Preparing to Upgrade Tasks Summary—IMPAX 4.5, 5.2, 5.3, or WEB1000 to IMPAX 6.5.1

Prerequisite software installations

Before proceeding with the migration to IMPAX 6.5.1, migrate or install the following software.

- If currently running PACS Broker 1.5.3, 1.5.4 or 1.5.5, you must migrate to Connectivity Manager 2.2.1 or 2.3 under the following circumstances:
  - Multi-site installations (for report queries from multiple sources)
  - VPN sites
  - EPR integrations with HL7 backend messaging
  - IMPAX RIS integrations
  - IMPAX RIS CD burning
  - Cardiology integrations
- And if you require the following new IMPAX and Connectivity Manager functionality, you must migrate to Connectivity Manager 2.2.1 or 2.3:
  - Report viewing in the IMPAX Text area
  - IHE workflows
  - MPPS communication from modalities
  - Audit messaging
  - Language support for Latin 4 character sets

To continue to use PACS Broker 1.5.3, 1.5.4 or 1.5.5—and if the preceding circumstances do not apply—install the PACS Broker DICOM Interface SU2.

You can also install or upgrade the versions of the following products before upgrading to IMPAX 6.5.1. These components are optional and may not be used by all sites.

- If intending to use the IMPAX Reporting integration with the IMPAX Client, IMPAX RIS must be upgraded to version 5.4.1. For upgrade instructions, refer to the *IMPAX RIS InstallShield Technical Manual*.
- TalkStation must be upgraded to TalkStation 3.2 or 4.0. For instructions on upgrading TalkStation, refer to the *TalkStation 4.0 Client Upgrade and Migration Guide* and the appropriate version of the *TalkStation 4.0 Server Upgrade Guide*.
- Audit Manager. For installation instructions, refer to the *Audit Manager 1.2 Installation, Upgrade, and Configuration Guide*.

Installing external software on new servers

If, through your analysis, you determine that you will be adding new AS300 or AS3000 server stations to your cluster, you can install the required external (that is, non-Agfa) software on these stations during the preparing to upgrade period. This is also the case when migrating a WEB1000 site.

For details on how to install external software on a new single-host, Database Server, Archive Server, or Network Gateway, refer to the *IMPAX 6.5.1 AS300 Installation and Configuration Guide* or the *IMPAX 6.5.1 AS3000 Installation and Configuration Guide*.

In the *IMPAX 6.5.1 AS300 Installation and Configuration Guide*, Oracle on Windows is the recommended database for new installations. However, when installing a new IMPAX AS300 Database Server as part of the upgrade, if SQL Server was previously used, then you must install SQL Server as part of the IMPAX 6.5.1 upgrade.

Installing SQL Server 2008

1. Log into Windows as an administrator-level user.
2. Launch the installer and select **Installation** from the left-hand menu of the SQL Server Installation Center.
3. To perform a new installation of SQL Server 2008, select the first option, **New SQL Server stand-alone installation or add features to an existing installation**.
4. If asked whether or not you want to run this application, click **Run**.
5. To install a permanent version of SQL Server 2008, confirm that the product key exists and click **Next**.
6. To accept the license terms and conditions, on the License Terms screen, read the license agreement and select the relevant checkbox.
7. To allow the Installation Wizard to install or update SQL Server 2008, on the Setup Support files screen, click **Install**.
8. Wait until all components are installed and configured, then click **Next** on the Setup Support Rules screen. Ensure that no significant errors exist.

9. On the Feature Selection Page screen, select the required components (as in the image that follows). Click **Next**.
10. On the Instance Configuration screen, select **Default instance**. Click **Next**.
11. The Disk Space Requirements screen verifies that sufficient disk space exists for the features you have selected. Click **Next**.
12. On the Server Configuration screen, on the Service Accounts tab, select **NT AUTHORITY\SYSTEM** as the Account Name for the login accounts for SQL Server services (as in the image that follows). Click **Next**.
13. On the Database Engine Configuration screen, on the Account Provisioning tab, select **Mixed Mode (SQL Server authentication and Windows authentication)** and type the sa (system administrator) password.
14. To add the administrative user, click **Add**.
15.
16. On the Ready to Install screen, click **Install**.
17. On the Installation Progress screen, click **Next**.
18. On the Complete screen, click **Close**.
19. Close the SQL Server Installation Center.
20. Restart the computer and log into Windows as an administrator-level user.

Stopping SQL Server 2008 services

1. Open the Windows Administrative Tools.
2. Select **Services**.
3. Select each of the following services in turn and click **Stop Service**, if needed:
    a. **SQL Server Full Text Search**
    b. **SQL Server Full Text Filter Daemon Launcher**
    c. **SQL Server Browser**
    d. **SQL Server Integration Services 10.0**
4. Close the Services window.

Upgrading SQL Server 2008 to SQL Server 2008 SP1

1. Launch the SP1 installer.
2. If you see a security warning, click **Run**.
3. On the Welcome screen, click **Next**.
4. On the License Terms screen, select **I accept the agreement**. Click **Next**.
5. On the Feature Selection screen, accept the default selections. Click **Next**.
6. On the Check Files in Use screen, wait while the processes are identified. Then, click **Next**, even if some locked files are found.
7. On the Ready to Update screen, click **Update**.
8. On the Update Progress screen, wait until the components are upgraded or installed, then click **Next**.
9. If the Computer Reboot Required prompt appears, click **OK**.
10. On the Installation Complete screen, click **Close**.
11. Restart the computer.

Obtaining Server licenses for Windows stations

1. For each Windows server, open a command prompt and type **ipconfig /all**.
2. Copy one of the returned MAC addresses to a secure place.
3. To obtain a license key for the server, send the MAC address information to licensekey@agfa.com, along with the type of component being installed on that server.

Obtaining Server licenses for Solaris stations

1. On a Solaris station, confirm that the Ethernet is connected.
2. Log in as the **root** user and open a terminal window.
3. Type

    arp `uname -n`

    or

    arp $(uname -n)
4. To obtain a license key for the server, copy and send the returned information to licensekey@agfa.com, along with a description of the type of component being installed on that server.

