Notice

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Revision History

	Description
Jun 2008	Release 9.X. Updated to reflect changes in 1mage's license manager and to remove references to product components no longer used.
Mar 2012	Release 10.2.x Updated to reflect the change from MKS toolkit as needed third-party software. Added Cygwin as third-party software.
Mar 2015	Release 11.1 Role and Route based Workflow added
Nov 2020	Release 12.1 Added ICM and supporting API MOCR, and supporting programs
Jan 2024	Clarified Many Instructions on Windows
Updated Appendix C (Installing Tomcat and Configuring for 1MAGE)
Updated Cygwin Installation Instructions

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1MAGE Installation

Minimum Hardware Requirements

The minimum hardware requirements for 1MAGE are dependent upon:

- The version of Windows Server that will run 1MAGE
- The suite of 1MAGE features that are to be installed
- The anticipated number of documents and users your system will service

The supported Windows platforms are Windows Server Versions 2008 R2 and higher.

Please consult your 1mage Software service representative for the specific hardware requirements for your imaging system.

Recommendations

This manual provides a description of the procedures necessary to install 1MAGE software on a Windows Server running 2008 R2 or higher.

- For System maintenance addition 1MAGE recommends a partition for the operating system (C:\), and creating at least two additional partitions on the volume: one for applications (1MAGE, Cygwin, Universe, and other needed software.) and another for image storage. (If images are to be stored locally) (See Installation procedures on page3).
- We also recommend that you have a system recovery disk easily accessible in case the Windows Server operating system goes down.

Pre-requisite checklist

For each server/workstation/printer checked below, either install the related components listed at left or confirm their configuration. This checklist is not absolute but is contingent on your hardware and level of imaging integration. If you have any questions, call 1mage Software Inc. technical support.

Related component	1MAGE Server	Legacy Server	1Scan PC	Workstation	Printer
1. Network Boards-Ethernet and/or	✓	✓	✓	✓	✓
2. Windows	✓		✓	✓	
3. UniVerse	✓				
4. Cygwin	✓				
5. uvnet (If both 1MAGE & legacy systems are UniVerse and database integration will be used)	✓	✓			
6. Fax Modem (optional)	✓				
7. NFS (optional)	✓		✓	✓	
8. Kofax VRS			✓		

Installation procedures

Overview

Use the procedures in the following steps to install 1MAGE on Windows Server environments. To help guide you, an installation checklist is provided in Appendix F: 1MAGE Installation Checklist.

✔ Important	In multi-domain environments, be sure to log in as the "Local Administrator" before beginning the installation process.
	Do not log in as the "Domain Administrator."
	This documentation is written for Local Security Access, not Active Directory Access.

Step 1. Install Third-Party Software

✔ 1MAGE relies on specific third-party hardware and software that must be in place and functioning for the installation of 1MAGE to be successful. This document provides instructions for 1MAGE installation *only*; for hardware and third-party software installation instructions, refer to the documentation provided by the vendor.

Do not begin installing 1MAGE until the following activities are completed and operational:

- All hardware (as well as network attachments) are installed and configured. Please note that 1MAGE can only use locally defined printers that attach directly to the network with the LPR protocol. (See Appendix A: Printing procedures)

- Network communications have been tested and verified.

- The Windows Server operating system is loaded.

- Determine where user accounts will be maintained. This will dictate what information is required when editing the 1MAGE configuration files.

- A compatible release level of UniVerse is installed. If 1mage Software Inc. is required for UniVerse support a compatible release must be installed. Additional configuration steps are now required when installing the UniVerse Database. The UniVerse home directory must allow Full control security privileges to any user that requires access to the UniVerse database through a telnet session. Failure to assign these privileges will prevent the image administrator from accessing the 1MAGE administrative interface. Contact 1MAGE technical support for instructions on setting directory security privileges. (For more information on compatible UniVerse releases, contact 1mage Software, Inc. for a copy of the current Compatibility Matrix.)

  Note: When installing UniVerse, do *not* install NLS.

