

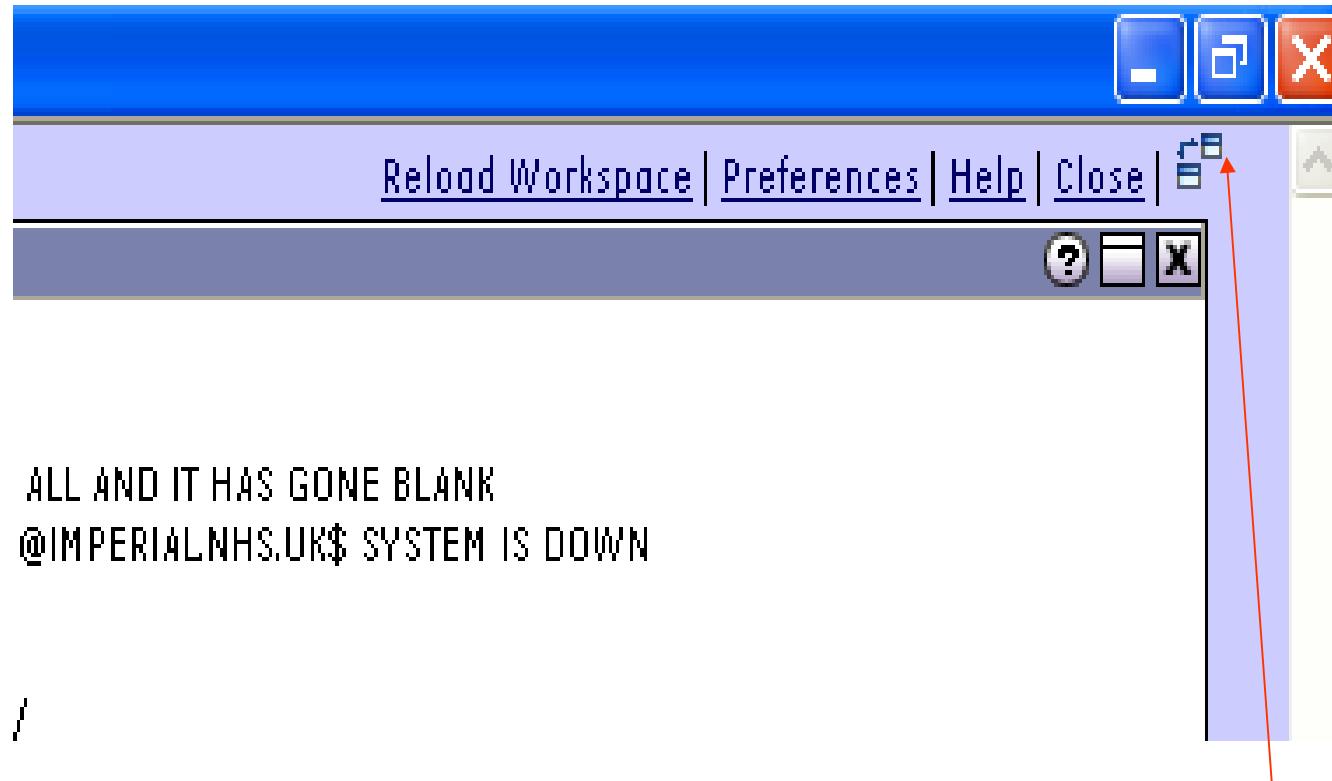
Remote Service Tools Guide

This guide is intended as a reference document for ROLE/RSL's and as such is not updated. Please refer to equipment specific documentation for detailed procedures.



imagination at work

Start remote diagnostic tools



ALL AND IT HAS GONE BLANK
@IMPERIALNHS.UK\$ SYSTEM IS DOWN

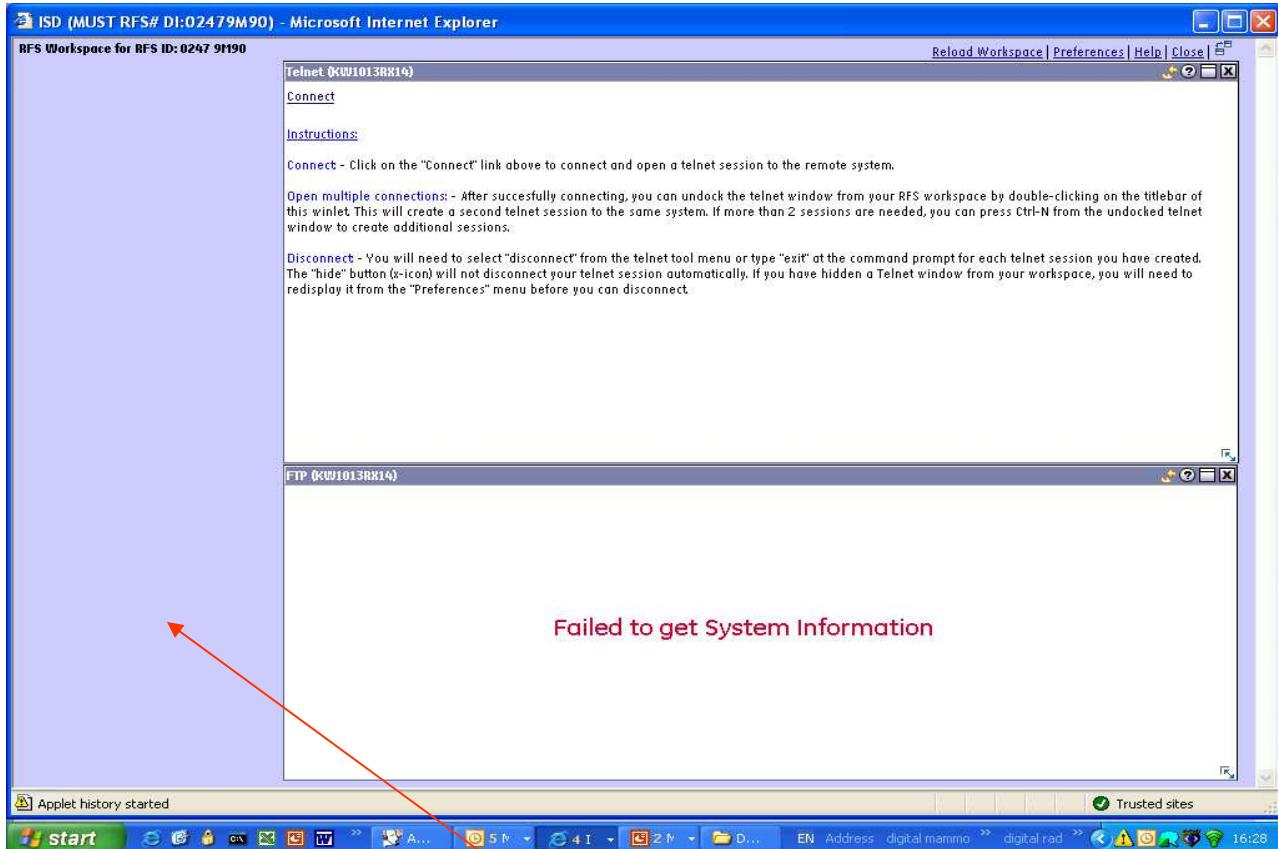
To Access service tools select RFS from queue then click on the
toggle Icon on top right hand corner of RFS screen

(you can also select from preferences but the toggle icon keeps it neater)



imagination at work

System is not connected to insite

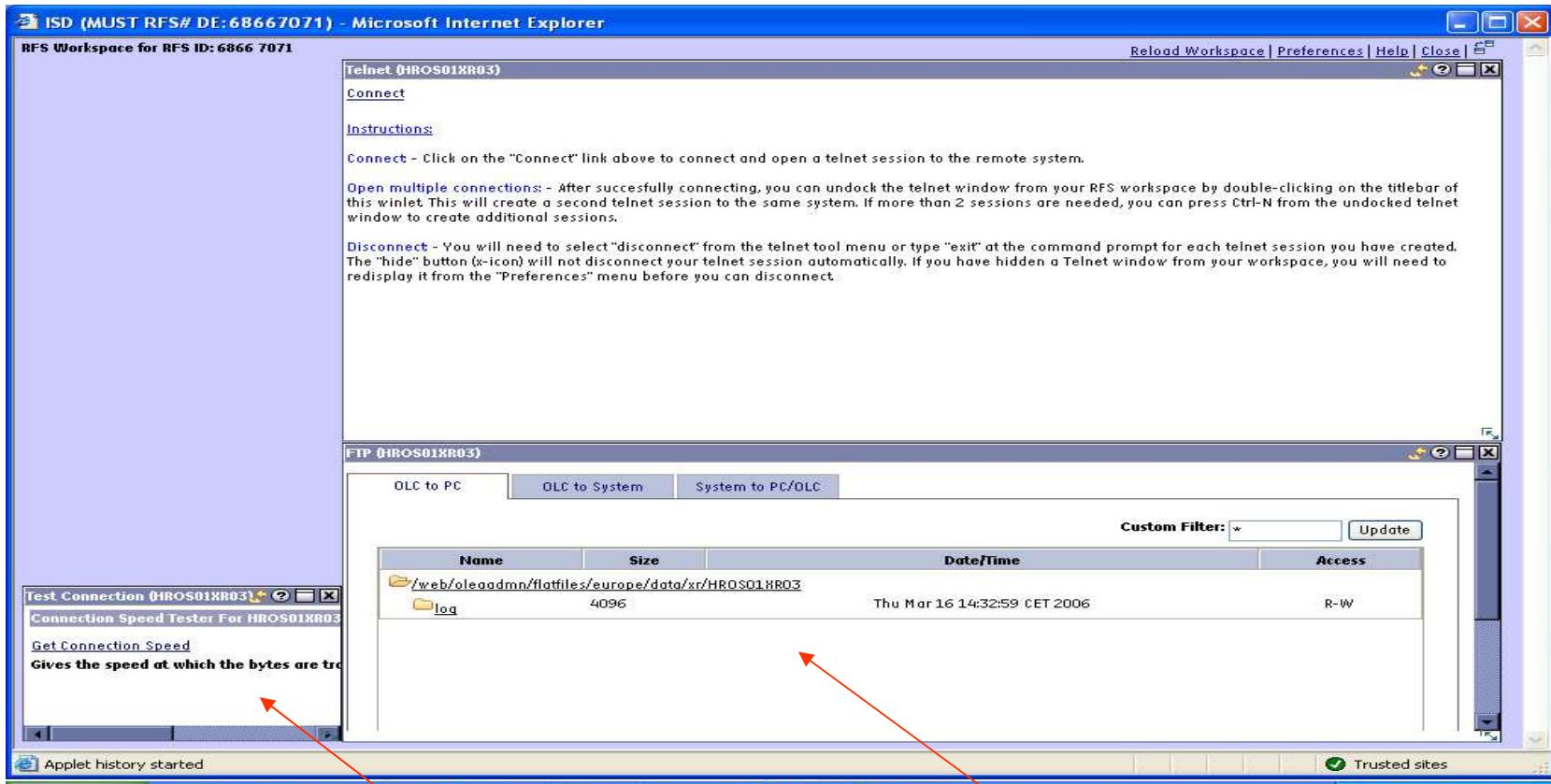


If system is not connected to insite you will see Fail message in FTP screen but also no Test connection winlet – see later section on connecting via another system.



imagination at work

System is connected to insite

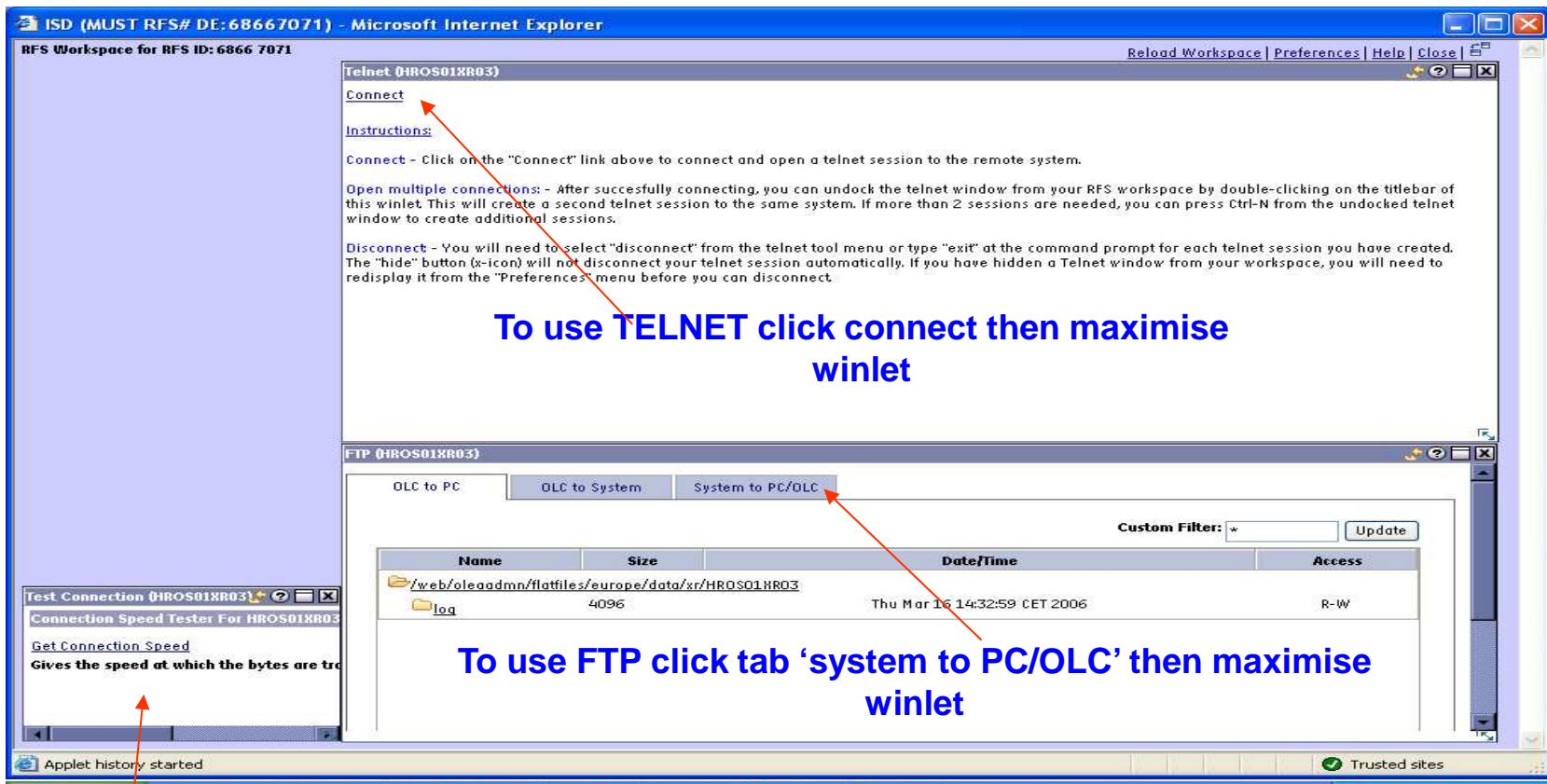


In this case the Connection Winlet is present and FTP winlet has server info



imagination at work

Start tools



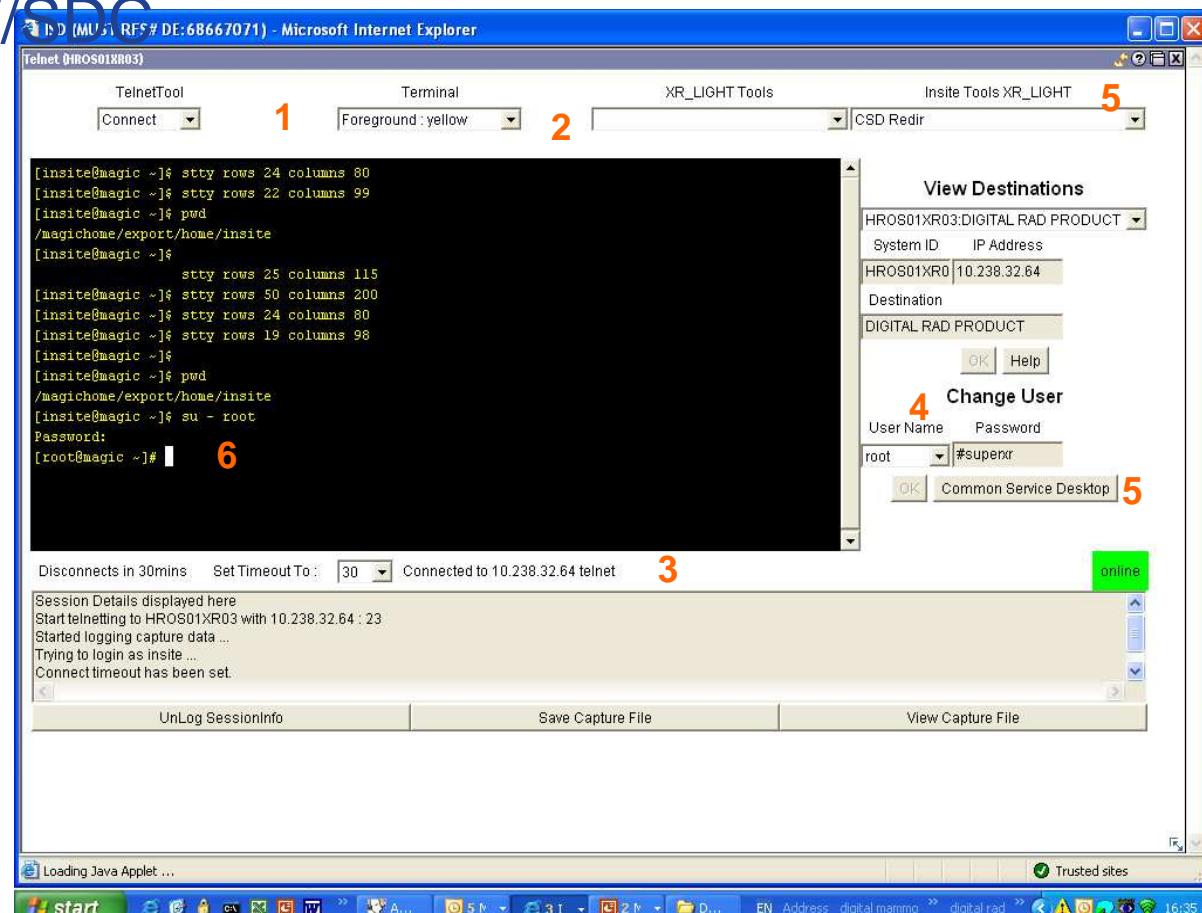
TEST connection is a quick verification that
the system is on and available for
connection



imagination at work

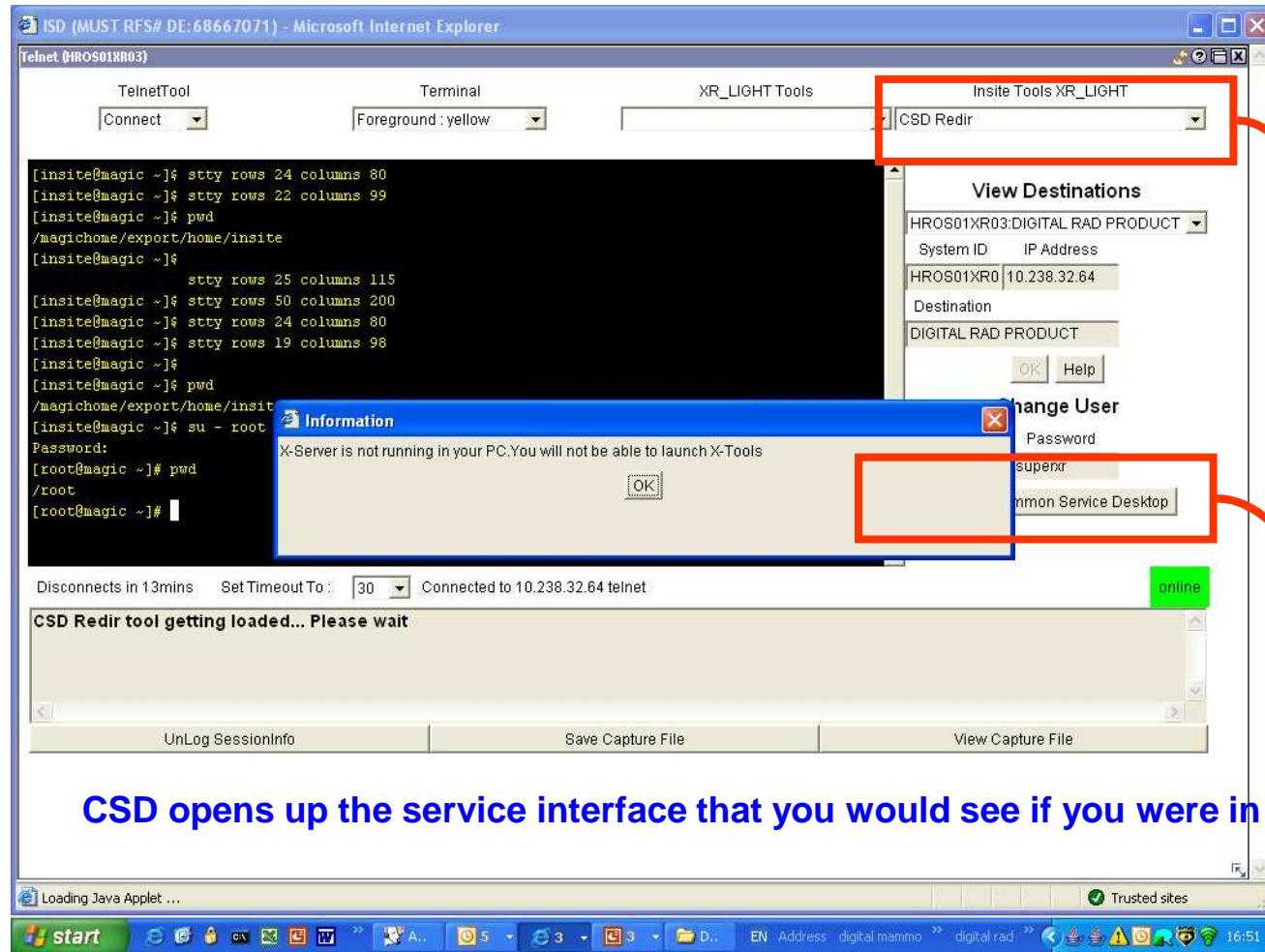
Connect/disconnect 1
Format font 2
Connection time out setting
3
Change user ROOT/CSD
etc 4
CSD LAUNCH 5
Workspace cursor 6

Telnet tool



imagination at work

Common Service Desktop



Common Service Desktop is
'Redirected to your local IE browser.'

