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NUVODIA

GUIDELINES FOR LOADING & OPERATING WEB INTELLISPACE ENTERPRISE PACS

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Client System Requirements

System requirements vary, depending on whether the user will run IntelliSpace PACS Radiology or IntelliSpace PACS Enterprise with or without IntelliSpace PACS Volume Vision. See the following sections for the latest IntelliSpace PACS system requirements for the Client. IntelliSpace Volume Vision is the 2D/3D/4D enhanced viewing application part of IntelliSpace Clinical Applications R8.2, bundled with the comprehensive IntelliSpace PACS solution. IntelliSpace Volume Vision R8.2 is installed in combination with IntelliSpace PACS and can be optionally enabled by Nuvodia for the client. The installers check for appropriate software and hardware requirements of the client machine. A notification displays and the installation stops if the minimum requirements are not met.

Clients Hardware And Software Specifications

	Anywhere 1.3	Enterprise 4.4 without advanced visualization[2]	Enterprise 4.4 with advanced visualization	Radiology 4.4 with advanced visualization
CPU				
One CPU Intel Pentium IV		Minimum[3]		
One Intel Core 2 Duo @ 2.0 GHz		Recommended		
Two Intel Core 2 Duo @ 2.0 GHz or one QuadCore processor			Recommended	
One Intel Six Core or two QuadCore @ 2.5 GHz processors or better				Recommended
RAM[4]				
1 GB	Recommended	Minimum		
4 GB		Recommended	Recommended	
8 GB or more[5]				Recommended
Graphics card				
No special requirement		Minimum		
Mid-range graphics card		Recommended		
Mid-range graphics card with OpenGL 3.2 support, 1 GB on-board memory			Recommended	
High-end graphics card with OpenGL 3.2 support, 2 GB on-board memory				Recommended
Diagnostic displays[6]				
Two 2, 3, or 5 MP color or grayscale monitors; One 4 or 6 MP widescreen color monitor			Recommended	Recommended
Two 5 MP monitors 510K cleared				Required with mammography

Additional software

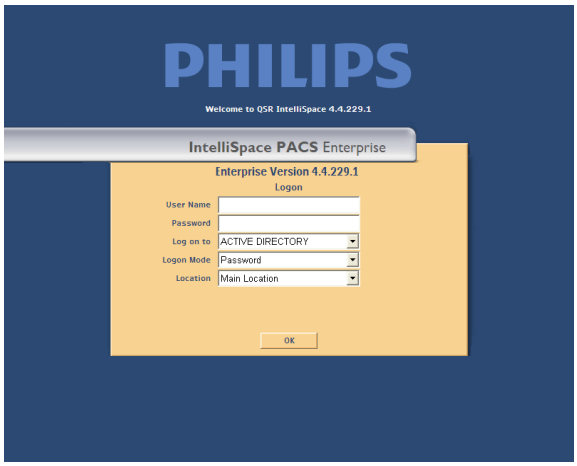
DirectX 9.0C for Windows XP (all versions) – additional SW required; DirectX 11.0 for Windows 7 (all versions)			Required with IntelliSpace Cardiology Enterprise Viewer R1.1V6	
Adobe Acrobat Reader (for Report and Help)			Required with advanced clinical applications (see Applications add-ons table on next page)	Required with advanced visualization[2]
Browser compatibility				
Internet Explorer 7, 8, and 9	N	Y	Y	Y
Internet Explorer 10 and 11	Y	Y	Y	Y
Firefox 33.1 and higher	Y	NA	NA	NA
Chrome 37.0 and higher	Y	NA	NA	NA
Safari 6 and higher	Y	NA	NA	NA
OS compatibility				
Windows 7, 32 bit and 64 bit[7]	Y	Y	Y	Y
Windows 8.1, 32 bit and 64 bit[7]	Y	Y	Y	Y
Windows RT[8]	N	N	N	N
OS X	Y	N	N	N
iOS 7, iOS 8, and iOS 9 (iPad 2 or later, iPad Mini)	Y	N	N	N
Android 4.0 and higher	Y	N	N	N

Loading the Intellispace Enterprise PACS

1. Open you Internet explorer browser and type: https://pacs4.nuvodia.com in the address bar
2. If prompted to install Philips Package Manager, select OK
3. You will see an in progress bar at the bottom that will progress.
4. After that is complete you will receive your login screen.
5. This can be saved in your Internet Favorites.