- Cygwin (current version or version certified for installed O/S) is installed.

  We recommend that you use Cygwin, it provides all the required functionality that 1MAGE requires. Cygwin provides 1MAGE with the ability to use UNIX commands in a

Windows environment. These UNIX commands provide Windows image server environments with full 1MAGE functionality. Alternatives for providing UNIX commands in the Windows environment may be used if they meet 1MAGE requirements. (Note; Cygwin may be downloaded from http://www.cygwin.com/, Paths and ENV names or values may need to be adjusted to accommodate the chosen installation location.)

The following POSIX-like shell commands are required when considering any alternative to Cygwin :

1. basename
2. cat
3. chgrp
4. chmod
5. chown
6. cp
7. cut
8. df
9. find
10. grep
11. Ls
12. mkdir
13. mv
14. rm
15. sh (with built-in support for cd, echo, export, pwd, test, type, umask, uname, /dev/null, ;, >, >>, <<)
16. tail
17. touch
18. tr
19. wc
20. who

Changes to Operating Systems may occur from release to release that may affect this list of POSIX-like shell commands. New commands may be added or removed from this list, and Microsoft may change how the Windows environment responds to these commands. For this reason, 1mage cannot guarantee the use of alternative UNIX-Windows interface tools other than Cygwin.

Installing Cygwin

1MAGE has specific requirements as to how Cygwin is to be installed. Use the following directions for installing Cygwin:

1) Install Cygwin into a directory or subdirectory whose name does not contain spaces. For example, do not load into …\Program▽Files\cygwin ; instead load into …cygwin.
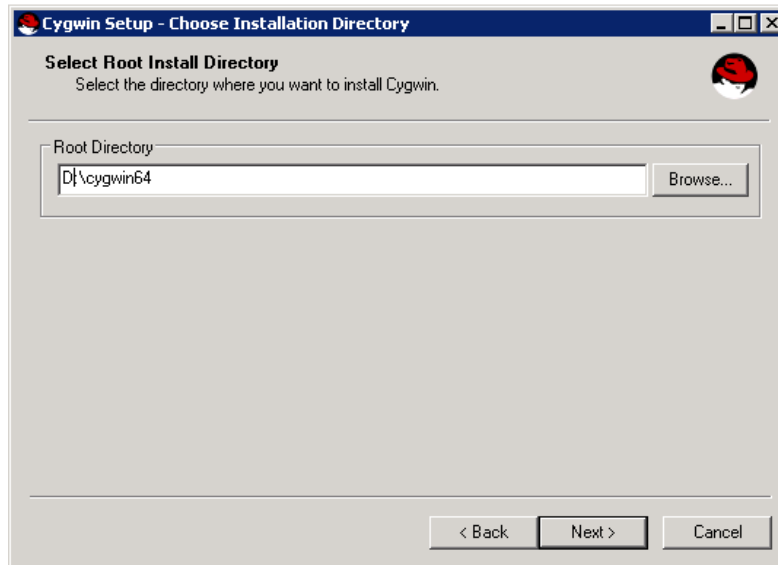
2) When prompted to Select Packages add the following for 1MAGE to use