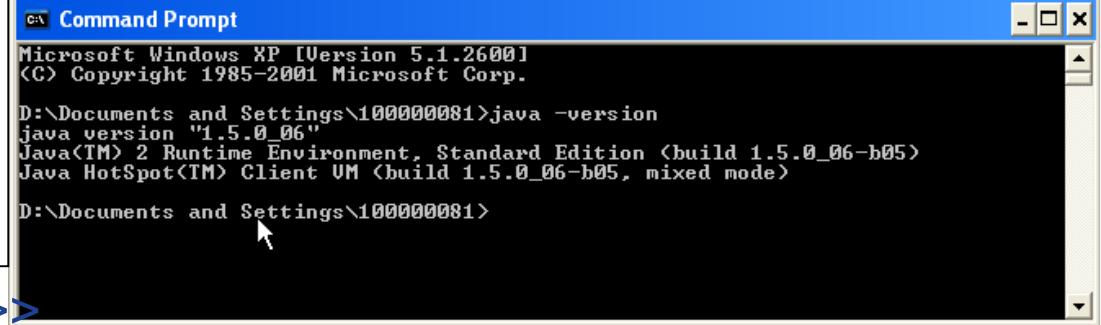
Common Service Desktop is
Displayed in remote Netscape browser

CSD opens up the service interface that you would see if you were in front of the unit on site

IE local browser more convenient, Netscape remote browser may be used in case some screens cannot be displayed. If both fail see sheet in appendix to turn off pf

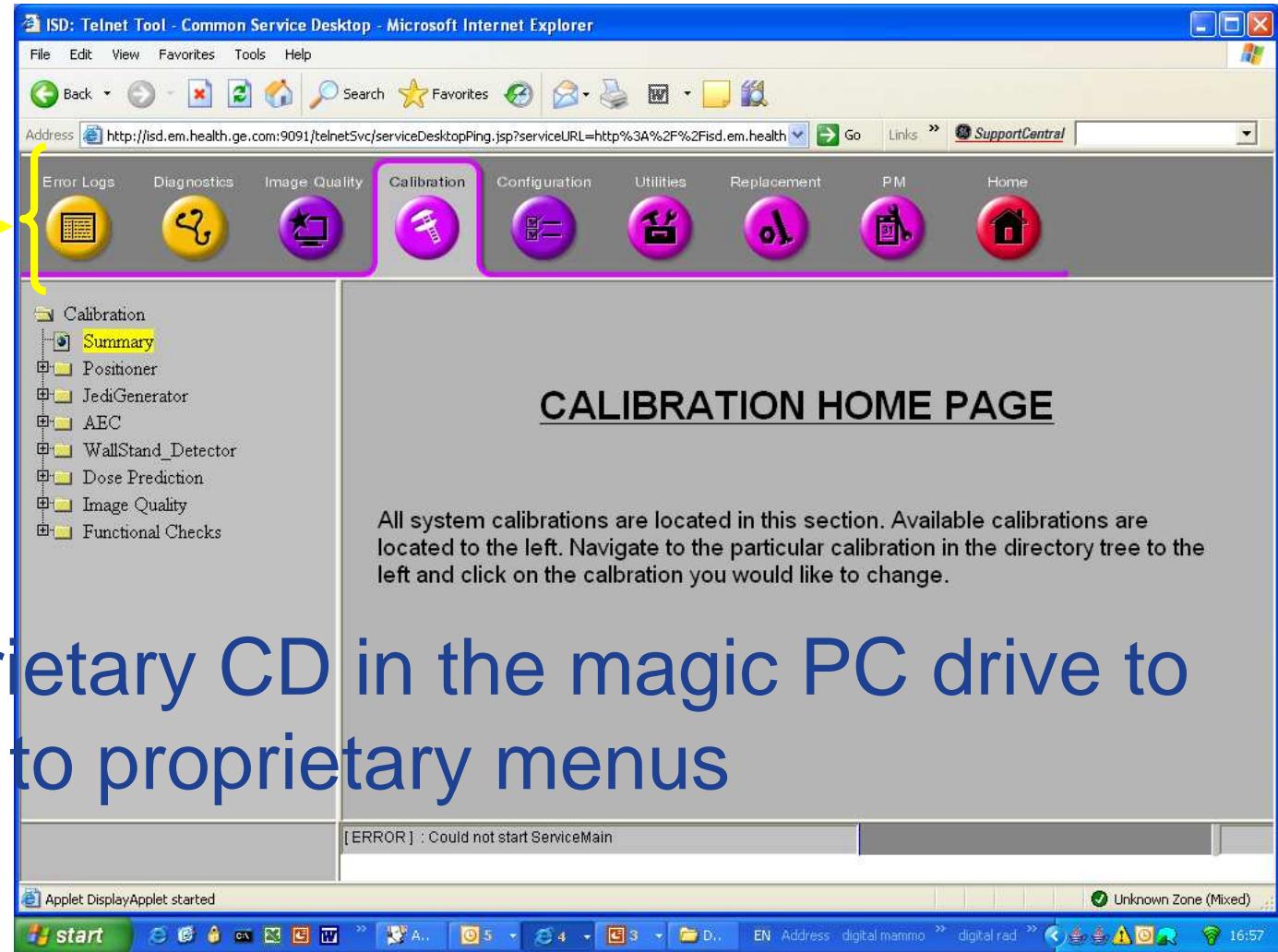
CSD local IE browser

Check Java version >>



```
Command Prompt  
Microsoft Windows XP [Version 5.1.2600]  
(C) Copyright 1985-2001 Microsoft Corp.  
  
D:\Documents and Settings\100000081>java -version  
java version "1.5.0_06"  
Java(TM) 2 Runtime Environment, Standard Edition (build 1.5.0_06-b05)  
Java HotSpot(TM) Client VM (build 1.5.0_06-b05, mixed mode)  
  
D:\Documents and Settings\100000081>
```

Navigating through these icons will FAIL unless you have JRE 1.4/1.5/1.6 (Java Runtime Env.)



The screenshot shows a Microsoft Internet Explorer window titled "ISD: Telnet Tool - Common Service Desktop - Microsoft Internet Explorer". The address bar shows the URL <http://isd.em.health.ge.com:9091/telnetSvc/serviceDesktopPing.jsp?serviceURL=http%3A%2F%2Fisd.em.health>. The toolbar includes Back, Forward, Stop, Refresh, Search, Favorites, and other standard browser icons.

The main content area displays the "CALIBRATION HOME PAGE". On the left, there is a navigation tree:

- Calibration
 - Summary
 - Positioner
 - JediGenerator
 - AEC
 - WallStand_Detector
 - Dose Prediction
 - Image Quality
 - Functional Checks

To the right of the tree, the text reads: "All system calibrations are located in this section. Available calibrations are located to the left. Navigate to the particular calibration in the directory tree to the left and click on the calibration you would like to change."

At the bottom of the page, an error message is displayed: "[ERROR] : Could not start ServiceMain".

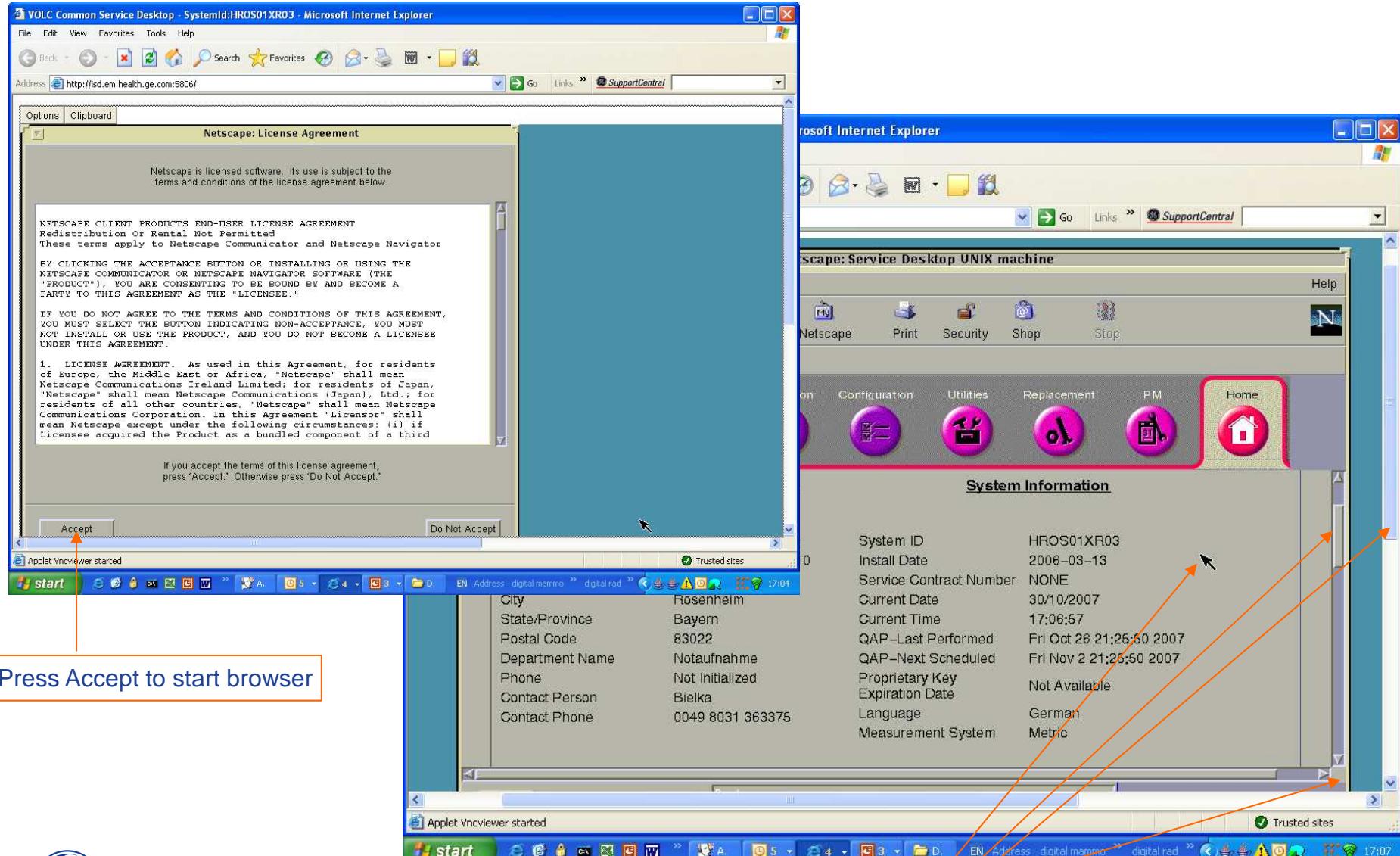
The status bar at the bottom shows "Applet DisplayApplet started" and "Unknown Zone (Mixed)".

Below the browser window, the Windows taskbar is visible with various icons and the time "16:57".



imagination at work

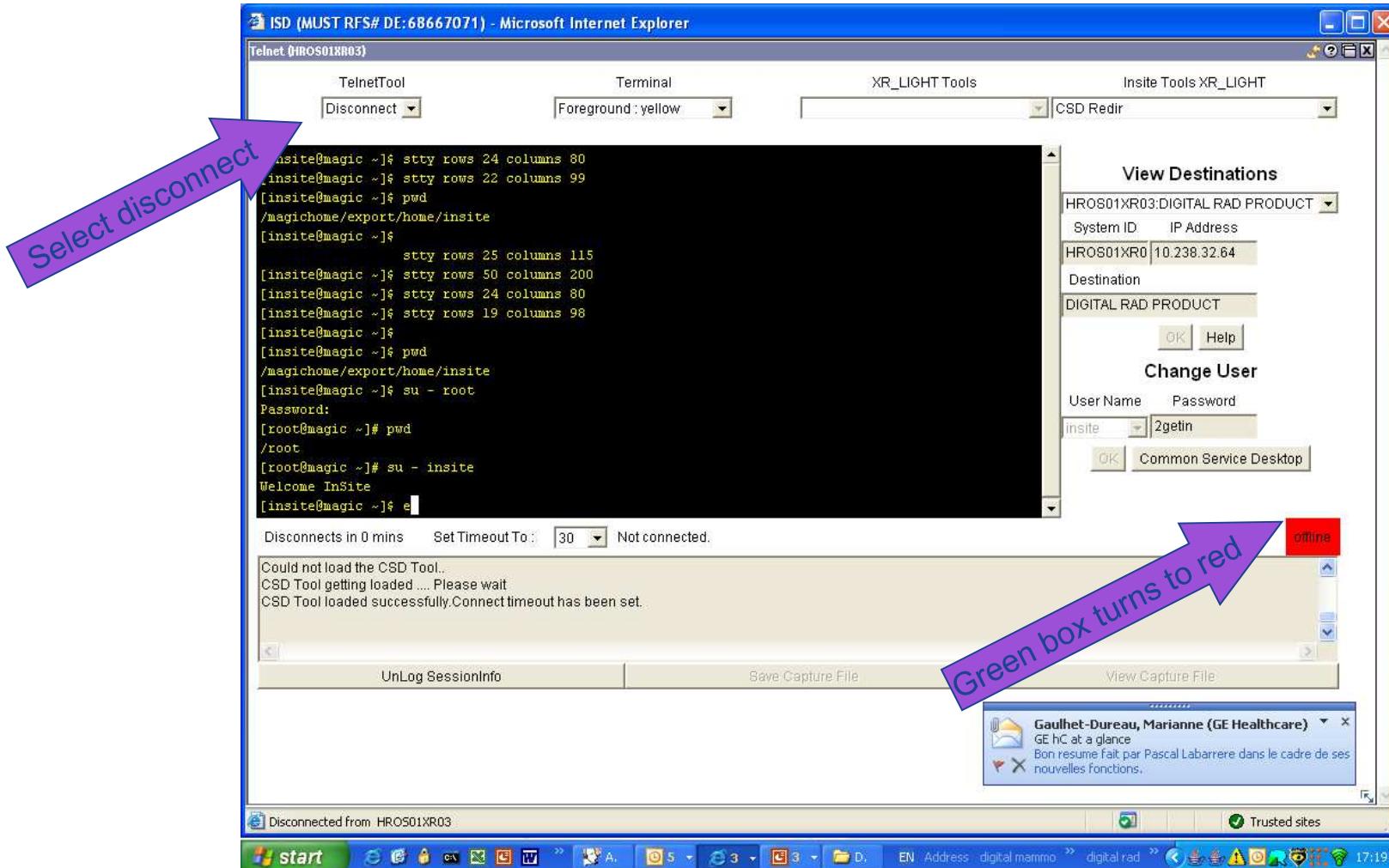
CSD remote Netscape browser



imagination at work

Need to resize window and scroll to navigate

Close CSD / telnet



imagination at work

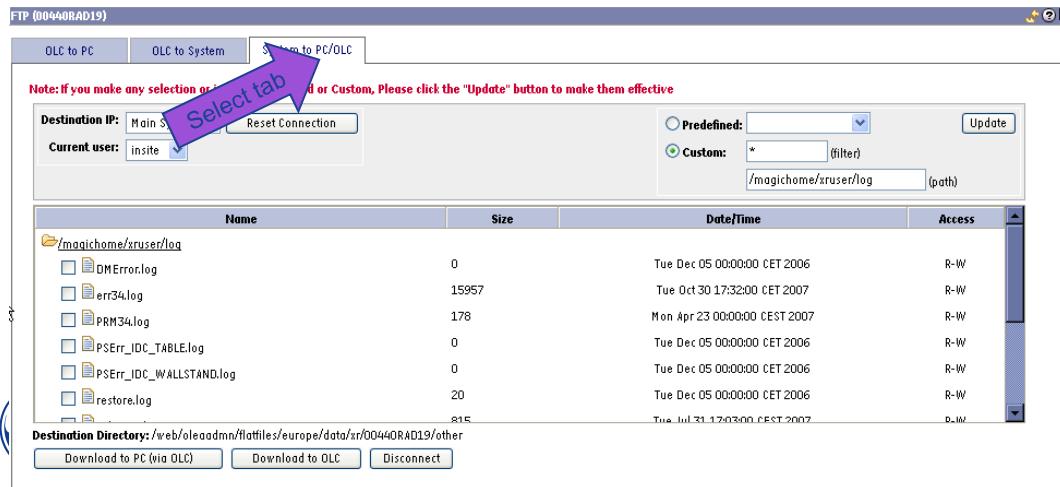
FTP tool



Retrieve from olc server,
previously downloaded
files. Server is flushed
out every 6 month or so.



Upload files from olc
server into the system,
files. This is for upgrade
or patch purpose.



Download files from the
system to olc server and
PC. This is the option
you will almost always
choose

FTP system to PC/OLC

1- Select a predefined path or enter any path manually, you may filter file name. Press UPDATE.

ISD (ISD Case# CSUS0000000003106196) - Microsoft Internet Explorer

FTP (00440RAD19)

DLC to PC DLC to System System to PC/OLC

Note: If you make any selection or input in Predefined or Custom, Please click the "Update" button to make them effective

Destination IP: Main System Reset Connection

Current user: insite

Predefined: Custom: * (filter) /magic/home/xruser/log (path)

Update

File Download

Do you want to open or save this file?

Name: sysError.log
Type: Text Document
From: isd.em.health.ge.com

Open Save

Save As

Save in: Desktop

Recent

Desktop

My Documents

My Computer

My Network Places

1720 la ciotat

CT Hubs_Q407

digital mamm

digital rad

essai photo

FW38 Service Seminar

images dresden

mp3 mini

mp3 pap

photo amsterdam

photo colo les filles

photo vacances

File name: sysError.log Save Cancel

start

Download to PC (via DLC) Download to OLC Disconnect

Status: Download to DLC was successful.

2- From the list displayed, check boxes for files to be downloaded

3- press DOWNLOAD

4- Observe status change.

5- Select OPEN to read a text file, or SAVE to laptop.

6- When SAVE, select filename and location on your laptop.



imagination at work

12 /

GE Title or job number /
10/20/2012

How to connect through another system

Applicable only if another GE equipment is insited at this site.

e.g 00440RAD21 is not reachable.

I can try to reach it through 00440RAD17 or any other systems.

See next page for details

- 1- check at e-checkout, if another GE equipment exist at this site and is insited.
- 2- create a case for this system, and connect it.
- 3- perform a telnet or FTP to the desired system using local IP address.

IP address can be retrieve from e-checkout or from local FE.

Note all files FTP will be saved under the other GE system.

The screenshot shows a Microsoft Internet Explorer window titled "eCheck Out: Site Info - Microsoft Internet Explorer". The URL in the address bar is <http://echeckout.em.health.ge.com/NewRelease/SiteInfo.asp>. The page displays "inside GEMS europe" and "eGEMS InSite Installation". On the left, there's a navigation menu with items like "MAIN HOME", "Bandwidth HOME", "Process", "Data", "Connectivity Report", "Admin", "Connectivity Support Central", "LOG-OUT", and "Feedback". The main content area has three boxes: "Site is in COVENTRY (UK) Primary FE: P", "NHS" (with a "VIEW" button), and "NHSN3" (with a "VIEW" button). Below these is a table titled "Choose a site: ID 0440 Name 00440 - WALSGRAVE *All Technologies". The table lists 56 systems, with the first few rows highlighted in green and others in blue. A red arrow points from the text "I can try to reach it through 00440RAD17 or any other systems." to the "System ID" column of the table. A green box highlights the row for "00440RAD21".

System ID	System Name	Type	Local IP	Gateway IP	NHSNet IP	NAT IP	CheckOut
00440FLU06	PRECISION MRI (RF)	NHS	192.168.17.158	192.168.17.1	10.176.131.158	10.247.128.123	8/1/2006
00440RAD21	DEFINIMUM	NHS	192.168.17.155	192.168.17.1	10.176.131.155	10.247.128.124	10/31/2006
00440RAD17	DEFINIMUM	NHS	192.168.17.151	192.168.17.1	10.176.131.151	10.247.128.125	10/31/2006
00440ULT27	VIVID i	NHS	192.168.17.178	192.168.17.1	10.176.131.178	10.247.128.167	11/1/2006
00440ULT28	LOGIQ 9	NHS	192.168.17.179	192.168.17.1	10.176.131.179	10.247.128.188	6/20/2006
00440ULT29	LOGIQ 9	NHS	192.168.17.180	192.168.17.1	10.176.131.180	10.247.128.189	6/20/2006
00440ULT30	LOGIQ 9	NHS	192.168.17.181	192.168.17.1	10.176.131.181	10.247.128.190	6/20/2006
00440ULT31	ECHOPAC PC	NHS	192.168.17.182	192.168.17.1	10.176.131.182	10.247.128.191	11/2/2006
00440ULT32	IMAGE VAULT	NHS	192.168.17.183	192.168.17.1	10.176.131.183	10.247.128.192	6/16/2006
00440ULT33	ECHOPAC	NHS	192.168.17.184	192.168.17.1	10.176.131.184	10.247.128.193	11/2/2006
00440ULT34	VIVID i	NHS	192.168.17.185	192.168.17.1	10.176.131.185	10.247.128.194	11/1/2006
00440ULT35	VIVID i	NHS	192.168.17.186	192.168.17.1	10.176.131.186	10.247.128.195	11/1/2006
00440ULT36	VIVID i	NHS	192.168.17.187	192.168.17.1	10.176.131.187	10.247.128.196	11/1/2006
00440ULT37	LOGIQ 9	NHS	192.168.17.188	192.168.17.1	10.176.131.188	10.247.128.197	6/27/2006



imagination at work

GE Title or job number /

10/20/2012

E-Checkout

Link to the web site:

<http://insite-check-in.euro.med.ge.com/>

Please enter your MUST ID and password :

User ID: bouchel
Password:

Change password? no yes

**Login with
MUST
ID & password**

If you forgot your MUST password, please contact Help Desk : [click](#) or call *644-3333/34/35/36/37

If you do not have access to MUST, use [Access Request](#) and ask for MUST access clicking on "Service Systems Applications" tab

Welcome to the eGEMS InSite Installation

Choose between these applications:

eGEMS Digital BroadBand Installation eGEMS Analog Modem Installation

Select BroadBand.
Analog modem not to be used anymore

Welcome to the eGems ISDN Insite installation. This message board will follow your progress and help you navigate.

Each time a new action occurs on the left of the board means a new action was detected.

Welcome to the eGEMS Insite Installation and Check Out Reporting tool

- The message board at the bottom will follow your progress and help you navigate. Each time a new spot appears on the left of the board, a new action was detected. General and status informations are blue. Tasks completed are green. Errors are red.

>PROCESS for new entry or modif.
>DATA for viewing site/system infos

Welcome to the eGems ISDN insite installation. This message board will follow your progress and help you navigate.