Installing hardware and software on a new Application Server

To prepare a server for an IMPAX Business Services installation, you must install the appropriate hardware and external software on it. For upgrades, you have the option of staying with Windows Server 2003 or upgrading to Windows Server 2008.

Setting up an AS300 single-host server

During the preparing to upgrade period, set up the future Curator station as a single-host AS300 Oracle station, for use within the training server cluster. Details for these installation procedures are available in the *IMPAX 6.5.1 AS300 Installation and Configuration Guide*.

Installing the IMPAX documentation

1. Insert the IMPAX Documentation DVD.
2. From the DVD root, double-click **IMPAXDocumentationSetup.exe**.
3. On the Welcome screen, click **Next**.

4. On the Setup Type screen, select the appropriate option and click **Next**.
5. If you selected Select Documentation to Install, on the Choose Features screen, you can select particular Knowledge Bases or languages to install.
6. On the Ready to Install the Program screen, click **Install**.
7. On the InstallShield Wizard Completed screen, click **Finish**.

Configuring IIS error messages on Windows Server 2003

1. Open the Windows Administrative Tools and select **Internet Information Services (IIS) Manager**.
2. Expand ***computer_name*** > **Web Sites** > **Default Web Site**.
3. Right-click the **Documents** file and select **Properties**.
4. Switch to the **Custom Errors** tab.
5. In the list of Error messages for HTTP errors, select **404**.
6. Click **Edit**.
7. Under Message Type, select **URL**.
8. In the URL field, type **/AgfaHC.LanguageRedirect/LanguageRedirect.aspx**.
9. To close the two dialogs, click **OK** in each.
10. To close the Internet Information Services (IIS) Manager window, select **File** > **Exit**.

Installing the IMPAX Business Services

1. Insert the IMPAX Business Services CD.
2. Navigate to the appserver folder, which contains the Business Services software.
3. Run **AGFA IMPAX Business Services Setup.exe**.
4. Select the required software packages to install.
5. Click **Install**.
6. On the Welcome screen, click **Next**.
7. At the license agreement, select the **I accept the terms in the license agreement** checkbox. Click **Next**.
8. On the Web Services Installation Folder screen, click **Change**.
9. Select **E:\wwwroot** as the location for the Web Services. Click **OK**.
10. Click **Next**.
11. On the Setup Type screen, click **Custom**. Click **Next**.
12. If you have an IMPAX RIS to connect to, under RIS Web Services, select **This feature will be installed on local hard drive**. Click **Next**.
13. Click **Install**.
14. To continue with the configuration after the installation is complete and verified, select the **Launch Configuration tool** checkbox.
15. Click **Finish**.

Verifying the Business Services installation

1. Open a web browser and connect to **http://localhost**.
2. Verify that the "IMPAX Documentation" page is displayed.

   or

   If the IMPAX Documentation has not been installed on the server, that the "Welcome to IMPAX 6.5.1" page is displayed.

Order of Application Server configuration

Configure the Application Server software. Configuration details are available in the *IMPAX 6.5.1 Application Server Installation, Upgrade, and Configuration Guide*.

Restoring the unmodified uname script

1. Log into the Database Server as the **root** user.
2. Change to the **/sbin** directory.
3. Back up the modified uname script by typing

   cp uname uname.agfa
4. Locate the unmodified backup script.
5. Restore the unmodified backup script by typing

   cp *backup* uname

Installing the Migration Toolbox on a Windows station

1. Insert the IMPAX Migration CD.
2. Navigate to the **win32** directory and double-click **impax_65_migration-winpkg-6.5.1.*xxx*.exe**
3. In the InstallShield Self-extracting EXE dialog, click **Yes**.
4. On the Welcome screen, click **Next**.
5. On the Select Features screen, select the checkboxes of the features that you want to install, and clear the rest.
6. Click **Next**.
7. To continue, click **Install**.
8. If you selected the Worklist and Report Migration Tools on the Select Features screen, when prompted, press any key to continue.
9. On the Setup Complete screen, click **Finish**.

Accessing the IMPAX migration software repository

1. Login as user **root**.
2. At a terminal window, type

lofiadm -a /*ISO_directory*/IMPAXMigration.iso.

3. Type

   mount –F hsfs /dev/lofi/1 /mnt1.

4. Change to the **/mnt1** directory (or whatever mount point you are using).

Installing the Migration Toolbox on a Solaris station

1. Log in as the **root** user and open a terminal window.
2. Insert the Migration Tools CD.
3. Navigate to the SunOS5 directory.
4. To install the migration tools, type

   pkgadd -d IMPAXmigration.pkg

5. When asked which packages to process, type the package name or **all** to process them all.
6. When asked if you want to continue with the installation, type **y**.
7. Because environment variables are updated during the Migration Toolbox installation, if you have any terminal windows open with the mvf user login, you must log out and log back in again.

Setting up a connection to a previous-version AS300 database

1. Open the Windows Administrative Tools.
2. Select **Data Sources (ODBC)**.
3. Switch to the **System DSN** tab.
4. Click **Add**.
5. In the Create New Data Source dialog, select **SQL Server** from the list. Click **Finish**.
6. In the Name field, type the appropriate value:

   For IMPAX 4.5 upgrades, use **mvf_45**.

   For IMPAX 5.2 upgrades, use **mvf_52**.

   For IMPAX 5.3 upgrades, use **mvf_53**.

7. In the Description field, type **mvf** (lowercase).
8. In the Server field, type or select the name of the 4.5, 5.2, or 5.3 AS300 server. Click **Next**.
9. Set the authentication according to the authentication used at the site (**Windows NT** or **SQL Server**).

   If using SQL Server, you may also have to select the **Connect to SQL Server** checkbox and supply a Login ID and Password.

10. If necessary, change the network library by clicking **Client Configuration**. Under Network libraries, select the protocol used to communicate with the SQL server at your site: either **TCP/IP** (the default) or **Named Pipes**. Click **OK**.
11. Click **Next**.
12. Change the default database to **mvf** (lowercase). Click **Next**.
13. Click **Finish**. Click **OK**.