a) Admin > cygrunsrv

b) Editors > vim

c) Shells > mksh

d) Utils > dos2unix
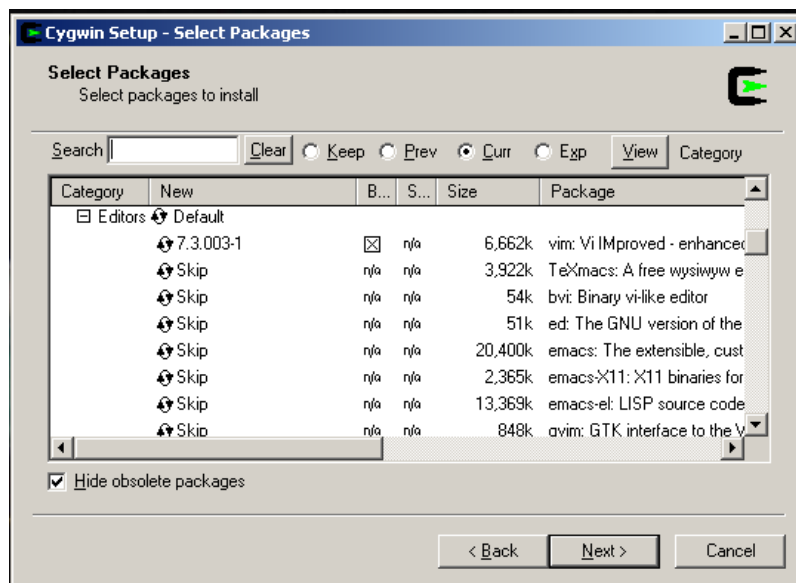
3) Follow the installation wizard's instructions to complete the Cygwin installation.

4) Find the Cygwin "ps" command and rename it. (e.g. "D:\cygwin\bin\ps.exe" to "D:\cygwin\bin\pss.exe")

a) The Cygwin "ps" command does not provide 1MAGE the information needed. So a 1MAGE "ps" command has been created.

5) (Optional) If Cygwin is running slowly, install it as a service

a) Ensure the Cygwin/bin folder is in the PATH system variable

b) Open up a CMD prompt shell as an Admin

c) Navigate to C:\cygwin64\bin

d) Run "bash.exe cygserver-config"

e) In the Services interface, ensure "CYGWIN" is set to run at startup

Step 2. Extract 1MAGE to the drive reserved for image applications.

You may locate "\1MAGE" at the root level of a partition, or in a directory structure. (e.g. "D:\1MAGE", if "D:\image\1MAGE").

Be sure that there is adequate disk space on the drive where 1MAGE will be installed. The \1MAGE directory will contain the following subdirectory work areas:

- \unindexed acts as a repository for unindexed images (including faxed in images). The number of images retained in the queue impacts storage requirements.

- \1MAGE.RENDQ Used by COLD capture and rendition printing; as before, volume dictates storage requirements.

Although you may locate the home directory for 1MAGE anywhere you wish, we recommend that you locate it in D:\1MAGE.

Step 3. Install the 1MAGE application

Make sure you have logged in as the local Administrator. 1MAGE software will be provided as a self-extracting executable. The self-extracting executable will allow you to choose where the 1MAGE software directory is placed.

Step 4. Add Environmental Variables

1. Go to Start | Control Panel | System | Advanced tab | Environment Variables button to display the Environment Variables window.
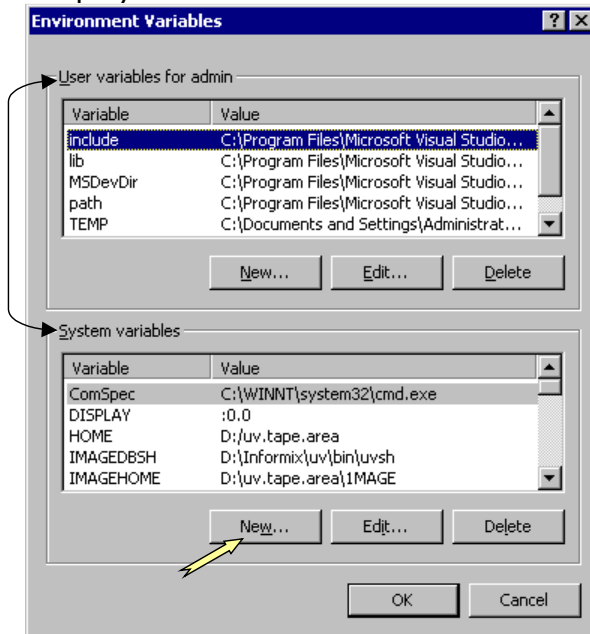
2. Click the New button (See above) to display the New System Variable window (below).
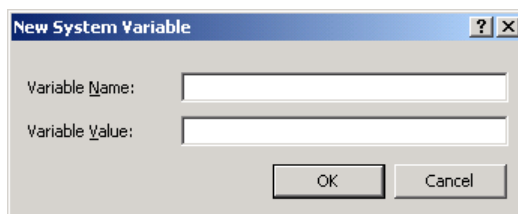
3. Using the table below, enter the variable names and corresponding values *one at a time*.