CONNECTIVITY INFORMATION

Technology	VPN
Device Brand	JUNIPER
Device Public IP	212.10.109.200
Approver Name	NO DATA
Approver eMail	no data
Approver Name	NO DATA
Approver eMail	no data
Installer Name	NO DATA
Installer eMail	no data
Installer Languages	NO DATA
Primary Range	10.238.98.0-43
Customer Contact Phone	2114966690
Comments	VPN RAUTER IP: 192.168.1.4
Customer Contact eMail	loche@eurogenmed.com
Site ID	PC8118
Site Name	LOCATION SITE INFORMATION
City	Duesseldorf
Country	GERMANY
Primary FE	ROLAND WITT
System ID	PC8118C104
System Name	CT04

Example of site info at Dusseldorf (RontgenInstitut)

System ID	System Name	IP Address	Subnet Mask	Gateway	Netmask	Port	Protocol
PC8118C104	CT04	192.168.100.219	255.255.255.0	-	255.255.255.0	1-1024	TCP/UDP
PC8118A101	AW4.0	192.168.100.219	255.255.255.0	-	255.255.255.0	1-1024	TCP/UDP
PC8118A102	AW4.1	192.168.100.216	255.255.255.0	-	255.255.255.0	1-1024	TCP/UDP
PC8118A103	AW4.1	192.168.100.216	255.255.255.0	-	255.255.255.0	1-1024	TCP/UDP
PC8118C107	SEND00000	192.168.100.240	255.255.255.0	-	255.255.255.0	10-239	TCP/UDP
PC8118C104	SEND00000	192.168.100.244	255.255.255.0	-	255.255.255.0	10-239	TCP/UDP
PC8118A104	SEND00000	192.168.100.248	255.255.255.0	-	255.255.255.0	10-239	TCP/UDP
PC8118A105	AWW4.2/29000	192.168.100.59	255.255.255.0	-	255.255.255.0	10-239	TCP/UDP
PC8118A106	AWW4.2/29000	192.168.100.63	255.255.255.0	-	255.255.255.0	10-239	TCP/UDP
PC8118A107	SNMP00000	192.168.100.70	255.255.255.0	-	255.255.255.0	10-239	TCP/UDP
PC8118A108	XELINK 0	192.168.100.76	255.255.255.0	-	255.255.255.0	10-239	TCP/UDP
PC8118A109	XELINK 0	192.168.100.76	255.255.255.0	-	255.255.255.0	10-239	TCP/UDP



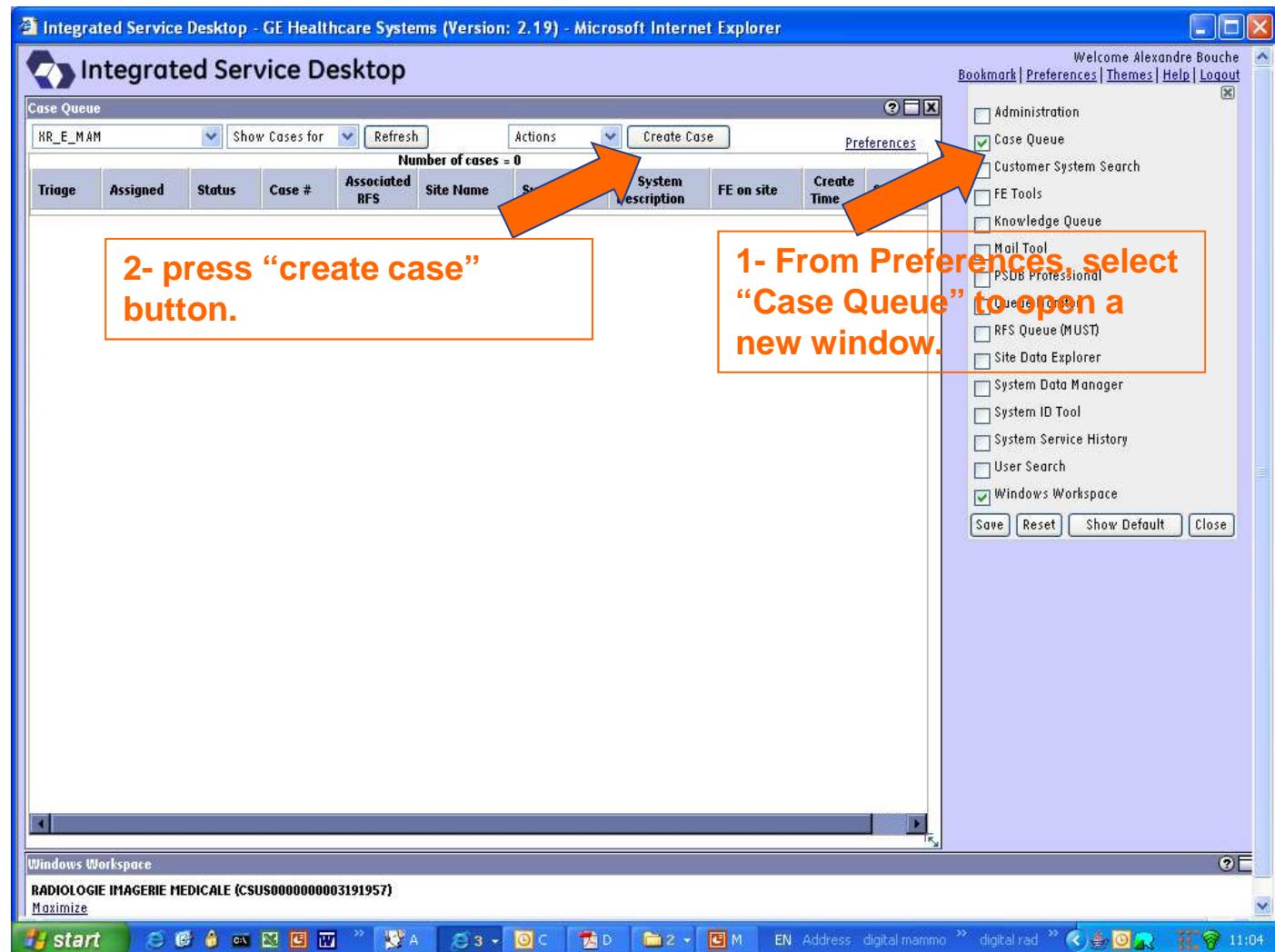
imagination at work

14 /

GE Title or job number /

10/20/2012

Create a case- step 1



imagination at work

Create a case – step 2

Integrated Service Desktop: Create Case - Microsoft Internet Explorer

Create Case (As Role: [EU_FE, EU_OLE, EU_OLE_XR]) (User ID: bouchal)

FE Pole	<input type="radio"/> AM <input checked="" type="radio"/> EU <input type="radio"/> Asia <input type="radio"/> Japan	Get FE Info	Search For FE
FE Mainframe ID	<input type="text" value="h"/> <input type="text" value="cohen"/>		
FE First Name	<input type="text" value=""/>		
FE Last Name	<input type="text" value=""/>		
FE Email	<input type="text" value=""/>		
FE SSO ID	<input type="text" value=""/>		
FE Open RFS's	<input type="button" value="View Tech Log"/>		
RFS Number	<input type="text" value=""/>		
System ID	<input type="text" value=""/>		
Site Name	<input type="text" value=""/>		
System Desc	<input type="text" value=""/>		
Triage	<input type="button" value="Modality"/>		
Symptom	<input type="text" value=""/>		
Queue	<input type="button" value="MAIN"/>		
<input type="button" value="Save"/> <input type="button" value="Check Spelling"/> <input type="button" value="Clear All Fields"/>			

1- enter FE name or FE SSO, press search button.

2- enter system ID (first characters), press Search button

3-use pull down menu to select TRIAGE and Modality

4-Type in short description

5-Press SAVE

* Mandatory Fields

Done Trusted sites

start EN Address digital mammo digital rad 11:07



imagination at work

Create a case – step 3

ISD (ISD Case# CSU0000000003192164) - Microsoft Internet Explorer

Case Workspace for Case ID: CSU0000000003192164

Case Details for PC8118HR04

Case Owner: Alexandre Bouche
Case Queue: 5263
Case Triage: 4
Callback #:
Case Title:
Symptom: test
Phone Notes:
Error Logs:
Key Error:
Recommendation:

Save Debrief Reassign Split Void

Working Information

Modality/Sys ID: HR/PC8118HR04
System: 0 Desc:
System: NONE Type:
Model: _NEPHYS18
Type:
Site: ROENTGENINSTITUT.DUSSELDORF-DR
Name: STO
Case ID: CSU0000000003192164
Case Status: Open
Case Type: Technical Support
FE Name: Cohen, Herbert
FE Mobile: (49)1726706085
FE Pager: N/A
Callback Number:
Associated: - RFS:
GSCC: N/A
Comments:

Press upper right for Diagnostic tools

ISD (ISD Case# CSU0000000003192164) - Microsoft Internet Explorer

Case Workspace for Case ID: CSU0000000003192164

Relay (PC8118HR04)

Instructions

Connect - Click on the Connect link above to connect and open a telnet session to the remote system.
Open multiple connections - after successfully connecting, you can unlock the telnet window from your RFS workspace by double-clicking on the titlebar of this window. This will create a second telnet session to the same system. If more than 2 sessions are needed, you can press Ctrl-M from the undocked telnet window to create additional sessions.

Disconnect - You will need to select "Disconnect" from the telnet host menu or type "exit" if the command prompt for each telnet session you have created. The "Hide" button to the left will disconnect your telnet session automatically. If you have hidden a telnet window from your workspace, you will need to reposition it from the "Presentation" menu before you can disconnect.

Same as RFS queue

FTP (PC8118HR04)

OLC to PC OLC to System System to PC/OLC

Custom Filter: > Update

Name	Size	Date/Time	Access
test/debrief/test/debrief.log	12288	Fri 01/19 14:02:28 CEST 2007	R-W
test	4096	Tue Jun 19 15:48:00 CEST 2007	R-W
test/test	4096	Tue Oct 18 14:50:41 CEST 2005	R-W
test	4096	Tue Apr 20 10:51:42 CEST 2005	R-W
test/test	4096	Tue May 17 13:24:04 CEST 2005	R-W

Slide 17 of 20 Blank Presentation

start

File Edit View Insert Tools Options Help

ISD Case# CSU0000000003192164 Microsoft Internet Explorer

Case Workspace for Case ID: CSU0000000003192164

Case Details for PC8118HR04

Case Owner: Alexandre Bouche
Case Queue: 5263
Case Title:
Case Created By: Alexandre Bouche
Current Case Owner: Alexandre Bouche
Symptom:
Planned:
Time Log:
Key Error:
Recommendation:

Note: Please make sure to click "Save changes" when changing Comments/Logs/Logs values before proceeding to the next operation.

Send Email to herbertcohen@...
Send Email to herbertcohen@...

Save changes

Start Blank Presentation Address: digital man...



imagination at work

Press DEBRIEF to close the case.

ISD (ISD Case# CSU0000000003192164) - Microsoft Internet Explorer

Case Workspace for Case ID: CSU0000000003192164

Relay (PC8118HR04)

Instructions

Connect - Click on the Connect link above to connect and open a telnet session to the remote system.
Open multiple connections - after successfully connecting, you can unlock the telnet window from your RFS workspace by double-clicking on the titlebar of this window. This will create a second telnet session to the same system. If more than 2 sessions are needed, you can press Ctrl-M from the undocked telnet window to create additional sessions.

Disconnect - You will need to select "Disconnect" from the telnet host menu or type "exit" if the command prompt for each telnet session you have created. The "Hide" button to the left will disconnect your telnet session automatically. If you have hidden a telnet window from your workspace, you will need to reposition it from the "Presentation" menu before you can disconnect.

After CASE STATUS has change to close. Press CLOSE at upper right corner.

Main system files

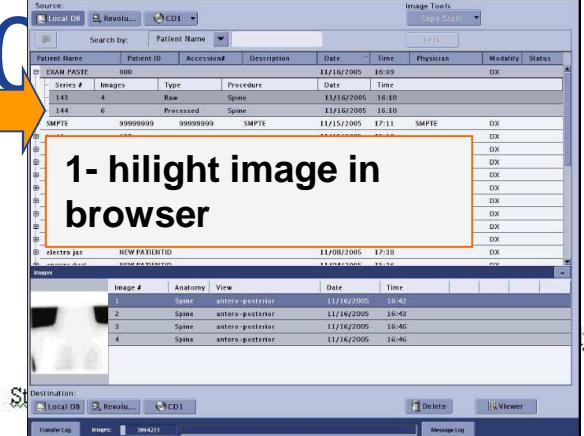
	OS ADS	OS IDC	main system log	IDC log	boot/hardw error	image download
revolution Xqi/XRd (Gipeto)	unix	vxWorks				
seno 2000D (FFDM)	unix	vxWorks	<u>text file present in aws at:</u> <code>/export/home/sdc/senovision/logfiles/error.log</code>	<u>file to be ftped in IDC:</u> <code>ftp IDC (tbl or ws) cd /idc bin get errorlog.txt get sensor.txt bye</code>	<u>file present at:</u> <code>/var/adm/messages</code>	1-select image in browser 2-dumpSel to identify image file (e.g. i52612.MGDC.1) 3-download image file at <code>/export/home1/sdc_image_pool/buf_image/i52612.MGDC.1</code>
Seno DS (Nephrys)	unix	vxWorks				
Revolution 2x platform (Lightning)	linux	N.A.	<u>text files present at:</u> <code>/magichome/xruser/log/ sysError.log >> system errors</code>	>>to laptop from ISD	<u>file present at:</u> <code>/var/log/messages.x</code> x is 0,1, 2, ...	1-select image at right monitor 2-start engineering tool ctrl+shift+F5 3-click Dicom/export/file/exit/quit 4-file (e.g. 03.00001e0d.dcm) is at <code>/database/image_export/</code>
Defininium 8000 (thunder)	linux	N.A.	<code>sysMSG.log >> application messages</code>	<u>file present at:</u> <code>cd /enggdata/IDC/(WS or TBL)/</code>		
seno Essential (sirius)	unix	linux	<u>text file present in aws at:</u> <code>/export/home/sdc/senovision/logfiles/error.log</code>	<u>file to be ftped at IDC:</u> <code>ftp IDC username=xruser / psswd=4\$xrax bin cd /enggdata/log get IDC.log bye</code> >>to laptop from ISD	<u>file present at:</u> <code>/var/adm/messages</code>	1-select image in browser 2-dumpSel to identify image file (e.g. i52612.MGDC.1) 3-download image file at <code>/export/home1/sdc_image_pool/buf_image/i52612.MGDC.1</code>



imagination at work

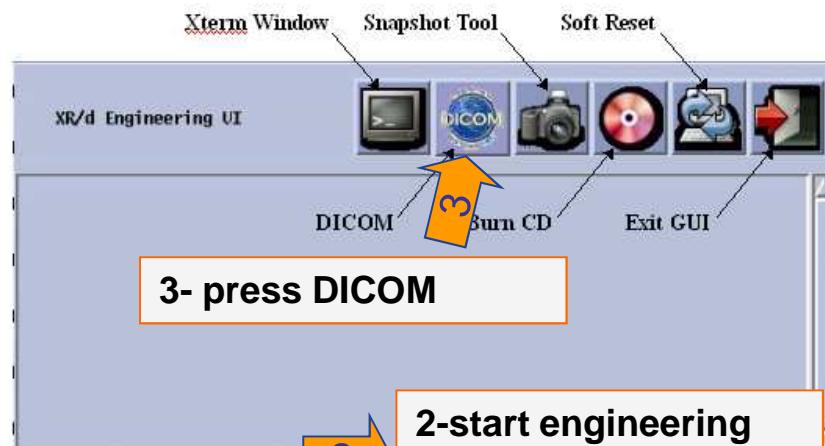
Image download at Definium

800



1. On the viewer screen (right-hand monitor), select the desired image or exam. A word of caution: selecting a complete exam could result in a large number of files to upload.
2. Press **Ctrl+Shift+F5** to open the XR/d Engineering UI. It is recommended that you move the mouse to the left-hand monitor so the XR/d Engineering UI opens there. This will allow you to view the image acquisitions list on the right-hand monitor without any obstructions.]

The following GUI will popup on the screen your mouse cursor is currently on:



imagination at work



**2-start engineering
tool (press keys
CTL+shift+F5)**

3. Click on the DICOM tool icon. The following GUI will appear:

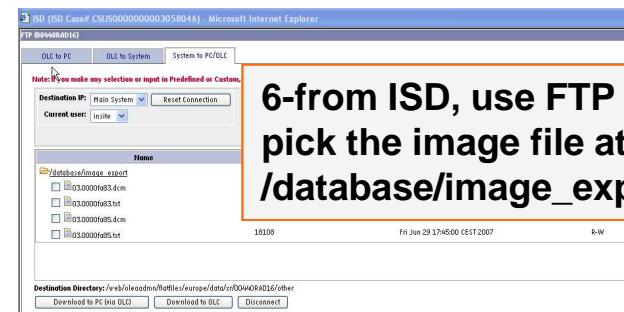


Note: Do not click on the **Import** or **Open** buttons! They do not work!

4. Click on the **Export** button. Click on **File** and then **Exit** to close the DICOM info browser window that pops up.
5. The DICOM tool will still be open. You can highlight another image and press **Export** to store it, or you can press **Quit** to exit the DICOM tool.
6. Launch the InSite FTP Tool and connect to the site. Enter **/database/image_export** in the Remote Working Directory box and click the **Change Directory** button. Change the **Pre-defined Filters** to * and the **Select destination folder** to image using the pulldowns. The files will have the following format:

```
-rw-rw-r-- 1 500 500 8184602 Feb 15 14:13 03.00001e0b.dcm
-rw-rw-r-- 1 500 500 21606 Feb 15 14:13 03.00001e0b.txt
-rw-rw-r-- 1 500 500 8283846 Feb 15 14:13 03.00001e0d.dcm
-rw-rw-r-- 1 500 500 25176 Feb 15 14:13 03.00001e0d.txt
```

The “.dcm” file is the image and the “.txt” file is the DICOM header information for that image. Highlight the files of interest and click the **Get File(s)** button.



**6-from ISD, use FTP tool to
pick the image file at:
/database/image_export.**

J
number /
0/20/2012

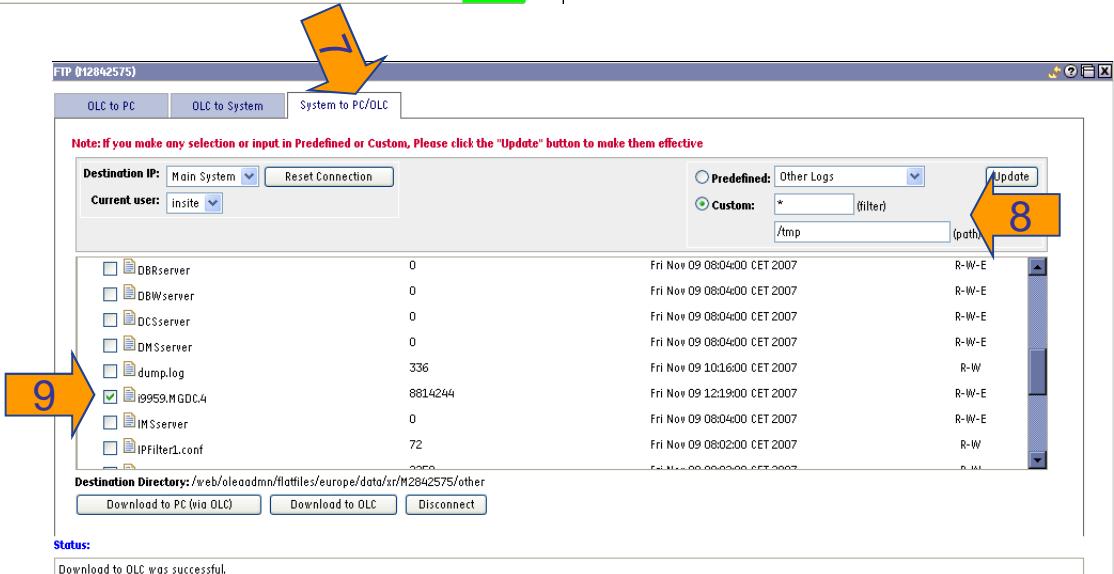
Image download at seno



1. Ask customer to select image in browser
2. Start ISD / TELNET tool
3. Switch user to SDC
4. Type "dumpSel" to get image file name (e.g. i9927.MGDC.1)
5. Type "cd /export/home1/sdc_image_pool/buf_image"
6. Type "cp /i9927.MGDC.1 /tmp/i9927.MGDC.1"
7. Start FTP tool, select system to PC/OLC
8. FTP custom filter = *, path = /tmp, press Update
9. Check box in front of image file, press download.
10. Save to laptop

Alternate procedure

1. Ask cust to select image of interest and then press F5 on keyboard.
2. Open FTP – system to pc tab
3. Select 'other logs' from pull down and filter of *
4. Change working directory to /export/home1/seno_image_pool/outputImages
5. Select the image called scrn.img (or similar)
6. View with Javista



imagination at work

Errorlog at Definium 8000

Launch FTPtool at ISD.

1. press tab system to PC/OLC
2. select System Errorlog in Predefined pull down
3. press Update button
4. Scroll down to display required file
5. Check box in front of sysError.log
6. Press Download to PC
7. Save to your laptop
8. Read the file using Wordpad or excel

ISD (ISD Case# CSUS00000000003058) - microsoft Internet Explorer

FTP [00440RAD16]

OLC to PC OLC to System System to PC/OLC

Note: If you make any selection or input in Predefined or Custom, Please click the "Update" button to make them effective

Destination IP: Main System Reset Connection

Current user: insite

Predefined: System/Error Logs Update

Custom: * (filter)

/database/image_export (path)

Name	Size	Date/Time	Access
/database/image_export			
03.0000fo83.dcm	2344578	Fri Jun 29 17:45:00 CEST 2007	R-W
03.0000fo83.txt	18112	Fri Jun 29 17:45:00 CEST 2007	R-W
03.0000fo85.dcm	2164458	Fri Jun 29 17:45:00 CEST 2007	R-W
03.0000fo85.txt	18108	Fri Jun 29 17:45:00 CEST 2007	R-W

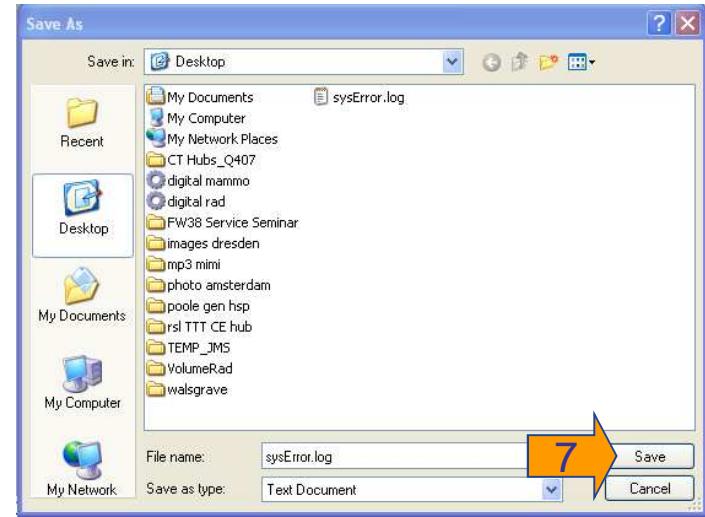
Destination Directory: /web/oleadmn/flatfiles/europe/data/xr/00440RAD16/other

Download to PC (via OLC) Download to OLC Disconnect

Name	Size	Date/Time	Access
restore.log	20	Wed Jan 03 00:00:00 CET 2007	R-W
subError.log	1843	Fri Jun 08 22:04:00 CET 2007	R-W
subMSG.log	4389	Fri Jun 08 22:06:00 CET 2007	R-W
<input checked="" type="checkbox"/> sysError.log	559124	Fri Nov 09 13:18:00 CET 2007	R-W
sysErrorPrev.log	1129082	Tue Nov 06 17:22:00 CET 2007	R-W
sysMSG.log	560969	Fri Nov 09 13:35:00 CET 2007	R-W
sysMSGPrev.log	2294732	Thu Nov 08 00:40:00 CET 2007	R-W
sysPRM.log	94573	Thu Nov 08 18:14:00 CET 2007	R-W

Destination Directory: /web/oleadmn/flatfiles/europe/data/xr/00440RAD16/log

Download to PC (via OLC) Download to OLC Disconnect



```
sequencenumber,date,time,subsystem,errorcode,errortext,exam,exceptioncategory,application,majorfunction,minorfuction
1,2007-11-06,11:22:26:626,"VEN",1090397, WS Vertical Amplifier Voltage output limit Error,2222,DO,DEFAULT, Pos, Devi
2,2007-11-06,11:22:26:631,"VEN",1090396, WS Vertical Amplifier Current output limit Error,2222,DO,DEFAULT, Pos, Devi
3,2007-11-06,11:22:26:636,"VEN",1090395, WS Vertical Amplifier Voltage output limit Error,2222,DO,DEFAULT, Pos, Devi
4,2007-11-06,11:22:26:640,"VEN",1090396, CLEAR,2222,DO,DEFAULT, Pos, DeviceGroup, Retry or reset the system.,1,1,0,
5,2007-11-06,11:22:26:645,"VEN",1090396, WS Vertical Amplifier Current output limit Error,2222,DO,DEFAULT, Pos, Devi
6,2007-11-06,11:22:26:652,"VEN",1090396, CLEAR,2222,DO,DEFAULT, Pos, DeviceGroup, Retry or reset the system.,1,1,0,
7,2007-11-06,11:22:26:677,"VEN",1090397, WS Vertical Amplifier Voltage output limit Error,2222,DO,DEFAULT, Pos, Devi
8,2007-11-06,11:22:26:681,"VEN",1090396, WS Vertical Amplifier Current output limit Error,2222,DO,DEFAULT, Pos, Devi
9,2007-11-06,11:22:26:688,"VEN",1090397, CLEAR,2222,DO,DEFAULT, Pos, DeviceGroup, Retry or reset the system.,1,1,0,
10,2007-11-06,11:22:26:700,"VEN",1090397, WS Vertical Amplifier Voltage output limit Error,2222,DO,DEFAULT, Pos, Devi
11,2007-11-06,11:22:26:704,"VEN",1090396, WS Vertical Amplifier Current output limit Error,2222,DO,DEFAULT, Pos, Devi
12,2007-11-06,11:22:26:706,"VEN",1090396, CLEAR,2222,DO,DEFAULT, Pos, DeviceGroup, Retry or reset the system.,1,1,0,
13,2007-11-06,11:22:26:707,"VEN",1090397, CLEAR,2222,DO,DEFAULT, Pos, DeviceGroup, Retry or reset the system.,1,1,0,
14,2007-11-06,11:22:26:711,"VEN",1090396, CLEAR,2222,DO,DEFAULT, Pos, DeviceGroup, Retry or reset the system.,1,1,0,
15,2007-11-06,11:22:26:715,"VEN",1090397, WS Vertical Amplifier Voltage output limit Error,2222,DO,DEFAULT, Pos, Devi
16,2007-11-06,11:22:26:722,"VEN",1090396, WS Vertical Amplifier Current output limit Error,2222,DO,DEFAULT, Pos, Devi
```

Errorlog at seno DS

Launch FTPtool at ISD.