Connecting to a 4.5, 5.2, or 5.3 AS3000 database

1. Select **Start** > **All Programs** > **Oracle - *Oracle_instance_name*** > **Configuration and Migration Tools** > **Net Configuration Assistant**
2. In the Oracle Net Configuration Assistant Welcome dialog, select **Local Net Service Name configuration** and click **Next**.
3. If the Naming Methods Configuration dialog appears, select **Local Naming** and click **Next**.
4. In the Net Service Name Configuration dialog, select **Add** and click **Next**.
5. In the Service Name field, type **MVF** and click **Next**.
6. From the list of protocols, select **TCP** and click **Next**.
7. In the TCP/IP dialog, type the host name of the 4.5, 5.2, or 5.3 AS3000 server.
8. Accept the default port number (1521) and click **Next**.
9. Select **Yes, perform a test** and click **Next**.
10. Click **Change Login**.
11. In the Username and Password fields, type **mvf**. Click **OK**.
12. Click **Next**.
13. In the Net Service Name field, ensure that **mvf_45**, **mvf_52**, or **mvf_53** appears and click **Next**.
14. At the prompt to configure another net service name, select **No** and click **Next**.
15. In the Net Service Name Configuration Complete dialog, click **Next**.
16. In the Naming Methods Configuration Complete dialog, click **Next**.
17. To close the Net Configuration Assistant dialog, click **Finish**.

Configuring the ODBC data source name

1. Open the Windows Administrative Tools.
2. Select **Data Sources (ODBC)**.
3. Switch to the **System DSN** tab.
4. Click **Add**.
5. In the Create New Data Source dialog, select **Oracle in *Oracle_instance_name*** and click **Finish**.
6. In the Data Source Name field, type the appropriate value:

   For upgrades from IMPAX 4.5, type **mvf_45**.

   For upgrades from IMPAX 5.2, type **mvf_52**.

   For upgrades from IMPAX 5.3, type **mvf_53**.

7. Type a description, if needed.

8. In the TNS Service Name field, type **mvf_45**, **mvf_52**, or **mvf_53**.
9. In the User Name field, type **mvf** (lowercase).
10. To save the changes and close the dialog, click **OK**.
11. To save the new source and exit the ODBC Data Source Administrator dialog, click **OK**.

Setting up a connection to the WEB1000 database

1. Open the Windows Administrative Tools.
2. Select **Data Sources (ODBC)**.
3. Switch to the **System DSN** tab.
4. Click **Add**.
5. In the Create New Data Source dialog, select **SQL Server** from the list. Click **Finish**.
6. In the Name field, type **mvf_web**.
7. In the Description field, type **mvf** (lowercase).
8. In the Server field, type or select the name of the WEB1000 Server. Click **Next**.
9. Set the authentication according to the authentication used at the site (**Windows NT** or **SQL Server**).

   If using SQL Server, you may also have to select the **Connect to SQL Server** checkbox and supply a Login ID and Password.
10. If necessary, change the network library by clicking **Client Configuration**. Under Network libraries, select the protocol used to communicate with the SQL server at your site: either **TCP/IP** (the default) or **Named Pipes**. Click **OK**.
11. Click **Next**.
12. Change the default database to **mvf** (lowercase). Click **Next**.
13. Click **Finish**. Click **OK**.

Installing the IMPAX Installation Server

You can set up an IMPAX Client Installation Server by running the IMPAXInstallationServerSetup.exe on a Windows-based server.

If you choose to install the IMPAX Installation Server package on a dedicated server, use the Web Server Certificate Wizard to create a certificate request to submit to a trusted certificate authority, and install the certificate. You must install the SSL certificate on the dedicated server before installing the IMPAX Installation Server package.

Running the IMPAX Installation Server package

1. From the IMPAX Client CD or a network location, run **IMPAXInstallationServerSetup.exe**.
2. On the Welcome to the InstallShield Wizard for IMPAX Installation Server screen, click **Next**.
3. To install the application into C:\Inetpub\wwwroot\ClientInstaller, on the Destination Folder screen, click **Next**.

   or

   To install the application to another location, click **Change**. In the Change Current Destination Folder dialog, browse for the directory location to install into and click **OK**. On the Destination Folder screen, click **Next**.
4. On the Ready to Install the Program screen, click **Install**.
5. On the Installation Wizard Completed screen, click **Finish**.
6. On the second Installation Wizard Completed screen, click **Finish**.

Running the Microsoft .NET Framework 3.5 SP1 installer package

1. From the IMPAX Client CD or a network location, run **IMPAXInstallationServer_DotNet35Updater.exe**.
2. On the Welcome to the InstallShield Wizard for Agfa IMPAX Installation Server - .NET 3.5 SP1 Updater screen, click **Next**.
3. To install the application into C:\Inetpub\wwwroot\ClientInstaller, on the Destination Folder screen, click **Next**.

   or

   To install the application to another location, click **Change**. In the Change Current Destination Folder dialog, browse for the directory location to install into and click **OK**. On the Destination Folder screen, click **Next**.
4. On the Ready to Install the Program screen, click **Install**.
5. On the Installation Wizard Completed screen, click **Finish**.

Enabling automated installation of the IMPAX Client software from a command prompt

1. At a command prompt, type

   ImpaxClientSetup.exe /S /v"*setting*=*value*... /quiet"

Copying the 5.2 or 5.3 Cross-Cluster Dictation Interlock components

1. On the 6.5.1 Application Server where the zip file was extracted, from the mvf-signal-relay directory, copy the mvf_signal_relay.exe and install_signal_relay.bat files.
2. On the IMPAX 5.2 or 5.3 computer to run the components on, in the C:\mvf\bin

directory, paste the two files copied in the previous step.

3. Open a command prompt.
4. Change to the **C:\mvf\bin** directory.
5. Type **install_signal_relay.bat *remote_host_name***
6. Open the Windows Administrative Tools and select **Services**.
7. Start the service.

