering the largest application ecosystem for the healthcare industry.

Designed to integrate into clinical workflows while managing the volume, velocity, and variety of healthcare data, the GE Health Cloud can connect to more than 500,000 GE Healthcare medical imaging machines and more than 1.5 million imaging machines worldwide. Additionally, the GE Health Cloud can link to millions of other healthcare devices including patient monitoring, diagnostics, anesthesia delivery, ultrasound, mammography and various data sources.

For more information, please navigate through the GE Healthcare website.

Application overview

GE Healthcare's Imaging Protocol Manager allows healthcare providers to improve consistency across their enterprises by empowering their protocol teams to develop, edit, optimize, manage, and download protocols to their devices with an easy-to-use app in the secure GE Health Cloud. It is a single app that can be used to ensure that the right protocols are on all CT and MR devices all the time, effortlessly.

Imaging Protocol Manager helps simplify the process to meet regulatory and accreditation requirements by keeping standardized protocols and their revisions in one location.

Imaging Protocol Manager also provides access to optimized protocols for GE Healthcare CT devices developed, validated, and verified by the University of Wisconsin-Madison, one of the world's premier healthcare providers and the world's first and largest school of medical physics.

Landing page

Protocol Manager supports role-based access control. On successful sign in to the Imaging Protocol Manager application with an assigned user account, you can view the application landing page with the selection options for 2 modalities (CT and MR) and also view the global settings:

Creating and managing your libraries

Libraries hold a set of protocols specific to a modality. With Imaging Protocol Manager, by clicking the Settings option on the left pane, you will be able to:

- Create a new library which will be used to manage your protocols on the cloud
- List the existing libraries along with details like the library type, corresponding modality, creation date and the user who created it
- Rename an existing library
- Mark a library as the standard library for your organization
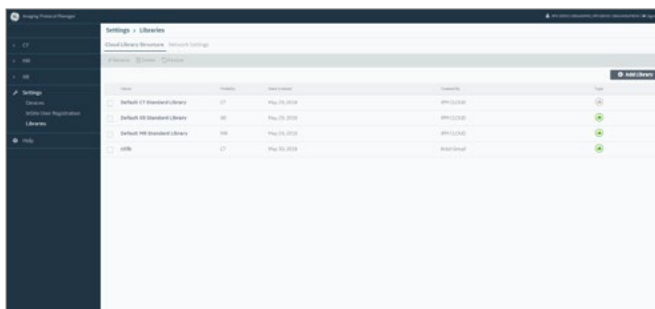
Managing your devices

The Devices section helps you understand the device interface by displaying device-specific details such as the device name, system ID, device modality and model number, the site information, and the status of the device in the Imaging Protocol Manager. There are two sections on this screen: one for directly connected devices and one for InSite™ back office-connected devices (CT LightSpeed™16 only).

Modality device view

This screen lists all the devices registered, with the number of protocols specific to a modality once imported. It lets the user import protocols from the scanner to the cloud library.

• View the list of protocols for a device relevant to a population category or an anatomical region, or sort them by protocol name, device model or device instance options

• Provides a baseline to ensure that the protocols in a device are in sync with the protocols in the standard library

• Import protocols from the device to the cloud device library
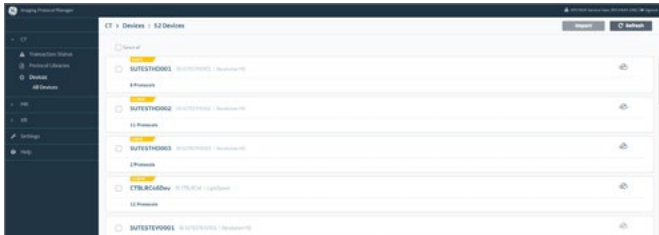
Managing your protocols

The Protocol Libraries section in Imaging Protocol Manager will help manage your protocols by providing visibility and ability on the following:

• View the list of libraries for the selected modality

• View/filter the list of protocols for the selected library

• Rename protocols

• Push selected protocols from the standard library to one or multiple devices

• View parameters and clinical instructions for the selected protocol
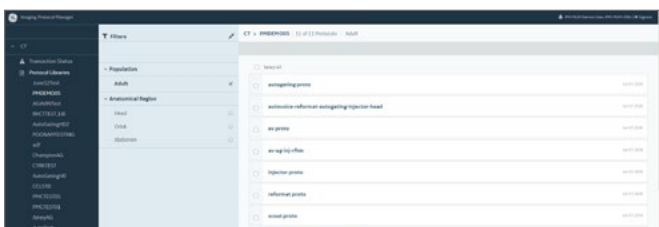
Viewing transaction status

The Transaction Status section in Imaging Protocol Manager will help view and filter the running transactions with event, site, date/time, and user details in two tabs:

• **The Devices** tab will display the status of the pull and the push events

• **The library** code will display the status of the copy and manage events
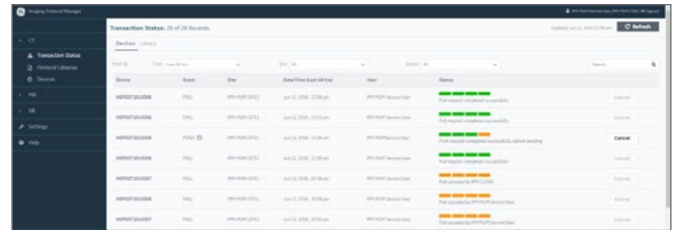
Customer Success Engagement

GE Healthcare offers standard Customer Success Engagement that not only helps customers get the value of the Imaging Protocol Manager application, but also assists your organization in implementing protocol management programs and processes.