   Important: All 1MAGE system environment variables are **case sensitive**! Enter each environment variable name exactly as shown.

Variable Name	Variable Value
CYGWIN	Nodosfilewarning
IMAGECYGHOME	/cygdrive/d/1mage

IMAGEHOME	1MAGE installation path; for example, D:/1MAGE
IMAGEDBSH	UniVerse shell; for example, C:\IBM\UV\bin\uvsh **(leave off the .exe extension)**
IMAGEHOST	<server hostname>; for example, test2008 (See note below)

When you have finished entering the variables, *do not exit* the Environment Variables window; go to 5, "Modify the Path Variable".

Step 5. Modify the Path Variable

1. Highlight System variables | Path and click the Edit button (Figure 1) to display the Edit System Variable window (Figure 2).

Figure 1

Figure 2

2. Add the following **at the beginning** of the PATH variable value

    *   < Cygwin installation path\bin>; for example, D:\cygwin\bin

3. Add the following **at the end** of the Variable Value; do not overwrite any values and be sure to **separate each entry with a semi-colon (;)**

    - <UniVerse installation drive>:\U2\UV\bin
      for example, D:\U2\UV\bin

    - <1MAGE installation path>; for example, D:\1MAGE

    - <1MAGE installation path\1VIEW>; for example, D:\1MAGE\1VIEW

    - <1MAGE installation path\bin>; for example, D:\1MAGE\bin

    - <1MAGE installation path\bin>; for example, D:\1MAGE\bin\sejda-console\bin
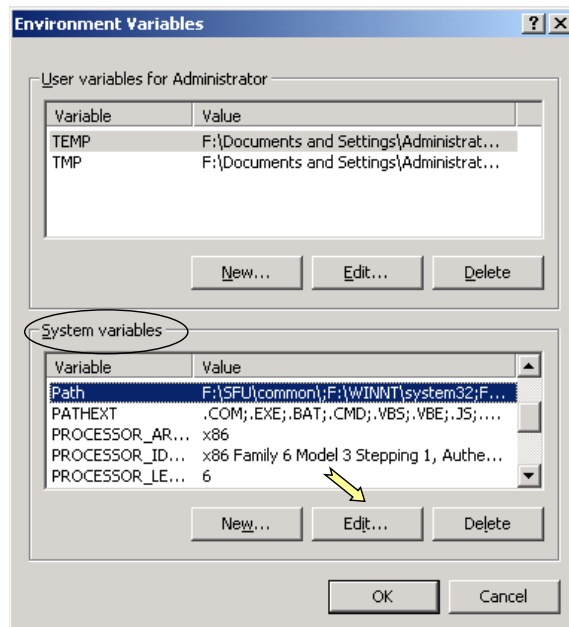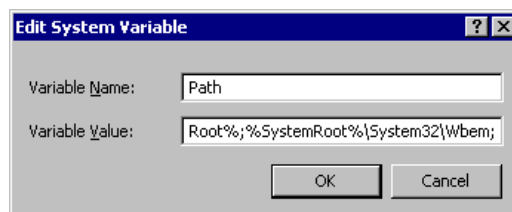
    - <1MAGE installation path\bin>; for example, D:\1MAGE\bin\sejda-console\lib

    - <1MAGE installation path\bin>; for example, D:\1MAGE\bin\sejda-console\etc

    Note: To ensure a successful 1MAGE installation, be sure to use the complete pathname to 1MAGE (%IMAGEHOME%) whenever called for in the Windows environment. This pathname is set when you log on.

4. Click OK to exit the Edit System Variable window.

Step 6. Modify the TMPDIR Variable

1. Confirm that the TMPDIR variable exists as a system variable. If it does not, then create the following System Variable:

Variable Name	Variable Value
TMPDIR	Directory path that all users can write to; for example, D:\temp.