Updating map_ini values for Cross-Cluster Dictation Interlock

1. Launch CLUI.
2. Type

   update map_ini set ini_value='*remote_host_name*' where ini_section='signal-relay' and ini_key='remote_host'
3. Type

   update map_ini set ini_value='*remote_port_value*' where ini_section='signal-relay' and ini_key='remote_port'
4. Optionally, change the default values of the external_port, rad_user, or trainee_user keys.

Copying the 6.5.1 Cross-Cluster Dictation Interlock components

1. Copy the study-status-signal-relay folder from the Cross-Cluster Dictation Interlock zip in the Tools subdirectory to an appropriate folder on the 6.5.1 Application Server, such as to C:\Program Files\Agfa\Impax Business Services.
2. Open a command prompt.
3. Change to the directory containing the copied files.
4. Change to the **study-status-signal-relay** directory.
5. Type **import-study-status-relay.bat**.
6. In the Apply Study Status Relay ADAM Schema dialog, click **OK**.

Configuring a firewall exception for the Cross-Cluster Dictation Interlock tool

1. On the IMPAX 6.5.1 Application Server, open Control Panel.
2. Select **Windows Firewall**.
3. Switch to the **Exceptions** tab.
4. Click **Add Port**.
5. In the Name field, type a name for the exception; for example, **Study Status Relay** or something similar.
6. In the Port field, type the number of the TCP port to listen for signals from the remote cluster.
7. Click **OK**.
8. To close the Windows Firewall dialog, click **OK**.
9. Configure a firewall exception on the Windows machine in the remote cluster as well.

Configuring the Study Status Relay role

1. Launch an IMPAX Client connected to the Application Server where the Study Status Relay role was created.
2. Log into the Client as an Administrator user.
3. From the **Configure** drawer menu  , select **Users and Roles**.
4. In the navigation pane, right-click the **Study Status Relay** role and select **Add User**.
5. In the details pane, under the User bar, switch to the **Information** tab.
6. Type a Name for the user, such as **Remote Dictation Automated User**.
7. In the Login field, type **remote-dictation**.
8. Type in a Password and note what this password is.
9. In the navigation pane, select the **Study Status Relay** role again.
10. In the details pane, expand the **Licensing** bar.
11. In the navigation pane, right-click the **Study-Status Relay** role and select **Add License** > **Add *license_type***

Configuring the Study Status Relay service

1. On the 6.5.1 Application Server, open a command prompt.
2. Change to the **C:\Program Files\Agfa\Impax Business Services\study-status-signal-relay** directory.
3. Type **Study.Status.Relay.EncryptionTool.exe *password_for_remote-dictation_user***
4. Copy the long string that is returned from this command.
5. Open the Study.Status.Relay.exe.config file in a text editor.
6. Under StudyStatusRelayConfiguration, between the `<UserPassword>` and `</UserPassword>` tags, paste the long string.
7. Update the values of **LoginServiceUrl**, **StudyInfoServiceUrl**, and **MessagingServiceUrl** with the local Application Server's fully qualified domain name.
8. Update the value of **RemoteSignalHost** with the host name or IP address of the computer in the previous-release version of IMPAX that is running the study-status-relay service.
9. Save and close the file.

10. In the command prompt, type **install_study_status_relay_service.bat**.

Running the Cross-Cluster Dictation Interlock tool

1. On the 6.5.1 Application Server where the Relay service is running, open a command prompt.
2. Type the following command:

   net start StudyStatusRelayService
3. Exit the command prompt.

Creating the pre-migration schema on an AS300 or WEB1000 server

1. Open a command prompt.
2. Change to the **C:\mvf-mig6\bin** directory.
3. Type the following:

   build-impax-mig-schema.bat sa sa mvf
4. At the `Do you want to proceed?` prompt, type **y**.

Creating the pre-migration schema on an AS3000 server

1. Log into the AS3000 Database Server as the **oracle** user.
2. Change to the **/usr/mvf-mig6/bin** directory.
3. Run the script called **./build-impax-mig-schema**.

Creating the pre-migration schema from the Application Server

1. On the Application Server, open a command prompt.
2. Change to the **C:\mvf-mig6\bin** directory.
3. If the Application Server is connected to a SQL Server database, type

   build-impax-mig-schema.bat *user_name password* mvf_*version_number*
4. If the Application Server is connected to an Oracle database, type **build-impax-mig-schema.bat** without any additional parameters.

Installing the Oracle 10.2.0.1 Client

1. Unzip the 10201_client_win32.zip file.
2. Run the unzipped Oracle 10g Client installer.
3. To open the Universal Installer, click **Install**.
4. In the Welcome dialog, click **Next**.
5. In the Installation type dialog, select **Administrator**. Click **Next**.
6. Under Destination, in the Name field, accept the default or type a new name.
7. Under Destination, in the Path field, select or type a path identifying where you want to install the Oracle Client.
8. In the Product Specific Pre-requisite Checks dialog, click **Next**.
9. In the Summary dialog, click **Install**.
10. If you are not continuing with configuration immediately, close the Configuration Assistant by clicking **Stop**.

Setting up the connection to the Oracle database

1. If the Net Configuration Assistant is not open, select **Start** > **All Programs** > **Oracle** - *Oracle_instance_name* > **Configuration and Migration Tools** > **Net Configuration Assistant**.
2. In the Oracle Net Configuration Assistant Welcome dialog, select **Local Net Service Name** configuration and click **Next**.
3. If the Naming Methods Configuration dialog appears, select **Local Naming**. Click **Next**.
4. In the Net Service Name Configuration dialog, select **Add**. Click **Next**.
5. In the Service Name field, type **MVF** and click **Next**.
6. From the list of protocols, select **TCP**. Click **Next**.
7. In the TCP/IP dialog, type the host name of the Oracle server.
8. Accept the default port number (1521). Click **Next**.
9. Select **Yes, perform a test**. Click **Next**.
10. Click **Change Login**.
11. In the Username field, type **mvf** and type the password for the mvf user.
12. Click **OK**.
13. Click **Next**.
14. In the Net Service Name field, ensure that MVF_ts.world appears. Click **Next**.
15. At the prompt to configure another net service name, select **No**. Click **Next**.
16. In the Net Service Name Configuration Complete dialog, click **Next**.
17. In the Naming Methods Configuration Complete dialog, click **Next**.
18. To close the Net Configuration Assistant dialog, click **Finish**.

