"This software is CE-compliant in accordance with Medical Devices Directive 93/42/EEC dated June 14, 1993, Annexes VII and V and is defined as a class IIa medical device in accordance with Annex IX."

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Caution:
Federal law restricts this device to sale by or on the order of a physician (or properly licensed practitioner).

Information in this manual may be subject to changes without prior announcement.
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System Overview

The Visage PACS/CS is a software product for the distribution of image and report data via intranet or Internet.

Visage PACS/CS is ideal both for complex requirements of large hospitals and for specialists' practices. The system can be customized to provide the optimum solution for each customer.

In this section you will find an overview of the Visage PACS/CS system and the Visage Web Client and its data security concept, and an introduction to the Visage PACS/CS user documentation available for this software.

Intended use

Visage PACS is a system for distributing, viewing, and processing medical images and reports within and outside health care environments. It is to be used only by trained and instructed health care professionals. Visage PACS consists of the following components:

- Visage PACS Storage
- Visage PACS Web
- Visage CS

Integration with other hospital information systems (HIS, RIS, CIS) is provided via special interfaces.

**Visage PACS Storage**

A server receives image data in DICOM format via the hospital network. This provides universal connections to archives, modalities, and workstations. The modalities that are supported by Visage PACS Storage are listed in the DICOM Conformance Statement.

Visage PACS Storage offers an archiving option for long-term storage of image data. The system guarantees the consistency of the data stored on archiving media but does not prevent data loss caused by media destruction.

**Visage PACS Web**

Data that are stored on the Visage PACS Storage server can be accessed simultaneously by multiple web-based viewing stations within or outside a healthcare enterprise through web clients.

The image data are transferred in DICOM format via the Intranet or the Internet, for example to stations located in a doctor's office, throughout hospitals or a physician's home. Strong data encryption is provided (SSL) to ensure secure data transfer. Images can be viewed directly within a web browser (Internet Explorer). The system
Visage CS offers simple functions for image manipulation and measurements. Reports can be viewed together with the images on one page.

Visage CS is a client server system that uses thin client technology for distribution of 3D image data generated from image data of state-of-the-art scanning modalities. The thin client viewer allows viewing and processing of 3D image data. No DICOM data is transferred to the client. It remains on the 3D application server at all times, ensuring safe and consistent access to large volumes of 3D data throughout the hospital enterprise. Instead of image data, a stream of compressed screen content information is transmitted during interaction.

If Visage CS is used in insecure networks (e.g. WAN), third party VPN (Virtual Private Network) solutions have to be used to secure data transfer between the Visage server and the client machines.

Important usage notes
Visage PACS can support physicians and/or their medical staff in providing their own diagnosis for medical cases. The final decision regarding diagnoses, however, resides with the doctors and/or their medical staff in their own area of responsibility.

Although the web and thin client technologies allow the software to be run on a variety of hardware platforms, for diagnostic purposes the user must make sure that the display hardware used for reading the images complies with state-of-the-art diagnostic requirements and currently valid laws.

Mammographic images compressed by a lossy method and digitized film screen images must not be reviewed for primary image interpretations.

The computers hosting the server-side software of Visage PACS/CS must be operated in a server room ensuring the appropriate operating and environmental conditions and access control.

License management

Every Visage PACS/CS installation comes with a license code. Without it the software will not run.

Licenses

The license code serves as copy protection and controls which product options are enabled. This includes:

- The maximum number of DICOM connections for calling/importing data from the network onto the Visage PACS/CS system, and for sending data from the Visage PACS/CS system.
- How many users may access data on the server simultaneously (per client type).
- The maximum data volume on the system
- Activation/deactivation of the audit trails.
- The availability of an archive option.
- The availability of the HL7 (Health Level Seven) option.
• The availability of the GSM (Global Session Manager) option.
• The availability of the worklist server option.
• The availability of the failover option.
• The maximum number of store servers for cluster configuration.
• The accessibility of the Visage CS Client.

Visage PACS/CS uses the so-called “floating licenses” concept. This means that a license is not bound to a particular user name or a dedicated workstation or PC. A license for 10 users means that 10 users can work with a Visage Web Client or Visage CS Client at any one time. If an 11th user tries to log on, he or she is told to try again later. Once one of the original 10 users logs off, logon of the 11th user will be permitted. Of course, licenses can be upgraded.

Upgrade

When upgrading an installation the old license becomes invalid. The new Visage PACS/CS license, which comes with the upgrade, must be installed.

If a larger data volume was licensed in a previous version, this may lead to the oldest data being deleted from the system after the new license has been installed, depending on the “auto-delete” settings defined by the system administrator.

Product information

In this section you will find information on:
• Constancy check
• Client types
• System requirements
• Hints for Visage Web Client installation
• Archiving with the archive option

Constancy check

Visage Web Client is a category A diagnostic imaging device (DID) for which the equipment used and the ambient conditions at the installation site must meet special requirements (RöV German X-Ray Ordinance dated January 8, 1987 in the version dated June 18, 2002 amending the RöV and other atomic energy ordinances). Imaging devices of this category are labeled accordingly.

The user is required to perform a monthly constancy check on these imaging devices in compliance with RöV, §16, per DIN 6868-57 (DIN V 6868-57:2000, Image quality assurance in diagnostic X-ray departments, Acceptance testing for image display devices).
The characteristic and reference values for the constancy check shall be defined during the acceptance test. The reference values shall be ascertained using the user's test instruments (luminance meter, at least class B (DIN 5032-7) with valid calibration, range 0.05 cd/m² to 10,000 cd/m²).

Client types

Visage Web Client provides different client types with different levels of functionality:

- **Visage Web Client View** with essential image viewing functions.
- **Visage Web Client Classic** offering more image handling and review functions.
- **Visage Web Client Expert** with full functionality.
- **Visage Web Client Expert Dual Monitor** with Expert functionality plus support of two monitors.

For a detailed comparison of the four client types refer to the Appendix.

If your installation does not support one of these license types an error message will be displayed when you try to log in.

System requirements

When describing system requirements we make a distinction between server and clients.

**Server**

For a specification of the hardware and software requirements for Visage PACS/CS servers please contact your sales representative.

**Clients**

These are the minimum hardware and software requirements for Visage Web Client PCs:

- **Operating system and software**
  - Microsoft Windows 2000, or
  - Microsoft Windows XP
  - Microsoft Internet Explorer 6.0 (Security Settings: Medium)
  - Microsoft NetMeeting (optional equipment for teleconferencing)
- **Computer/processor**
  - Intel Pentium III with at least 500 MHz (Intel Pentium IV, 2 GHz recommended)
- **RAM**
  - 256 MB (1 GB recommended for basic MIP/MPR viewer)

If you run clients on PCs with only 128 MB RAM the performance might not meet your expectations.
• **Hard disk**
  At least 2 GB free hard disk space

• **Graphics card**
  Resolution of at least 1024 x 768 pixels, true color

• **Monitor**
  17" color monitor (21" recommended) or grayscale monitor

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**Note**

Mammographic images may only be interpreted using an FDA-approved monitor that provides at least 5-Mpixel resolution and meets other technical specifications reviewed and accepted by the FDA (U.S. only).

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**Tip**

If you are working with high-resolution monitors your system administrator can configure the display of the Visage Web Client so that larger font sizes and icons are shown.

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• **Other**
  Network link or ISDN/analogue modem
  Loudspeakers, microphone, and web cam (optional for use with Microsoft NetMeeting Software)

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**Hints for Visage Web Client installation**

During installation the Visage PACS/CS server is listed as a *Trusted Site*. To ensure that the Visage Web Client ActiveX components can be installed on the client computer you must set the security level for *Trusted Sites* in the relevant network zone (intranet or Internet) to **Medium** or **Low**. The security level **High** would prevent ActiveX components from running.

In order to change the security level for *Trusted Sites*:

1. Open the **Internet Options** (menu **Tools > Internet Options**) dialog box in the Internet Explorer.
2. Click the **Security** tab card.
3. Click **Trusted Sites** and **Custom Level**.
4. Check the settings for **Trusted Sites** and change them if necessary.
5. Also be sure to disable **Use PopUp Blocker**, if you are working with Windows XP, Service Pack 2 or higher.

In order to add a **Trusted Site** manually:

1. Enter the Visage Web Client URL (e.g. http://servername/en) in the Internet Explorer address bar.
2. Select and copy the URL (Ctrl + C).
3. Open the **Internet Options** (menu **Tools > Internet Options**) dialog box in the Internet Explorer.
4. Click **Trusted Sites** and **Sites**.
5. Paste the URL in the **Add this Web site to the zone** box (Ctrl + V).
6. Click **Add** and then close the dialog box with **OK**.

**Note**

For installation, administrator privileges are required on the client computer.

**Tip**

At some sites the Visage Web Client is distributed in the Windows Domain with a so-called MSI Package. If this is the case the Visage Web Client will be installed automatically, no user interaction is required here.

**Archiving with the archive option**

With the archive option, data is sent to the archive according to a configurable schedule.

These archive options are available:

- Archiving on RAID hard disks
- Archiving on SAN and NAS devices

Which archiving method is used will depend on your requirements, the hardware used, and the configuration of archive option.

**Tip**

Archiving is always performed in the background. As a user you will not actively intervene in archiving. However, you can monitor the status of archiving in the study list and exclude studies from archiving.
Data protection and data security

Data relating to individuals is subject to data protection. In this regard, please ensure compliance with all applicable laws and regulations in your country.

Visage PACS/CS provides extensive security mechanisms that help you assure data protection and data security:

On the administration platform the system administrator can also activate the audit trail option. This ensures that the system follows the strict regulations concerning patient data protection and data security according to US law.

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Access control and authentication

Visage PACS/CS employs a user management concept that controls both access to study data and the availability of program functions.

Each user must log in on a Visage Web Client with a **user name** and **password**. The Visage PACS/CS server checks these entries. Only if they match is access to the system granted.

**Access to data**

Access rights to study data are defined by the system administrator on the Visage PACS/CS server. The basic idea is that only those users who are involved in a particular case should have access to study data.

Access authorization ensures that users can only view data for which they have access rights.

**Access to program functions**

In addition to restricting access to data, the system administrator can also make certain program functions available to some users but not to others. This way, every user will find only those icons and functions on the user interface that he or she really needs. Controlling the range of functions available for each user also adds to data security. The availability of potentially critical functions such as making specific patient data available to other users or deleting data that is no longer needed can be restricted to more experienced users.

When a function is disabled on a user level, the icon or input field for that function is also disabled.

Visage Web Client comes with a number of preset user levels with predefined functionalities. The Visage PACS/CS system administrator can adapt these user levels to your requirements.

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**Note**

For security reasons, it is not permitted to make changes to the product Visage PACS/CS and its database. Contravention of this will lead to all guarantees being revoked and under some circumstances may even be violating applicable laws.
Login and password
To ensure that user accounts and their passwords are effectively protected from unauthorized access:

- passwords are encrypted and, if this has been configured
- passwords will expire
- failed login attempts are recorded, and multiple failed login attempts will cause a user account to be locked.