Logging into Intellispace PACS

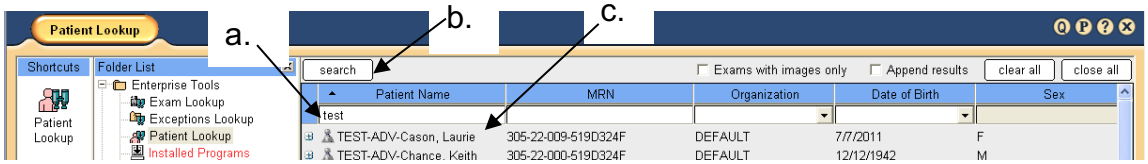
1. Enter the User Name and Password
2. "Log on to" should be ACTIVE DIRECTORY
3. "Logon Mode" should be Password
4. "Location" should be Main Location if running outside of location where PACS proc is located. Select your site name if running inside your facility.



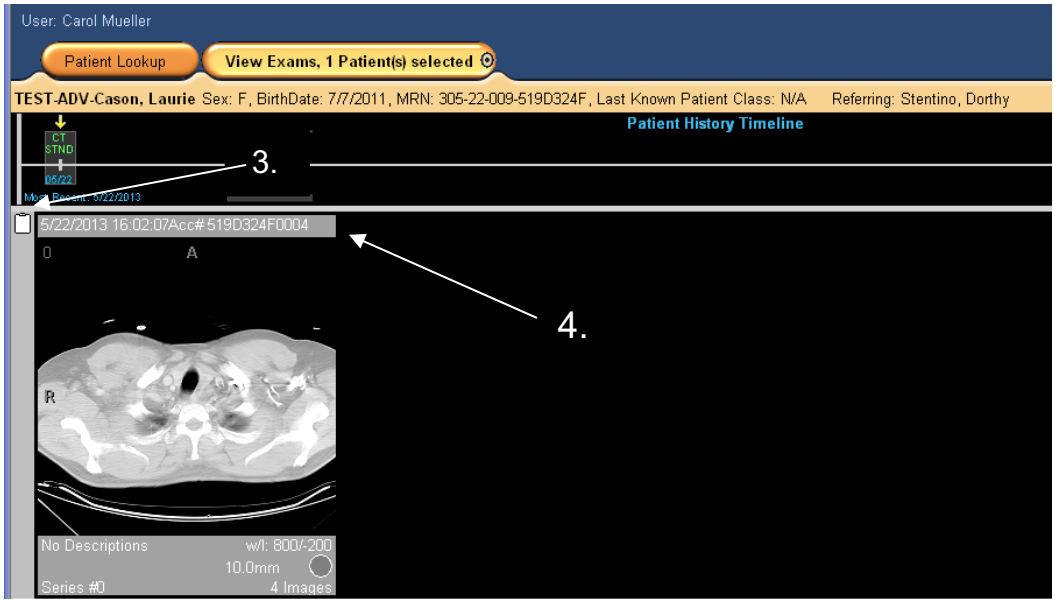
Viewing Images in Intellispace PACS

To view images:

1. To view images from a Filter, select Filter and click on image.
2. To select Patient from Patient Lockup.
    a. Type in patients name
    b. Select Search
    c. Select Patients Name to open their jacket and double-click on desired exam to open images