Migrating reports to the training server

1. On the Application Server component of the training server cluster, run the **C:/mvf-mig6/MigrateTRServer/MigrateTRServer.exe** application.
2. Select the **Migrate Report Data** checkbox.
3. Under Source, supply the database information for the production server, as follows:
   a. Click **Modify**. 

b. In the Data Link Properties dialog, select **Microsoft OLE DB Provider for SQL Server**. Click **Next**.

c. In the Data Source field, type mvf_ts.world or the name of the tns entry that was created in tnsnames.ora.

d. Select **Use a specific name and password** and type the database user name—normally **sa**.

e. In the Select the database on the server field, type **mvf**.

f. Click **OK**.

4. In the Migrate training/traveling server data dialog, under Source, type the database password.

5. Under Destination, supply the database information for the training server database, as follows:

a. Click **Modify**. 

b. In the Data Link Properties dialog, select **Oracle Provider for OLE DB**. Click **Next**.

c. In the Data Source field, type mvf_ts.world or the name of the tns entry that was created in tnsnames.ora.

d. Select **Use a specific name and password** and type the database user name—normally **dbadmin**.

e. In the Select the database on the server field, type **mvf**.

f. Click **OK**.

6. On the training server, the database password will be encrypted. To retrieve it, use the following command at C:\mvf\bin:

passkey -M QUERY -u sa

Then type the retrieved value into the Destination Password field.

7. Click **Migrate Data**.

8. When the migration is complete, close the DTSResults dialog.

Collecting information on IMPAX clients, servers, stations, and printers

1. On Solaris, log in as the **mvf** user.

2. At a command prompt, change to the directory containing the migration_inventory tool.

3. On Windows, type

migration_inventory.exe -s [-d *database_name* -U *database_user_name* -P *database_password*] -D *database_server_host_name*

On Solaris, type

migration_inventory -s -D *database_server_host_name*

4. To create a report file with this information, on Windows, type

mig_reporter.exe -d mvf_*version_number* -t system_inventory_tool

On Solaris, type

mig_reporter -d mvf_*version_number* -t system_inventory_tool

Increasing the tablespace size on Solaris

1. Log into the Database Server as the **mvf** user.

2. Start the database by typing

dbstartmvf

3. Start the listener. Type

lsnrctl start

4. Change to the **/usr/mvf-mig6/bin** directory.

5. To see whether 2–3 GB of space is available for the MVFL tablespaces, type

/usr/mvf/bin/monitor_update

/usr/mvf/bin/monitor_stats

6. If additional space is needed, to run the monitor_add script, type

/usr/mvf/bin/monitor_add

7. To continue, type **C**.

8. Type the tablespace name, **MVFL**.

9. Type the path name for the data file.

10. Type the size of the file in megabytes, **2000**.

11. Repeat these steps for the MVFLINDX, MVF, MVFINDX, and UNDO tablespaces, substituting the appropriate tablespace name each time.

Running a report on study archiving status on a Windows station

1. At a command prompt, type

mig-study-archive-report.exe -d mvf_*version_number* -U *IMPAX_database_user* -P *IMPAX_database_password*

2. To create a report file with this information, type

mig_reporter.exe -d mvf_*version_number* -t mig-study-archive-report

Running a report on study archiving status on a Solaris station

1. At a terminal window, type

mig-study-archive-report -o

2. To create a report file with this information, type

mig-reporter -t mig-study-archive-report

Checking the operating system

On each server you plan to upgrade (rather than replace), check the Windows or Solaris operating system to ensure that it is healthy. This helps to prevent issues such as bad disk systems or server hardware faults from affecting the upgrade.

Checking the integrity of database data

1. To check for uniqueness of OBJECT_REF in DOSR_OBJECT_DOCUMENT, in ISQL, type

   select count(object_ref) from dosr_object_document where object_ref in (select object_ref from dosr_object_document group by object_ref having count(object_ref)>1).

2. To check for null values in the DOSR_HIS_STUDY.STUDY_UID column, type

   Select count(*) from dosr_his_study where study_uid is NULL

3. To check for null values in the DOSR_STUDY.STUDY_UID column, type

   Select count(*) from dosr_study where study_uid is NULL

4. To check for null values in the DOSR_OBJECT.SOP_INSTANCE_UID column, type

   Select count(*) from dosr_object where sop_instance_uid is NULL

5. To check for null values in the DOSR_OBJECT.SERIES_REF column, type

   Select count(*) from dosr_object where series_ref is NULL

6. To check for null values in the MAP_JOB.ORIGINATING_USER_ID column, type

   Select count(*) from map_job where originating_user_id is NULL

7. To check for null values in the MAP_EVENT.USER_ID column, type

   Select count(*) from map_event where user_id is NULL

8. To check for null values in the MAP_EVENT_AUDIT.USER_ID column, type

   Select count(*) from map_event_audit where user_id is NULL

9. To check for null values in the MITRA_FOLDER.FOLDER_NAME column, type

   Select count(*) from mitra_folder where folder_name is NULL

10. To check for null values in the MITRA_FOLDER_ITEM.ITEM_NAME column, type

    Select count(*) from mitra_folder_item where item_name is NULL

11. To check for null values in the MITRA_PRINT_PARAMS.USER_ID column, type

    Select count(*) from mitra_print_params where user_id is NULL

12. To check for null values in the AGFAHC_REPORT_ACCESS_CONFIG.AE_TITLE; column, type

    Select count(*) from agfahc_report_access_config where ae_title is NULL

13. If the return value is > 0 for any of these, a NULL value exists in that column. If duplicates or nulls are found, contact Agfa support for assistance in dealing with them.