**Note**
Recording logins and other actions only makes sense if all users on the system have their own user names and passwords.

**Tip**
You should change your password from time to time for data security reasons.

User profiles
The working environment of each user (user profile) is saved on the server when you log out. This supports roaming, which means that you can log in from any computer and find exactly the working environment you are accustomed to.

Auto logoff
Visage PACS/CS can be configured so that a logged in user is logged off from the system after a configurable period of time with no user interactions. This prevents licenses from being unnecessarily blocked and stops any unauthorized persons accessing data if a user has logged on but has forgotten to log off again.

Multi-session operation
If configured, a user may log on to Visage Web Client more than once from different PCs. Multi-session operation allows users to work from more than one clinical workplace simultaneously and view the same data there.

Each session makes use of (and thereby blocks) one license.

Service access permissions
Remote access for service purposes must be granted explicitly. It is therefore up to you if and to what extent you wish to grant access rights to service.

- Full Access
  Service has read and write permissions. This means that service personnel can analyze problems and can solve these problems or change settings. Service access is logged.
- Limited Access
  Service has read permission only.
- No Access
  Service has no access.
Audit trails

Logging of user actions in Visage Web Client occurs in so-called audit trails. Audit trails are recordings of access-controlled actions. They are the proof that access to patient data is monitored.

A message informs users that their actions may be monitored.

The following activities are recorded if the audit trail option has been activated by the system administrator:

- Changes to access rights with accessing user, date and time
- Viewing, printing, or deleting patient data
- Changes to archived images with time, date and user
- Login and logout, and failed attempts to log in
- Every query/retrieval
- Service sessions (local or remote)
- Software updates, as well as backup and restore

In addition the highest original number of images is recorded, to compare the current number of images.

Audit trails must be kept for a number of years. It is the responsibility of the system administrator to ensure that the relevant log files are archived according to the requirements that apply to your institution and country.

The system administrator is the only user who has access to the audit trails via a dedicated viewer.

For larger systems, a separate database server can be made available for audit trails.

Encryption

With Visage PACS/CS, data is transmitted in accordance with the SSL (Secure Socket Layer) standard. For this purpose, a security certificate, which is essential to guarantee the security of data transfer, is installed automatically on your computer the first time you start the program. Data is then automatically transmitted over a secure connection. Furthermore, it is advisable to additionally encrypt the images using the encryption function of the Visage Web Client for transmission.
For Visage Web Client users who access the web server over the Internet, the system administrator can set data encryption as a default for each data transfer. The system administrator can also make sure that these Internet users cannot deactivate data encryption themselves.

Overview of the Visage PACS/CS product documentation

The Visage PACS/CS product documentation distinguishes between three user groups and the tasks that these groups typically perform.

- Clinical users

  These users access the Visage PACS/CS server from a Visage Web Client or Visage CS Client in order to review 2D, 3D, or report data (Visage Web Client) or to view and process 3D volume data (Visage CS Client).

  The Visage Web Client and Visage CS Client user documentation addresses this user group.

- System administrator

  The system administrator of the hospital will perform system maintenance and adapt server configuration and database settings to changes in the system and network environment. This user group works on the administration platform.

  The Visage PACS/CS administrator documentation addresses this user group.

- Service personnel

  This user group will install the system and subsequently perform initial system configuration. This group will need the installation manual for system installation and the administration documentation for initial system configuration.

In this section you will find an overview of the available product documentation as well as information on how to work with the Visage Web Client user manual, online guide, and online help system.

User and administrator documentation

The Visage PACS/CS product documentation addresses the information needs of each of these user groups.

User documentation

The Visage Web Client and Visage CS Client user documentation addresses clinical users.

It comprises:
The **Visage Web Client** user documentation

In these documents clinical users will find a complete description of the Visage Web Client user interface and program functionality.

In the printed **user manual** (this document) you will find a complete description of all Visage Web Client functions.

The **online guide** offers additional information and task-oriented descriptions presented in a step-by-step style. Online guides are available on your installation medium in English and German.

Visage Web Client also features a **context-sensitive online-help system** which you can call up right from the user interface. The context-sensitive help topics explain all the user interface elements and features of the currently displayed screen in your native language. For the English and German user interface the online help system also contains task-oriented step-by-step instructions.

The **Visage CS Client** user documentation

The **user manual** (pdf file and/or printed manual) provides a complete description of all Visage CS Client functions.

Visage CS Client also features an **online-help system**, which you can call up from the Help menu. The various help topics explain the user interface of the client software.

**Tip**

You can download the user documentation as pdf files. Follow the corresponding link on the login screens.

**Administrator documentation**

The Visage PACS/CS administrator documentation supports system administrators in a hospital. It helps them with user management and adapting the system to changes in the overall network environment, if this becomes necessary.

The Visage PACS/CS administrator documentation also helps service personnel with initial system configuration tasks right after system installation or update.

- **The Administration Manual**

  This document is available as a pdf file on your installation medium. You can print out this document if you prefer reading on paper.

- **The administration platform Online Help System**

  The Visage PACS/CS administration platform features a context-sensitive online-help system.

  The context-sensitive help topics explain the parameters you will find and the settings you can make on the various configuration screens. Whenever relevant, background information on selected topics is also given in the online help system.

**Service documentation**

Installation instructions for single-server systems are available on your installation medium. Installation instructions for cluster systems and CS systems are available for Mercury Computer Systems service personnel only.
Release notes

Release notes contain additional useful information about the software. They focus on technical details. You can find the release notes document on your installation medium.

Information on using the Visage PACS/CS manuals

Document structure

In order to help you locate relevant information in the Visage PACS/CS manuals quickly, they are subdivided into chapters.

In the Visage Web Client user manual and online guide each chapter addresses a specific task or group of tasks relevant to your daily work with the product. For experienced users, The Visage Web Client Window section serves as a concise reference guide.

The Table of Contents and Index sections help you locate a topic quickly.

Layout conventions

To help you find and interpret the appropriate information, the following visual orientation aids are used here:

• Operating steps

Single-step actions are presented as plain text.

1. Operating steps in sequences of actions are numbered.

• Bold text

Names of windows, menus, and functions are shown in bold typeface. Sections of text given particular emphasis are also highlighted in bold type.

Tips, notes, warnings

Tips, notes, and warnings are highlighted.

Tip

Tips provide additional useful information about a topic. Tips, for example, help you organize your work more efficiently.

Note

Notes mark text that you should pay special attention to. A note may, for example, emphasize a piece of information relating to the safety of functions, but where no direct danger is involved.

Caution

Caution is used to indicate the presence of a hazard, which can cause personal injury to a patient, or damage to the equipment.
Information on using the online help systems

The Visage Web Client and Visage CS Client user interfaces, and the Visage PACS/CS administration platform feature an online-help system each.

Calling up online help

You can call up the online help system from any Visage Web Client window.

Click the help icon on the Visage Web Client navigation bar along the left edge of the window to open the context-sensitive online help system.

The context-sensitive online help displays the help topic relevant to the window that is active when it is called.

Tab cards

The left half of the Visage Web Client online help window shows tab cards for quick access to the help contents.

This tab card contains a table of contents similar to that of a printed book.

1. Double-click the book icon to display a topic and show subheadings.

2. Click the page with the question mark icon to display the text of a help page in the right half of the window.

You can search for index entries here.

1. Enter a word you want to search for.

   -Or-

   Scroll through the alphabetical index.

2. Double-click an index entry to display the information about it.

This tab card permits a full-text search.

1. Enter a word to search for.

2. Press the RETURN key.

   All help topics containing this word will be listed.
On this tab card you can set bookmarks to help topics that are of particular interest to you.

1. Display the topic you want to add to the Favorites list.
2. Click Add.

Links to other topics

In various help topics you will find links that will take you to more detailed information about a subject.

Text links are shown in blue and underlined.

Links in overview graphics are shown in italics.

Scrolling from topic to topic

Use the next and previous icons in the footer of each help topic to scroll through the online help system topic by topic.

Help window toolbar

The upper part of the help window shows a number of icon buttons. Use these buttons to adapt the help window, scroll through topics, and print topics.

- Shows the online help tab cards if they are hidden and then changes to the Hide button.
- Hides the online help tab cards if they are shown and then changes to the Show button.
- Returns to the previous topic.
- Returns to the next topic (after you have clicked Back).
- Prints the current topic on the set printer.
- Shows a menu with more help functions.
Starting and Ending the Program

This section tells you how to start Visage Web Client, log onto the server, and close Visage Web Client properly at the end of each session.

Depending on your system configuration, the type of data connection you are using to access the web server, and the settings made by your system administrator, you will use one of the following methods for calling up the Visage Web Client software program and logging onto the Visage PACS/CS system.

When you have finished working with Visage Web Client do not forget to log off from the system again.

Calling up the login screen

Before attempting to start Visage Web Client, make sure Microsoft Internet Explorer 6.0 is installed on your PC.

Visage Web Client will not work with older versions of the Microsoft Internet Explorer or Web browsers of other manufacturers. When you log onto the system, Visage Web Client checks whether the correct browser is installed. If it is not, a message tells you which browser you need.

Standard languages

The Visage Web Client user interface is available in six languages. You choose a language when you call the Visage Web Client login screen.

1. Connect to the Internet (or Intranet).
2. Start the Internet Explorer.
3. Enter the address (URL) of the Visage PACS/CS server.
   - http://servername/de (for the German program version)
   - http://servername/en (for the English program version)
   - http://servername/fr (for the French program version)
   - http://servername/es (for the Spanish program version)
   - http://servername/it (for the Italian program version)
   - http://servername/pt (for the Portuguese program version)

   Servername is a placeholder for the name of the Visage PACS/CS server on the network.
URLs that follow the convention of previous software versions (http://servername/visagepacs/en or http://servername/radin/en) are also still valid.

**Customer-specific translation**
If a customer would like to have the user interface translated into any other language than those listed above, a separate directory is available for this.

The customer-specific directory ... /cs contains a version of the user interface that can be translated into other languages.

The address of the login page in this case is:

http://servername/cs  
(for customer specific program version)

**Shortcuts**
To speed up the call-up procedure for subsequent logins you can create shortcuts to the login screen.

1. Enter the URL of the Visage PACS/CS server in the Internet Explorer address bar.
2. Select **Favorites > Add to Favorites** in the Internet Explorer menu.

-Or-

Reduce the Internet Explorer window so that it no longer covers the entire screen, and click this icon in front of the URL and drag it onto your Windows desktop.

3. Select Visage Web Client in the **Favorites** menu of the Internet Explorer.

-Or-

Doubleclick the Visage Web Client icon on your desktop next time you want to call up the Visage Web Client login screen.

**Downloading the user manual**
1. Click on the text link **Download user documentation** on the login screen.

   The link takes you to a web page where you will find the user manual as pdf file in the language you have selected for the user interface.

2. You can download the pdf file from here onto your local PC in order to view it online or print it out.
Standard system login

After you have entered the address of the Visage PACS/CS server, the Visage Web Client login screen is shown.