3. Select the clipboard to view memo/report
4. Select box in upper right corner of image to maximize

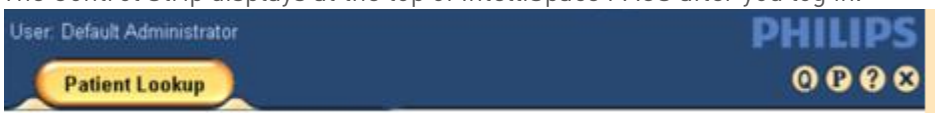

User: Carol Mueller
Patient Lookup
View Exams, 1 Patient(s) selected
TEST-ADV-Cason, Laurie Sex: F, BirthDate: 7/7/2011, MRN: 305-22-009-519D324F, Last Known Patient Class: N/A
Referring: Stentino, Dorthy
Patient History Timeline
CT
STND
05/22
3.
5/22/2013 16:02:07Acc# 519D324F0004
0
A
4.
R
No Descriptions
w/l: 800/-200
10.0mm
Series #0
4 Images

Additional PACS functionality

PROGRAM LAYOUT

Control Strip

The Control Strip displays at the top of IntelliSpace PACS after you log in.



It displays the name of the current user and the following:

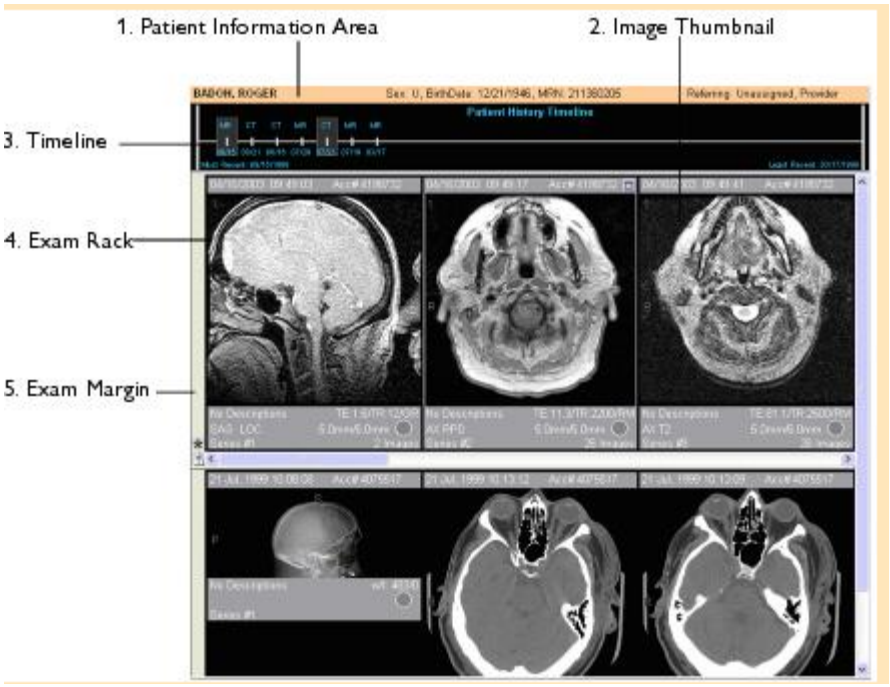
ICON	DESCRIPTION
	A tab showing the current action. You can click this tab to return to this action from the Canvas page (for example, **Patient Lookup** or **My Filters**). You can select multiple, non-contiguous patients using **Ctrl-click**.
	This tab displays when you double-click on an exam in the worklist, displaying the Canvas Page. If you have viewed more than one patient's exams, you can right-click on the tab to select the patient whose exams you would like to view, or to select the **Close All Patient(s)** option. Click the icon on the right side of the tab to close the currently displayed exams. The patient's name, sex, birth date, patient ID, and referring physician are displayed below the tab.
	Icon to access the iExport Queue application (if you have the proper privileges).
	Icon to access the **Preferences** dialog box (always displayed).
	Icon to access the online help (always displayed).
	Icon to log off of IntelliSpace PACS (always displayed).
Low memory warning	If available memory falls below 50 MB for IntelliSpace PACS Enterprise or 128 MB for IntelliSpace PACS Radiology, a notification displays in the Control Strip. Users should contact their IT department to increase hardware components to meet their viewing needs.
	Displays an About box that displays the Philips end-user license agreement and information.