Collecting data on the WEB1000 or IMPAX user base

1. Open a command prompt on the Application Server and navigate to **C:\mvf-mig6\bin**.
2. At the prompt, type

   user_base_summary.exe -d mvf*_version_number* -U *IMPAX_4.5_5.2_or_5.3_database_user* -P *IMPAX_4.5_5.2_or_5.3_database_password*

3. Type

   mig_reporter.exe -d mvf*_version_number* -U *IMPAX_4.5_5.2_or_5.3_database_user* -P *IMPAX_4.5_5.2_or_5.3_database_password* -t user_base_summary

Viewing the report on the WEB1000 or IMPAX user base

1. On the Application Server, navigate to **C:\mvf-mig6\reports**.
2. Using a text editor such as Notepad, open the file ***database_server_name*_user_base_summary_REPORT_1_*date_and_time*** .

Getting a list of IMPAX Client station names

1. On the Application Server, open a command prompt and change to the **C:\mvf-mig6\bin** directory.
2. Type the following:

   get_station _mapping.exe -m List -d mvf*_version_number* -U *IMPAX_4.5_5.2_or_5.3_database_user* -P *IMPAX_4.5_5.2_or_5.3_database_password*

3. Type the following:

   mig_reporter.exe -d mvf*_version_number* -U *IMPAX_4.5_5.2_or_5.3_database_user* -P *IMPAX_4.5_5.2_or_5.3_database_password* -t get_station_mapping

Updating the host_list file

1. Open the report created when getting a list of IMPAX Client station names.
2. From the C:\mvf-mig6\bin folder, open the **host_list** file.

3. Using the station info mapping tool report, add each IMPAX Client station host name or IP address to the host_list file.
4. Save the host_list file.

Modifying the Windows XP network access settings

1. Open the Windows Administrative Tools.
2. Select **Local Security Policy**.
3. In the navigation pane, select **Local Policies** > **Security Options**.
4. Double-click **Network access: Sharing and security model for local accounts**.
5. If the selected list option is Guest only - local users authenticate as Guest, change it to **Classic - local users authenticate as themselves**.
6. Click **Apply**. Click **OK**.
7. To close the Local Security Settings window, select **File** > **Exit**.

Mapping multiple IMPAX Client station names to machine identifiers

1. If the administrator usernames and passwords are the same for all IMPAX Client machines, on the Application Server, open a command prompt.
2. Type

   run_psexec.bat [*administrator_username administrator_password*]

Verifying that all IMPAX Client station names have been mapped

1. Run the **get_station_mapping.exe** command.
2. Run the following command:

   mig_reporter.exe -d mvf_*version_number* -U *IMPAX_4.5_5.2_or_5.3_database_user* -P *IMPAX_4.5_5.2_or_5.3_database_password* -t get_station_mapping
3. Verify that no station names are listed in the report.
4. If any station names are listed, add them to the host_list file and run the **run_psexec.bat** command again.

Mapping individual Client station names

Instead of mapping all Client station names at once, you can perform a set of tasks on each Client station individually.

Retrieving the IMPAX Client station name

1. On the Client station, open a command prompt.
2. Change to the location of the get_station_mapping.exe file.
3. Type the following:

   get_station _mapping.exe -m List -d mvf_*version_number* -U *IMPAX_database_user* -P *IMPAX_database_password*
4. Type the following:

   mig_reporter.exe -t get_station_mapping -d mvf_*version_number* -U *IMPAX_database_user* -P *IMPAX_database_password*

Mapping an IMPAX Client station name to a machine identifier

1. On the Client station, open a command prompt.
2. Navigate to the location of the get_station_mapping.exe file.
3. At the prompt, type the following:

   get_station_mapping.exe -m add -d mvf_*version_number* -U *IMPAX_database_user* -P *IMPAX_database_password*

Exporting user data

1. Open a command prompt on the Application Server.
2. Change to the **C:\mvf-mig6\UserMigration** directory.
3. To export IMPAX 4.5, 5.2, or 5.3 user information, type

   migrate-users.exe -m mvf2xml -d mvf_*version_number* -U *IMPAX_4.5_5.2_or_5.3_database_user* -P *IMPAX_4.5_5.2_or_5.3_database_password*
4. To export WEB1000 user information after exporting the IMPAX MVF data, type

   migrate-users.exe -m mvf2xml -d mvf -U *MVF_database_user* -P *MVF_database_password* -ud mvf_web -uU *WEB1000_database user* -uP *WEB1000_database_password*

   or

   To export **only** WEB1000 users information (no IMPAX data to migrate), type

   migrate-users.exe -m mvf2xml -d mvf_web -U *WEB1000_database user* -P *WEB1000_database_password*

Deleting special characters in user names

1. Open the **users.xml** file in a text editor.
2. In each UserName and Fullname field, check for and delete any instances of the following characters:

   **= + < > # ; / **
3. Save and close the **users.xml** file.
4. Repeat with the **webusers.xml** file, if applicable.

Planning the migration of user preferences

To mitigate the potential pitfalls, work with the site to effectively plan the migration of user preferences, following steps such as the following:

1. Define the appropriate hierarchy of roles and users, determining which preferences should be inherited by all.
2. Define which preferences will be getting migrated at the user level, therefore overriding role inheritance, by consulting the exported user data and the list of .
3. Pinpoint areas where the migrated preferences would interfere with the preferred inheritance model.

Depending on how many preference groups would be affected, and how many users need migrating, you can then manage the problem one of two ways:

1. Do not migrate users. Instead, re-create them all in the training server cluster.

   or
2. Migrate the users, then remove the custom preferences where needed.

Disabling the password and account lockout policies

1. Open the Windows Administrative Tools and select **Local Security Settings**.
2. In the navigation pane, expand **Account Policies** and select **Password Policy**.
3. To modify the Password Policy information, double-click the policy to be changed.
4. Under Account Policies, click **Account Lockout Policy**.
5. To modify the Account Lockout Policy information, double-click **Account lockout threshold**.
6. Set its value to **0** and click **OK**.
7. To close Local Security Settings, select **File** > **Exit**.