    If the TMPDIR variable does exist as a System Variable, confirm that the value is a path that all users can write to; for example: "D:\temp".

    Note: Other programs such as Windows Terminal Server and Cygwin may create a TMPDIR variable in the User Variables for Administrator. These settings will not interfere with the TMPDIR system variable created for 1MAGE.

2. Click the OK button to close the Environment Variables screen.

    Note: Modifications made to System Variables made in Step 4, Step 5, and Step 6 requires a system restart before the modified settings take effect. You may choose to restart now or you may wait until 0 to restart the server.

Step 7. Create storage directories

Image storage directories are where 1MAGE will store the document image files. When 1MAGE is indexing an image, an image master record ID is assigned to that image. 1MAGE performs a calculation on the image master record ID based on your system

settings and decides in what image storage directory it should store the document image file.

There are three steps in creating image storage directories:

- Decide where to create the image storage directories.
- Decide on how many image storage directories to make.
- Make the image storage directories.

Decide Where to Create the Image Storage Directories

The decision of where to store the image storage directories is very important in planning for flexibility and growth of the imaging system. If possible, locate the storage directories on a different drive letter than the \1MAGE directory. We recommend that the image storage directories be located on the third partition (E:\).

Create a holding directory named "..\i". The actual image storage directories will be stored inside this holding directory.

Decide on How Many Image Storage Directories to Make

Your platform configuration, projected daily image storage volume, and on-line storage requirements are important factors to consider when determining the number of storage directories to create. As a rule, dispersing images on a greater, rather than lesser, number of directories means that image retrieval is more efficient. This efficiency is realized because the file system is more effective when the number of files in each of its directories is no greater than 20,000.

Plan to make as many storage directories as required so that the maximum total number of files that exist in a directory does not exceed 20,000.

1MAGE does not limit the number of directories that you may create because our expectation is that you will create the number of directories that you need to maximize the efficiency of your image retrieval.

Make the Image Storage Directories

There are two methods for creating image storage directories: using an image storage creation script, or manually creating the image storage directories. The following section provides instructions for implementing either method.

Using the Image Storage Creation Script

Open a mksh shell console and change directories to $IMAGEHOME/bin.

Note: the $IMAGEHOME environment variable has not yet been set. Use the complete path to where 1MAGE has been installed, for example D:\1MAGE.

Type 'create_imagestore' at the command line and press enter. The following prompt displays:

Enter the full path to IMAGESTORE (use drive letter and forward slashes):

Enter the partition path where the image storage directories are to be created, for example, E:/i. Press Enter. The following prompt displays:

Enter the directory name prefix:

Enter the desired prefix for your image storage directory names. This prefix will be pre-pended to each of the image storage directory names, For example, if "i" is used as the prefix then the image storage directories will appears as follows: i01, i02, i03 …

Press Enter. The following prompt displays:

Enter the number of directories to create [1-9999]:

Enter the number of image storage directories you wish to create and press Enter. A prompt displays requesting you to confirm the name and number of directories to be created. Press "y" to create the directories, or press "n" to abort the script.

Once the directories have been created, you will be prompted to update 1MAGE.CTRL. Answer "y" to have 1MAGE.CTRL automatically configured to recognize the newly created image storage directories.

Warning: Any existing values defining the image storage directories in 1MAGE.CTRL will be overwritten. Answer "y" to this prompt only if you plan immediately use the newly created image storage directories.

Manual Creation of the Image Storage Directories

Keep the following important points in mind when manually creating the image storage directories:

- Name each storage directory using the convention ..*i**innnn*, where nnnn is 01 thru 09 (note the leading zero) and 10 thru 9999.

- The total number of image storage directories must be equal to (or greater than) the modulo number defined in the 1MAGE\\1MAGE.CTRL\\MODULO. Once you have determined the number of storage directories that will be used, set the modulo value to equal this number. See the instructions for editing MODULO in 0 for more information.