Using the Canvas Page

The Canvas Page displays patient exams and provides quick access to diagnostic images and series, diagnostic reports and exam notes, patient information, and diagnostic reading workflow. You use the Canvas Page to get contextual, historical information about the patient.

You can reposition an image by selecting its information bar, dragging and dropping it to the desired location. Each exam has its own horizontal scrollbar that you can use to pan through the images and series in that exam. You can use the vertical scrollbar at the right side of the screen to view the selected exams if there are more than can fit on the screen.

The IntelliSpace Enterprise Canvas Page displays the following:



1. Patient Information Area: Displays general information about the patient whose exams you are viewing, including the patient's name, sex, date of birth, MRN, and referring physician. It also displays a Patient Class entry, which designates the type of patient, typically Inpatient (I), Outpatient (O), Emergency (E), and so forth. This information comes from the HIS/RIS.

2. Image Thumbnail: Displays thumbnail images and/or image series of an exam. Each image or series has an information bar below it. Double-clicking a thumbnail image or series opens an image popup window. Right-clicking a thumbnail image displays a menu with various options. See Using Image Popup Windows and Using Thumbnail Images.

3. Patient History Timeline: Displays a chronological listing of all of the patient's exams on the IntelliSpace PACS server. See Using the Patient History Timeline.

4. Exam Rack: A horizontal or vertical display of the thumbnail images for the exam.

5. Exam Margin: Displays various icons if they are available for the image. Right-clicking in the Exam Margin displays a menu with various options.

WARNING

- Make sure you label the left and right sides of an image correctly to prevent incorrect patient orientation and the possibility of misdiagnosis.
- Make sure you follow industry best practices for correct patient orientation.
- Make sure the images were acquired correctly at the modality before using them for diagnosis.
- Make sure you validate third party software to ensure that it is using the correct information from the outside source. In addition, proper validation of third party software must be done to ensure that it is using standard DICOM tags. Images that are submitted with a different pixel spacing tag than what IntelliSpace PACS uses (0018,1164) to perform measurements on projection radiography images could lead to incorrect measurement readings, thus leading to misdiagnosis and treatment planning.