1. Select one of these client types: View, Classic, Expert, Expert Dual Monitor.
   -Or-
   Call up the Visage Web Client login screen in your preferred client type, e.g.:
   http://servername/en/view (for client type View)
   http://servername/en/classic (for client type Classic)
   http://servername/en/expert (for client type Expert)
   http://servername/en/2Monitor (for client type Expert Dual Monitor)

2. Enter your user name and password.
   Visage Web Client makes a distinction between upper and lower case letters.

3. Press the RETURN key or click the Login button.
   The Visage Web Client patient window opens.

   If you are unable to log in, either the maximum permissible number of users may be logged in at the moment or your license does not support the selected client type. In this case, try logging on again a few minutes later or select another client type.

   If Visage Web Client still does not start, check the network connection or contact your system administrator.

Dual monitor

In dual monitor mode you work with two monitors simultaneously. The operating elements and screen areas of the Visage Web Client software are distributed over two monitors. This makes working with Visage Web Client easier.

Dual monitor mode is only available if you have an Expert license and the required user privileges.

Multiple sessions

If your administrator has activated this function for you, you can log on to several workstations with the same user data and continue on one workstation with the work you started on another one.
Integrated Windows authentication

If your client is connected to the hospital network (Windows domain), you can work with Visage Web Client without entering a user name and password. Your Windows login will be used instead.

**Note**

Integrated Windows authentication is only possible for users whose accounts were imported in the Visage PACS/CS system from Windows and for whom the integrated Windows authentication privilege has been set by the system administrator.

Before calling Visage Web Client via integrated Windows authentication for the first time:

Start the Internet Explorer and call up the standard Visage Web Client login screen once (e.g. http://servername/en).

After that use the following URL for calling the Visage Web Client via integrated Windows authentication:

- Or-
- [https://servername/en/iwa/classic](https://servername/en/iwa/classic)
- [https://servername/en/iwa/2Monitor](https://servername/en/iwa/2Monitor)
Call-up from another software program

If you are working with other applications on your PC you might be able to call up Visage Web Client directly from such a program (e.g. a hospital or radiology information system (HIS/RIS) or electronic patient browser).

If Visage PACS/CS has been integrated in the other clinical software application, the program will start automatically whenever you select one or more images and call up image display. You do not have to enter your login data every time you call up image display in this case. The selected images are immediately displayed in the Visage Web Client viewer window.

If your Visage PACS/CS installation includes the Visage CS Client license both clients will be called up automatically when you select a patient and study on the HIS/RIS for which 3D volume data are available on the Visage PACS/CS system. Joint OEM call of course requires that the HIS/RIS has been configured to call Visage PACS/CS with the correct parameters and that your Visage PACS/CS user account holds appropriate user rights.

Changing your password

You should change your password from time to time for data security reasons.

1. Open the Visage Web Client login screen.
2. Open the popup menu of the login screen with the right mouse button.
3. Select Change Password from the popup menu.
4. Enter your user name and your old password, as usual, and press RETURN.
   You are now prompted to enter a new password on the login screen.
5. Enter the new password in the New Password box.
6. Enter the new password a second time in the Confirm box and press RETURN.
   Use the new password from now on when logging in.

**Tip**

If the login screen popup menu does not contain the Change Password item, ask your system administrator to configure this for you.
Logging off from the web server

Logging off from the server

You should always log off from the Visage PACS/CS system.
If images are currently being loaded, please cancel loading with the Esc key before you log out.

Click this icon in the lower part of the navigation bar.
This logs you off from the Visage PACS/CS system. The Visage Web Client login screen is displayed again.

-Or-

Click this icon in the top right corner of the program window.
This logs you off from the Visage PACS/CS system and also closes the Internet Explorer.

Tip
If you are working with a 1024x768 screen resolution the logoff icon in the lower left-hand corner of the navigation bar may not be visible.
Press F11 for a full-screen display of the Internet Explorer in this case. In this view the logoff icon is always available.

Tip
Your system administrator can configure an HTML link to an Internet page after manual logoff.

Automatic logoff

If Visage PACS/CS observes no activity for a certain time (default setting: 15 minutes) a message box appears. You are prompted to confirm that you wish to continue working. If you do not answer you will be logged off automatically after a few seconds. The license you were using is now available for another user.

Only the system administrator can change the automatic logout time.
The Visage Web Client Window

This section describes the screen layout and the windows you use when working with Visage Web Client. You will find a brief functional description of the individual windows, the icons, and other elements here.

You open the Visage Web Client windows via the navigation bar on the left-hand side of the screen. This navigation bar is identical in all Visage Web Client windows.

Tip

The online guide, which is available in German and English and which you received as a PDF file on your Visage PACS/CS installation medium, provides more detailed information and instructions for working with Visage Web Client. If you are working with an English or German user interface you can also download the online guide from the login screen.

Navigation bar

Using the icons on the navigation bar you can quickly switch to any of the other Visage Web Client windows.

Switching to another window will not load any data into that window. Instead the data you last loaded to that window is displayed.

Dual monitor

If you are working with two monitors, the navigation bar appears at the left edge of the left monitor and on the right edge of the right monitor. It contains the same icons on both monitors.

Audit Warning

A message is displayed. It informs you that only authorized users are permitted to use Visage Web Client and that all your actions may be recorded.

Patient Window

Lists all patients that were found by the last database query. You can select a patient here to display his or her study list next.
Study/Series Window
Shows all examinations and series of the selected patient.
If you activate the preview area, you will see preview images of the selected study or series in the right half of the window.

Image Preview (not for dual monitor)
Shows one or all series of an examination as thumbnails.
You can select individual images, or one or more series and load them into the viewers.

Report Window
If a report is stored on the Visage PACS/CS server for a selected study, you can view the report text in this window.
-Or-

Report with Image
You can display images of a study together with the report text.

Viewer 1
Displays the images of a selected study, series, or individual selected images in viewer 1.

Viewer 2
Displays the images of a selected study, series, or individual selected images in viewer 2.

Compare Mode (vertical)
Splits the screen down the center and displays the images loaded in viewer 1 on the left-hand side and the images loaded in viewer 2 on the right-hand side.

Compare Mode (horizontal)
Splits the screen across the center and displays the images loaded in viewer 1 in the upper half of the screen and the images loaded in viewer 2 in the lower half.

Basic MIP/MPR Viewer
Displays the basic MIP/MPR viewer (only possible for image data that is suitable for 3D reconstruction).

Status information
Displays information about all data transfer jobs in the network as well as a list of all logged on users.

Help
Calls a context-sensitive online help topic with an explanation of the window that is currently active.

Logoff
Logs you off from the Visage PACS/CS server.
Patient window

In the patient window you can search for the patient whose images you wish to review.

You can search for the patient in the local database (web server) or in the database of a configured DICOM partner.

Entering filter and search criteria will make searching easier.

Note

To ensure the confidentiality of patient data, the system administrator will, as a rule, restrict which examinations you are able to access. As a referring physician you may, for example, only be able to view the data of your own patients.

Dual monitor

When you are working in dual monitor mode, the patient list is spread over both monitors. The filter elements are shown on the left monitor only.
Information area (patient window)

This area of the patient window shows the user name you are logged in with.

- Hide/show filter criteria
  Use this icon for collapsing (or expanding) the filter parameters and search criteria section of the screen.

Patient List
Active window where you are now.

User name
User currently logged in.

Filter parameters

Here you select criteria for filtering the patient list.

**Study Date**
Here you can select a period. After a database query, the patient list will only show patients examined over this period.
- **Today** - lists all patients examined today.
- **Yesterday** - lists all patients examined yesterday.
- **The last X days** - lists all patients examined over the last X days.
- **Date** - lists all patients examined on this day.
- **From date to date** - lists all patients examined within the stated period.
- **All** - lists all patients, irrespective of examination date.

**Modality**
Here you can filter the patient list according to modality.
Click the ▼ icon next to the filter parameter **Modality**.
Check one or more modalities.
After a new database query, only patients examined with this modality or these modalities will be shown.

**Physician**
Here you can filter the patient list according to the name of the referring, performing, and/or reporting physician.
Click the ▼ icon next to the filter parameter **Physician**.
Check the box **Referring physician, Performing physician, and/or Reporting physician** and type the name of the physician. Or type A for all physicians whose name begin with A, for example.
-Or-
Open a list of all names by clicking on the ▼ icon behind an entry field. A list drops down with all referring, performing, or reporting physicians of the studies you have access to. Select a name.
If you are searching in the network, the patient list can only be filtered according to the referring physician.
The Visage Web Client Window

Location
Here you can filter the patient list according to the patient’s ward or the name of the institution where the patient was examined.

Click the ▼ icon next to the filter parameter Location.
Select a Ward or Institution Name.

Date of Birth
Here you can filter the patient list according to the patients’ dates of birth.

Date - lists all patients born on this day.
From date to date - lists all patients born within the stated period.
All - lists all patients, irrespective of date of birth.

Insertion Date
Here you can sort the patient list according to the date when the patients’ data were transferred to the web server.

Today - lists all patients whose studies were transferred to the web server today.
Yesterday - lists all patients whose studies were transferred to the web server yesterday.
The last X days - lists all patients whose studies were transferred to the web server during the last X days.
Date - lists all patients whose studies were transferred to the web server on that particular day.
From date to date - lists all patients whose studies were transferred to the web server within the stated period.
All - lists all patients, irrespective of when their studies were transferred to the web server.

Search criteria

Here you can enter search criteria for a database query. If you do not remember a name or number you can use wildcards in your search. (E.g. Mil to find Miller, Milford, Mittner, or *mil to find all the above and also Hamilton, or AB??34 to find AB1234, AB0034, and AB11345678.)

<table>
<thead>
<tr>
<th>Search Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Name</td>
<td>Searches for a patient by name.</td>
</tr>
<tr>
<td>Patient ID</td>
<td>Searches for a patient ID.</td>
</tr>
<tr>
<td>Patient Comment</td>
<td>Searches for a patient whose studies contain a specific comment.</td>
</tr>
<tr>
<td>Study ID</td>
<td>Searches for a patient with this study ID.</td>
</tr>
<tr>
<td>Study Description</td>
<td>Searches for a patient with this study description.</td>
</tr>
<tr>
<td>Accession Number</td>
<td>Searches for a patient with this accession number.</td>
</tr>
</tbody>
</table>
Toolbar (patient window)

In the patient window you will start all processing steps with the icons of the toolbar.

User-defined filter

You can select a predefined filter here.

Reset to Default Filter

Activates the filter defined as the default filter.

Set Filter Properties

The Personal Settings dialog box opens. You can define your own filters here.

Reset Filter Settings

All the filter parameters you entered are removed. Click Start Data Query to display the unfiltered patient list again.

Reset Input Fields

All the search criteria you entered are removed. Click Start Data Query to display a longer patient list again.

Data source

Here you select where to search for data: on the local web server database or on a DICOM network node.

Start Data Query

Starts a data query with the current filter and search criteria in the selected data source. As a result the patient list of the web server or a response list from a DICOM node will be displayed.

Cancel Data Query

A query currently in progress is stopped. All patients found so far are displayed.