In the standard Customer Success Engagement:

1. Customer Success Manager (CSM) is involved from the outcome-scoping phase until its realization.

2. Through regular and sustained touchpoints, the CSM coaches the customer team, leveraging Change Acceleration Process (CAP) expertise/tools from the definition of the vision and governance mechanisms to the follow-up action and initiatives.

3. To support customer success, the CSM can leverage GE Healthcare clinical experts, educational materials, and technical privileged support.

	Entitlement	Standard
Outcome coaching	Measure current state	●
	Clinical excellence	●
	Operation efficiency	●
	Financial growth	◐
Customer Success	Kick-Off	●
	On-line coaching (12 touchpoints)	●
	On-site advisory services	◔
	Change acceleration	◔
IT	Machine data	●
	RIS data	●

System specifications
& technical requirements

GE Health Cloud system requirements:

Item	Minimum Specification
OS	Windows® 7
Browsers	Google Chrome®, Internet Explorer®
Optimum screen resolution	1920 x 1080 pixels
Minimum bandwidth	100 Mbps
Regional cloud servers	U.S., U.K. (London)

* GE Health Cloud URL needs to be whitelisted at the firewall

## Connectivity requirements

Directly connected devices

The cloud agent resides on the device and securely connects it to the cloud server after the user registers and authenticates the device. The connection to upload or download protocols is always initiated from the device to the cloud.

Site status	Device & firewall configuration
No proxy	No configuration required on device
Proxy server IP and port number	Configure the device IP and port number on proxy
Proxy server IP with user name and password	Configure the device IP, port number, user name and password
Proxy certification by IT department	Configure the certificates in the device to go through the proxy
URL restrictions	It is recommended to restrict the URL request made from the device to the internet in your firewall configuration rules— GE Healthcare will provide the list of URLs to whitelist
Device source IP filtering	It is possible to configure firewalls to allow only certain devices to connect to the internet

InSite-connected devices (CT LightSpeed16 only)

This option leverages the existing InSite connection to upload or download protocols through VPN from the device to the GE Data Center. The GE Data Center uploads the protocols that come from the device, and similarly downloads protocols from the cloud and pushes them to the device.

Site status	Device & firewall configuration
Device is InSite checked out	No configuration required, check the connectivity on the device
Device is not InSite checked out	Contact GE Service to check out the device to establish connectivity
Proxy server IP required with user name and password	Configure the device IP, port number, user name and password
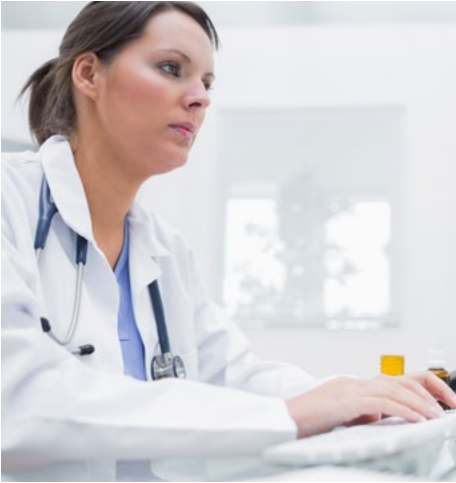
Data privacy and security

The Imaging Protocol Manager application helps to ensure confidentiality, integrity, and availability of customer data. To support adequate security for customer data, GE Healthcare has implemented required security measures at physical, network, and application levels of the application.

Physical & network level

The application will be hosted in a physically secured AWS (Amazon Web Services™) data center and GE Healthcare will monitor and deploy the application in a network security controlled environment. The configuration of network security components (i.e. firewall) is reviewed and configured by the GE Healthcare experts.

Application level

In accordance with its internal security standards, GE Healthcare has built all required security measures into the application.

Some of those specific measures are:

- Security risk assessment of the application
- Threat modeling and mitigation
- Encryption of the data at rest and in transit
- Strong authentication methods for every access
- Data integrity controls
- Audit trails for compliance purposes
- Specific security checks for protocol upload and download

GE Healthcare propriety and confidentiality

Imaging Protocol Manager only utilizes protocol configuration detail in conjunction with cloud-based services and applications to share settings. The data transmitted from the scanner includes scanner meta data, dependencies, and capabilities. No patient information (PHI) is being transmitted from scanner to the cloud.

Imagination at work