1. press tab system to PC/OLC
2. select “Error Logs” in Predefined pull down
3. press Update button
4. Scroll down to display required file
5. Check box in front of error.log
6. Press Download to PC
7. Save to your laptop
8. Read the file using Wordpad or excel

ISD (ISD Case# CSUS00000000002975) Microsoft Internet Explorer

FTP 012842575

DLC to PC DLC to System System to PC/OLC

Note: If you make any selection or input in Predefined or Custom, Please click the "Update" button to make them effective

Destination IP: Main System Current user: initse

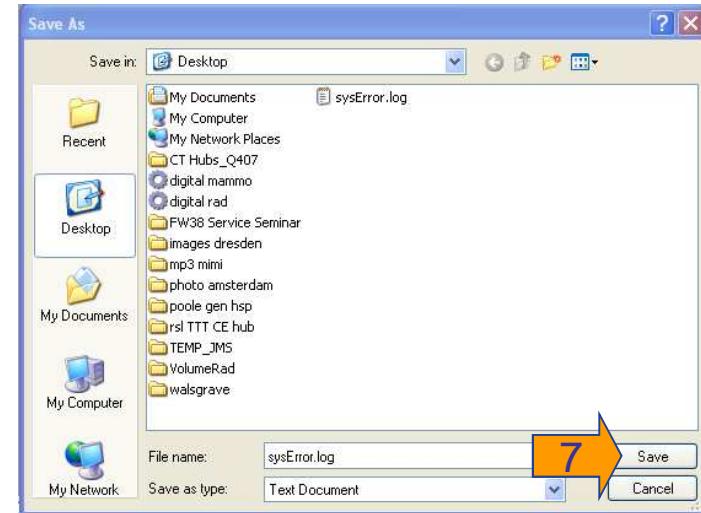
Predefined: Error Logs Custom: error.log (filter) /export/home/sdc/senovision/logs/(path)

Update

Name	Size	Date/Time	Access
/export/home/sdc/senovision/logs/	14648	Fri Nov 09 10:16:00 CET 2007	R-W-E
_	512	Fri May 04 00:00:00 CEST 2007	R-W-E
backup_dir	512	Fri May 04 00:00:00 CEST 2007	R-W-E
oldfiles	77312	Fri Nov 09 10:20:20 CET 2007	R-W-E
traces	512	Fri May 04 00:00:00 CEST 2007	R-W-E
error.log	5633	Fri Nov 09 09:39:00 CET 2007	R-W

Destination Directory: /web/oleadmin/ttffiles/europe/data/xr/M2842575/log

Download to PC (via DLC) Download to DLC Disconnect



Microsoft Excel

error.log

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O		
1	sequence	number	date	time	subsystem	errorcode	exception	category	application	majorfunction	minorfunction	fru	viewinglevel	rootcause	repeatcount	debt
2	2007-11-07	14:01:51	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	WR...IDC.....							
3	2007-11-07	14:01:52	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	WR...IDC.....							
4	2007-11-07	14:01:58	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	WR...IDC.....							
5	2007-11-07	14:02:07	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	WR...IDC.....							
6	2007-11-07	14:02:07	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	WR...IDC.....							
7	2007-11-07	14:02:07	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	WR...IDC.....							
8	2007-11-07	14:02:07	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	WR...IDC.....							
9	2007-11-07	14:02:29	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	WR...IDC.....							
10	2007-11-07	14:02:29	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	WR...IDC.....							
11	2007-11-07	14:03:22	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	WR...IDC.....							
12	2007-11-07	14:03:22	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	WR...IDC.....							
13	2007-11-07	14:03:22	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	WR...IDC.....							
14	2007-11-07	14:03:22	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	WR...IDC.....							
15	2007-11-07	14:03:25	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	WR...IDC.....							
16	2007-11-07	14:03:25	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	WR...IDC.....							
17	2007-11-07	14:03:25	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	WR...IDC.....							
18	2007-11-07	14:03:25	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	WR...IDC.....							
19	2007-11-07	14:03:46	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	WR...IDC.....							
20	2007-11-07	14:03:51	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	WR...IDC.....							
21	2007-11-07	14:03:51	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	WR...IDC.....							
22	2007-11-07	14:03:51	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	WR...IDC.....							

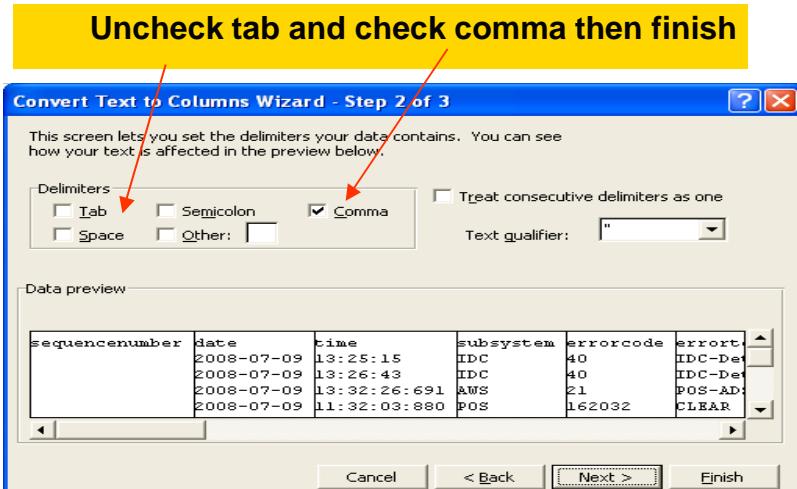
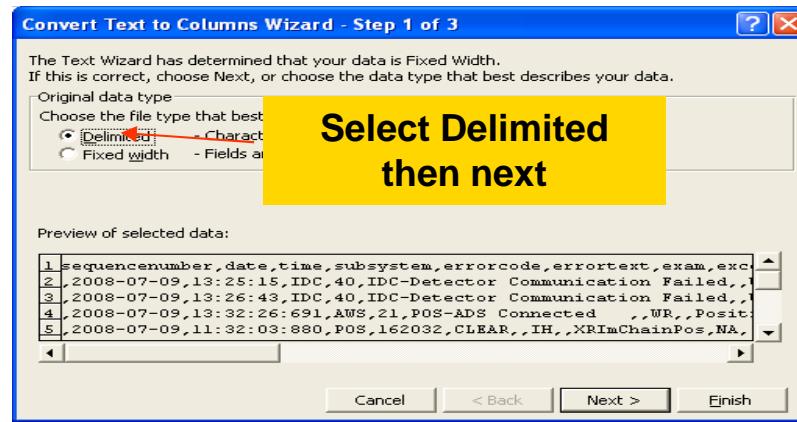


imagination at work

Make the error log readable

Right Click on saved file and 'open with excel'

sequencenumber	date	time	subsystem	errortext	exam	exceptioncategory	application	majorfunction	minorfunction	fru	viewinglevel	rootcause	repeatcount	debug	
1	2008-07-09	13:26:15	IDC	40	IDC-Detector Communication Failed	WR_Apollo_Monitoring	XRMChainPos	Comm	Comm	NA	CD	Device disconnected	1		
2	2008-07-09	13:26:43	IDC	40	IDC-Detector Communication Failed	WR_Apollo_Monitoring	XRMChainPos	Comm	Comm	NA	CD	Device disconnected	1		
3	2008-07-09	13:26:43	IDC	40	IDC-Detector Communication Failed	WR_Apollo_Monitoring	XRMChainPos	Comm	Comm	NA	CD	Device disconnected	1		
4	2008-07-09	13:26:43	IDC	40	IDC-Detector Communication Failed	WR_Apollo_Monitoring	XRMChainPos	Comm	Comm	NA	CD	Device disconnected	1		
5	2008-07-09	11:32:03	880	POS	162032	CLEAR	IH_XRMChainPos	NA	1.0.0(null)	XRMChainPos	705				
6	2008-07-09	13:36:18	IDC	15	IDC-ADS Communication failed	WR_NS_Eth_Card	[AdsComm_udsCommandTask]	Unable to read ADS command,ADS must have been connected	ADS	ADS	NA	CD	Device disconnected	1	
7	2008-07-09	13:36:18	IDC	40	IDC-ADS Communication failed	WR_NS_Eth_Card	[Image_Output_Driver_AdmsImageWriteTask]	Unable to read ADS command,ADS must have been connected	ADS	ADS	NA	CD	Device disconnected	1	
8	2008-07-09	13:36:55	880	AVWS	21	POS-ADS Connected	WR_Positioner_1.0	Positioner is connected	erserver/src/PositionerManager.c:247						
9	2008-07-09	13:36:55	880	AVWS	21	POS-ADS Connected	WR_Positioner_1.0	Positioner is connected	erserver/src/PositionerManager.c:247						
10	2008-07-09	13:36:55	880	AVWS	21	POS-ADS Connected	WR_Positioner_1.0	Positioner is connected	erserver/src/PositionerManager.c:247						
11	2008-07-09	13:36:55	880	AVWS	21	POS-ADS Connected	WR_Positioner_1.0	Positioner is connected	erserver/src/PositionerManager.c:247						
12	2008-07-09	13:36:18	IDC	40	IDC-ADS Communication failed	WR_NS_Eth_Card	[AdsComm_udsCommandTask]	Unable to read ADS command,ADS must have been connected	ADS	ADS	NA	CD	Device disconnected	1	
13	2008-07-09	13:36:18	IDC	40	IDC-ADS Communication failed	WR_NS_Eth_Card	[Image_Output_Driver_AdmsImageWriteTask]	Unable to read ADS command,ADS must have been connected	ADS	ADS	NA	CD	Device disconnected	1	
14	2008-07-09	13:36:55	880	AVWS	21	POS-ADS Connected	WR_Positioner_1.0	Positioner is connected	erserver/src/PositionerManager.c:247						
15	2008-07-09	13:36:55	880	AVWS	21	POS-ADS Connected	WR_Positioner_1.0	Positioner is connected	erserver/src/PositionerManager.c:247						
16	2008-07-09	13:39:09	IDC	40	IDC-Detector Communication Failed	WR_Apollo_Monitoring	XRMChainPos	Comm	Comm	NA	CD	Device disconnected	1		
17	2008-07-09	13:39:09	IDC	40	IDC-Detector Communication Failed	WR_Apollo_Monitoring	XRMChainPos	Comm	Comm	NA	CD	Device disconnected	1		
18	2008-07-09	13:39:30	IDC	40	IDC-Detector Communication Failed	WR_Apollo_Monitoring	XRMChainPos	Comm	Comm	NA	CD	Device disconnected	1		
19	2008-07-09	13:40:16	1	AVWS	22	POS-ADS Connected	WR_Positioner_1.0	Positioner is connected	erserver/src/PositionerManager.c:247						
20	2008-07-09	13:40:16	1	AVWS	22	POS-ADS Connected	WR_Positioner_1.0	Positioner is connected	erserver/src/PositionerManager.c:247						
21	2008-07-09	13:40:22	IDC	51	IDC-DMR Serial Comm VR	WR_ServoServer	XRMChainPos	Comm	Comm	NA	CD	Device disconnected	1		
22	2008-07-09	13:40:22	IDC	4	communication Pb w/ VR	WR_Positioner	XRMChainPos	Comm	Comm	NA	CD	Device disconnected	1		
23	2008-07-09	13:40:52	1	POS	162032	CLEAR	IH_XRMChainPos	NA	1.0.0(null)	XRMChainPos	705				
24	2008-07-09	13:40:52	1	POS	162032	CLEAR	IH_XRMChainPos	NA	1.0.0(null)	XRMChainPos	705				
25	2008-07-09	13:40:54	9	POS	162032	CLEAR	IH_XRMChainPos	NA	1.0.0(null)	XRMChainPos	705				
26	2008-07-09	13:40:54	9	POS	162032	CLEAR	IH_XRMChainPos	NA	1.0.0(null)	XRMChainPos	705				
27	2008-07-09	13:40:54	9	POS	162032	CLEAR	IH_XRMChainPos	NA	1.0.0(null)	XRMChainPos	705				
28	2008-07-09	13:40:54	9	POS	162032	CLEAR	IH_XRMChainPos	NA	1.0.0(null)	XRMChainPos	705				
29	2008-07-09	13:46:07	7	AVWS	21	POS-ADS Connected	WR_Positioner	XRMChainPos	Comm	Comm	NA	CD	Device disconnected	1	
30	2008-07-09	13:46:07	7	AVWS	21	POS-ADS Connected	WR_Positioner	XRMChainPos	Comm	Comm	NA	CD	Device disconnected	1	
31	2008-07-09	13:46:00	0	POS	170005	Bucky Step Loss	IH_XRMChainPos	NA	1.0.0(null)	XRMChainPos	705				
32	2008-07-09	13:46:00	0	POS	170005	Bucky Step Loss	IH_XRMChainPos	NA	1.0.0(null)	XRMChainPos	705				
33	2008-07-09	13:50:29	9	AVWS	22	POS-ADS Communic VR	WR_Positioner	XRMChainPos	Comm	Comm	NA	CD	Device disconnected	1	
34	2008-07-09	13:50:29	9	AVWS	22	POS-ADS Communic VR	WR_Positioner	XRMChainPos	Comm	Comm	NA	CD	Device disconnected	1	
35	2008-07-09	13:50:29	9	AVWS	22	POS-ADS Communic VR	WR_Positioner	XRMChainPos	Comm	Comm	NA	CD	Device disconnected	1	



sequencenumber	date	time	subsystem	errortext	exam	exceptioncategory	application	majorfunction	minorfunction	fru	viewinglevel	rootcause	repeatcount	debug
1	2008-07-09	13:25:15	IDC	40	IDC-Detector Communication Failed									
2	2008-07-09	13:26:43	IDC	40	IDC-Detector Communication Failed									
3	2008-07-09	13:32:26	8 AVWS	21	POS-ADS Connected	IH								
4	2008-07-09	11:32:03	8 POS	162032	CLEAR	IH_XRMChainPos	NA							
5	2008-07-09	13:36:18	IDC	15	IDC-ADS Communication failed	WR_NS_Eth_Card	[AdsComm_udsCommandTask]	Unable to read ADS command,ADS must have been connected	ADS	ADS	NA	CD	Device disconnected	1
6	2008-07-09	13:36:18	IDC	40	IDC-ADS Communication failed	WR_NS_Eth_Card	[Image_Output_Driver_AdmsImageWriteTask]	Unable to read ADS command,ADS must have been connected	ADS	ADS	NA	CD	Device disconnected	1
7	2008-07-09	13:36:55	8 AVWS	21	POS-ADS Connected	IH								
8	2008-07-09	13:36:55	8 POS	162032	CLEAR	IH_XRMChainPos	NA							
9	2008-07-09	13:36:55	8 AVWS	21	POS-ADS Connected	IH								
10	2008-07-09	13:36:55	8 POS	162032	CLEAR	IH_XRMChainPos	NA							
11	2008-07-09	13:36:18	IDC	40	IDC-Detector Communication Failed	WR_NS_Eth_Card	[AdsComm_udsCommandTask]	Unable to read ADS command,ADS must have been connected	ADS	ADS	NA	CD	Device disconnected	1
12	2008-07-09	13:36:18	IDC	40	IDC-ADS Communication failed	WR_NS_Eth_Card	[Image_Output_Driver_AdmsImageWriteTask]	Unable to read ADS command,ADS must have been connected	ADS	ADS	NA	CD	Device disconnected	1
13	2008-07-09	13:40:54	9 POS	162032	CLEAR	IH_XRMChainPos	NA							
14	2008-07-09	13:40:54	9 IDC	40	IDC-Detector Communication Failed	WR_Apollo_Monitoring	XRMChainPos	Comm	Comm	NA	CD	Device disconnected	1	
15	2008-07-09	13:40:54	9 IDC	40	IDC-Detector Communication Failed	WR_Apollo_Monitoring	XRMChainPos	Comm	Comm	NA	CD	Device disconnected	1	
16	2008-07-09	13:39:30	IDC	15	IDC-ADS Communic VR	WR_Positioner	XRMChainPos	Comm	Comm	NA	CD	Device disconnected	1	
17	2008-07-09	13:39:30	IDC	40	IDC-ADS Communic VR	WR_Positioner	XRMChainPos	Comm	Comm	NA	CD	Device disconnected	1	
18	2008-07-09	13:40:16	1 AVWS	22	POS-ADS Communic VR	WR_Positioner	XRMChainPos	Comm	Comm	NA	CD	Device disconnected	1	
19	2008-07-09	13:40:16	1 POS	162032	CLEAR	IH_XRMChainPos	NA							
20	2008-07-09	13:40:16	1 AVWS	22	POS-ADS Communic VR	WR_Positioner	XRMChainPos	Comm	Comm	NA	CD	Device disconnected	1	
21	2008-07-09	13:40:22	IDC	51	IDC-DMR Serial Comm VR	WR_ServoServer	XRMChainPos	Comm	Comm	NA	CD	Device disconnected	1	
22	2008-07-09	13:40:22	IDC	4	communication Pb w/ VR	WR_Positioner	XRMChainPos	Comm	Comm	NA	CD	Device disconnected	1	
23	2008-07-09	13:40:52	1 POS	162032	CLEAR	IH_XRMChainPos	NA							
24	2008-07-09	13:40:52	1 POS	162032	CLEAR	IH_XRMChainPos	NA							
25	2008-07-09	13:40:54	9 POS	162032	CLEAR	IH_XRMChainPos	NA							
26	2008-07-09	13:40:54	9 IDC	40	IDC-Detector Environment VR	WR_Apollo_Monitoring	XRMChainPos	Comm	Comm	NA	CD	Device disconnected	1	
27	2008-07-09	13:40:54	9 IDC	40	IDC-Detector Environment VR	WR_Apollo_Monitoring	XRMChainPos	Comm	Comm	NA	CD	Device disconnected	1	
28	2008-07-09	13:40:54	9 AVWS	21	POS-ADS Connected VR	WR_Positioner	XRMChainPos	Comm	Comm	NA	CD	Device disconnected	1	
29	2008-07-09	13:40:54	9 POS	162032	CLEAR	IH_XRMChainPos	NA							
30	2008-07-09	13:46:07	7 POS	170005	Bucky Step Loss	IH_XRMChainPos	NA							
31	2008-07-09	13:46:00	0 POS	170005	Bucky Step Loss	IH_XRMChainPos	NA							
32	2008-07-09	13:46:00	0 AVWS	22	POS-ADS Communic VR	WR_Positioner	XRMChainPos	Comm	Comm	NA	CD	Device disconnected	1	
33	2008-07-09	13:50:29	9 IDC	40	IDC-Detector Environment VR	WR_Apollo_Monitoring	XRMChainPos	Comm	Comm	NA	CD	Device disconnected	1	

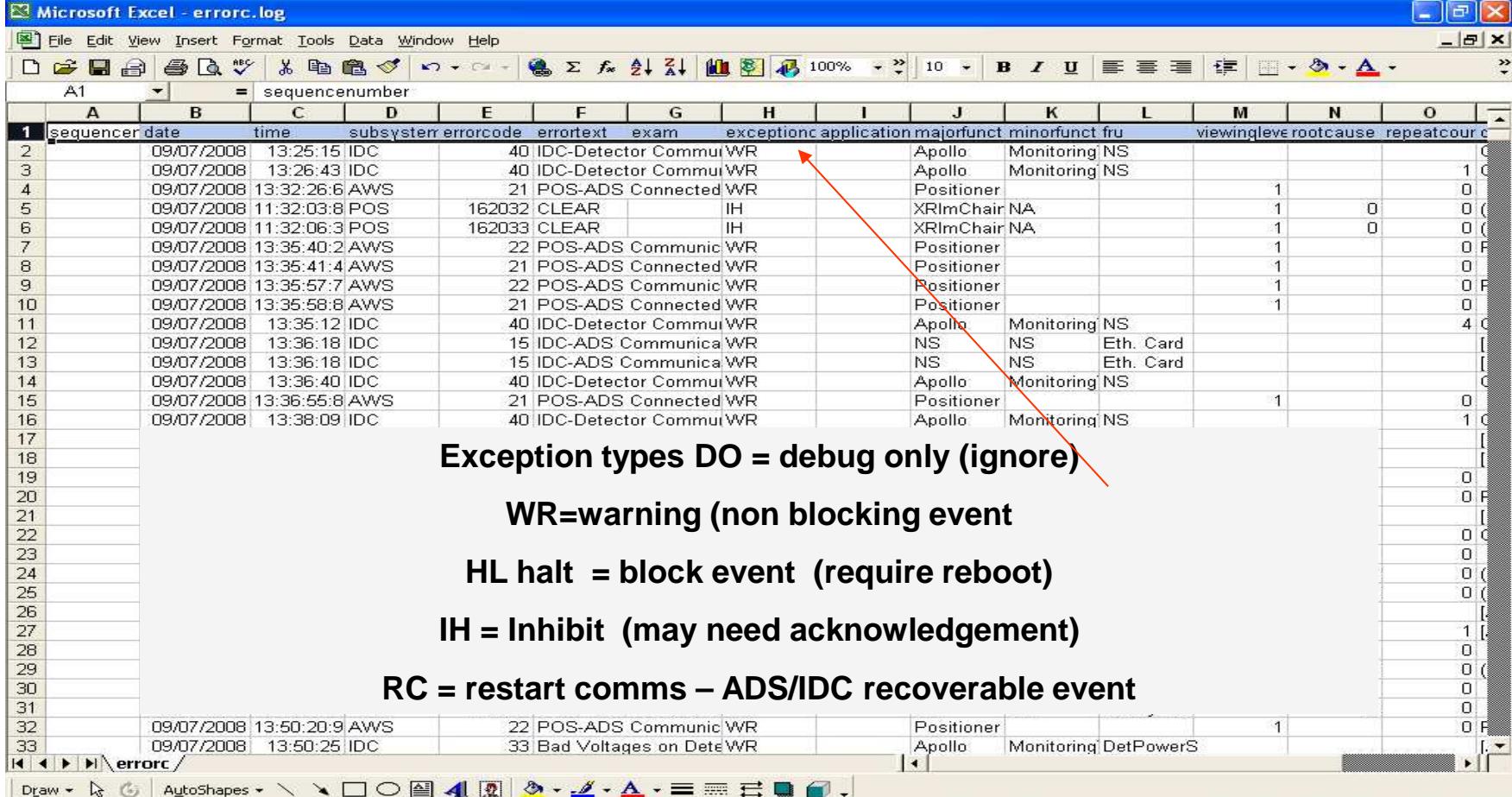


imagination at work

Make the error log readable (2)

Adjust width on column B then highlight row A, select Data, Filter, Auto filter.