Retrieve Study from DICOM Node

If you did not request data in the local database, but on a network node, you will see the response list of the DICOM node in the patient window. If you find the patient you are looking for in this list, you nevertheless cannot work with this data immediately. You must first copy the patient to the local database with this icon. This icon is dimmed while the data source web server is selected, or while no patient is selected in a network response list.

Query Patient

This icon is active if a patient was selected in the local patient list and then a DICOM partner was selected in the data source drop-down list. The patient name and the patient ID of this patient are copied into the search criteria boxes and the search for this patient is started on the DICOM partner.
DICOM Send
Opens a dialog box. Select the address(es) in your DICOM network to which you want to send the selected patient(s).

DICOM Quick Send
Sends the selected patient(s) to one or several DICOM nodes immediately. (Your system administrator has defined these addresses for you.)

Forward
For a better overview the patient list does not display all patients found at a time.
After a very generic patient search that results in more patients found, click this icon to page through the list of all patients found.

Backward
Click this icon to page backward through the list of all patients found.

Set Delete Protection
Delete-protected patients cannot be deleted (neither automatically by the program nor manually by the user).

Remove Delete Protection
Cancels delete-protection for the selected patient(s).

Delete Patients
The selected patient(s) is/are deleted from the local database if delete protection is not active.
The status bar shows the progress of deletion. You cannot continue your work until deletion has been completed.

Change Group Assignment
The Change Group Assignment dialog box opens. Here you can define which user groups have access to the selected patients.

Change User Assignment
The Change User Assignment dialog box opens. Here you can define which users have access to the selected patients.

Export Patient
The data of the selected patient(s) is exported. The data is first written to a directory on the server and then written to CD or DVD depending on the configuration. If you use a CD or DVD producer station, disks can be recorded automatically.
Next to the icon the volume of data that is stored for the selected patient(s) in the Visage PACS/CS database is displayed.

Launching Application
Starts another web application if your system administrator has configured this for you.
The icon is only active if you have selected a patient.
System messages

This part of the patient window shows important messages from the system.

Patient list (local)

The local patient list shows all patients found in the web server database who match the search criteria, and to whom you have access.

The patient list contains only one entry for each patient even if several studies exist for this patient.

Tip

You can sort the list by clicking on a column header.

<table>
<thead>
<tr>
<th>Patient Name</th>
<th>Name of the patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient ID</td>
<td>Patient's identification number</td>
</tr>
<tr>
<td>Date of Birth</td>
<td>Date of birth in YYYY-MM-DD format</td>
</tr>
<tr>
<td>Sex</td>
<td>M = male, F = female, O = other (unknown)</td>
</tr>
<tr>
<td>Modalities</td>
<td>Modality used to examine the patient</td>
</tr>
<tr>
<td>Patient Comment</td>
<td>Comment text about the patient</td>
</tr>
<tr>
<td>Report</td>
<td>Yes - a report exists on the Visage PACS/CS server for one of this patient's studies. No - no report exists on the Visage PACS/CS server. In the study/series window you can query for reports on configured report network nodes.</td>
</tr>
<tr>
<td>Delete Protect</td>
<td>Yes - this patient cannot be deleted. No - this patient can be deleted</td>
</tr>
<tr>
<td>Study Date/Time</td>
<td>Date and time of the study in the format: YYYY-MM-DD and hh:mm:ss (24-hour clock). If more than one study exists, the date of the most recent study is displayed.</td>
</tr>
<tr>
<td>Insertion</td>
<td>Date and time when the patient data was sent to the Visage PACS/CS server.</td>
</tr>
</tbody>
</table>
Response list (network node)

If you selected a network node as the data source instead of querying the local Visage PACS/CS server, you will see the response list of the DICOM node instead of the local patient list.

Here a patient name may be listed more than once as each entry represents exactly one study.

Tip
You cannot load patient data directly from the response list of a DICOM node into the study/series window. You must first copy a patient to the local database by double-clicking the patient entry, or with the **Retrieve Study from DICOM Node** icon.

<table>
<thead>
<tr>
<th><strong>Patient Name</strong></th>
<th>Name of the patient.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Patient ID</strong></td>
<td>Patient’s identification number</td>
</tr>
<tr>
<td><strong>Study Date</strong></td>
<td>Date of the study in YYYY-MM-DD hh:mm:ss format.</td>
</tr>
<tr>
<td><strong>Date of Birth</strong></td>
<td>Date of birth in YYYY-MM-DD format</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td>M = male, F = female, O = other (unknown)</td>
</tr>
<tr>
<td><strong>Accession Number</strong></td>
<td>Job number of the patient in the HIS/RIS (hospital or radiology information system)</td>
</tr>
<tr>
<td><strong>Study Description</strong></td>
<td>Description of the study</td>
</tr>
<tr>
<td><strong>Number of Images</strong></td>
<td>States how many images are stored for this study on the selected network node.</td>
</tr>
<tr>
<td><strong>Referring Physician</strong></td>
<td>Name of the referring physician</td>
</tr>
<tr>
<td><strong>Archive Status</strong></td>
<td>(archive option only) Here you can monitor the status of archiving of this study. The archive status tells you about the availability of the study in the archive.</td>
</tr>
<tr>
<td></td>
<td>✓ Completely archived</td>
</tr>
<tr>
<td></td>
<td>⌁ Partially archived</td>
</tr>
<tr>
<td></td>
<td>☐ Not yet archived</td>
</tr>
<tr>
<td><strong>Patient Comment</strong></td>
<td>Comment text about the patient.</td>
</tr>
</tbody>
</table>
Study/series window

The study/series window contains all studies, series, and presentation states of the patient currently selected in the patient list.

You use the study/series window to select a study, series, individual images, or a presentation state for display in one of the image viewers. To facilitate image selection you can display the images of a study as thumbnails in the right screen half of the study/series window.

Series and presentation state tab cards

A presentation state comprises all those images of a study that the reporting physician considered particularly important. Presentation states are compiled at the diagnostic workstation that sent the study to the web server.

Technically speaking DICOM presentation state objects contain references to selected images of the series of a study. A presentation state also stores the image display settings (such as window values, or zoom/pan settings) that were valid at the time when the presentation state was created.

If the presentation state tab card is not shown in your study/series window, then your hospital is not usually working with these DICOM objects. Your system administrator has therefore not configured this feature for you.

Dual monitor

In dual monitor mode, the study/series window is shown on the left monitor. The right monitor shows the preview area. It is not possible to hide the preview area in dual monitor operation.
Information area (study/series window)

This area of the study/series window provides information about the loaded patient.

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Name</td>
<td>Name of the loaded patient.</td>
</tr>
<tr>
<td>Patient ID</td>
<td>Identification number of the loaded patient.</td>
</tr>
<tr>
<td>Date of Birth</td>
<td>Date of birth of the loaded patient.</td>
</tr>
</tbody>
</table>

Toolbar (study/series window)

In the study/series window you will start most of your processing steps with the icons of the toolbar. But note that a popup menu is also available for selecting images in the image preview area.

- **Previous Patient**
  Shows the studies and series of the patient above the patient currently selected in the patient list.

- **Next Patient**
  Shows the studies and series of the patient below the patient currently selected in the patient list.

- **Show all Studies**
  When Visage Web Client is called from another application via the OEM interface, this icon shows all studies of the current patient.

- **Load into viewer 1**
  The selected study, series, presentation state, or individual images are loaded into viewer 1.

- **Load into viewer 2**
  The selected study, series, presentation state, or individual images are loaded into viewer 2.

- **Load to Compare Mode**
  Loads the first two series of a selected study, or two selected series, or two images into compare mode (side by side).

- **Load to Compare Mode**
  Loads the first two series of a selected study, or two selected series, or two images into compare mode (top and bottom).

- **Load to Basic MIP/MPR Viewer**
  Loads the selected series into the basic MIP/MPR viewer.
  Only CT or MR series that are suitable for 3D reconstruction can be loaded into the basic MIP/MPR viewer.
Load all series as one
Click this icon before you load an entire study into one of the viewers to merge all images of this study into one "viewing series".

Refresh
The study/series window is updated.

Delete object
Pops up a dialog box and allows you to select what you want to delete from the web server: the entire study, the study reports (if available), or a presentation state, or one or several selected series only.

Change Study Priority
Here you can change the priority of the selected study.

Archive Protection
Sets or removes archive protection for the selected study.

Compression Level A
Transfers images with compression level A. In compression level A, the images are usually only slightly compressed and without loss of quality. Your system administrator defines the compression rules for your system.

Compression Level B
Transfers images with compression level B, which compresses the images even more. Note that compressed images do not contain the full volume of data of the original. The diagnostic quality of the images is affected as a result.

Encrypted Data Transfer
The images are transmitted encrypted.

Non-encrypted Data Transfer
The images are transmitted without encryption.

Query Report
Requests a report on the currently selected study from the configured report network node. If a report on the selected study already exists on the Visage PACS/CS server, the report is downloaded again and the existing report is overwritten.

Use Local Cache
If this icon is activated, the images you download from the web server are stored in your local cache memory. When you load images into a viewer, Visage Web Client searches the local cache first and only retrieves data from the web server if no images are found in the local cache.

This option speeds up your workflow if you need to load and review one study several times during one Visage Web Client session. It is recommended for networks with low data transfer rates.
**Preload Study**
Loads all images of a selected study into the local cache for the duration of your session. When you subsequently load these images into a viewer and move on to this viewer the images are displayed immediately.

This icon is only active if **Use Local Cache** has also been selected.

**Image Preview on/off**
Switches display of the image area on or off.

**Truncate Thumbnails for Large Series**
Toggles thumbnail display for large series: one or all thumbnails per series are shown in the image preview section.

**Show Thin Slice Series**
When this option is selected the series list will list both thin slice series (original scan series) and thick slice series (generated image series which permit faster loading and browsing).

When this option is deselected only thick slice series are shown in the series list.

**Select all previews**
Selects all images in the preview area.

**Deselect all previews**
Deselects all images currently selected in the preview area.

**DICOM Information**
Shows the DICOM information of the image selected in the preview area.

**Launching Application**
Starts another web application if your system administrator has configured this for you. The icon is only active if you have selected a study.

**DICOM Send**
Opens a dialog box. Select the address(es) in your DICOM network to which you want to send the selected study (or studies) or series.

**DICOM Quick Send**
Sends the selected study (or studies) or series to one or several DICOM nodes immediately. (Your system administrator has defined these addresses for you.)

**Display as 3D volume**
Shows a selected series in the Visage CS Client for advanced 3D evaluation.

The icon is active when you select a series for which a 3D volume data set is available on the web server.

**Automatic Synchronization with 3D volume**
Select this option to ensure that both the Visage Web Client and the Visage CS Client will always show images of the same patient.
Study list

This list shows all studies of the patient selected in the patient list.