VIEWING AND MANIPULATING IMAGES

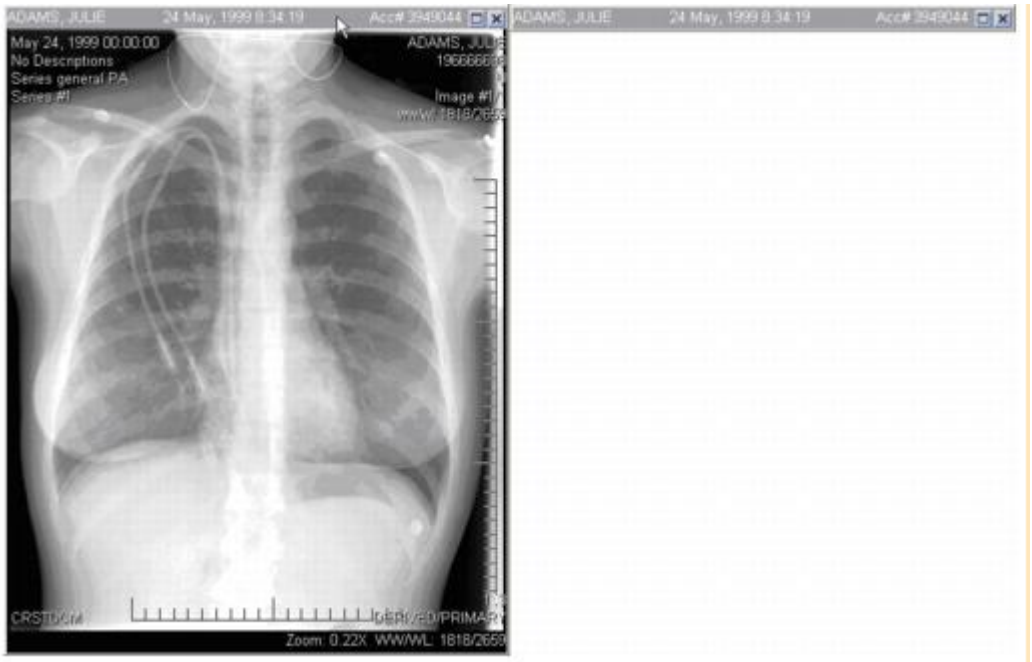
Using Image Popup Windows

Image popup windows provide additional image manipulation functionality not available for thumbnail images. You can arrange these windows by dragging them to the desired location on the Canvas Page and resizing them.

You can display an image popup window by doing one of the following:

- Double-clicking a thumbnail image
- Right-clicking an image and selecting Create Popup from the menu.

You can minimize popup windows by double-clicking on the window's top margin. To re-enlarge the window, double-click the image margin.



Right-clicking in an image popup window displays a menu with the following options, depending on the modality and whether the series is single-image or multi-sliced:

- Interaction: Allows you to select an enhanced cursor for zoom, pan, scroll, or brightness, if you have enabled this in the General user preferences.
- Window Width/Level (WW/WL)
- Measurements
- Annotations
- Delete All Measurements and Annotations (if there are annotations)
- Image Processing
- Scout Line Mode (for CT, MR, and PT)
- Localizer Mode (for CT, MR, and PT)
- Multi-Image Mode (for stack images):
- Key ImagePlay Cine Loop (for multi-sliced series): Allows you to scroll through the slices in a series either one-by-one (Cine mode) or rapidly (Fast Cine). For a frame-by-frame review, slowly scroll the mouse-wheel. For rapid review,

double-click the mouse-wheel and drag the mouse forward or backward. For Coarse Fast Cine mode in Standard mouse mode, click the middle mouse button while dragging the mouse up or down past the point in which you placed your cursor. In Enhanced mouse mode, left-click while dragging the mouse down past the point in which you placed your cursor.

- New Link
- Link All Axials/Sagittals/Coronals/Obliques (for multi-sliced series)
- Clone
- Clone Window with Preset
- Save
- To Paper Printer
- Flip/Rotate/Sort/Split
- Zoom Presets: Allows you to select a preset zoom factor of Fit to Window, 100% (Original Size), 200%, 300%, or 400%.
- Magnifying Glass

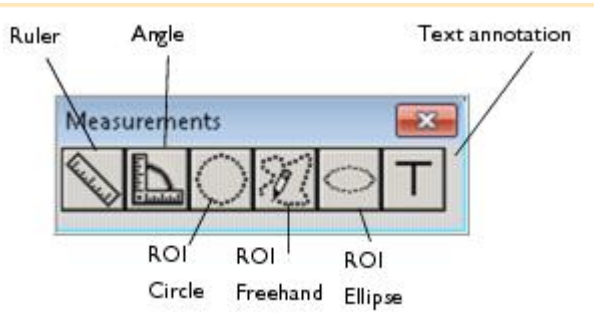
Addional documentation on the above items is available in the Online Help, by clicking the "?" in the Program Control Strip on the top of the Screen.

Panning Around an Image

You can use the Step Zoom tool to step sequentially through portions of the image at full resolution, instead of having to pan manually.

- Hold down the mouse-wheel button while dragging your mouse in the desired direction. To pan around an image-series, such as an MR or CT exam, left-click the mouse while holding down the Ctrl key and drag the mouse to display the desired area

Using the Measurement Palette



IntelliSpace PACS provides a Measurement palette that streamlines your work and allows you to make various measurements and the text annotation on an image. You can drag the Measurement palette to any location on your screen. You can also toggle the display of the palette by pressing M. The Measurement palette displays for the exam until you close the palette.

WARNING: Measurement values are modality dependent. The measurement values that IntelliSpace PACS displays are derived from information sent by the modality responsible for generating the image being measured. If this modality is incorrectly configured or defective, IntelliSpace PACS measurement values may be adversely affected and may be incorrect.