You can then filter on todays date or on exception type i.e DO, IH, WR



A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
1	sequencer	date	time	subsystem	errorcode	errortext	exam	exception	application	majorfunct	minorfunct	fru	viewinglevel	rootcause	repeatcount
2		09/07/2008	13:25:15	IDC	40	IDC-Detector Commu	WR		Apollo	Monitoring	NS				0
3		09/07/2008	13:26:43	IDC	40	IDC-Detector Commu	WR		Apollo	Monitoring	NS			1	0
4		09/07/2008	13:32:26	6 AWS	21	POS-ADS Connected	WR		Positioner				1		0
5		09/07/2008	11:32:03	8 POS	162032	CLEAR		IH	XRIImChair	NA			1	0	0
6		09/07/2008	11:32:06	3 POS	162033	CLEAR		IH	XRIImChair	NA			1	0	0
7		09/07/2008	13:35:40	2 AWS	22	POS-ADS Communic	WR		Positioner				1		0
8		09/07/2008	13:35:41	4 AWS	21	POS-ADS Connected	WR		Positioner				1		0
9		09/07/2008	13:35:57	7 AWS	22	POS-ADS Communic	WR		Positioner				1		0
10		09/07/2008	13:35:58	8 AWS	21	POS-ADS Connected	WR		Positioner				1		0
11		09/07/2008	13:35:12	IDC	40	IDC-Detector Commu	WR		Apollo	Monitoring	NS			4	0
12		09/07/2008	13:36:18	IDC	15	IDC-ADS Communica	WR		NS	NS	Eth. Card				
13		09/07/2008	13:36:18	IDC	15	IDC-ADS Communica	WR		NS	NS	Eth. Card				
14		09/07/2008	13:36:40	IDC	40	IDC-Detector Commu	WR		Apollo	Monitoring	NS				
15		09/07/2008	13:36:55	8 AWS	21	POS-ADS Connected	WR		Positioner				1		0
16		09/07/2008	13:38:09	IDC	40	IDC-Detector Commu	WR		Apollo	Monitoring	NS			1	0
17															
18															
19															
20															
21															
22															
23															
24															
25															
26															
27															
28															
29															
30															
31															
32		09/07/2008	13:50:20	9 AWS	22	POS-ADS Communic	WR		Positioner				1		
33		09/07/2008	13:50:25	IDC	33	Bad Voltages on Dete	WR		Apollo	Monitoring	DetPowerS				

Exception types DO = debug only (ignore)

WR=warning (non blocking event)

HL halt = block event (require reboot)

IH = Inhibit (may need acknowledgement)

RC = restart comms – ADS/IDC recoverable event



Remote operation examples



imagination at work

Seno 2000D/DS/ESS – detector overtemperature

1- retrieval of file sensor.txt on Seno DS/2000D (troubleshooting temperature detector)

connect to the system (telnet)

su - root (log in as root, psswd operator)

cd / (go to the root directory /)

mkdir tmp (create a temporary directory to save our temporary file)

cd /tmp (go to directory tmp)

ftp idc (press "enter" at username and password)

cd /idc (move to directory /idc)

bin (switch to binary transfer mode)

get sensor.txt (download the file sensor.txt)

bye (get out of ftp)

more sensor.txt (display file sensor.txt)

the file can be later be copied on the FE laptop using FTPtool (select directory /tmp)

2- retrieval of file sensor.txt on Seno Essential (troubleshooting temperature detector)

Connect to the system (telnet)

Change directory to /export/home/sdc

Connect to IDC via FTP by entering ftp idc (press "enter" at username and password)

Change directory to /enggdata/log

bin (switch to binary transfer mode)

get NGD_IDC_TEMO_SENSOR0.log (download the file sensor.txt)

bye (get out of ftp)

more NGD_IDC_TEMO_SENSOR0.log (display file)

the file can be later be copied on the FE laptop using FTPtool (select directory /tmp)

To quickly view the temperature trending it is much simpler to FTP file
Imagemeasures.stat as this records factors for every exposure
including the detector temp at the time of exposure



imagination at work

26 /

GE Title or job number /

10/20/2012

Seno 2000D/DS – change chiller temperature setting

change detector temperature setting (temp.txt pour seno 2000D)

```
connect to the system (telnet)
su - root (log in as root, psswd operator)
cd / (go to the root directory /)
mkdir tmp (create a temporary directory to save our temporary file)
cd /tmp (go to directory tmp)
ftp idc (press "enter" at username and password)
cd /idc (move to directory /idc)
bin (switch to binary transfer mode)
get temp.txt (download the file)
more temp.txt (display the fichier)
to modify temperature setting change the 4 lines containing "stabilized). Values are in 1/10 of degrees celcius (200 = 20 degrees celcius).
```



imagination at work

Seno 2000D/DS – network issue

get declared remote hosts

how to find remote hosts declared on the station and check if those hosts can be reached (network troubleshooting).

connect to the system (telnet)

su - root

cd /export/home/sdc/Prefs

For network hosts (other workstations etc) more SdCRHosts

For RIS hosts (worklist broker etc) type more ScCRishosts

For PRINTERS type more xxxx.dev (use command ls –al to find name of printer file)
(display all declared hosts , note necessary IP addresses, AE titles and port numbers)

For your own AEtitle,ip address type cd /etc then type more hosts

ping/dicom echo (network troubleshooting)

Once you have the ip address type ping xxx.xxx.xxx.xxx you should see either
xxx.xxx.xxx.xxx is alive or a list of transmissions with timings etc – if ping fails you have a basic
network issue – if ping works then you can try a dicom ping

Change user to sdc on telnet drop down window then type sendecho and follow on screen
instructions – failure can be due to incorrect AEtitle, system not declared on pacs etc



imagination at work

Seno 2000D/DS/ESS – remote hosts config

Digital-Mammo

Host-Worklist

Host :Directory /export/home/sdc/Prefs File :SdCRHosts

Worklist: Directory /export/home/sdc/Prefs File :SdCRisHosts

```
aws% cd Prefs
aws% ls
AdvantageUserPrefs@      SdCAplications*          SdCProtocols*
AiMIndexFile              SdCAplications.bak*      SdCRHosts*
BrowserMammoPrefs@       SdCArchiveDevice*        SdCRisHosts*
BrowserPrefs*              SdCAutoPush             Sessions@
BrowserUserPrefs@         SdCBrowserTypes*        Shared_Protocols/
CurrentProtocols@        SdCFilters@            UserPrefs@
KeypadUserPrefs@          SdCNotification*       config_db_file*
LicenseFileDescription    SdCPrefsList*           fujil.dev
Protocols@                SdCPreset@             fujiz.dev
aws% more ^M
: No such file or directory
aws%
aws% more SdCRHosts
cad
set_host_name "cad" "r2cad.r2mfg";set_host_app_entity_title "cad" "DICOMINBOX";s
et_host_address "cad" "41.100.0.72";← set_host_protocol "cad" 3;set_host_port_numb
er "cad" "1115";set_host_provider_type "cad" 3;set_host_support_worklist "cad" 2
;set_host_storage_commitment "cad" 0;set_host_send_flag "cad" 0;set_host_comment
"cad" "FFDM CAD System";
Radstore
set_host_name "Radstore" "1FZRZK01";set_host_app_entity_title "Radstore" "AE_1FZRZ
K01";set_host_address "Radstore" "41.100.0.73";set_host_protocol "Radstore" 3;se
t_host_port_number "Radstore" "104";set_host_provider_type "Radstore" 0;set_host
_support_worklist "Radstore" 2;set_host_storage_commitment "Radstore" 0;set_host
_send_flag "Radstore" 0;set_host_comment "Radstore" "";
St de Revue
set_host_name "St de Revue" "rws";set_host_app_entity_title "St de Revue" "rws";
set_host_address "St de Revue" "41.100.0.71";set_host_protocol "St de Revue" 3;s
et_host_port_number "St de Revue" "4006";set_host_provider_type "St de Revue" 3;
set_host_support_worklist "St de Revue" 2;set_host_storage_commitment "St de Rev
ue" 0;set_host_send_flag "St de Revue" 1;set_host_comment "St de Revue" "";
```

Menetrier-Thierry

IP address

AE title



imagination at work

imagination at work

29 /

GE Title or job number /

10/20/2012

Seno 2000D/DS/ESS – dicom printer config

Digital-Mammo

Printer

Directory /export/home/sdc/Prefs File-extension : .dev

```
/export/home/sdc/Prefs
aws$ more fujil.dev
set dName "fuji 26x36"
set dType dicom
set dColour greyscale
set dQueueType DICM
set dQueueName "dicom"
props canDoSaveOnDisk canDoMultiCopies canDoCustomResolution
set dFilmFormatMode standard
set dGreyscaleMode off
set dColourMode greyscale
set dResolutionMode custom
set dPixelDepth 8
set reviewroom ""
set dHostName "fujil"
set dAppTitle "LP_2636"
set medType "BLUE FILM"
set destination PROCESSOR
set filmOrientation PORTRAIT
set magType CUBIC
set netAddr "41.100.0.61"
set portNumber 105
set filmSize "8INx10IN"
pfilmSize "8INx10IN" 0 0
# If print priority is empty LOW is used as the default
# Available values : LOW, MED, HIGH
set printPriority ""
# If session label is empty it is not sent
set sessionLabel ""
# If smoothing factor is empty or mag type != CUBIC
# then smoothing factor is not sent
set smooth ""
# If border density is empty, it is not sent
# Available values : BLACK, WHITE
set borderDensity "BLACK"
# If empty img density is empty, it is not sent
# Available values : BLACK, WHITE
set emptyImgDensity ""
# If min density = -1, it is not sent
```

AE title

IP adress

Port number

Menetrier-Thierry



imagination at work

imagination at work



30 /

GE Title or job number /

10/20/2012

Seno 2000D/DS/ESS – check ADS software version

verify software versions (from CSD and command line)

Connect with telnet

```
cd /export/home/install/jumpstart
```

```
ls (1st file on the top of the list has ADS version)
```



imagination at work

All Seno + RWS +revolution XQiXRd: cannot complete boot up.

File system recovery if boot fails (usually says enter cntrl-d for normal boot or enter root password for normal boot – normal boot fails

Login and change user to root

Type fsck -y

You may need to run this more than once – I usually run twice by default then reboot
(if no connection the customer can easily run this with your advice)

boot issues (clean up of /reserved) to be applied if application start fails (no browser).

connect the system (telnet)

su - root

cd /export/home1/sdc_image_pool/reserved

ls -la (display content of directory /reserved) /reserved must be empty, if not delete any present file or directory except ./ and .. / (rm for file removal, rmdir for directory removal)

This has also fixed systems when icons fail to work or applications behaves oddly in general



imagination at work

All systems – check partitionning troubleshoot boot error or soft failure.

check partitionning (df -k) when sdc fails

To be checked if application does not start.

connect to system (telnet)

su - root

df -k (display partition) check all partitions /sdc and export/home1 exist. check no partition has reached 100% (or clean up files in the concerned partition)

If partition is >90% you may see odd errors and once full you may see things such as errors when attempting to open new patient etc

IOP Cleaner – if system gives errors such as very slow to view processed images, disk full, partition full, error during image declaration, patients & images not appearing on browser or DS hangs at 62% - then run IOP cleaner this will manually clear network and print queues and clear reserved disk space if found

Mammo – /export/home/sdc/scripts then iop_cleaner (need to be root)

Xr/d Xq/I cd scripts then enter then iop_cleaner



imagination at work

Seno 2000D/DS/ESS – workstation tips

- Recover database launch script **start.reinstall.images**

-Script path : /export/home/sdc/scripts (must be SDC user)

- UPS batteries at low level

Log in as root and execute the command **ups stop**

and let the system on to reload the batteries

- Check that the devices are responding

probe-ide or **probe-scsi** (at OK prompt)

- Boot errors logged in messages file – var/adm/messages

- If system appears to be totally hung – ask customer to press ‘front’ key on keyboard and make sure no page is behind the browser.

- To restart browser (apps software) change to user sdc

type cd /export/home/sdc/scripts

to stop kill.sdc

to start start.sdc



imagination at work

Seno 2000D/DS/ESS – bypass UPS

bypass de l'UPS

To be used if ups failure or ups battery flat.

This procedure can apply to Seno 2000D or Seno DS.

1- Hardware re-configuration:

Bypass the UPS by connecting all devices normally supplied by the UPS to a multi-plug, itself connected to the 220V.

In the generator, connect separately the conditionner to an external 220V outlet (as recommended for vacation period)

2- Software re-configuration:

power the system, and when the AWS login appears, immediately login as *root* (pwd = operator); then enter the command: `ups stop <return>`; this will stop the UPS daemon (you have 20 seconds to do all that !!) to put the UPS in simulation mode, enter commands:

- `cd /export/home/sdc/senovision/scripts <return>`
- `configure.sh -U simul <return>` (*it is capital U !*)

then type: `reboot <return>` and after restart, login as usually, the system should be fully operational.

3- To switch on the system: use the main room switch

4- To switch off the system: shutdown the AWS as usually, when the *OK prompt* appears (and only then !!!), switch off with the main room switch (the conditionner should stay on)

5- Software re-reconfiguration when new UPS in place:

to put the UPS back to real mode, enter commands (being *root*):

- `cd /export/home/sdc/senovision/scripts <return>`
- `configure.sh -U real <return>` and reboot the AWS



imagination at work

IP filter applies to Seno Essential, Seno DS after FMI 12031 (**M5B-soft version:32.00**),

and to Seno 2000D after FMI 12063 (**Alnitak-soft version:17.4.5**)

- This filter does not forbid in any case the actions (ping, ftp, telnet...) of AWS toward remote hosts.
- DICOM transactions are ALWAYS authorized (no declaration in IP filter for printers & other servers like worklist or PACS, *sendecho* possible)
- BUT any host must be declared to allow a ftp or telnet session, for example from RWS to AWS.
- **The “ping” toward AWS remains forbidden in all cases.**
- About Insite, VPN or ISDN case, **it will be necessary to declare the LAN IP of the router**; by default only IP interval 150.2.0.0/16 is valid.
- Job cards of interest: ELE M056, REP C010, CFG C010
- Main commands to remember: *IPFadd.sh <IP_range>* & *IPFls.sh*
- Example: *IPFadd.sh 192.22.33.10/20*

Quick-Reference-Card-Unix [doc_4736-quick-Reference-Card-unix-command.pdf](#)

Quick-Reference-Card- Network [doc_4735.-Quick-Reference-Card-network-card.pdf](#)

Quick-Reference-Card- Dicom [doc_4734-Quick-Reference-Card-Dicom.pdf](#)

Useful link

Support-Central-X-Ray Mammo Online Center

http://supportcentral.ge.com/products/sup_products.asp?prod_id=46289

PRODUCT

2000d see ASM (yellow) job card TSG 004 Network Troubleshooting

DS-Essential see SIP-M job card TSG 004 Network Troubleshooting



imagination at work

JAVISTA :Image viewer

DTRACE : Trace Dicom analyzer

The Installation package of Javista: <ftp://globe/globepro/javista/javista>

The Installation package of DTrace: <ftp://globe/globepro/javista/DTrace/>

The JRE (Java Runtime Environment) V1.4:

<ftp://globe/globepro/javista/JavaRuntimeEnvironment%20v1.4/>

See H Baroukh for installation and training



imagination at work

QRC quick Reference card - Network

 GE Medical Systems <i>Inhalation Education Solutions</i> Direction XXXXXX-100 Networks Quick Reference Card <small>Rev D.c Approved by Brad Wulf Proprietary to General Electric Company Produced by GE Medical Systems Education Center</small>		Network Command's Reference Procedure Command Access Another System telnet Adding a Router route Address Resolution arp DICOM Ping sendecho Interface Configuration ifconfig List Users and Machines rusers Logout CTRL 'd' Monitor network communications snoop Move files across the network ftp Network Status netstat Networked Systems on Line rup Test Network Communications ping Who's Logged On who	Network Files /etc/hosts A lookup file to associate host alias names with their IP addresses. Must have an entry for hostname. /etc/hostname.xxx Contains the hostname for the xxx interface. xxx may be le0, le1, hme0, hme1, ba0, ba1, etc. /etc/netmasks A lookup table to associate sub-netmask with their base network addresses. /etc/services A list of TCP/IP applications and their software port numbers. /usr/sbin/in.rdisc Router discovery daemon, rename to turn off. /usr/sbin/in.routed Network routing daemon, rename to turn off.
Networking Parts Description Part # Description 46-287532P2 10-Base-2 Thinner AUI Transceiver 2135003 10-Base-T RJ45 AUI Transceiver 2224969 10-Base-T RJ45 AUI Transceiver 2220705 10-Base-T RJ45 AUI Transceiver 2224971 10-Base Stackable Hub 8-RJ45, 1 Thinner, 1 AUI 2230676 10/100-Base Stackable Hub 8-RJ45 46-296861G1 4 1/2' Long AUI Cable 2183711 8' Short AUI Cable 2183929 DLX Transceiver Mounting Bracket 46-254682P4 50 Ω BNC "T" Connector 46-220427P3 BNC Bullet Connector 46-214999P1 50 Ω BNC Terminator 46-313020P1 50 Ω BNC Terminator w/ground lead 99171776 50 Ω BNC Terminator w/chain 2152351 Power Strip 46-296454G6 50 Ω 45 Meter coax cable 46-296454G2 50 Ω 18 Meter coax cable 2128649 50 Ω 3.9 Meter coax cable 2173765 50 Ω 6.5 Meter coax cable 2173767 50 Ω 1.2 Meter coax cable 2237749 RJ45 1.8 Meter TP cable 2173766 RJ45 6.5 Meter TP cable 2195942 RJ45 6.5 Meter TP cable 2114689 RJ45 4 Meter TP cable 2236781 RJ45 60 Meter TP CAT 5 2212538 RJ45 TP Cable CPU to Hub 2212537 RJ45 TP Cable CPU to CPU	arp [-a] Internet-to-Ethernet address translation table. -a Display all of the current ARP entries. ctrl-d Logout, close shell instance, close a window ftp host File transfer protocol, moves files between host host IP address or hostname from host table In ftp 'help' will give a list of available commands. ifconfig [-a] interface [address] [up] [down] [netmask mask] [broadcast address] Configure network interface parameters -a Displays the current condition of all the interfaces. interface Physical interface, address assigns an address up, down Turns the interface on or off netmask Assigns the netmask of mask broadcast Assigns address for broadcast. netstat [-arn] Show network status. -a All sockets, -r Routes -s Show addresses as numbers, -i All TCP/IP Interfaces ping host Send an Echo request to a network host. route [-f] [add net network gateway hops] Manipulate the routing tables. -f Delete table. network Destination network IP. gateway Gateway IP. hops Number of steps to destination network. rup [-h] Show host status of local machines. -h Alphabetically by host name. rusers [-al] Who's logged in on local machines. -a All Machines. -l Long listing. snoop [-d device] [-v] [-h] -d select port device ie: le0, hme0, -v verbose, -h help sendecho DICOM verification used on AW, Revolution XQ/I & Senograph 2000D. Need host & destination AE, port & IP telnet host Interface to a remote system. host IP address or alias name of remote system.	Network Troubleshooting Hardware: Verify all cable connections: Thinner: Verify termination, must measure approx. 25 ohms. Twisted Pair: Look for link lights on transceivers and hubs. Local network: halt - Halt to the OK prompt OK - test net - OK? Reboot - KO? Check connection to Hub, check Hub, try another connection/port. ping hostname - OK? Local hardware ok. KO? Verify name in file /etc/hostname.xxx is listed in the /etc/hosts file. ping host - OK? Network connection ok. KO? Verify host powered on. Try other hosts. Use routers to see other hosts ifconfig -a - Verify IP address, netmask KO? Correct & reboot. OK? Connect two systems together with hub or crossover cable and recheck. Routed network: ping router, local side IP - KO? See local network troubleshooting. ping router, routed side IP - OK? Ping routed workstation. KO? Check routed workstation config. OK? No Problem KO? Check route table, netmasks ifconfig -a - Verify netmask, broadcast address netstat -r - Verify existing routes, network base address route -f - Delete the existing routing table route add net - Add route for destination network ping router, routed side IP - OK? Determine reason for bogus routes KO? Verify router is functioning. Slow Communications: snoop - Monitor communication load. Reboot workstation and check for 10 or 100 base connections Half or full duplexed	