<table>
<thead>
<tr>
<th>Online Status</th>
<th>(for archive option only)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The online status tells you about the availability of the study in the local database.</td>
</tr>
<tr>
<td>✓</td>
<td>Completely available</td>
</tr>
<tr>
<td></td>
<td>Partially available</td>
</tr>
<tr>
<td></td>
<td>Not available</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Archive Status</th>
<th>(for archive option only)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The archive status tells you about the availability of the study in the archive.</td>
</tr>
<tr>
<td>✓</td>
<td>Completely archived</td>
</tr>
<tr>
<td></td>
<td>Partially archived</td>
</tr>
<tr>
<td></td>
<td>Not yet archived</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Archive Protection</th>
<th>(for archive option only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>study cannot be archived</td>
</tr>
<tr>
<td>No</td>
<td>study can be archived</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Study Description</th>
<th>Description of the study</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Study Date/Time</th>
<th>Date and time of the study in the format: YYYY-MM-DD and hh:mm:ss (24-hour clock).</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Referring Physician</th>
<th>Name of the referring physician</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Study Comment</th>
<th>Comment text about the study</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Accession Number</th>
<th>Accession number of the study</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Study ID</th>
<th>Study's identification number</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Report</th>
<th>- no report is stored on the Visage PACS/CS server for this study</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (2, 3, ...)</td>
<td>one or more reports are stored on the Visage PACS/CS server for this study. When you display or edit the report the most recent of these report versions will be shown.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Study priority</th>
<th>1 (red) - high</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2 (yellow) - normal</td>
</tr>
<tr>
<td></td>
<td>3 (green) - low</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-viewable Series</th>
<th>Number of series that cannot be displayed</th>
</tr>
</thead>
</table>
Series list

This tab card lists all series that are stored on the web server for the current study.

<table>
<thead>
<tr>
<th>Type</th>
<th>(Visage CS Client option only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>With <strong>Show Thin Slice Series</strong> selected both the original scan series (thin slice series) and thick slice series are listed in the series list. When this icon is not selected only thick slice series are displayed.</td>
<td></td>
</tr>
</tbody>
</table>

- Thin slice series (original scan series, series with a large number of images)
- Thick slice series (generated image series, series with a smaller number of images)

<table>
<thead>
<tr>
<th>3D Volume</th>
<th>(Visage CS Client option only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicates if a 3D volume data set is available for this series on the system. Only series with a 3D volume data set can be loaded into the Visage CS Client.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Modality</th>
<th>Modality used to create the series</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Number of Images</th>
<th>Total number of images of this series on the web server.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Highest Image Number</th>
<th>Highest available image number</th>
</tr>
</thead>
<tbody>
<tr>
<td>For modalities that work with single frame images, comparing the <strong>Number of images</strong> and the <strong>Highest Image Number</strong> helps you determine if all images of this series have been transferred to the web server.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Preloaded images</th>
<th>Number of images in the local cache</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Organ</th>
<th>Examined organ or body part</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>Description of the series</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Performing Physician</th>
<th>Name of the performing physician</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Series Date/Time</th>
<th>Date and time of creation of the series in the format: YYYY-MM-DD and hh:mm:ss (24-hour clock).</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Series number</th>
<th>Number of this series within the study</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Marked images</th>
<th>In these columns you will find information about whether images in this series have been marked with a star or a flag (only relevant if the imaging systems in your hospital support marking images).</th>
</tr>
</thead>
</table>

Presentation state list

This tab card lists all presentation states that are stored on the web server for the current study.

<table>
<thead>
<tr>
<th>Label</th>
<th>Presentation state label as entered on the diagnostic workstation where the presentation state was created.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Descriptive text for this presentation state.</td>
</tr>
<tr>
<td>Content creator</td>
<td>Name of the user who created the presentation state object.</td>
</tr>
<tr>
<td>Creation Date/Time</td>
<td>Date and time when the presentation state was created in the format YYYY-MM-DD and hh:mm:ss (24-hour clock).</td>
</tr>
<tr>
<td>No. of ref. images</td>
<td>Number of referenced images in this presentation state object.</td>
</tr>
</tbody>
</table>

Image preview

The image preview of the study/series window shows the images of the selected study or series as miniature images (thumbnails).

You use the preview area to select images or series. You can select an entire study, complete series, a presentation state or individual images from one or several series and then load them into a viewer. With large series that contain a large number of images and slow data transmission lines, selecting and loading only those images that are relevant to your diagnostic problem will save time.

Moreover the image preview contains information about the study, series, and the images they contain.

Refer to the preview window for details about:

- *Information about the study*
- *Information about a series*
- * Thumbnails*
- *Image preview popup menu*
Preview window

The preview window shows the images of the selected study or series as miniature images (thumbnails).

Unlike the preview area of the study/series window, this preview window shows the thumbnails over the full width of the browser window.

You use the preview area to select images or series. You can select an entire study, complete series, or individual images from one or several series and then load them into a viewer. With large series that contain a large number of images and slow data transmission lines, selecting and loading only those images that are relevant to your diagnostic problem will save time.

Moreover the image preview contains information about the study, series, and the images they contain.
Information area (preview window)

This area of the preview window provides information about the loaded patient.

<table>
<thead>
<tr>
<th>Patient Name</th>
<th>Name of the loaded patient.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient ID</td>
<td>ID of the loaded patient.</td>
</tr>
<tr>
<td>Date of Birth</td>
<td>Date of birth of the loaded patient</td>
</tr>
</tbody>
</table>

Toolbar (preview window)

In the preview window you will start most of your processing steps with the icons of the toolbar. But note that a popup menu is also available for selecting images.

- **Previous Patient**
  Shows the studies and series of the patient above the patient currently selected in the patient list.

- **Next Patient**
  Shows the studies and series of the patient below the patient currently selected in the patient list.

- **Load to Viewer 1**
  The selected study, series, or individual images are loaded into viewer 1.

- **Load to Viewer 2**
  The selected study, series, or individual images are loaded into viewer 2.

- **Load to Compare Mode**
  Loads the first two series of a selected study, or two selected series, or two images into compare mode (side by side).

- **Load to Compare Mode**
  Loads the first two series of a selected study, or two selected series, or two images into compare mode (top and bottom).

- **Load all series as one**
  Click this icon before you load an entire study into one of the viewers to merge all images of this study into one "viewing series".

- **Compression Level A**
  Transfers images with compression level A. In compression level A, the images are usually only slightly compressed and without loss of quality. Your system administrator defines the compression rules.
The Visage Web Client Window

**Compression Level B**
Transfers images with compression level B, which compresses the images even more.
Note that compressed images do not contain the full volume of data of the original. The diagnostic quality of the images is affected as a result.

**Encrypted Data Transfer**
The images are transmitted encrypted.

**Non-encrypted Data Transfer**
The images are transmitted without encryption.

**Query Report**
Requests a report on the currently selected study from the configured report network node.
If a report on the selected study already exists on the Visage PACS/CS server, the report is downloaded again and the existing report is overwritten.

**Use Local Cache**
If this icon is activated, the images you download from the web server are stored in your local cache memory.
When you load images into a viewer, Visage Web Client searches the local cache first and only retrieves data from the web server if no images are found in the local cache.
This option speeds up your workflow if you need to load and review one study several times during one Visage Web Client session. It is recommended for networks with low data transfer rates.

**Preload Study**
Loads all images of a selected study into the local cache for the duration of your session.
When you subsequently load these images into a viewer and move on to this viewer the images are displayed immediately.
This option is only active if **Use Local Cache** has also been selected.

**Truncate Thumbnails for Large Series**
Toggles thumbnail display for large series: one or all thumbnails per series are shown in the image preview section.

**Show Thin Slice Series**
When this option is selected the series list will list both thin slice series (original scan series) and thick slice series (generated image series which permit faster loading and browsing).
When this option is deselected only thick slice series are shown in the series list.

**Select all previews**
Selects all images in the preview window.

**Deselect all previews**
Deselects all images currently selected in the preview window.

**DICOM Information**
Shows the DICOM information of the selected image.
Launching Application
Starts another web application if your system administrator has configured this for you. The icon is only active if you have selected a study.

DICOM Send
Opens a dialog box. Select the address(es) in your DICOM network to which you want to send the selected series or image(s).

DICOM Quick Send
Sends the selected series or image(s) to one or several DICOM nodes immediately. (Your system administrator has defined these addresses for you.)

Display as 3D volume
Shows a selected series in the Visage CS Client for advanced 3D evaluation.
The icon is active when you select a series for which a 3D volume data set is available on the web server.

Automatic Synchronization with 3D volume
Select this option to ensure that both the Visage Web Client and the Visage CS Client will always show images of the same patient.

Information about the study

The colored header bar of the study shows the following information:

| study description | date/time | referring physician | study ID |

Tip
Click on the study information bar to select all images of this study or to invert the current selection of images. Double-clicking on the study information will load the entire study into viewer 1.
Information about a series

In the image preview thumbnails are grouped by series. Series header bars show the following information about a series:

<table>
<thead>
<tr>
<th>series description</th>
<th>modality</th>
<th>number of images</th>
<th>examined organ</th>
<th>date/time</th>
<th>additional series information</th>
</tr>
</thead>
</table>

Tip

Click on the series information bar to select all images of this series or to invert the current selection of images. Double-clicking on the series information will load the entire series into viewer 1.

Additional series information

- **CT:** Series scanned with contrast medium

  For CT series the abbreviation WC on the right edge of the series information bar indicates that these images were scanned with contrast medium. WO indicates that this series was scanned without contrast medium.

  If a CT series contains both images that were scanned with and without contrast medium then Visage Web Client splits up this series. The images are displayed grouped as two separate series.

- **MR:** T1/T2 series

  For MR series, Visage Web Client indicates if the series contains T1 or T2-weighted images.

  If an MR series contains both T1 and T2-weighted images then Visage Web Client splits it up. The images are displayed grouped according to their T1/T2-weighting.
Thumbnails

The way the thumbnails themselves are presented also provides information about image types and acquisition data.

**Multiframe images**

Series of some modalities can contain single images or multiframe images. You will recognize multiframe images by the dog-ear shown in the top right corner of the thumbnail.

**XA report or photofile images**

XA series may contain report or photofile images with image evaluation information. Report/photofile images are displayed next to the corresponding multiframe images as separate series.
Biplane scenes

XA scenes that have been recorded in biplane mode contain image pairs. You can recognize biplane scenes in the image preview by the fact that two multiframe images are close together.

Truncated series

For very large series so-called truncated thumbnail display mode can be enabled in the imager preview (see Truncate Thumbnails for Large Series icon in the toolbar). One image from the middle of the series followed by three dots is shown in the image preview for such long series.

MPPS (Modality Performed Procedure Steps)

Support of MPPS (Modality Performed Procedure Steps) can either be activated or deactivated by your system administrator.

If MPPS support is deactivated, the display of the series is staggered according to the SeriesInstanceID, and using possible value pairs (e.g. image type).

If MPPS support is activated, however, the MPPS-ID is used to group series, together with further value pairs. If no MPPS-ID is available, then the display is stag-
gered only according to these value pairs (e.g. image type). The original image sequence within an MPPS series is retained.