Backing up the ADAM database

1. Select **Start** > **All Programs** > **Accessories** > **System Tools** > **Backup**.
2. Select **Tools** > **Options**.
3. Switch to the **Exclude Files** tab.
4. In the list of file names, select **C:\Program Files\Microsoft ADAM** and click **Remove**. Click **OK**.
5. When the Backup or Restore Wizard is displayed, clear the **Always start in Wizard mode** checkbox and click **Advanced Mode**.
6. On the Welcome screen, click **Backup Wizard**.
7. On the Backup Wizard screen, click **Next**.
8. On the What to Backup screen, select **Backup selected files, drives, or network data**. Click **Next**.
9. On the Items to Backup screen, select the folder containing the ADAM data as well as the **World Wide Web Publishing Service** folder. Click **Next**.
10. If backing up to a tape drive, under Backup media type, select the tape drive, and in the backup media area, click **New media**. Click **Next**.

    or

    If backing up to any other media type, select the location where the backup is to be saved, and type a name for the backup. Click **Next**.
11. On the Completing the Backup Wizard screen, click **Advanced**.
12. On the Type of Backup screen, select **Normal.** Click **Next**.
13. On the How to Backup screen, select **Verify data after backup and Use hardware compression if available.** Click **Next**.
14. On the Backup Options screen, select **Replace the existing backups**. Click **Next**.
15. On the When to Backup screen, select **Now**. Click **Finish**.
16. In the Backup Progress dialog, click **Close**.
17. Close the Backup Utility.

Setting up custom roles

1. Log into the IMPAX 6.5.1 Client.
2. From the Configure area drawer menu  , select **Users and Roles**.
3. To add a role within a role, in the navigation pane, right-click the role and select **Add Role**.

   or

   To add a role at the top level of the role hierarchy, right-click in the navigation pane below the defined roles and select **Add Roles**.
4. Rename the new role.
5. Repeat for any other roles to create.

Mapping IMPAX or WEB1000 privileges to custom roles

1. In the UserMigration folder where the Migration Tools are installed, locate and open the configuration file called **migrate-users.exe.config**.
2. Compare the privileges in the database with the role mapping in the migrate-users.exe.config file.
3. To map an IMPAX or WEB1000 privilege to a custom IMPAX 6.5.1 role, add additional map entries.
4. Save the file.

Converting the user data to LDF

1. Open a command prompt.
2. Change to the **C:\mvf-mig6\UserMigration** directory.

3. To convert **only** IMPAX 4.5, 5.2. or 5.3 user information, type

   migrate-users.exe -m xml2ldf -I users.xml -d mvf_*version_number* -U *IMPAX_4.5_5.2_or_5.3_database_user* -P *IMPAX_4.5_5.2_or_5.3_database_password*

   or

   To convert **only** WEB1000 user information, type

   migrate-users.exe -m xml2ldf -I webusers.xml -d mvf_web -U *MVF_database_user* -P *MVF_database_password*

   or

   To export **both** IMPAX and WEB1000 user information at once, type

   migrate-users.exe -m xml2ldf -I users.xml,webusers.xml -d mvf_*version_number* -U *IMPAX_4.5_5.2_or_5.3_database_user* -P *IMPAX_4.5_5.2_or_5.3_database_password*

Migrating user data to ADAM

1. On the Application Server, open a command prompt.
2. Change to the **C:\mvf-mig6\UserMigration** directory.
3. Type

   ldifde -i -s *fully_qualified_domain_name_of_ADAM_host* -f *LDF_input_file* -t 636

4. If you have a conflict.ldf file that contains user IDs representing unique individuals, run the ldifde command again and use that conflict.ldf file as the *LDF_input_file*.

Backing up the ADAM database again

1. As all user data has been migrated to the ADAM database, back up the ADAM database again—using a different name than used for any prior backup.

Updating ADAM passwords

1. On the Application Server, open a command prompt.
2. Change to the **C:\mvf-mig6\UserMigration** directory.
3. Type

   migrate-users.exe -m postimport -d mvf_*version_number* -U mvf -P mvf

   or, for WEB1000-only sites:

   migrate-users.exe -m postimport -d mvf_web -U mvf -P mvf

Updating study comments after upgrading to IMPAX 5.2 from IMPAX 4.5

1. Launch CLUI.
2. Type

   Update DOSR_STUDY set study_comments_utf8=study_comments where study_comments is not null

Running a final report on study archiving status

1. At a command prompt, for Windows, type

   mig-study-archive-report.exe -U *IMPAX_5.2_or_5.3_database_user* -P *IMPAX_5.2_or_5.3_database_password* -d mvf_*version_number* -o

   or, for Solaris, type

   mig-study-archive-report -U *IMPAX_5.2_or_5.3_database_user* -P *IMPAX_5.2_or_5.3_database_password* -d mvf_*version_number* -o

Importing IMPAX users into the traveling server

1. Log into the AS3000 Database Server as the **mvf** user.
2. Run the following command:

   sqlplus dbadmin/dbadmin

   select count(*) from user_tab_columns where table_name= 'MITRA_DISPLAY_MODALITY_CONFIG' and column_name= 'CONTROLLER_MODE_DEFAULT';

3. If the output is 0, add a column named **CONTROLLER_MODE_DEFAULT** to the MITRA_DISPLAY_MODALITY_CONFIG table.

Trimming map_event and map_event_audit tables

1. On Windows, open the SQL Server Query Analyzer.

   On Solaris, launch CLUI.

2. Type **select count(*) from map_event**.
3. On Windows, click **Execute**.
4. Type **select count(*) from map_event_audit**.
5. On Windows, click **Execute**.

Creating the AS3000 software repository

1. On the AS3000 Database Server, create a directory for the repository by typing **mkdir /agfa/*repository***
2. Copy the IMPAX 6.5.1 AS3000 Server ISO file to this repository.
3. As the **root** user, type:

   # lofiadm –a /agfa/*repository*/IMPAX 6.5 AS3000 Server.iso

   /dev/lofi/1

   # mount –F hsfs /dev/lofi/1 /mnt

   # cd /mnt

   # cp -r . /agfa/*repository*

4. Unmount /mnt and optionally remove the IMPAX 6.5.1 AS3000 Server ISO file.

5. Copy the Oracle for Solaris ISO file to the repository.
6. Repeat the process to extract and copy the Oracle software to the repository.