imagination at work

QRC quick reference card – unix commands

 GE GE Medical Systems <i>Global International Solutions</i> Direction XXXXXX-100 Networks <i>Quick Reference Card</i> <small>Rev D.C. Approved by Brad Wulf Proprietary to General Electric Company Produced by GE Medical Systems Education Center</small>		Network Command's Reference <table border="0"> <thead> <tr> <th>Procedure</th><th>Command</th></tr> </thead> <tbody> <tr> <td>Access Another System</td><td>telnet</td></tr> <tr> <td>Adding a Router</td><td>route</td></tr> <tr> <td>Address Resolution</td><td>arp</td></tr> <tr> <td>DICOM Ping</td><td>sendecho</td></tr> <tr> <td>Interface Configuration</td><td>ifconfig</td></tr> <tr> <td>List Users and Machines</td><td>users</td></tr> <tr> <td>Logout</td><td>CTRL 'd'</td></tr> <tr> <td>Monitor network communications</td><td>snoop</td></tr> <tr> <td>Move files across the network</td><td>ftp</td></tr> <tr> <td>Network Status</td><td>netstat</td></tr> <tr> <td>Networked Systems on Line</td><td>rarp</td></tr> <tr> <td>Test Network Communications</td><td>ping</td></tr> <tr> <td>Who's Logged On</td><td>who</td></tr> </tbody> </table>	Procedure	Command	Access Another System	telnet	Adding a Router	route	Address Resolution	arp	DICOM Ping	sendecho	Interface Configuration	ifconfig	List Users and Machines	users	Logout	CTRL 'd'	Monitor network communications	snoop	Move files across the network	ftp	Network Status	netstat	Networked Systems on Line	rarp	Test Network Communications	ping	Who's Logged On	who	Network Files <table border="0"> <tr> <td>/etc/host</td><td>A lookup file to associate host alias names with their IP addresses. Must have an entry for hostname.</td></tr> <tr> <td>/etc/hostname.xxx</td><td>Contains the hostname for the xxx interface. xxx may be le0, le1, hme0, hme1, ba0, ba1, etc.</td></tr> <tr> <td>/etc/netmask</td><td>A lookup table to associate sub-netmask with their base network addresses.</td></tr> <tr> <td>/etc/services</td><td>A list of TCP/IP applications and their software port numbers.</td></tr> <tr> <td>/usr/sbin/in.rdisc</td><td>Router discovery daemon, rename to turn off.</td></tr> <tr> <td>/usr/sbin/in.routed</td><td>Network routing daemon, rename to turn off.</td></tr> </table>	/etc/host	A lookup file to associate host alias names with their IP addresses. Must have an entry for hostname.	/etc/hostname.xxx	Contains the hostname for the xxx interface. xxx may be le0, le1, hme0, hme1, ba0, ba1, etc.	/etc/netmask	A lookup table to associate sub-netmask with their base network addresses.	/etc/services	A list of TCP/IP applications and their software port numbers.	/usr/sbin/in.rdisc	Router discovery daemon, rename to turn off.	/usr/sbin/in.routed	Network routing daemon, rename to turn off.															
Procedure	Command																																																									
Access Another System	telnet																																																									
Adding a Router	route																																																									
Address Resolution	arp																																																									
DICOM Ping	sendecho																																																									
Interface Configuration	ifconfig																																																									
List Users and Machines	users																																																									
Logout	CTRL 'd'																																																									
Monitor network communications	snoop																																																									
Move files across the network	ftp																																																									
Network Status	netstat																																																									
Networked Systems on Line	rarp																																																									
Test Network Communications	ping																																																									
Who's Logged On	who																																																									
/etc/host	A lookup file to associate host alias names with their IP addresses. Must have an entry for hostname.																																																									
/etc/hostname.xxx	Contains the hostname for the xxx interface. xxx may be le0, le1, hme0, hme1, ba0, ba1, etc.																																																									
/etc/netmask	A lookup table to associate sub-netmask with their base network addresses.																																																									
/etc/services	A list of TCP/IP applications and their software port numbers.																																																									
/usr/sbin/in.rdisc	Router discovery daemon, rename to turn off.																																																									
/usr/sbin/in.routed	Network routing daemon, rename to turn off.																																																									
Networking Parts <table border="0"> <thead> <tr> <th>Part #</th><th>Description</th></tr> </thead> <tbody> <tr> <td>45-287532P2</td><td>10-Base-2 Thinner AUI Transceiver</td></tr> <tr> <td>2135003</td><td>10-Base-T RJ45 AUI Transceiver</td></tr> <tr> <td>2224969</td><td>10-Base-T RJ45 AUI Transceiver</td></tr> <tr> <td>2220705</td><td>10-Base-T RJ45 AUI Transceiver</td></tr> <tr> <td>2224971</td><td>10-Base Stackable Hub 8-RJ45, 1 Thinner, 1 AUI</td></tr> <tr> <td>2230676</td><td>10/100-Base Stackable Hub 8-RJ45</td></tr> <tr> <td>46-296861G1</td><td>4 1/2 Long AUI Cable</td></tr> <tr> <td>2183711</td><td>8" Short AUI Cable</td></tr> <tr> <td>2183929</td><td>DLX Transceiver Mounting Bracket</td></tr> <tr> <td>45-254682P4</td><td>50 Ω BNC "T" Connector</td></tr> <tr> <td>46-220427P3</td><td>BNC Bullet Connector</td></tr> <tr> <td>46-214999P1</td><td>50 Ω BNC Terminator</td></tr> <tr> <td>46-313020P1</td><td>50 Ω BNC Terminator w/ ground lead</td></tr> <tr> <td>9917176</td><td>50 Ω BNC Terminator w/chain</td></tr> <tr> <td>2152351</td><td>Power Strip</td></tr> <tr> <td>46-296454G6</td><td>50 Ω 45 Meter coax cable</td></tr> <tr> <td>46-296454G2</td><td>50 Ω 18 Meter coax cable</td></tr> <tr> <td>2128649</td><td>50 Ω 3.9 Meter coax cable</td></tr> <tr> <td>2173765</td><td>50 Ω 6.5 Meter coax cable</td></tr> <tr> <td>2173767</td><td>50 Ω 1.2 Meter coax cable</td></tr> <tr> <td>2237740</td><td>RJ45 1.8 Meter TP cable</td></tr> <tr> <td>2173766</td><td>RJ45 6.5 Meter TP cable</td></tr> <tr> <td>2195942</td><td>RJ45 6.5 Meter TP cable</td></tr> <tr> <td>2114689</td><td>RJ45 4 Meter TP cable</td></tr> <tr> <td>2236781</td><td>RJ45 60 Meter TP CAT 5</td></tr> <tr> <td>2212538</td><td>RJ45 TP Cable CPU to Hub</td></tr> <tr> <td>2212537</td><td>RJ45 TP Cable CPU to CPU</td></tr> </tbody> </table>	Part #	Description	45-287532P2	10-Base-2 Thinner AUI Transceiver	2135003	10-Base-T RJ45 AUI Transceiver	2224969	10-Base-T RJ45 AUI Transceiver	2220705	10-Base-T RJ45 AUI Transceiver	2224971	10-Base Stackable Hub 8-RJ45, 1 Thinner, 1 AUI	2230676	10/100-Base Stackable Hub 8-RJ45	46-296861G1	4 1/2 Long AUI Cable	2183711	8" Short AUI Cable	2183929	DLX Transceiver Mounting Bracket	45-254682P4	50 Ω BNC "T" Connector	46-220427P3	BNC Bullet Connector	46-214999P1	50 Ω BNC Terminator	46-313020P1	50 Ω BNC Terminator w/ ground lead	9917176	50 Ω BNC Terminator w/chain	2152351	Power Strip	46-296454G6	50 Ω 45 Meter coax cable	46-296454G2	50 Ω 18 Meter coax cable	2128649	50 Ω 3.9 Meter coax cable	2173765	50 Ω 6.5 Meter coax cable	2173767	50 Ω 1.2 Meter coax cable	2237740	RJ45 1.8 Meter TP cable	2173766	RJ45 6.5 Meter TP cable	2195942	RJ45 6.5 Meter TP cable	2114689	RJ45 4 Meter TP cable	2236781	RJ45 60 Meter TP CAT 5	2212538	RJ45 TP Cable CPU to Hub	2212537	RJ45 TP Cable CPU to CPU	arp [-a] Internet-to-Ethernet address translation table. -a Display all of the current ARP entries. ctrl-d Logout, close shell instance, close a window ftp host File transfer protocol, moves files between host host IP address or hostname from host table In ftp 'help' will give a list of available commands. ifconfig [-a] [interface [address] [up] [down] [netmask mask] [broadcast address] Configure network interface parameters -a Displays the current condition of all the interfaces. interface Physical interface, address assigns an address up, down Turns the interface on or off netmask Assigns the netmask of mask broadcast Assigns address for broadcast. netstat [-arn] Show network status. -a All sockets, -r Routes -n Show addresses as numbers, -i All TCP/IP Interfaces ping host Send an Echo request to a network host. route [-f] [add net network gateway hops] [add default gateway hops] Manipulate the routing tables. -f Delete table. network Destination network IP, gateway Gateway IP. hops Number of steps to destination network. rup [-h] Show host status of local machines. -h Alphabetically by host name. users [-al] Who's logged in on local machines. -a All Machines. -l Long listing. snoop [-d device] [-v] [-h] -d select port device ie: le0, hme0, -v verbose, -h help sendecho DICOM verification used on AW, Revolution XQ/I & Senograph 2000D. Need host & destination AE, port & IP telnet host Interface to a remote system. host IP address or alias name of remote system.	Hardware: Verify all cable connections: Thinner: Verify termination, must measure approx. 25 ohms. Twisted Pair: Look for link lights on transceivers and hubs. Local network: halt Halt to the OK prompt OK - test net - OK? Reboot - KO? Check connection to Hub, check Hub, try another connection/port. ping hostname - OK? Local hardware ok. KO? Verify name in file /etc/hostname.xxx is listed in the /etc/hosts file. ping host - OK? Network connection ok. KO? Verify host powered on. Try other hosts. Use routers to see other hosts ifconfig -a - Verify IP address, netmask KO? Correct & reboot. OK? Connect two systems together with hub or crossover cable and recheck. Routed network: ping router, local side IP - KO? See local network troubleshooting. ping router, routed side IP - OK? Ping routed workstation. KO? Check routed workstation config. OK? No Problem KO? Check route table, netmasks ifconfig -a - Verify netmask, broadcast address netstat -r - Verify existing routes, network base address route -f - Delete the existing routing table route add net - Add route for destination network ping router, routed side IP - OK? Determine reason for bogus routes KO? Verify router is functioning. Slow Communications: snoop - Monitor communication load. Reboot workstation and check for 10 or 100 base connections Wait for full download
Part #	Description																																																									
45-287532P2	10-Base-2 Thinner AUI Transceiver																																																									
2135003	10-Base-T RJ45 AUI Transceiver																																																									
2224969	10-Base-T RJ45 AUI Transceiver																																																									
2220705	10-Base-T RJ45 AUI Transceiver																																																									
2224971	10-Base Stackable Hub 8-RJ45, 1 Thinner, 1 AUI																																																									
2230676	10/100-Base Stackable Hub 8-RJ45																																																									
46-296861G1	4 1/2 Long AUI Cable																																																									
2183711	8" Short AUI Cable																																																									
2183929	DLX Transceiver Mounting Bracket																																																									
45-254682P4	50 Ω BNC "T" Connector																																																									
46-220427P3	BNC Bullet Connector																																																									
46-214999P1	50 Ω BNC Terminator																																																									
46-313020P1	50 Ω BNC Terminator w/ ground lead																																																									
9917176	50 Ω BNC Terminator w/chain																																																									
2152351	Power Strip																																																									
46-296454G6	50 Ω 45 Meter coax cable																																																									
46-296454G2	50 Ω 18 Meter coax cable																																																									
2128649	50 Ω 3.9 Meter coax cable																																																									
2173765	50 Ω 6.5 Meter coax cable																																																									
2173767	50 Ω 1.2 Meter coax cable																																																									
2237740	RJ45 1.8 Meter TP cable																																																									
2173766	RJ45 6.5 Meter TP cable																																																									
2195942	RJ45 6.5 Meter TP cable																																																									
2114689	RJ45 4 Meter TP cable																																																									
2236781	RJ45 60 Meter TP CAT 5																																																									
2212538	RJ45 TP Cable CPU to Hub																																																									
2212537	RJ45 TP Cable CPU to CPU																																																									



imaginat.ion@work

QRC quick reference card - Dicom

 GE Medical Systems <i>Medical Educational Solutions</i> EDGE <i>Direction XXXXXX-100</i> Networks <i>Quick Reference Card</i> <small>Rev 0.c Approved by Brad Wulf Proprietary to General Electric Company Produced by GE Medical Systems Education Center</small>		Network Command's Reference <table border="0"> <thead> <tr> <th>Procedure</th><th>Command</th></tr> </thead> <tbody> <tr> <td>Access Another System</td><td>telnet</td></tr> <tr> <td>Adding a Router</td><td>route</td></tr> <tr> <td>Address Resolution</td><td>arp</td></tr> <tr> <td>DICOM Ping</td><td>sendecho</td></tr> <tr> <td>Interface Configuration</td><td>ifconfig</td></tr> <tr> <td>List Users and Machines</td><td>users</td></tr> <tr> <td>Logout</td><td>CTRL 'd'</td></tr> <tr> <td>Monitor network communications</td><td>snoop</td></tr> <tr> <td>Move files across the network</td><td>ftp</td></tr> <tr> <td>Network Status</td><td>netstat</td></tr> <tr> <td>Networked Systems on Line</td><td>rnp</td></tr> <tr> <td>Test Network Communications</td><td>ping</td></tr> <tr> <td>Who's Logged On</td><td>who</td></tr> </tbody> </table>	Procedure	Command	Access Another System	telnet	Adding a Router	route	Address Resolution	arp	DICOM Ping	sendecho	Interface Configuration	ifconfig	List Users and Machines	users	Logout	CTRL 'd'	Monitor network communications	snoop	Move files across the network	ftp	Network Status	netstat	Networked Systems on Line	rnp	Test Network Communications	ping	Who's Logged On	who	Network Files <table border="0"> <tr> <td>/etc/host</td><td>A lookup file to associate host alias names with their IP addresses. Must have an entry for hostname.</td></tr> <tr> <td>/etc/hostname.xxx</td><td>Contains the hostname for the xxx interface. xxx may be le0, le1, lme0, hme1, ba0, bal, etc.</td></tr> <tr> <td>/etc/netmasks</td><td>A lookup table to associate sub-netmask with their base network addresses.</td></tr> <tr> <td>/etc/services</td><td>A list of TCP/IP applications and their software port numbers.</td></tr> <tr> <td>/usr/sbin/in.rdisc</td><td>Router discovery daemon, rename to turn off.</td></tr> <tr> <td>/usr/sbin/in.routed</td><td>Network routing daemon, rename to turn off.</td></tr> </table>	/etc/host	A lookup file to associate host alias names with their IP addresses. Must have an entry for hostname.	/etc/hostname.xxx	Contains the hostname for the xxx interface. xxx may be le0, le1, lme0, hme1, ba0, bal, etc.	/etc/netmasks	A lookup table to associate sub-netmask with their base network addresses.	/etc/services	A list of TCP/IP applications and their software port numbers.	/usr/sbin/in.rdisc	Router discovery daemon, rename to turn off.	/usr/sbin/in.routed	Network routing daemon, rename to turn off.															
Procedure	Command																																																									
Access Another System	telnet																																																									
Adding a Router	route																																																									
Address Resolution	arp																																																									
DICOM Ping	sendecho																																																									
Interface Configuration	ifconfig																																																									
List Users and Machines	users																																																									
Logout	CTRL 'd'																																																									
Monitor network communications	snoop																																																									
Move files across the network	ftp																																																									
Network Status	netstat																																																									
Networked Systems on Line	rnp																																																									
Test Network Communications	ping																																																									
Who's Logged On	who																																																									
/etc/host	A lookup file to associate host alias names with their IP addresses. Must have an entry for hostname.																																																									
/etc/hostname.xxx	Contains the hostname for the xxx interface. xxx may be le0, le1, lme0, hme1, ba0, bal, etc.																																																									
/etc/netmasks	A lookup table to associate sub-netmask with their base network addresses.																																																									
/etc/services	A list of TCP/IP applications and their software port numbers.																																																									
/usr/sbin/in.rdisc	Router discovery daemon, rename to turn off.																																																									
/usr/sbin/in.routed	Network routing daemon, rename to turn off.																																																									
Networking Parts <table border="0"> <thead> <tr> <th>Part #</th><th>Description</th></tr> </thead> <tbody> <tr> <td>46-287532P2</td><td>10-Base-2 Thinner AUI Transceiver</td></tr> <tr> <td>2135003</td><td>10-Base-T RJ45 AUI Transceiver</td></tr> <tr> <td>2224969</td><td>10-Base-T RJ45 AUI Transceiver</td></tr> <tr> <td>2220705</td><td>10-Base-T RJ45 AUI Transceiver</td></tr> <tr> <td>2224971</td><td>10-BASE Stackable Hub 8-RJ45, 1 Thinner, 1 AUI</td></tr> <tr> <td>2230676</td><td>10/100-BASE Stackable Hub 8-RJ45</td></tr> <tr> <td>46-296861G1</td><td>4 1/2' Long AUI Cable</td></tr> <tr> <td>2183711</td><td>8' Short AUI Cable</td></tr> <tr> <td>2183929</td><td>DLX Transceiver Mounting Bracket</td></tr> <tr> <td>46-254682P4</td><td>50 Ω BNC "T" Connector</td></tr> <tr> <td>46-220427P3</td><td>BNC Bullet Connector</td></tr> <tr> <td>46-214999P1</td><td>50 Ω BNC Terminator</td></tr> <tr> <td>46-313020P1</td><td>50 Ω BNC Terminator w/ground lead</td></tr> <tr> <td>99171776</td><td>50 Ω BNC Terminator w/chain</td></tr> <tr> <td>2152351</td><td>Power Strip</td></tr> <tr> <td>46-295454G6</td><td>50 Ω 45 Meter coax cable</td></tr> <tr> <td>46-296454G2</td><td>50 Ω 18 Meter coax cable</td></tr> <tr> <td>2128649</td><td>50 Ω 3.9 Meter coax cable</td></tr> <tr> <td>2173765</td><td>50 Ω 6.5 Meter coax cable</td></tr> <tr> <td>2173767</td><td>50 Ω 1.2 Meter coax cable</td></tr> <tr> <td>2237749</td><td>RJ45 1.8 Meter TP cable</td></tr> <tr> <td>2173766</td><td>RJ45 6.5 Meter TP cable</td></tr> <tr> <td>2195942</td><td>RJ45 6.5 Meter TP cable</td></tr> <tr> <td>2114689</td><td>RJ45 4 Meter TP cable</td></tr> <tr> <td>2236781</td><td>RJ45 60 Meter TP CAT 5</td></tr> <tr> <td>2212538</td><td>RJ45 TP Cable CPU to Hub</td></tr> <tr> <td>2212537</td><td>RJ45 TP Cable CPU to CPU</td></tr> </tbody> </table>	Part #	Description	46-287532P2	10-Base-2 Thinner AUI Transceiver	2135003	10-Base-T RJ45 AUI Transceiver	2224969	10-Base-T RJ45 AUI Transceiver	2220705	10-Base-T RJ45 AUI Transceiver	2224971	10-BASE Stackable Hub 8-RJ45, 1 Thinner, 1 AUI	2230676	10/100-BASE Stackable Hub 8-RJ45	46-296861G1	4 1/2' Long AUI Cable	2183711	8' Short AUI Cable	2183929	DLX Transceiver Mounting Bracket	46-254682P4	50 Ω BNC "T" Connector	46-220427P3	BNC Bullet Connector	46-214999P1	50 Ω BNC Terminator	46-313020P1	50 Ω BNC Terminator w/ground lead	99171776	50 Ω BNC Terminator w/chain	2152351	Power Strip	46-295454G6	50 Ω 45 Meter coax cable	46-296454G2	50 Ω 18 Meter coax cable	2128649	50 Ω 3.9 Meter coax cable	2173765	50 Ω 6.5 Meter coax cable	2173767	50 Ω 1.2 Meter coax cable	2237749	RJ45 1.8 Meter TP cable	2173766	RJ45 6.5 Meter TP cable	2195942	RJ45 6.5 Meter TP cable	2114689	RJ45 4 Meter TP cable	2236781	RJ45 60 Meter TP CAT 5	2212538	RJ45 TP Cable CPU to Hub	2212537	RJ45 TP Cable CPU to CPU	<p>arp [-a] Internet-to-Ethernet address translation table. -a Display all of the current ARP entries.</p> <p>ctrl-d Logout, close shell instance, close a window</p> <p>ftp host File transfer protocol, moves files between host host IP address or hostname from host table In ftp 'help' will give a list of available commands.</p> <p>ifconfig [-a] interface [address] [up] [down] [netmask mask] [broadcast address] Configure network interface parameters -a Displays the current condition of all the interfaces. interface Physical interface, address assigns an address up, down Turns the interface on or off netmask Assigns the netmask of mask broadcast Assigns address for broadcast.</p> <p>netstat [-arni] Show network status. -a All sockets, -r Routes -n Show addresses as numbers, -i All TCP/IP Interfaces</p> <p>ping host Send an Echo request to a network host.</p> <p>route [-f] [add net network gateway hops] [add default gateway hops] Manipulate the routing tables. -f Delete table. network Destination network IP, gateway Gateway IP. hops Number of steps to destination network.</p> <p>rup [-h] Show host status of local machines. -h Alphabetically by host name.</p> <p>users [-a] Who's logged on local machines. -a All Machines. -l Long listing.</p> <p>snoop [-d device] [-v] [-h] -d select port device ie: le0, lme0, -v verbose, -h help</p> <p>sendecho DICOM verification used on AW, Revolution XQ/I & Senograph 2000D. Need host & destination AE, port & IP</p> <p>telnet host Interface to a remote system. host IP address or alias name of remote system.</p>	<p>Hardware:</p> <p>Verify all cable connections: Thinnet: Verify termination, must measure approx. 25 ohms.</p> <p>Twisted Pair: Look for link lights on transceivers and hubs.</p> <p>Local network:</p> <p>halt - Halt to the OK prompt OK - test net - OK? Reboot - KO? Check connection to Hub, check Hub, try another connection/port.</p> <p>ping hostname - OK? Local hardware ok. KO? Verify name in file /etc/hostname.xxx is listed in the /etc/host file.</p> <p>ping host - OK? Network connection ok. KO? Verify host powered on. Try other hosts. Use users to see other hosts.</p> <p>ifconfig -a - Verify IP address, netmask KO? Correct & reboot. OK? Connect two systems together with hub or crossover cable and recheck.</p> <p>Routed network:</p> <p>ping router, local side IP - KO? See local network troubleshooting. ping router, routed side IP - OK? Ping routed workstation. KO? Check routed workstation config. OK? No Problem KO? Check route table, netmasks</p> <p>ifconfig -a - Verify netmask, broadcast address netstat -r - Verify existing routes, network base address</p> <p>route -f - Delete the existing routing table route add net - Add route for destination network</p> <p>ping router, routed side IP - OK? Determine reason for bogus routes KO? Verify router is functioning.</p> <p>Slow Communications:</p> <p>snoop - Monitor communication load. Reboot workstation and check for 10 or 100 base connections Half or full duplexed</p>
Part #	Description																																																									
46-287532P2	10-Base-2 Thinner AUI Transceiver																																																									
2135003	10-Base-T RJ45 AUI Transceiver																																																									
2224969	10-Base-T RJ45 AUI Transceiver																																																									
2220705	10-Base-T RJ45 AUI Transceiver																																																									
2224971	10-BASE Stackable Hub 8-RJ45, 1 Thinner, 1 AUI																																																									
2230676	10/100-BASE Stackable Hub 8-RJ45																																																									
46-296861G1	4 1/2' Long AUI Cable																																																									
2183711	8' Short AUI Cable																																																									
2183929	DLX Transceiver Mounting Bracket																																																									
46-254682P4	50 Ω BNC "T" Connector																																																									
46-220427P3	BNC Bullet Connector																																																									
46-214999P1	50 Ω BNC Terminator																																																									
46-313020P1	50 Ω BNC Terminator w/ground lead																																																									
99171776	50 Ω BNC Terminator w/chain																																																									
2152351	Power Strip																																																									
46-295454G6	50 Ω 45 Meter coax cable																																																									
46-296454G2	50 Ω 18 Meter coax cable																																																									
2128649	50 Ω 3.9 Meter coax cable																																																									
2173765	50 Ω 6.5 Meter coax cable																																																									
2173767	50 Ω 1.2 Meter coax cable																																																									
2237749	RJ45 1.8 Meter TP cable																																																									
2173766	RJ45 6.5 Meter TP cable																																																									
2195942	RJ45 6.5 Meter TP cable																																																									
2114689	RJ45 4 Meter TP cable																																																									
2236781	RJ45 60 Meter TP CAT 5																																																									
2212538	RJ45 TP Cable CPU to Hub																																																									
2212537	RJ45 TP Cable CPU to CPU																																																									



imagi

Check ethernet connection

To Check the Active Ethernet Connections for HPower System

Open a Shell and type : **ifconfig <enter>** The following list below should display

```
Eth0 is the Hospital backbone- dual card #2 port labeled "A"
eth0    Link encap:Ethernet HWaddr 00:07:E9:0D:03:24
        inet addr:3.231.48.2 Bcast:3.231.48.0 Mask:255.255.252.0
        UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
        RX packets:16497 errors:0 dropped:0 overruns:0 frame:0
        TX packets:450 errors:0 dropped:0 overruns:0 carrier:0
        collisions:0 txqueuelen:100
        RX bytes:1596730 (1.5 Mb) TX bytes:66981 (65.4 Kb)
        Interrupt:28 Base address:0x2800 Memory:da140000-0

Eth2 is the DARC connection - dual card #1 port labeled "C"
eth2    Link encap:Ethernet HWaddr 00:07:E9:0D:06:DC
        inet addr:172.16.0.1 Bcast:172.16.0.255 Mask:255.255.255.0
        UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
        RX packets:8721 errors:0 dropped:0 overruns:0 frame:0
        TX packets:7041 errors:0 dropped:0 overruns:0 carrier:0
        collisions:0 txqueuelen:100
        RX bytes:4921088 (4.6 Mb) TX bytes:7502277 (7.1 Mb)
        Interrupt:24 Base address:0x2880 Memory:da180000-0

Eth3 is the Gantry TGP connection - dual card #2 port labeled "B" HPower
eth3    Link encap:Ethernet HWaddr 00:07:E9:0D:06:DD
        inet addr:192.9.220.1 Bcast:192.9.220.255 Mask:255.255.255.0
        UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
        RX packets:6047 errors:0 dropped:0 overruns:0 frame:0
        TX packets:6022 errors:0 dropped:0 overruns:0 carrier:0
        collisions:10 txqueuelen:100
        RX bytes:801454 (782.6 Kb) TX bytes:846248 (826.4 Kb)
        Interrupt:25 Base address:0x28c0 Memory:da1a0000-0

Under Unix/Linux there is always the local device that is the local system (Software pseudo device)
lo      Link encap:Local Loopback
        inet addr:127.0.0.1 Mask:255.0.0.0
        UP LOOPBACK RUNNING MTU:16436 Metric:1
        RX packets:173978 errors:0 dropped:0 overruns:0 frame:0
        TX packets:173978 errors:0 dropped:0 overruns:0 carrier:0
        collisions:0 txqueuelen:0
        RX bytes:76737700 (73.1 Mb) TX bytes:76737700 (73.1 Mb)
```