![Image preview popup menu](image.png)

**Image preview popup menu**

A popup menu is available in the image preview section to help you select images and show image information.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Select</strong></td>
<td>Selects the thumbnail the cursor is currently pointing to.</td>
</tr>
<tr>
<td><strong>Deselect</strong></td>
<td>Deselects the thumbnail the cursor is currently pointing to.</td>
</tr>
<tr>
<td><strong>Select all</strong></td>
<td>Selects all images of a study or series if the cursor points to the study or series title bar, or if the cursor points to anywhere between thumbnails.</td>
</tr>
<tr>
<td><strong>Deselect all</strong></td>
<td>Deselects all images of a study or series (depending where the cursor is currently pointing).</td>
</tr>
<tr>
<td><strong>Invert Selection</strong></td>
<td>Inverts the selection (i.e. selects the currently unselected images) of a study or series (depending where the cursor is currently pointing).</td>
</tr>
<tr>
<td><strong>Image Info</strong></td>
<td>Shows information about the image type and compression level settings for an image.</td>
</tr>
</tbody>
</table>
Report window

Visage Web Client can display both images and reports.

Visage Web Client provides a text-only view and a view in which images and report text are displayed side by side, and in which you can also edit a report.

Use these icons on the navigation bar to switch to the report window or report with image view.

The icons are active if you have selected a study for which a report is available in the study/series window.

Tip

You must first load images into viewer 1 or viewer 2 before switching over to the report with image view. Otherwise the image section of this view will remain blank and only the report text will be shown.

-Or-

Click the Edit report icon in the toolbar of one of the viewer windows to create a new report.

Visage Web Client now shows the report with image window whose report section is in editing mode.

Tip

Your system administrator can define that the report with image view is the preferred viewer. This means that it will automatically pop up when you double-click a study or series in the study/series or preview window for which a report exists on the Visage PACS/CS system.

If no report is available locally and a report interface has been configured with automatic report query, Visage Web Client will automatically search the HIS/RIS for the report every time you load images.

Dual monitor

Dual monitor operation does not support the text-only view. When you call the report with image view in dual monitor mode, the left monitor shows the image window, the right monitor shows the report.
Report window

The Visage Web Client Window

Report text

When you call one of the report windows with the navigation bar icons the report text is shown view only.

From the report with image window you can move on to the Visage Web Client report editor. In the text only report window you can only view but not edit a report.

Note

Note that when you edit and save a report in the Visage Web Client report editor this will only change the report stored on the Visage Web Client but not update the report version stored in the HIS/RIS for this study.

Caution

Visage PACS/CS can receive and display DICOM Structured Reports. The layout in which these structured reports are shown in Visage Web Client can be configured by Customer Service.

However, if Customer Service makes any layout changes at your request, you must validate these changes to ensure that all relevant report information is actually shown in the HTML report translation of these reports.
The Visage Web Client Window

Report text display

Header information
The header of the loaded report shows data about the patient and examination (for example, accession number, study ID, patient name, and patient ID). This data represents the information stored for this study and patient in the HIS/RIS.

Compare this data with the patient information in the viewer section (if you are working in the report with image window) or with the patient’s information in the study/series window to ensure the information in the HTML report is up to date.

Report text
If the report is too long for the report window, use the scroll bar to scroll through the report text.

Footnotes
When a report was received from the HIS/RIS in the format DICOM Structured Report it may contain footnote information, which is not immediately visible in the HTML report version shown in the report window.

Move the mouse pointer over these icons which indicate hidden footnote text to show this information in a tooltip.

Report editor

You activate the report editor with this icon in the toolbar of the image display section.

Once you have switched over from view only to editing mode a toolbar appears above the report text with basic text editing and text formatting functions.

Note
You can only edit the report text (white background) but not the report header (gray background).

Report editor toolbar

Save
Saves your changes to the report back to the web server.

Cancel
Undoes your editing and displays the report as you last saved it or as it was stored on the web server before you started editing it.

Font family and size
Allows you to change the font family and size for selected report text.
Image display

The image section in the report view contains all those images from the current study that you have loaded into a viewer.

The image display in the report window provides you with the same image display and editing functions as any of the viewer windows.

Viewer toolbar

Use the icons on the toolbar above the image display to change the display of the loaded image, to evaluate image information, and to print images.

See also Toolbar (viewer)

Position indicator bar

The position indicator bar below the image display shows you which image of a loaded series is currently visible.

See also Position indicator bar (viewer)
**Viewers**

The viewer windows integrate all functions required for reviewing images.

In the viewer windows you can scroll through the loaded images, select a screen layout best suited to your problem, optimize image display of individual or all loaded images for the duration of the current Visage Web Client session, and evaluate image information.

**Viewers 1 and 2**

Visage Web Client offers you two viewer windows. The layout of the windows and the function of the toolbar icons are identical in both viewers.

**Modality-specific options**

Depending on the modality of the loaded images, the toolbar of the viewer may contain a number of extra icons.

- Standard mode: all modalities except for XA
- Angio mode: XA

**Dual monitor**

In dual monitor operation, the viewer is spread across both monitors. It contains an additional scroll bar on the left monitor for navigating through the loaded images. This is synchronized with the right scroll bar.
**Information area (viewer)**

This area of the viewer provides information about the loaded patient and study.

<table>
<thead>
<tr>
<th><strong>Patient Name</strong></th>
<th>Name of the loaded patient.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Patient ID</strong></td>
<td>ID of the loaded patient.</td>
</tr>
<tr>
<td><strong>Date of Birth</strong></td>
<td>Date of birth of the loaded patient</td>
</tr>
<tr>
<td><strong>Study description</strong></td>
<td>Description of the study</td>
</tr>
<tr>
<td><strong>Study Date/Time</strong></td>
<td>Date and time of the study in the format: YYYY-MM-DD and hh:mm:ss (24-hour clock).</td>
</tr>
</tbody>
</table>

**Toolbar (viewer)**

With the icons of the viewer toolbar and the popup menu in the image display area you scroll through the loaded images, change the screen layout, and optimize the image display.

The viewer toolbar is shown as one, two, or three rows of icons, depending on your screen resolution and the number of configured icons.

**Note**

The selection of available icons depends on what images are loaded (XA images or others), and on how the system administrator has configured the user interface for you.

| **Change Toolbar Location** | Moves the toolbar from above to left of the image area (i.e. horizontal to vertical) and vice versa. |
| **Auto-Hide Toolbar/Lock Toolbar** | Hides or redisplays the viewer toolbar. If the toolbar is hidden move the cursor over the area where it would normally be shown to redisplay it temporarily and to access its icons. |
| **Previous Patient** | Shows the first study and series of the patient above the patient currently selected in the patient list. |
| **Next Patient** | Shows the first study and series of the patient below the patient currently selected in the patient list. |
| **Previous Study** | Loads the previous study of the current patient and displays its images. |
Next Study
Loads the next study of the current patient and displays its images.

Previous Series
Loads the previous series of the current study and displays its images. With multiframe images, the previous scene is loaded.

Next Series
Loads the next series of the current study and displays its images. With multiframe images, the next scene is loaded.

Previous Presentation State
Shows the previous presentation state of this patient and study.

Next Presentation State
Shows the next presentation state of this patient and study.

The Previous/Next Presentation State icons are dimmed if only one presentation state exists for this study or if no presentation state has been loaded.

Cancel loading
Stops loading images.

Select Images
Offers options for selecting images for printout on a DICOM printer.

Select all Images
Selects all loaded images for DICOM print.

Range Selection
Opens a dialog box for range selection.

Deselect all Images
Undoes the current selection for DICOM print (no images are selected after you click this icon).

Print
Allows you to print images on a connected DICOM or Windows printer.

Windows Print
Opens the Windows Print dialog box and prompts you to select a printer and print settings. All images currently displayed on the screen will be printed.

DICOM Print
Opens the DICOM Print dialog box and prompts you to select a printer and print settings. Only those images that are marked for DICOM print (solid green box in the lower right-hand corner of the image segment) will be printed.

Copy to Clipboard
Copies the currently displayed images to the clipboard. From there, you can paste the copied images into another Windows program (e.g. a presentation or NetMeeting program).
DICOM Send
Opens a dialog box. Select the address(es) in your DICOM network to which you want to send the selected image or all loaded images.

DICOM Quick Send
Sends the selected image or all loaded images to one or several DICOM nodes immediately. (Your system administrator has defined these addresses for you.)

Export Images
Exports the currently displayed images to a directory on your local PC. You can save the images as DICOM images or in BMP format.

DICOM Information
Shows the DICOM information of the current image.

Hide/Show Image Text
Shows or hides text in the image.

Edit Report
Opens an existing report for editing or creates a new study report on the web server.

Zoom
Allows you to enlarge or reduce the displayed images steplessly using the left mouse button.

While Zoom is active, the mouse pointer looks like this:

Quick Zoom
Permits temporary zooming of a portion of an image. As soon as you release the mouse button, the image returns to its original size.

While Quick Zoom is active, the mouse pointer looks like this:

Magnifying Glass
Allows you to enlarge a portion of an image by factor 2. As soon as you release the mouse button, the enlargement is no longer displayed.

While Magnifying Glass is active, the mouse pointer looks like this:

Pan
Allows you to move the image in the segment. If the portions of the image disappear off the screen after enlargement, you can pan them back into view.

While Pan is active, the mouse pointer looks like this:
The Visage Web Client Window Viewers

Windowing
If this icon is pressed, you can use the mouse to change the grayscale display (brightness/contrast) in the images.

While Windowing is active, the mouse pointer looks like this:

Edge Enhancement
This filtering enhances the contrast in images.

While Edge Enhancement is active, the mouse pointer looks like this:

Predefined Level Presets
If different window or filter values are predefined for the current image type, you can call them up here and apply them to the loaded images.

Reset Window Level
Resets the window and filter values back to default values (i.e. the values with which the images were loaded).

Invert
Inverts the grayscale display of an image. Bright areas are now shown dark and dark areas are shown light.

Rotate
Rotates the current image 90° clockwise.

Mirror
Mirrors the current image about its vertical axis.

Fit into Segment
Resizes the current image to fit it optimally in the image segment.

Original size
Resets the loaded image to its original size.

Measurement Functions
Opens a selection list with measurement functions.

Distance Measurement
Permits measurement of distances in images.

While this tool is active, the mouse pointer looks like this:

Measured values are indicated in exact millimeters (mm; in CT and MR images), estimated millimeters (mm[?]), or in pixels (pix) if no distance measurement in millimeters is possible.
Caution

The accuracy of distance measurements is ± 2 pixels. Larger errors can occur if the image is displayed with reduced matrix size, that is if not every original pixel is shown on the screen due to zoom-out. For optimum accuracy we recommend zooming into the structure of interest as much as possible. The accuracy is further limited by the physical resolution of the acquisition itself. If the monitor used for display does not permit exact pixel selection, the inaccuracy can be greater still.

Angle Measurement

Permits measurement of angles in images.

While this tool is active, the mouse pointer looks like this:

Caution

The accuracy of angle measurements depends on the length of the shorter of the two angle legs. The longer the angle legs are, the better the accuracy.