- Although 1mage Software, Inc. suggests that the storage directories be named \\i\\innn (for example, \\i\\i01, \\i\\i02, etc.), you may name these directories anything you wish, so long as the name you use is defined in IMAGE.ENV as the IMAGESTORE variable (see 0), and that the directories are numbered sequentially in their trailing digits. For example, you may name a storage directory \\i01\\STORE01, \\i01\\STORE02… if \\i01\\STORE is entered in IMAGE.ENV as the IMAGESTORE variable.

  Alternatives to this directory-naming schema can be constructed. One method might be to divide the document and image storage directories into groups segregated by month, quarter, or year. For example, you may use the following convention to name storage directories: \\2004Q1\\i01, \\2004Q1\\i02, \\2004Q1\\i03, etc. This method might minimize the volume of disk space backed up in any given cycle.

- 1mage Software, Inc. also recommends that you plan for a regular backup routine for your document image files. In addition to ensuring that all of your image files are safe, such procedures provide limitless image storage capabilities.

For technical advice about planning and backing up your 1mage environment, contact 1mage Software, Inc. or your 1MAGE Reseller.

Note: If you choose to compress your image files in order to preserve disk space, either create the image storage *drive* as a compressed volume or compress it at a later date by selecting its drive letter in Explorer and going to File | Properties and checking "Compress drive to save disk space".

When you add a file to a directory on a compressed drive, it is compressed automatically. To display compressed files in a different color in Windows Explorer, go to Control Panel | Folder Options. Click View and check "Display compressed files and folders with alternate color check box."

Step 8. Edit essential text files

The text files listed here require modification. Use WordPad to edit these files. Do **NOT** use Notepad as it will insert extra line of codes and will cause unpredictable behavior.

Note: The path to some of the essential text files listed here use %IMAGEHOME%. %IMAGEHOME% refers to an environment variable that was set in Step 4. It is the Drive and directory where 1MAGE is installed. If you restarted the server after setting the environment variables you use either the environment variable as it is shown or you may use the full path when opening these files. For example: D:\1MAGE\...\...

Open a command console and do the following:

1. Edit %SystemRoot%\system32\drivers\etc\services.

   Add the following line where 2222 would occur numerically in the list of port numbers:
   ```
   isd          2222/tcp      #1MAGE image server
   ```
   Add the following line where *5555* would occur numerically in the list of port numbers:
   ```
   its          5555/tcp      #its
   ```

   Warning: Place these entries in their appropriate numeric position in the services file. If you insert isd as the last line in the services file, getservbyname() may fail in ic.exe and isd.exe.

   Save and close the services file.

2. Edit %SystemRoot%\system32\drivers\etc\hosts

   Add the IP address and hostname of the Image Server.

Note: If the image server is required to connect back to any clients, add their IP addresses to the hosts file. Clients using WinClient require that the image server connect to them by either host name or IP address.

Save and close the hosts file.

3. Edit 1MAGE.CTRL\MODULO

If you did not use the utility "create_imagestore"; at the command prompt, change directory to %IMAGEHOME%\1MAGE.CTRL and edit the MODULO file.

Make sure that the number which appears in the MODULO (on line 1) is equal to or less than the total number of storage directories created.

It is recommended that the MODULO be a prime number. This ensures the best possible image file distribution across the image storage directories. For example, if creating approximately 1000 directories, 997 would be a good choice for the modulo since it is the closest prime number to 1000.

Note: This file does not need to be edited if you used the create_imagestore script to update 1MAGE.CTRL.

4. Edit IMAGE.CTRL\IMAGE.ENV

If you did not use the utility "create_imagestore"; at the command prompt, change directory to %IMAGEHOME%\1MAGE.CTRL and edit IMAGE.ENV.

Change the drives that appear in IMAGE.ENV to the correct drives for the installation. Leave the slashes as you find them.