67



imagination at work

42 /

GE Title or job number /
10/20/2012

Definium Workstation tips

- Fails to boot (usually after power black out, incorrect shutdown etc
 - login as root then type fsck -y (you may need to run twice)
(customer can easily do this on your behalf from command window)
- Perform Database recovery (run automatically at start up)
force recovery only if files present in directory below
cd /database/DBHeader/localdb/composites1/dir0000000000/
ls -al to view files

If some files are listed, you can probably recover the DB by forcing a db recovery during startup. To force the recovery, edit the file /magichome/xruser/bin/start.dm.cots using gedit or vi. Edit the line:

`${PKG_HOME}/resources/db/startLocaldb.cmd start >&! $ATH_LOG_DIR/startLocaldb.log`
To make it :
 `${PKG_HOME}/resources/db/startLocaldb.cmd start -f >&! $ATH_LOG_DIR/startLocaldb.log`

Save file and exit -do a soft reset – db recovery may take quite a while

IMPORTANT - Whether or not this fixes the problem change the file back to original data line



imagination at work

Definium Workstation tips (2)

Restart apps software

/magichome/xruser/bin/kilall (cust will see a blue screen)

/magichome/xruser/bin/start.magic (to restart)

Check network and RIS hosts

Hosts are found at /magichome/cots/terra/resources/NETWORK/

RIS server info is in file mwl_pps_cfg.xml

Other hosts in file network-cfg.xml

Boot errors

/var/log/messages

Software versions

magichome/enggdata/config.txt (ftp to laptop)

Display Sensors and encoder values

Change user to xruser, cd bin command is showStatus (capital S in status)



imagination at work

HOW TO MAKE A SCREEN CAPTURE ON DEFINIUM 8000

1. Get the desired left and/or right screen (to be printed) on the system.
2. Open a command window, i.e. press **Ctrl+Shift+F5** and click on the leftmost (one with a window) icon on the resulting pop-up. A blank (white-colored) screen will be displayed with the following "xruser@magic engg]\$"
3. Now, to print left screen type **import -window root -display :0.0 /enggdata/name.gif** and press the **Enter** key
4. Similarly, to print right screen type **import -window root -display :0.1 /enggdata/name.gif** and press the **Enter** key
5. The .gif images will be stored in the directory **/enggdata/** on the system. You can then transfer these files through a USB drive/internet to your laptop/PC.



imagination at work

Definium 8000 – remote snapshot

A GUI that is invoked with hot-key combination **Ctrl+Shift+F5**

Can take snapshot, export/import DICOM files, do software-only reset, etc

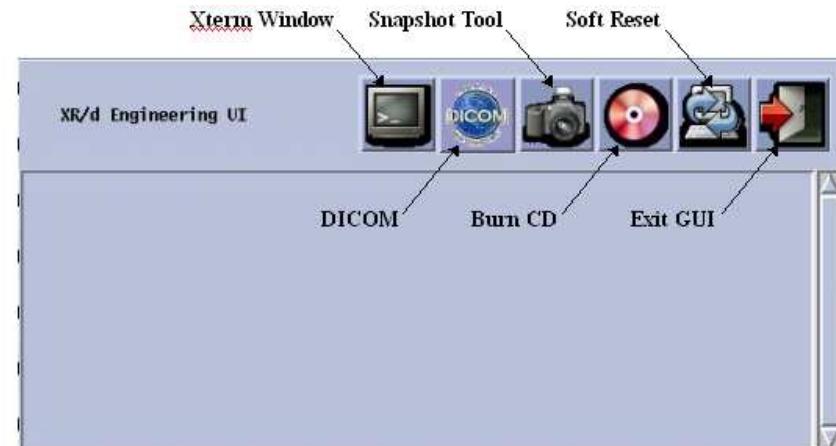
Command line tools exist for each function

`/magichome/xruser/engg/collectLogs.sh` – Creates snapshots

`/magichome/xruser/engg/dicomExport.sh` – Exports images selected on browser as DICOM images to `/database/image_export` directory (Copy the images to `/enggdata/log` before invoking a manual snapshot, if the issue is related to the image or IQ)

`/magichome/xruser/engg/restartapps` – Performs a SW-only restart (no OS restart)

Snapshots on : `/magichome/ enggdata/Snapshots`



GE Title or job number /
10/20/2012



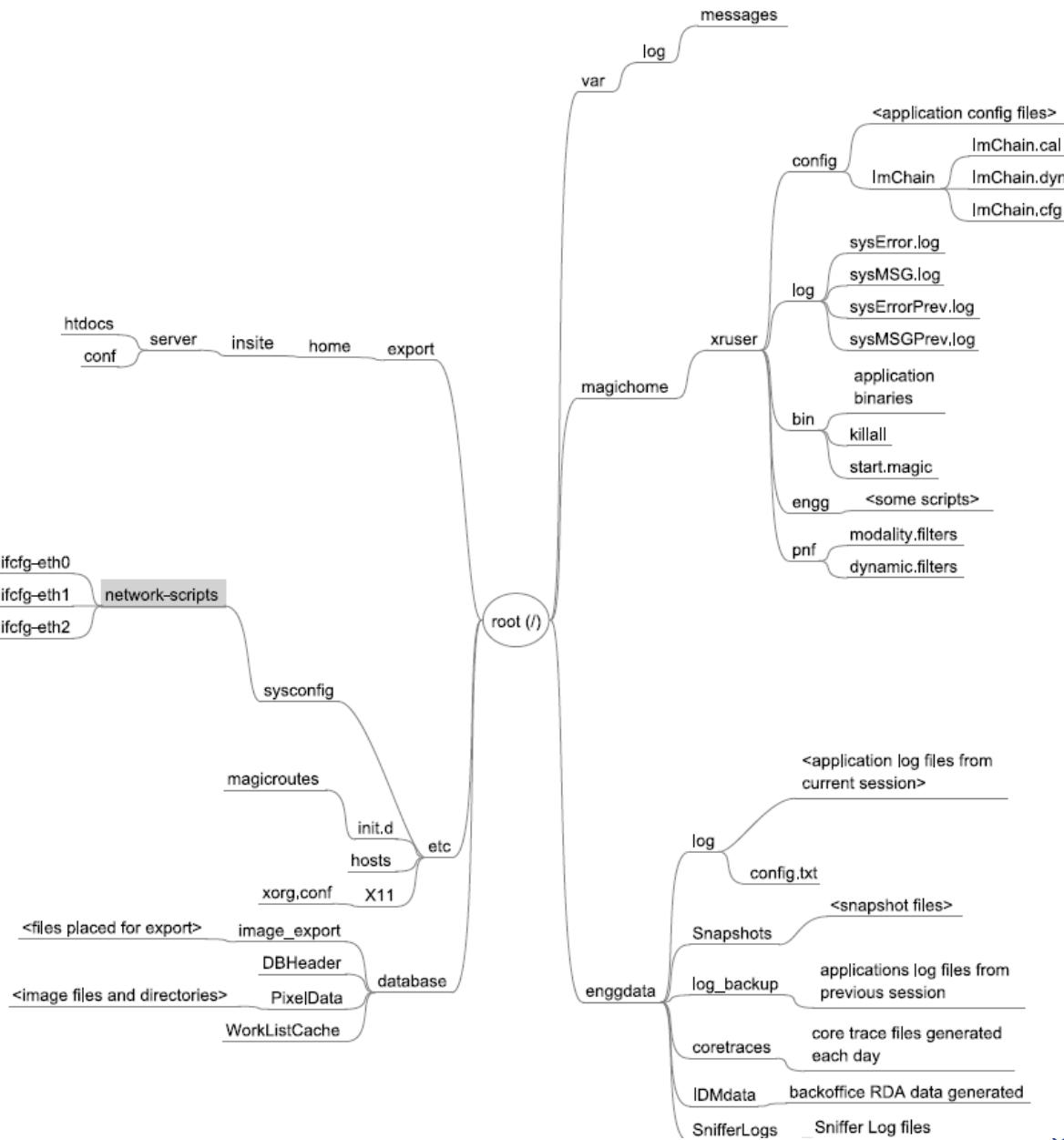
imagination at work

Magic PC – usefull commands

man command	=>	prints help for a given command
/bin/df	=>	Show information about the filesystems
/sbin/ifconfig		network configuration about all ethernet interfaces
/sbin/ethtool	=>	will print out eth0 settings such as (duplex level, speed, Link status etc)
/sbin/ethtool eth0		run as root user
/usr/bin/locate		
/usr/bin/locate filename	=>	will print the full path of all files matching the name filename
/bin/netstat	=>	prints network statistics
netstat -i	=>	prints packet statistics for all interfaces
netstat -s	=>	overall stats
netstat -r	=>	routing table
/sbin/route	=>	prints network routing table
/bin/ps grep -i "Executable"	=>	lists the process information
/usr/bin/free	=>	prints the amount of memory and swap space used
/usr/bin/top -d 1	=>	prints all processes, memory use, keeps updating every 1 second. Press Ctrl+C to quit
rpm -qa grep -i "Platform"	=>	prints the package version / name
Copying snapshot files to usb drive: /bin/mount /mnt/usbdisk cd /enggdata/Snapshots cp <snapshot name> /mnt/usbdisk umount /mnt/usbdisk		
CDROM /bin/mount /dev/cdrom /bin/umount		



Magic PC – software tree



imagination at work

Magic PC- copy files to USB flash

Procedure to copy files to a USB Jumpdrive:

1. Press **Ctrl+Shift+F5**. The Engineering UI will pop up.
 2. Click on the first icon to open an xterm (command) window.
 3. Type in: **tail [space]-f [space]/var/log/messages <enter>**.
 4. Plug the USB device into one of the USB ports on the front of the Magic PC.
 5. Look at the messages displayed on the screen and locate the line containing “new high speed USB device”. A few lines after this will be an “added mount point ... for /dev/xxxx” statement; for example, “added mount point LEXAR_Media for /dev/uba1”. Take note of the “/dev/xxxx” at the end of this statement for later use.
 6. Press **Ctrl+C**.
 7. Type in: **su [space]-[space]root <enter>**.
 8. At the password prompt, type in **#superxr**.
 9. Type in: **mkdir [space]/mnt/usbdisk <enter>**.
 10. Type in: **mount [space]/dev/xxxx [space]/mnt/usbdisk <enter>**, where **/dev/xxxx is what was noted in Step 5**.
 11. Type in: **cd [space]/mnt/usbdisk <enter>**.
 12. Type in: **cp [space]~xruser/bin/gain0.img [space]. <enter>** where **~xruser/bin/gain0.img is the directory path and the specific file to be copied and “.” means the current directory (/mnt/usbdisk)**.
 13. Type in: **ls [space]-l <enter>** and verify the file is present.
 14. Type in: **cd <enter>**.
 15. Type in: **umount [space]/mnt/usbdisk <enter>**.
 16. Unplug the USB device.
 17. Type in: **exit <enter>** to exit root.
 18. Type in: **exit <enter>** to close the xterm window.
-  On the door icon to exit the Engineering UI.

Magic PC – copy files to CD

Procedure to copy files to a CD:

1. Press **Ctrl+Shift+F5**. The Engineering UI will pop up.
2. Click on the first icon to open an xterm (command) window.
3. Type in: **su [space] [space] root <enter>**.
4. At the password prompt, type in **#superxr**.
5. Type in: **mkdir [space] temp <enter>**.
6. Type in: **cd [space] temp <enter>**.
7. Type in: **cp [space] ~xruser/bin/gain0.img [space] . <enter>** where **~xruser/bin/gain0.img** is the directory path and the specific file to be copied and **“.”** means the current directory (temp).
8. Type in: **mkisofs [space] -r [space] -O [space] .. /cdrom.iso [space] <enter>**.
9. Type in: **cd [space] .. <enter>**.
10. Insert the CD in the drive and wait for the drive to spin up.
11. Type in: **cdrecord [space] -v [space] cdrom.iso <enter>**. At this point, the file will be written to the CD.
12. Type in: **mount [space] /mnt/cdrom <enter>**.
13. Type in: **cd [space] /mnt/cdrom <enter>**.
14. Type in: **ls [space] -l <enter>** and verify the file is present.
15. Type in: **cd <enter>**.
16. Type in: **umount [space] /mnt/cdrom <enter>**.
17. Type in: **eject <enter>**. The CD should be ejected.
18. Type in: **exit <enter>** to exit root.
19. Type in: **exit <enter>** to close the xterm window.
20. Click on the door icon to exit the Engineering UI.



imagination at work

Magic PC – IDC calib files

calib.hst and calib.log.

they are both located in IDC.

you need to ftp in idc and pick them up using get command

```
ftp idc  
cd /idc  
get calib.hst  
get calib.log
```



imagination at work

Magic PC – browse a CD

Browse a CD:

- Insert CD in Magic PC
- Type **ctrl + Alt + F2** to get to shell
- Login : **root**
- **password: #superxr**
- Type **mount<space>/mnt/cdrom**
- Type **cd<space>/mnt/cdrom**
- Type **cksum<space>*** (The following will be the contents of the CD)

	2730415866		1498378	Athena_Thunder_Magic_Release_patch_2-5.3-15.rpm
	1833959969		904058	ATLASIDC_PLATFORM-5.3-15_PATCH1.i386.rpm
	389674997		42893	iui_thunder_m3_patch-1.0-1.i386.rpm
	158308521		2949	M3patchInstall.sh
	1927960340		1042	restartapps
	2757657023		316	systemState.sh
	3135689314		1087	updateANR.sh



imagination at work

3 /
GE Title or job number /
11/09/2007



imagination at work

52 /

GE Title or job number /
10/20/2012

Definium 8000 – annotation size too small

Problem: The annotation font is too small. The Default is set to N, and Customer wants +3. For every annotation they are having to adjust the Font Size. Need to change the Default Annotation Size to +3.

Solution/Workaround: This is now configurable. Please follow the instructions below:

The Default Annotation Size is made configurable and the options available are +3, +2, +1, N, -1, -2.

1. Logon to the System:

Login: xruser

Password: 4\$xray

2. Go to the Directory /magichome/xruser/config

```
$ cd /magichome/xruser/config
```

3. Edit the FONT_COMBO_DEFAULT_SELECT_OPTION value from the default value to the desired value (+3, +2, +1, N, -1, -2) in the PrintFontSize.prop file using vi Editor

```
$ vi PrintFontSize.prop
```

FONT_SIZE_MAGNIFICATION_FACTOR = 1

(Font Size Magnification factor options: 1,2,3)

FONT_COMBO_DEFAULT_SELECT_OPTION = +1

(Font Combo options: +3,+2,+1, N, -1, -2)



imagination at work

Definium 8000 – worklist not populated

Problem: The Worklist is not populating. The worklist responses from the HIS/RIS system have invalid entries per DICOM, which causes the System to reject the WL entries during the Validation.

Solution/Workaround: *(NOTE: THE FOLLOWING TURNS OFF DICOM VALIDATION!! LEAVING THE SYSTEM IN THIS STATE RENDERS THE UNIT NON-DICOM PART 14 COMPLIANT!!)*

1. Make sure all exams and work is saved before continuing.
2. Press Ctrl+Alt+F2
3. Login as root. Password is #superxr.
4. Navigate to `magichome/xruser/bin` directory
5. Type the following command; `./kilall`
6. All of the running software will be stopped. Now navigate to the following directory
`magichome/cots/terra/resources/NETWORK`
7. Type the following into the prompt, `vi mwl_pps_cfg.xml`
8. Using the `vi` editor, change the following line:
`<ValidateMwlResult>true</ValidateMwlResult>`
to
`<ValidateMwlResult>false</ValidateMwlResult>`
9. Exit and save the file
10. Reset the system.

After the reset, if you see the worklist now fill in the issue is inside the DICOM header being sent by the HIS/RIS. It is either a value with incorrect data or is a null field. The field will need to be fixed on the HIS/RIS side and then the validation algorithm must be turned back on.

To turn the validation back on, follow the process but change the value back to true from false.

If turning off the validation did not resolve the issue, the root cause is something else. Hence, turn the validation ON and troubleshoot further.

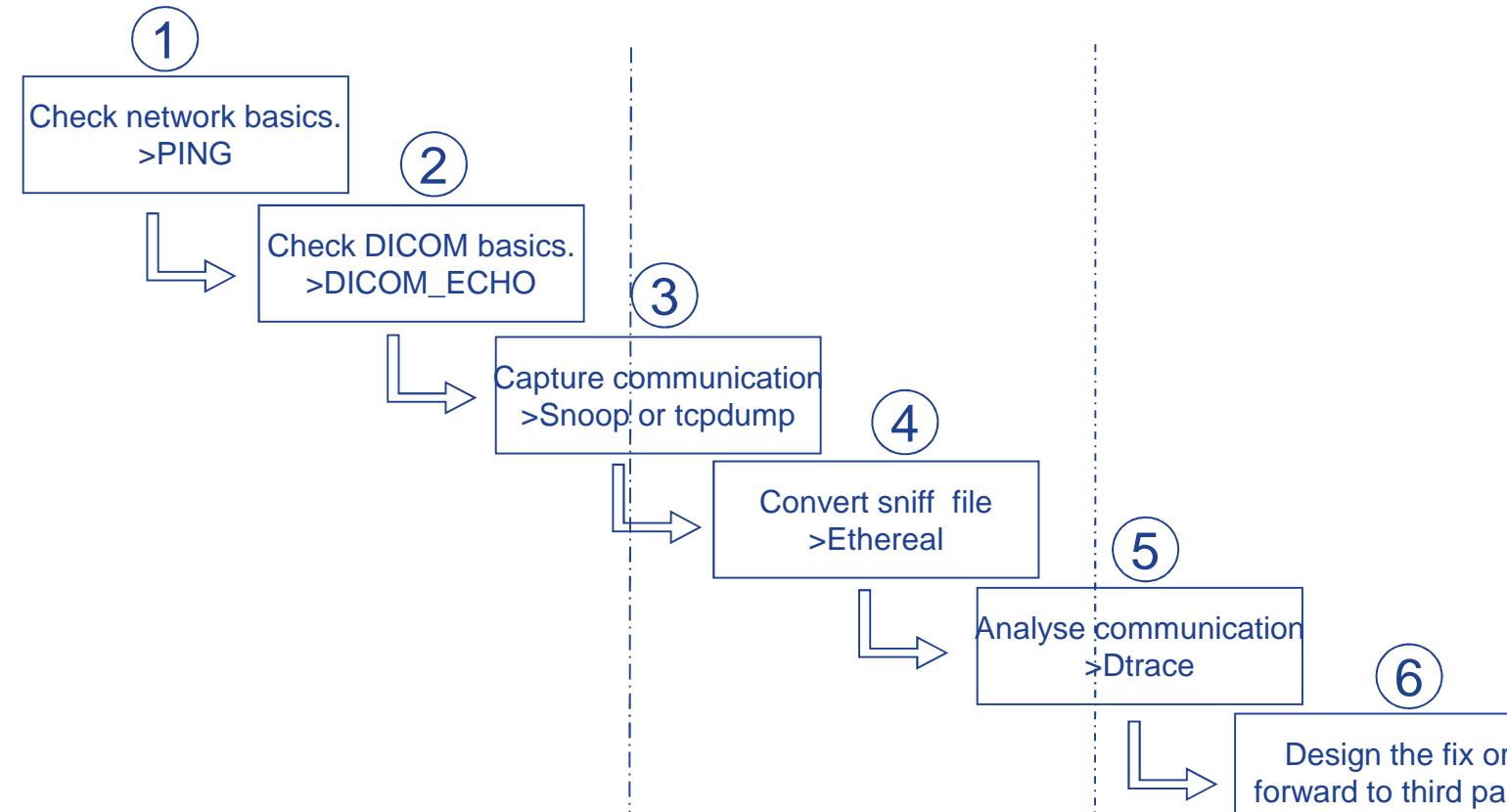
Dicom troubleshooting

The following slides show how to capture a dicom session (sniff/snoop) – this dicom communication is very complex and it is simpler to download snoop file then send to OLC for analysis of tags etc



imagination at work

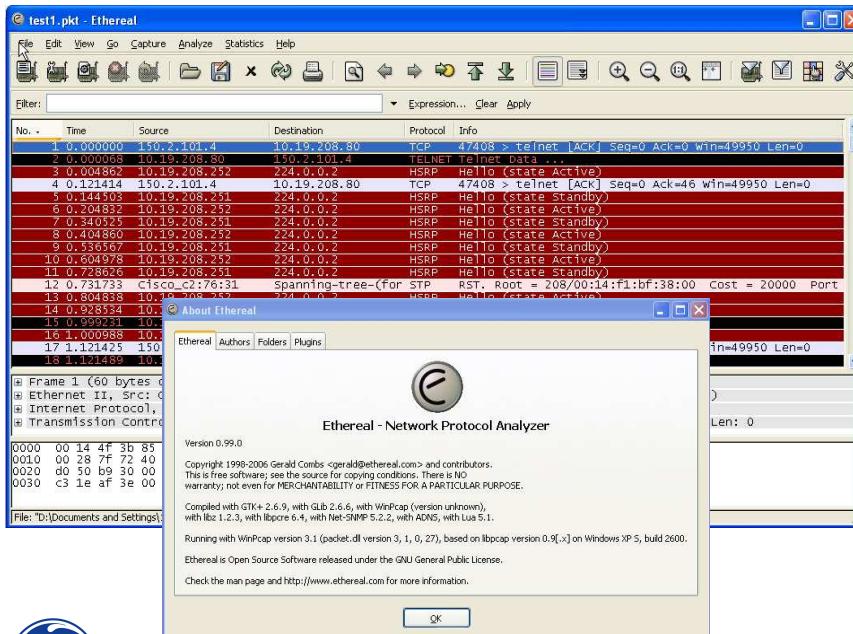
DICOM troubleshooting Process overview



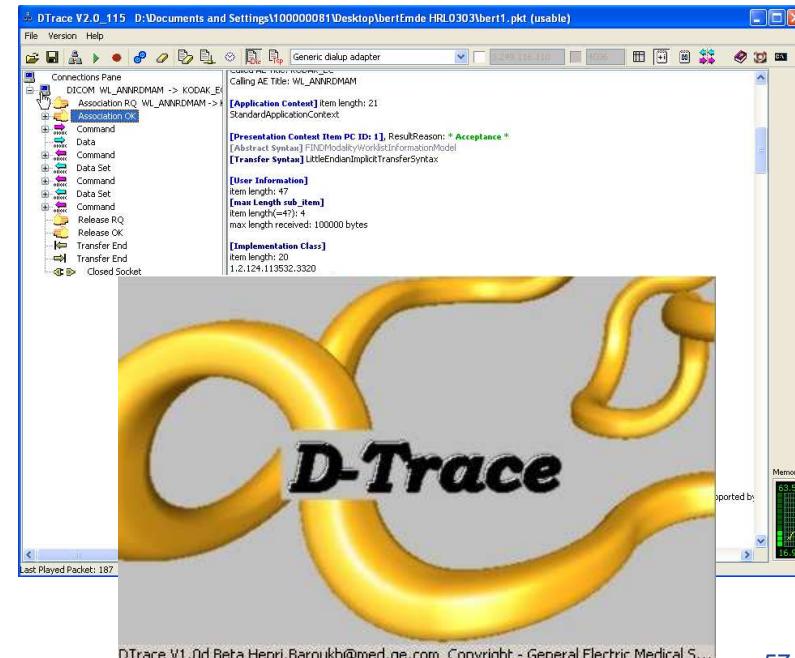
imagination at work

DICOM troubleshooting Tools

- Ping & Dicom_echo >> at system level.
- Snoop/Tcpdump >> at system level.
- Ethereal >> download from the web, run on your laptop.
- Dtrace >> GE tool, run on your laptop.
- Design fix or further analysis >> adv tools need expert help.



imagination at work



DTrace V1.0d Beta Henri.Baroukh@med.ge.com Copyright - General Electric Medical S...