For example:
Length of shorter angle leg (measurement error):
10 pixels (± 12°), 20 pixels (± 6°), 50 pixels (± 2.5°), 100 pixels (± 1.1°)

Larger errors can occur if the image is displayed with reduced matrix size, that is if not every original pixel is shown on the screen due to zoom-out. For optimum accuracy we recommend zooming into the structure of interest as much as possible. The accuracy is further limited by the physical resolution of the acquisition itself. If the monitor used for display does not permit exact pixel selection, the inaccuracy can be greater still.

Calibrate Distance

Permits calibration of distances in images.

While this tool is active, the mouse pointer looks like this:

Density Measurement

Permits measurement of grayscale values (pixel values) in images.

While this tool is active, the mouse pointer looks like this:
ROI Ellipse
Permits evaluation of circular or elliptical regions of interest (ROIs) in grayscale images.
While this tool is active, the mouse pointer looks like this:

ROI Rectangle
Permits evaluation of rectangular regions of interest (ROIs) in grayscale images.
While this tool is active, the mouse pointer looks like this:

Measured values are indicated in exact square millimeters (mm²; in CT and MR images),
estimated square millimeters (mm²'), or in pixels (pix) if no distance measurement in millimeters is possible.

Caution
The relative error of the elliptical or rectangular ROI measurements is ± 2 pixels/
(shorter radius or shorter side).

For example:
Shorter radius or shorter side (measurement error):
10 pixels (± 20%), 20 pixels (± 10%), 50 pixels (± 4%), 100 pixels (± 2%)

Larger errors can occur if the image is displayed with reduced matrix size, that is if
not every original pixel is shown on the screen due to zoom-out. For optimum ac-
ccuracy we recommend zooming into the structure of interest as much as possible.
The accuracy is further limited by the physical resolution of the acquisition itself. If
the monitor used for display does not permit exact pixel selection, the inaccuracy
can be greater still.

Density Profile
Permits evaluation of a density profile along a straight line (an arrow indicates the direction).
While this tool is active, the mouse pointer looks like this:

Show Scoutlines (compare mode only)
Shows the position of selected images on the corresponding reference images.
Note that this icon is only shown in the viewer toolbars in compare mode. It will only become active if a CT or MR study has been loaded that contains suitable image data.

Show All Scoutlines
Shows all scoutlines in the reference image.

Show Border Scoutlines
Shows only the first and last scoutline in the reference image.
Show Border and Current Scoultines
Shows the scoutline of the current image and the first and last scoutline in the reference image.

Show Current Scoultine
Shows only the current scoutline in the reference image.

Display Mode
Opens a selection list with different layouts.

Select, for example, the 2x2 view. The image display is divided into 4 segments in this example. Depending on the number of images that are loaded, up to 4 images will be displayed at one time.

Cine Mode Backward
Plays back the loaded images like a movie. The playback direction is backward.

Cine Mode Stop
Stops movie playback.

Cine Mode Forward
Plays back the loaded images like a movie. The playback direction is forward.

Cine Mode Speed
If the slider is far left, movie playback stops. If the slider is far right, the movie is played back at maximum speed.

Bouncing Cine
If you click this icon, the movie will run without interruption: When playback reaches the last image, the movie runs backward to the first image, then forward again, etc.

Interactive Cine Mode
When Interactive Cine Mode is active, the images of a series (or scene) will play back when you move the mouse pointer over the image area. This gives the impression of a movie being played back.

Mouse up or right: play forward
Mouse down or left: play backward
Mouse stopped: still image

The direction in which you are supposed to move the mouse can be configured by your system administrator.

Gamma Adjustment
Opens a dialog box for the adjustment of the gamma curve of images. This adjustment applies to all Visage Web Client image viewers.

Show/Hide Presentation State
Toggles image display: from presentation state image to original referenced image and vice versa. The icon is only active if you have loaded a presentation state.
Angio mode

In angio mode (with XA images loaded), the toolbar contains a number of additional icons. They provide special display functions for evaluating XA scenes.

**Display as 3D volume**
Shows a loaded series in the Visage CS Client for advanced 3D evaluation. The icon is only active when you are reviewing a series for which a 3D volume data set is available on the server.

**Automatic Synchronization with 3D volume**
Select this option to ensure that both the Visage Web Client and the Visage CS Client will always show images of the same patient.

**Color Map**
Allows you to display the loaded images with another color map that highlights your current diagnostic problem in a better way.

**Plane A**
Switches to plane A for biplane angio scenes.

**Plane B**
Switches to plane B for biplane angio scenes.

**Loop All**
Successively plays back all loaded scenes of a study. If you click the **Previous Series** or **Next Series** icon during playback, the movie will jump back to the last scene or on to the next scene.

**Previous Frame**
Scrolls to the previous frame (individual image) of the multiframe.

**Next Frame**
Scrolls to the next frame (individual image) of the multiframe.

**Display Reports**
Displays the report images originating from the XA environment which are assigned to a scene.

**Display Scenes**
Switches back from displaying the report images to displaying the multiframe (scene).
**Image area with popup menu**

The image area shows the loaded images with the selected size and in the selected layout. The size of this area depends on the screen resolution and the actual size of the application window.

Right-click in the image display area.

A popup menu appears with all the processing options that are pertinent to the current image selection.

**Note**

Note that many image display functions are available from both the toolbar and popup menu. Others functions are available only from the toolbar or only from the popup menu.

The following table describes only those functions that have not already been explained in the context of the toolbar.

<table>
<thead>
<tr>
<th>Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Apply to All</strong></td>
<td>Applies the last editing step to all images of a loaded series.</td>
</tr>
<tr>
<td><strong>Auto Apply to All</strong></td>
<td>When this option is selected, all image editing steps are applied to all images of a loaded series immediately (and not just to one image alone).</td>
</tr>
<tr>
<td><strong>Undo</strong></td>
<td>Undoes the last editing step.</td>
</tr>
<tr>
<td><strong>Show/Hide Overlays</strong></td>
<td>Shows overlays if any have been created for the loaded images.</td>
</tr>
<tr>
<td><strong>Hide/Show Shutter</strong></td>
<td>Shows or hides a shutter, if a shutter was created for the loaded image.</td>
</tr>
<tr>
<td><strong>Undo Measurement</strong></td>
<td>Undoes the last editing step in the context of a measurement function.</td>
</tr>
<tr>
<td><strong>Delete Measurement</strong></td>
<td>Deletes a selected measurement graphic.</td>
</tr>
<tr>
<td><strong>Delete all Measurements</strong></td>
<td>Deletes all measurement graphics in the currently selected image.</td>
</tr>
<tr>
<td><strong>Select image</strong></td>
<td>Selects the current image (i.e. the image highlighted by a white border) for DICOM print. DICOM print selection is indicated by a solid green box in the lower right-hand corner of the image segment.</td>
</tr>
<tr>
<td><strong>Deselect image</strong></td>
<td>Removes the current image from the DICOM print selection.</td>
</tr>
<tr>
<td><strong>Hide/Show ECG</strong></td>
<td>Shows (or hides) the ECG curve in the image (only possible for XA images containing ECG information).</td>
</tr>
<tr>
<td><strong>SMPTE 1/2</strong></td>
<td>Calls one of two available test images for performing a display quality check of your monitor.</td>
</tr>
</tbody>
</table>
Position indicator bar (viewer)

You will usually have more images loaded than can be displayed simultaneously in the selected layout. The position indicator bar at the bottom edge of the screen tells you which images are visible and which are still in the background.

- **Light green bar**: These images are visible on the screen.
- **White bar**: This image is selected.
- **Dark green bar**: Loaded images are not visible.
- **Dark gray bar**: Image not yet loaded (only appears during loading).

**Tip**

The SMPTE images you can display here are not suitable for calibration of DICOM printouts. Use `TestImage_SMPTE_1k` instead. You find this test case in the patient list. If no patient of this name exists in your patient list, ask your system administrator to insert this test case into the Visage PACS/CS system from your installation medium. We recommend that you protect the `TestImage_SMPTE_1k` test case against deletion, so that it will not be deleted automatically when disc space is running low.
Compare mode

Compare mode shows the two viewers side by side or one above the other. You can easily compare two series in this way.

Use these icons on the navigation bar to switch to compare mode (vertical), i.e. side by side, or compare mode (horizontal), i.e. top and bottom.

**Image display and editing**

As far as image display and processing is concerned, you can work in both screen halves in just the same way as if a viewer were displayed full screen.

**Tip**

The toolbars above (or to the left) of each image view contain the same icons and access the same functions as in one of the full screen viewer windows, with one exception: Showing scoutlines in suitable CT or MR images is only possible in compare mode but not in any of the full screen image viewers or the report with image view. If configured, scoutlines are shown by default when you load suitable series into compare mode.

**Dual monitor**

In dual monitor mode, the two viewers are displayed on the two monitors: viewer 1 on the left and viewer 2 on the right monitor.
Basic MIP/MPR viewer

The basic MIP/MPR Viewer of the Visage Web Client can calculate a volume data set from suitable CT and MR series.

You can move freely through this volume data set, viewing new slice images in any plane or orientation.

### Note

The basic MIP/MPR viewer is a display mode only. It allows you to calculate and display new slice images. However, it does not provide measurement tools and you cannot save the recalculated images back to the web server. If you require advanced 3D evaluation functions contact your Mercury Sales Representative concerning the Visage CS Client option.

### Calculation method

The Visage Web Client basic MIP/MPR viewer gives you a choice of two 3D calculation methods:

- **Multiplanar reconstruction (MPR)**
  - This method is the default method used by the program.
- **Maximum intensity projection (MIP)**
  - You can switch each of the four views separately to an MIP-based display.

### 3D operation

Unlike other Visage Web Client windows, the basic MIP/MPR viewer does not provide a toolbar for calling operating functions.

In the basic MIP/MPR viewer, you work with:

- **Popup menu**
- **Keyboard**
- **Mouse clicks**

### Dual monitor

If you are working in dual monitor mode, the basic MIP/MPR viewer is only shown on the left monitor.
Information area (basic MIP/MPR viewer)

This area of the basic MIP/MPR viewer provides information about the loaded patient and study.

<table>
<thead>
<tr>
<th><strong>Patient Name</strong></th>
<th>Name of the loaded patient.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Patient ID</strong></td>
<td>ID of the loaded patient.</td>
</tr>
<tr>
<td><strong>Date of Birth</strong></td>
<td>Date of birth of the loaded patient</td>
</tr>
<tr>
<td><strong>Study description</strong></td>
<td>Description of the study</td>
</tr>
<tr>
<td><strong>Study Date/Time</strong></td>
<td>Date and time of the study in the format: YYYY-MM-DD and hh:mm:ss (24-hour clock).</td>
</tr>
</tbody>
</table>
3D overview segment

When suitable data is loaded into the basic MIP/MPR viewer, a volume data set is calculated from the acquired slice images. The volume is shown as an orientation cube in the overview segment.