To create the AS3000 software repository using DVDs

1. On the AS3000 Database Server, log in as the root user and create a directory for the repository by typing **mkdir /agfa/*repository***
2. Insert the IMPAX 6.5.1 AS3000 Server DVD.
3. Change to the **/cdrom/cdrom0** directory.
4. Copy and unpack the files from the DVD by typing

   tar cvf - . | (cd /agfa/*repository* ; tar xf -)
5. Remove the IMPAX AS3000 DVD and insert the Oracle for Solaris DVD.
6. Still in the /cdrom/cdrom0 directory, copy and unpack the files from this DVD as well.

   tar cvf - . | (cd /agfa/*repository* ; tar xf -)

Creating an AS3000 build report repository

1. On the server, log in as the mvf user and create the following directory: **/usr/mvf/reporting_tables**.
2. Insert the Connectivity Manager 2.1.1 or 2.2 CD.
3. Navigate to the **/cbframework-platform/AgfaHC-database** directory on the CD.
4. Copy the following files from the AgfaHC-database directory into the /usr/mvf/reporting_tables directory:
   a. **agfahc-sql.schema.oracle**
   b. **build-oracle-database.bash**
   c. **regrant-oracle.bash**
5. Change to the **/usr/mvf/reporting_tables** directory.
6. To grant execute permissions on the script files, run the following command:

   chmod 777 build-oracle-database.bash
7. To run the command, type

   ./ build-oracle-database.bash.
8. Remove the Connectivity Manager CD and insert the IMPAX 6.5.1 Migration CD.
9. Log in as user **root**.
10. Navigate to the SunOS5 directory on the CD.
11. Type

    pkgadd -d IMPAXmigration.pkg

Preparing the database for report migration

1. On the Connectivity Manager, in Query Analyzer, run the following queries:
   a. **use mcf**
   b. **select distinct use_of_patient_id from mcf_patient_id**
   c. **select distinct issuer_of_patient_id from mcf_patient_id**
2. If either of these queries gets more than one response, this may indicate a problem. To resolve it, work with the Connectivity Manager integrator and Agfa support.

Updating the database statistics

1. Log into the Database Server.
2. Start an sqlplus session by typing

   sqlplus / as sysdba
3. Type the following command:

   exec dbms_scheduler.run_job('gather_stats_job');
4. Type the following command:

   exec dbms_scheduler.run_job ('dbadmin.gather_and_lock_stats_job');
1. Log into the Database Server as the oracle (traveling server) or service (IMPAX 5.2 or 5.3 server) user.
2. On Solaris, type

   analyze-tables
3. If errors occur, check */usr/mvf/data/logs/analyze-tables.log* for details.

Identifying the report source

1. On the Connectivity Manager, open osql and type

   use mcf;

   select distinct(requesting_service) from mcf_service_request;
2. To prepare for upgrading the database, note the value stored in the requesting_service field.
3. If multiple values are returned in the *requesting_service* field, consult a Connectivity Manager integrator, as data and mappings may need to be updated.

Verifying the version of Oracle

1. On the AS3000 Database Server, log in as the **mvf** user.
2. Type the following commands:

   sqlplus /nolog

   SQL> **connect sys/stayout as sysdba**

   SQL> **select COMP_ID,COMP_NAME,VERSION,STATUS from dba_registry;**
3. If the version displayed is 9.2.0.1, the Oracle 9.2.0.4 upgrade was not completed correctly. Upgrade Oracle to version 9.2.0.4 now.

Backing up the AS300 SQL 2000 database

1. On the server running the AS300 database, select **Start** > **All Programs** > **Microsoft SQL Server** > **Enterprise Manager**.
2. In the Explorer window of the Enterprise Manager, expand **Console Root** > **Microsoft SQL Servers** > **SQL Server Group** > ***server*** > **Databases** > **MVF**
3. Select **Action** > **All Tasks** > **Backup database**.
4. In the SQL Server Backup screen, in the Backup section, select **Database–complete**.
5. Click **Add** and specify the directory to back up to.
6. To start the backup, click **OK**.
7. Exit the SQL Server Enterprise Manager.

Backing up the AS3000 Oracle database

1. If backing up to tape, insert the tape into the tape drive.
2. Log into the AS3000 Database Server as the **oracle** or service user.
3. Type the following command:

   /usr/mvf/bin/runbackup.
4. If backing up to tape, when the database is backed up and the tape is rewound, remove the tape from the tape drive.

Saving the map_event_audit tables from an AS3000 Oracle database

1. Log into the Database Server as the **service** user.
2. Launch SQLPlus and log in as **dbadmin**.
3. Enter the following command into SQLPlus:

   Select CEIL(SUM(bytes)/1024) from user_segments where SEGMENT_NAME='MAP_EVENT_AUDIT' AND SEGMENT_TYPE= 'TABLE';
4. To close SQLPlus, type **exit**.
5. To save the map_event_audit tables, open a command prompt and type the following commands:

   exp userid=dbadmin/dbadmin file=*location_you_selected*/MAP_EVENT_AUDIT.dmp tables=MAP_EVENT_AUDIT
6. Launch SQLPlus and log in as **dbadmin**.
7. Truncate the table with the following command:

   truncate table map_event_audit;

Saving the map_event_audit tables from an AS300 SQL Server database

1. Start the SQL Server Query Analyzer and log in as the **sa** user.
2. In Query Analyzer, type

   sp_spaceused MAP_EVENT_AUDIT
3. Note the *reserved size* value returned by the previous command.
4. Open a command prompt.
5. To save the map_event_audit tables, type

   bcp mvf..map_event_audit out location_you_selected\MAP_EVENT_AUDIT.txt -Usa-Psa_password -c
6. Close the command prompt.
7. In the Query Analyzer, truncate the map_event_audit table by typing

   truncate table map_event_audit

Checking the integrity and identity of cache files against the IMPAX AS300 database

1. In a command prompt, change to the location of the cache check and repair tools.
2. Run **mvf-check-cache *parameters path_to_cache***

Finding files in a cache directory that are unknown to the database

1. Run **mvf-clean-cache *parameters path_to_cache***

Moving images from a cache directory

1. Run the ***mv_command_file*** .

Generating a report of lost images

1. Run **mvf-report-loss *parameters report_file_name***