57 /

GE Title or job number /

10/20/2012

Capture DICOM communication (snoop/tcpdump)

Objective : create a file (e.g. capture(pkt) on the system that contains the trace of a Dicom communication between local host and a remote host.
The file is downloaded for data conversion and then analysis using Dtrace.

- Unix systems (Seno DS ESS 2000D, revol XRd) > snoop
- Linux systems (Definium 8000, SenoAdvantage) > tcpdump

Step 1:
Type command snoop/tcpdump
Listening for dicom dialog.

Step 2:
While snoop/tcpdump is listening,
Operate the system to reproduce
the fault (e.g. refresh worklist)

Step 3:
Stop listening (press ctl+C).
The file (capture(pkt) is created.

Step 4:
Download using ISD the file
created during listening

Next steps are at your laptop:
1. Convert data (Ethereal)
2. Analysis (Dtrace)



imagination at work

snoop/tcpdump synthax

How to use the tcpdump command ?

tcpdump -w myCapture.pkt -s 2000 -i <network port>

Example for AW4.2_04:

```
{awpc-7}[2]# tcpdump -w test.pkt -s 2000 -i eth0
tcpdump: listening on eth0
```

1. STOP the capture :

To stop listening press CTRL+C. That will return you to the command prompt

2. Check the file :

```
{lass}[5] ls -al test*
-rw-r--r-- 1 root other 1731468 Jul 21 16:07 test.pkt
{lass}[6]
```

It is recommended to Zip the file.

3. Transfer the file in your laptop by FTP, [using the binary mode!](#)

4. In your Laptop, Unzip the file and open it with DTrace.

How to use the snoop command?

snoop -d <network port> -o myCapture.pkt

Example for AW3.1 & AW4.0:
snoop -d eth0 -o test.pkt

The name of the port is displayed by the ifconfig command

Example for AW4.0:

```
{lass}[3] ifconfig -a
lo0: flags=849<UP,LOOPBACK,RUNNING,MULTICAST> mtu 8232
    inet 127.0.0.1 netmask ff000000
hme0: flags=863<UP,BROADCAST,NOTRAILERS,RUNNING,MULTICAST> mtu 1500
    inet 3.249.116.135 netmask ffffff00 broadcast 3.249.116.255
        ether 0:3:ba:3:75:34
```

Example of result:

1. Run the snoop command:

```
{lass}[4] snoop -d hme0 -o test.pkt
Using device /dev/hme (promiscuous mode)
2534
```

2. STOP the capture :

To stop listening press CTRL+C. That will return you to the command prompt

3. Check the file :

```
{lass}[5] ls -al test*
-rw-r--r-- 1 root other 1731468 Jul 21 16:07 test.pkt
{lass}[6]
```

It is recommended to Zip the file.

4. Transfer the file in your laptop by FTP, [using the binary mode!](#)

5. In your Laptop, Unzip the file and convert your file to libpcap format

The snoop format is not directly compatible with DTrace software.

DTrace software can use only **libpcap** format.

You must use the **ethereal Software** to convert your snoop file to libpcap format. (see below)



imagination at work

Appendix



imagination at work

CSD Fails to launch by any method

This is most likely due to incorrect settings of pf filter.
(but telnet/ftp works)

This can be overcome temporarily but Fe needs to configure correctly when next onsite.

For mammo systems to disable firewall (pf)

Login as root

/etc/rc2.d/S65ipfboot stop

to re-enable reboot or type /etc/rc2.d/S65ipfboot

For definiuum systems to disable firewall (pf)

Login as root

/usr/share/pnf/manager off

To re-enable type /usr/share/pnf/manager off



imagination at work

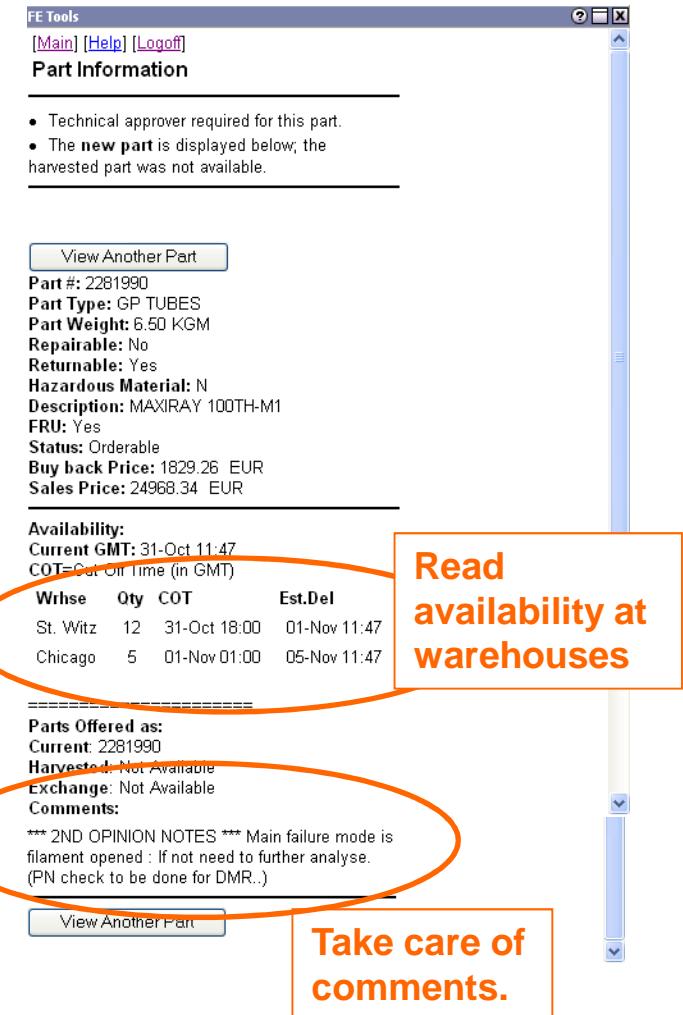
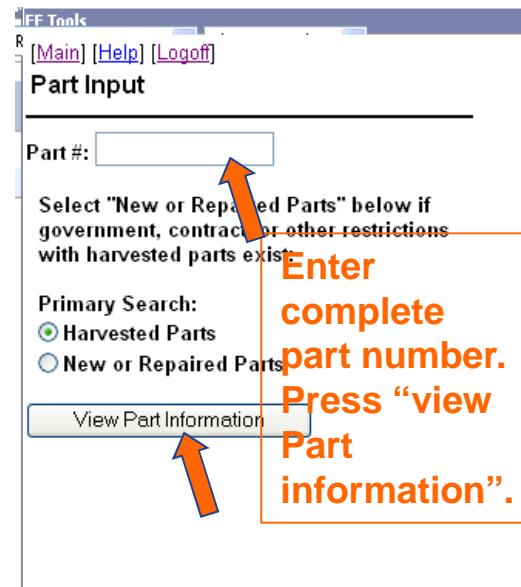
Check part availability – FE tool

The screenshot shows the Integrated Service Desktop interface. At the top, there's a navigation bar with links for 'Bookmark', 'Preferences', 'Themes', 'Help', and 'Logout'. Below it, a sidebar titled 'FE Tools' lists various system tools. Two specific items are highlighted with orange arrows: 'FE Tools' (which is checked) and 'RFS Queue (MUST)' (which is also checked). A large orange callout box contains the text: '1- From PREFERENCES, check FE tool box.' In the main content area, there's a form titled 'FEMC Select FE page' asking for an SSO number, with a 'Login' button. Another orange callout box contains the instructions: '2- enter SSO of supported FE or your own SSO. Press LOGIN.' Below this, a separate window titled 'RFS Queue (MUST)' displays a table of data with columns like 'Assign (*)', 'RFS #(*)', 'Status', etc.



imagination at work

Check part availability



Part Search Tool - PST

You can get PST from CD or from Server (access application included)

How to update The Part Search Tool ?

How to update the Part Search Tool on your PC ?

The PART SEARCH TOOL is based on periodic extraction from GELS database (Updated 2 times per year).
There are 2 ways to get a new Part Search Tool version.

- 1) BY USING THE CD-ROM DISTRIBUTED ACCORDING TO TAB LIST 1180 & 180, [for Europe only]
File name of part search tool is: Part Search Tool vx.x.mda (xx is the version number) CAUTION: The application does not run correctly if you launch it from the CD
The file must be on the hard disk of your PC.
- 2) BY GETTING THE ZIP FILE FROM SERVERS
The zip file has the name: Part Search Tool vx.x.zip.
 - a) From TechPub (link is in ePDM for part number 5191079-202): You can download the contents
 - b) From Service Tools Gateway:
\\hubudnap01\FE_Central\1.Software_Tools\1.Common_Applications\Part_Search_Tool\ClientApp

Part Search Tool [Part Search Tool V2.0]

Keywords | Replacement history | Products using the part | Display Alternate | Part Active From Alternate

Part number	Com	Part description	Dist/Replacement	Product name	Must Code
Sort		Sort by Part Description	y/n	Sort by Product Name	

Double clic to see comment

[Click here to access Part Search Tool address](#)

About the Part Search Tool

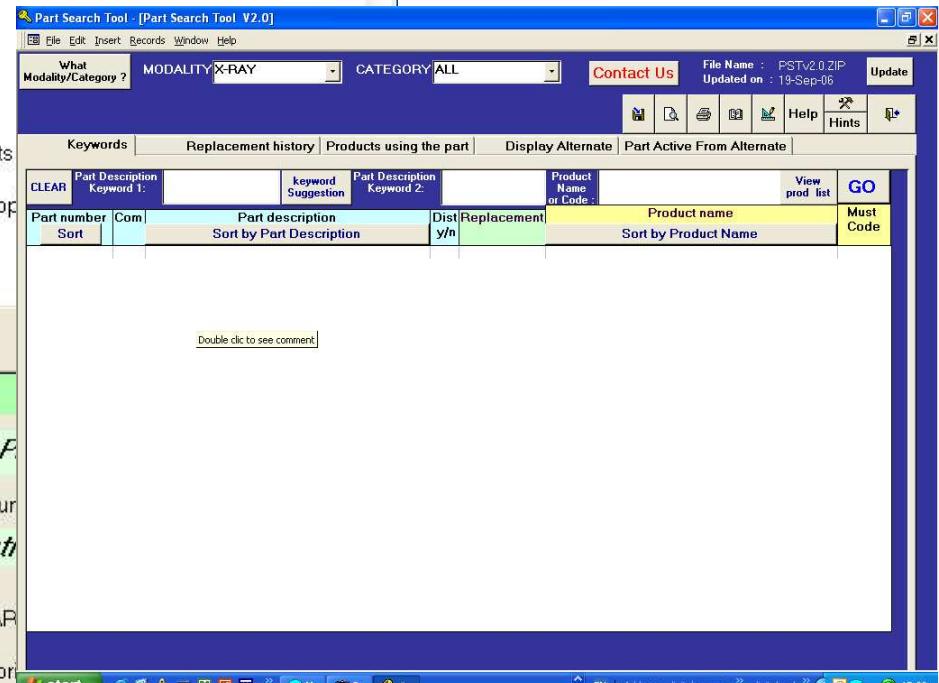
Authors : André HATTE & Jean-Pierre

Launched in December 2000 with a CD (Part Number 5191079-202).

Application deeply re-designed by Sébastien MARGOURI during summer 2001.

Last Update on 5-July-2006 by Abderrahim MAP (abderrahim.margoum@ge.com): GELS data and 5 years (2001-2006) MUST debris removed to update the tool.

New CD part number: 5191079-202 Rev1



imagination at work

Link to PST >>

\\hubudnap01\FE_Central\1.Software_Tools\1.Common_Applications\Part_Search_Tool

64 /

GE Title or job number /

10/20/2012

Documentation – mammo blue house

Dedicated to “GE” mammo products.
Instrumentarium not included here
(cf.CDL)

The screenshot shows a website for GE Mammography documentation. At the top, it says "Blue House" and "Mammography CEM Department - Service & User Documentation". Below this is a stylized house icon with a chimney and a thought bubble containing "What's new". A "Read me" link is at the top of the house. The house has two main sections: "Analog Systems" and "Digital Systems". Under "Analog Systems", there is a "Product history" section with links to "Acquisition" (Senix HF and 500/600T, Senographe 700/800T, Senographe DMR, Data Flash), "Common to Various Products" (Planned Maintenance by Field Engineers, PM - Analog Systems, PM - Digital Systems), "Quality Control by Radiologists and Physicists" (QC Manuals for Europe, QC Manuals for US), and "Service Tools" (Mammocom). Under "Digital Systems", there is a "Product history" section with links to "Acquisition" (Senovision, Senographe 2000D, Senographe DS, Senographe Essential), "CAD" (ImageChecker (CAD R2), Second Look Digital (CAD X or iCAD)), "Review" (RWS), and "Service Notes" (Seno Advantage). To the right of the "Digital Systems" section is a callout box with orange text: "Click a product to get to : Service Manuals, Adv Service Manuals, PIM, OM, QC manuals, Dicom CS, Service Notes, FMI. Old & newest revisions." At the bottom left is the GE logo with the tagline "imagination at work". At the bottom right is a link to the blue house: "Link to the blue house: http://gein.euro.med.ge.com/engineering/bluehouse/".

All documents can be downloaded to your laptop

Blue House

Mammography

CEM Department - Service & User Documentation

What's new

Read me

Analog Systems

Product history

- Acquisition
 - Senix HF and 500/600T
 - Senographe 700/800T
 - Senographe DMR
 - Data Flash

Common to Various Products

- Planned Maintenance by Field Engineers
 - PM - Analog Systems
 - PM - Digital Systems
- Quality Control by Radiologists and Physicists
 - QC Manuals for Europe
 - QC Manuals for US
- Service Tools
 - Mammocom

Digital Systems

Product history

- Acquisition
 - Senovision
 - Senographe 2000D
 - Senographe DS
 - Senographe Essential
- CAD
 - ImageChecker (CAD R2)
 - Second Look Digital (CAD X or iCAD)
- Review
 - RWS
 - Seno Advantage

Click a product to get to :
➤ Service Manuals, Adv Service Manuals
➤ PIM, OM, QC manuals, Dicom CS,
➤ Service Notes, FMI.
Old & newest revisions.

Link to the blue house:
<http://gein.euro.med.ge.com/engineering/bluehouse/>

Safety and regulatory
FDA / CDRH / MQSA

Author guides

CEM Authoring team
Mammography events

65 /
GE Title or job number /
10/20/2012

Documentation – CDL

This screenshot shows the 'Select Search Criteria' page of the GE Healthcare Common Documentation Library. At the top, there's a toolbar with File, Edit, View, Favorites, Tools, Help, Back, Forward, Stop, Refresh, and Search buttons. The address bar shows the URL: <http://olcweb.olc.med.ge.com:8020/servlet/ClientServiceProp?REQ=Enter+Documentation+Library>. Below the address bar, the GE Healthcare logo is displayed. The main title 'Common Documentation Library' is centered above a search criteria box. The search criteria box contains a grid of buttons for various modalities and products: CT, MR, NM, PET, US, XR, Radiopharmacy, Cardiology, CIS (Clinical Systems), IIS, OEC, Sub-Acute, Pre-Clinical, Common, and AW. A green button labeled 'Life Support' is highlighted. Below the grid is a 'Search Direction Number, Document Name, Comment, and File Description:' input field with a 'Search' button. A note below the input field states: 'Note: This search method is case insensitive (you may enter upper or lower case). If multiple words are entered, the input is considered to be an exact phrase search. Wildcards are not permitted.' To the right of the search criteria box, a date 'October 31, 2007' and a 'Common Document' link are visible. A 'Search' button is located at the bottom right of the search criteria box.

1- select your modality e.g. XR

This screenshot shows the same search interface as the previous one, but with more detailed search criteria. The 'Select all desired XR Products' dropdown is open, listing items like 'CentriQ', 'Centri Filter', 'DataFlash Plus', 'Definium 5000', 'Definium 6000', 'Definium 8000', 'Definium AMX 700', 'Definium AMX 800', 'Delta 32', 'DE', 'Diamond', and 'Digital CAD'. The 'Select all desired Manual Types' dropdown is also open, showing options such as 'Accessory Catalog', 'Advance Diagnostics', 'Advance Theory', 'CD-ROM Disk', 'CUSTOMER LETTER', 'FIM', 'Functional Checks/Adjustments', 'Image Quality', 'Installation', 'ISERV', 'Learning and Reference Guide', and 'Not Applicable'. The 'Select all desired Classification' dropdown lists 'General (Class A)', 'Advanced (Class C)', 'Exclusive (Class M)', and 'Exclusive/Vendor (Class D)'. The 'Select all desired Status' dropdown lists 'New', 'Updated', 'CD', 'Obsolete', and 'Clinical'. Below these dropdowns is a 'Search Direction Number, Document Name, Comment, and File Description:' input field with a 'Search' button. A note below the input field states: 'Note: This search method is case insensitive (you may enter upper or lower case). If multiple words are entered, the input is considered to be an exact phrase search. Wildcards are not permitted.'

2- select your product e.g. Definium 8000

All documents can be downloaded to your laptop

Link to CDL server :

<http://olcweb.olc.med.ge.com:8020/servlet/ClientServiceProp?REQ=Enter+Documentation+Library>

This screenshot shows the 'Search Results' page of the GE Healthcare Common Documentation Library. The results table lists 63 documents, each with a checkbox, a file name, a size, a date, and a status. Some rows have small green checkmarks. The columns include: Document ID, Type, File Name, Size, Date, and Status. A note at the bottom left says 'Initial release of document.' and a note at the bottom right says 'See document Revision History...'. The table has a header row with icons for sorting and filtering. The bottom of the screen shows a taskbar with various icons and a system tray.

3- Check boxes in front of the documents you need.

This screenshot shows a 'Save As' dialog box from a Windows operating system. It displays a list of files in the 'My Computer' section, including 'Desktop', 'My Documents', and 'My Network'. The 'File name:' field is set to 'DownloadFile.zip', and the 'Save as type:' dropdown is set to 'PKZIP File'. There are 'Save' and 'Cancel' buttons at the bottom. The background shows a taskbar with various icons and a system tray.

4- rename and relocate file download on your laptop.

Documentation – Support Central



Link to Support Central Definium 8000:

http://supportcentral.ge.com/bookupload/sup_book_default.asp?prod_id=31370&trng_doc_id=1014350&vendor_flag=11

Tips & FAQ from engineering related to:

- Dicom connectivity
- imaging & application
- Installation
- Service troubleshooting
- ...

Similar pages exist for:

Lightning >
Precision 500D >
Definium 700 >
Definium 6000 >
Definium 5000 >

http://supportcentral.ge.com/bookupload/sup_book_default.asp?prod_id=31370&trng_doc_id=1014350&vendor_flag=11
http://supportcentral.ge.com/bookupload/sup_book_default.asp?prod_id=31370&trng_doc_id=1014350&vendor_flag=11
http://supportcentral.ge.com/bookupload/sup_book_default.asp?prod_id=31370&trng_doc_id=1014350&vendor_flag=11
http://supportcentral.ge.com/bookupload/sup_book_default.asp?prod_id=31370&trng_doc_id=1014350&vendor_flag=11
http://supportcentral.ge.com/bookupload/sup_book_default.asp?prod_id=31370&trng_doc_id=1014350&vendor_flag=11

Documentation – support CDs

The screenshot shows the GE X-Ray Technical Training community homepage. Key sections include:

- FACILITATORS:** Edward Singleton (Facilitator) and Perry Price (Co-Facilitator).
- Training News/Course Sequences:** Includes links to Course Sequences, IR Course pre-requisites check, and How to Enroll in a Class.
- Rad and Fundamentals:** Course Profiles for AMX 4, Revolution System Differences, Revolution Systems, Fluoro Fundamentals, Rad Fundamentals, and Definium 8000.
- R/F:** Course Profiles for CR_Uaji, CR_Kodak, Film_Agfa Curix Ultra UVL, Film_Kodak_Lanex_Regular 400 Speed, Precision MPI, and Precision RXI.
- Precision MPI:** Links to MPI Support - Rev 27 (CHECK THIS), MPI Applications Overview (CHECK THIS), and RXI Support Tool - Rev.24 (HOT).
- Precision RXI:** Links to RXI Support Tool - Rev.24 (HOT) and RXI-Table-top Removal Procedure (MUST READ).
- Prestige II:** Prestige II Support Tool.
- Mammography:** Includes links to Senograph 2000D, Senograph DS, Diamond Course, Mammos, and Performa.
- Invasive Cardiology:** Mac Lab Quick Reference Card and First Responder Course Profile.
- Vascular:** Vascular Certification (UPDATED), View Online - Advanced Innova Mod 2, Course Profiles for LC Advantx, and Advanced Vascular IQ.

>> troubleshooting tips, photo tour, service and application screen captures, LED view, block diagram, error codes, ...
-for definium 8000
-Precision 500D
-Precision RXi
-Precision MPI



imagination at work

Download support CDs from Edward Singleton

at:

http://supportcentral.ge.com/product/s/sup_products.asp?prod_id=21148

Definium 8000 Support Tool Contents

The screenshot shows the Definium 8000 Support Tool interface. The main content area displays a table of contents for the Definium 8000 Overview, including:

- Block Diagrams
- Image Generation Diagram
- Image Quality
- LED Power Level Status: Jedi
- Network/DICOM Device Configuration
- Power States
- Service Levels
- System Version
- Volume Rad (Tomo)

On the left, there is a sidebar with links to:

- Support Tool Help
- Tour
- Troubleshooting Tips
- LEDs & Test Points
- S/W Load from Cold
- Quick Reference Guide
- Dose Unit Converter
- Manuals
- Specialty Tools

At the bottom right, it says "Created by Edward Singleton".