Color coding after loading

Immediately after you have loaded a 3D data set, the anatomical standard views are shown in the slice segments. The orientations of these slices are shown as follows on the orientation cube:

- Surface with **yellow** border - transverse standard view
- Surface with **red** border - sagittal standard view
- Surface with **green** border - coronal standard view

Color coding after moving

Using the Slice cursor, you can change the orientation and position of slices in the slice segments. The slices always remain mutually orthogonal. This calculates and displays new slice images. The slices then no longer correspond to the anatomical standard views. The following now applies:

- Surface with **yellow** border - upper left segment
- Surface with **red** border - upper right segment
- Surface with **green** border - lower left segment

Image processing

To obtain a better view of the orientation and position of the display slices, you can rotate the orientation cube in each direction and change display parameters, such as window values. This is done with the mouse.
Slice segments

After you have loaded the data set, the slice segments first show the anatomical standard views:

- Transverse standard view (upper left, yellow border)
- Sagittal standard view (upper right, red border)
- Coronal standard view (lower left, green border)

Slice cursor

You can ascertain the position and orientation of the two other slices by the color of the Slice cursor and from the orientation labels.

You can use the slice cursor to move through the volume data set. You can observe the changes in orientation and position of the slices displayed in the 3D overview segment.

Image processing

To obtain a better view of details in the displayed slices, you can change different display parameters in the slice segments (e.g. window, zoom, pan).

Information in the slice segments

Orientation labels
Orientation and position of the slice in the upper right segment
Orientation and position of the slice in the lower left segment
Current operating mode
Current calculation method
Current slice thickness

Example: Upper left segment (after loading images: transverse slice)

Slice cursor

The slice cursor in a slice segment shows you the orientation and position of the slices that are currently shown in the two other slice segments.

Color coding

On the slice cursor:

- a yellow cursor line corresponds to the slice image in the upper left segment.
- a red cursor line corresponds to the slice image in the upper right segment.
- a green cursor line corresponds to the slice image in the lower left segment.
Slices in the volume data set

You can use the slice cursor of the three slice segments to move through the volume data set and display the recalculated slice images.

- If you move the center of the slice cursor, you will move the entire slice cursor in the image. This moves two view planes simultaneously in the volume data set and shows new slice images in both of the other slice segments.

- If you click near to the point of intersection on the cursor line, you will only move a single cursor line. That will take you through the volume data set along the two other standard axes and update the view in one of the other slice segments.

- If you click a long way from the point of intersection on the cursor line, you can rotate the slice cursor. This rotates the cross-hair, updates the views in the two other slice segments, and generates slice images with non-standard views in them.

Tip

You can monitor all your slice cursor movements in the 3D overview segment. This gives you a clear overview of the slices through the volume data set that are currently being displayed in the slice segments.

Popup menu

Right-click on a slice segment or on the 3D overview segment. A popup menu appears with all the processing options that are possible here.

- Apply to All  
  Applies a processing function in the current segment to all other segments, too.  
  (In the overview segment, only possible for windowing)

- Windowing  
  Activates interactive windowing with the mouse.

- Zoom  
  Activates interactive image zooming with the mouse.

- Pan  
  Activates interactive image panning with the mouse.

- Rotate  
  In the 3D overview segment only  
  Allows you to rotate the orientation cube in any direction with the mouse.

- SliceShift  
  In the slice segments only  
  Allows you to move the slice currently shown in the slice segment along two standard axes. Do not accidentally click on the slice cursor line.
### Basic MIP/MPR viewer

The Visage Web Client Window

**SliceThickness**  *In the slice segments only*

Allows you to change the slice thickness of the image shown in this slice segment interactively.

Do not accidentally click on the slice cursor line.

**View**

Opens a submenu:

**Fit into Segment**  
Enlarges or reduces the image so that it fits optimally into the image segment.

**Original size**  
Shows the image in its original size.

**Full size**  
Displays the current segment in full window size. The other three segments are then hidden.

**Show All slices**  *In the 3D overview segment only*

Shows or hides all slices in the overview segment.

**Slice1 (2, 3)**  *In the 3D overview segment only*

Shows or hides display of individual slices.

**Volume box**  *In the 3D overview segment only*

Shows or hides the volume box in the overview segment.

**Slice cursor**  *In the slice segments only*

Shows or hides the slice cursor in a slice segment.

**MPR**  
Selects MPR as the volume calculation method (default).

**MIP**  
Selects MIP as the volume calculation method.

**Reset**  
Resets all processing steps and again shows the images in all segments as they were when first loaded.

**Unload**  
Removes the data set from the basic MIP/MPR viewer. All segments are then empty.

### Keyboard

In the basic MIP/MPR viewer you can activate processing modes in the segments via the keyboard.

1. Click on a segment.

2. Then press the corresponding key.

   The display switches or the new operating mode is shown bottom left in the segment.

3. Now perform the processing step with the mouse.

   **w**  
   Activates interactive windowing with the mouse.

   **z**  
   Activates interactive image zooming with the mouse.
Mouse clicks

In the basic MIP/MPR viewer you can also switch operating steps and calculation modes using mouse clicks.

1. Left-click on the display of the operating mode in a segment to scroll forward through the operating modes.
   - Or -
   Right-click to scroll backward through the operating modes.

2. Left-click on the display of the calculation method in the lower right corner of the segments to switch between MPR and MIP.
# Appendix

## List of supported modality types and abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Modality</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR</td>
<td>computer radiography</td>
</tr>
<tr>
<td>CT</td>
<td>computer tomography</td>
</tr>
<tr>
<td>DR</td>
<td>digital radiography</td>
</tr>
<tr>
<td>DS</td>
<td>digital subtraction angiography</td>
</tr>
<tr>
<td>DX</td>
<td>digital radiography</td>
</tr>
<tr>
<td>ES</td>
<td>visible light (VL) endoscopy</td>
</tr>
<tr>
<td>GM</td>
<td>visible light (VL) microscopy</td>
</tr>
<tr>
<td>IO</td>
<td>intraoral radiography</td>
</tr>
<tr>
<td>MG</td>
<td>mammography</td>
</tr>
<tr>
<td>MR</td>
<td>magnetic resonance tomography</td>
</tr>
<tr>
<td>NM</td>
<td>nuclear medicine</td>
</tr>
<tr>
<td>OT</td>
<td>other method</td>
</tr>
<tr>
<td>PR</td>
<td>presentation state</td>
</tr>
<tr>
<td>PT</td>
<td>positron emission tomography (PET)</td>
</tr>
<tr>
<td>RF</td>
<td>radio fluoroscopy</td>
</tr>
<tr>
<td>RT</td>
<td>radiotherapy</td>
</tr>
<tr>
<td>SC</td>
<td>&quot;secondary capture&quot; images</td>
</tr>
<tr>
<td>US</td>
<td>ultrasound</td>
</tr>
<tr>
<td>XA</td>
<td>x-ray angiography</td>
</tr>
<tr>
<td>XC</td>
<td>visible light (VL) photography</td>
</tr>
</tbody>
</table>
## Overview of functionality supported by client types

### Navigation bar

<table>
<thead>
<tr>
<th>Window Type</th>
<th>Client type View</th>
<th>Client type Classic</th>
<th>Client type Expert</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient window</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Study/series window</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Preview window</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Report window</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Report with image</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Viewer 1</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Viewer 2</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Compare mode (vertical)</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>
## Appendix Overview of functionality supported by client types

<table>
<thead>
<tr>
<th></th>
<th>Client type View</th>
<th>Client type Classic</th>
<th>Client type Expert</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compare mode</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td></td>
<td>(horizontal)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic MIP/MPR Viewer</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Status information</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

### Patient window

<table>
<thead>
<tr>
<th></th>
<th>Client type View</th>
<th>Client type Classic</th>
<th>Client type Expert</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hide/show filter criteria</td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Filter parameters (all)</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Search parameters (all)</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>User-defined filter</td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Reset to Default Filter</td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Set Filter Properties</td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Reset Filter Settings</td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Function</td>
<td>Client type View</td>
<td>Client type Classic</td>
<td>Client type Expert</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>------------------</td>
<td>---------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>Reset Input Fields</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Data source</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Start Data Query</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Cancel Data Query</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Retrieve Study from DICOM Node</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Query Patient</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>DICOM Send</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>DICOM Quick Send</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Forward</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Backward</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Set Delete Protection</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>
### Appendix

#### Overview of functionality supported by client types

<table>
<thead>
<tr>
<th>Action</th>
<th>Client type View</th>
<th>Client type Classic</th>
<th>Client type Expert</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remove Delete Protection</td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Delete Patients</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Change Group Assignment</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Change User Assignment</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Export Patient</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Launching Application</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

### Study/series window

<table>
<thead>
<tr>
<th>Action</th>
<th>Client type View</th>
<th>Client type Classic</th>
<th>Client type Expert</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presentation state tab card</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Previous Patient</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Next Patient</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>
# Overview of functionality supported by client types

<table>
<thead>
<tr>
<th>Function</th>
<th>Client type View</th>
<th>Client type Classic</th>
<th>Client type Expert</th>
</tr>
</thead>
<tbody>
<tr>
<td>Show all Studies</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Load into viewer 1</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Load into viewer 2</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Load to Compare Mode</td>
<td>x</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Load to Compare Mode</td>
<td>x</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Load to Basic MIP/MPR Viewer</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Load all series as one</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Refresh</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Delete object</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Change Study Priority</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>
## Appendix Overview of functionality supported by client types

<table>
<thead>
<tr>
<th>Feature</th>
<th>Client type View</th>
<th>Client type Classic</th>
<th>Client type Expert</th>
</tr>
</thead>
<tbody>
<tr>
<td>Archive Protection (only with archive option)</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Compression Level A</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Compression Level B</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Encrypted Data Transfer</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Non-encrypted Data Transfer</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Query Report</td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Use Local Cache</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Preload Study</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Image Preview on / off</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Truncate Thumbnails for Large Series</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>
## Overview of functionality supported by client types

<table>
<thead>
<tr>
<th>Client type View</th>
<th>Client type Classic</th>
<th>Client type Expert</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select all previews</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Deselect all previews</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>DICOM Information</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Launching Application</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>DICOM Send</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>DICOM Quick Send</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Display as 3D volume</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Synchronize with 3D volume</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Show/Hide Thin Slice Series</td>
<td></td>
<td>x</td>
</tr>
</tbody>
</table>
## Viewers

<table>
<thead>
<tr>
<th>Viewers</th>
<th>Client type View</th>
<th>Client type Classic</th>
<th>Client type Expert</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change Toolbar Location</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Auto-Hide Toolbar/Lock</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Previous Patient</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Next Patient</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Previous Study</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Next Study</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Previous Series</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Previous Series</td>
<td>x</td>
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### Overview of functionality supported by client types

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<tr>
<th>Function</th>
<th>Client type View</th>
<th>Client type Classic</th>
<th>Client type Expert</th>
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<td>DICOM Send</td>
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<td>Interactive Cine Mode</td>
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<td>Client type Classic</td>
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<tr>
<td>Function</td>
<td>Client type View</td>
<td>Client type Classic</td>
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<td>Display Reports</td>
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<td>Hide/Show ECG</td>
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