Change line 2 from IMAGES to the path to the image storage directory. For example, if the image storage directories have been created as follows:

    \i\i01
    \i\i02
    \i\i03
     . . .
    \i\i999

then enter the following on line 2:

    E:\i\i

Note: IMAGES (the image storage directories) may be on a different drive than all other subdirectories listed. Be sure to rename this drive to the drive where the image storage directories have been created. If you used the create_imagestore script to update 1MAGE.CTRL, the value for IMAGES will not need to be modified.

5. Edit isd.config

1MAGE offers multiple options for implementing user security. User authentication may be enforced either from the local server, or a domain. It is important to determine where user accounts will be maintained prior to installing 1MAGE. This will determine how to configure the isd.config file.

Note: Please see the information in Appendix E of the System Administration Guide for a complete discussion of the security configuration options available in isd.config.

By default, the Windows isd.config file is configured to authenticate 1MAGE users on the local image server. If you wish to set the 1MAGE server to authenticate users from a domain then complete the following steps:

1. Open the isd.config in the \1MAGE\1MAGE.CTRL directory with a text editor (WordPad).

2. Locate the following lines:
   ######

   # Authenticate users locally unless this is set. Also used by check_logname.exe.

   ######

   user.login.authentication.domain=

3. Enter the name of the domain as the value for *user.login.authentication.domain* For example:

   user.login.authentication.domain=MyDomainName

   Note: There are no spaces around the "=" sign

4. Save and exit the isd.config file.

   Note: If this step is being completed <u>after</u> the 1MAGE server has already been installed and running, then restart the isd service.

Step 9. Update UniVerse with 1MAGE GCI link dll

The default UniVerse installation will install the UniVerse Database application in different locations depending upon the version of UniVerse being installed. Be sure to first determine the home directory of the UniVerse Database application on your server before completing the following steps. If the home directory is "UV" then use "UV" in the following steps in place of "IBM."

1. Find either %IMAGEHOME%\bin\1mage32.dll or 1mage64.dll and re-name it 1mage.dll. Copy 1mage.dll to \U2\UV\gcidir. (Note. The bit level of the 1mage.dll needs to match the bit level on the installed Universe.)

2. Go to Start | Programs | IBM | UniVerse | UniVerse Shell to get a UniVerse prompt. Type RUN∇APP.PROGS∇GCI.NTINST.B∇1MAGE and press Enter.

   When the program finishes, answer Y to the question. If installation is successful, the message "GCI Library '1mage.dll' successfully installed" displays.

3. Type QUIT to exit UniVerse.

Step 10. Create a group named ImageGroup

1. Go to Start | Control Panel | Administrative Tools | Computer Management | Local Users and Groups. Expand the Local Users and Groups directory, right-click on Groups, and select New Group.

2. For Group name, enter ImageGroup; for Description, enter ImageGroup.
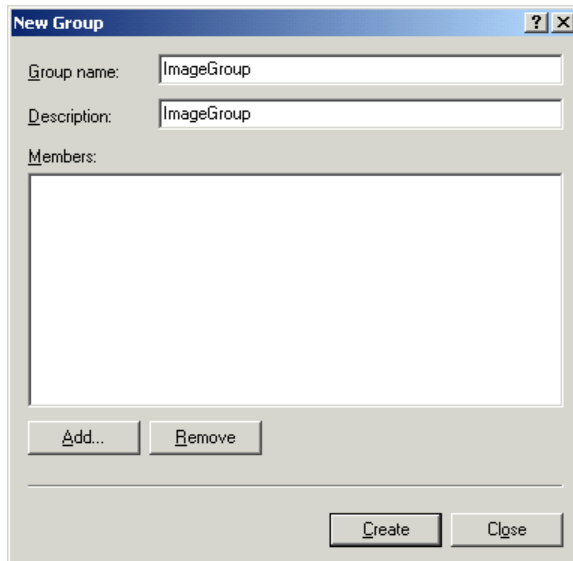
3. Click Create and then Close.

Step 11. Assign rights to ImageGroup

1. Open Start | Programs | Administrative Tools | Local Security Policy. Expand Local Policies and click User Rights Assignment to display the Policy list.
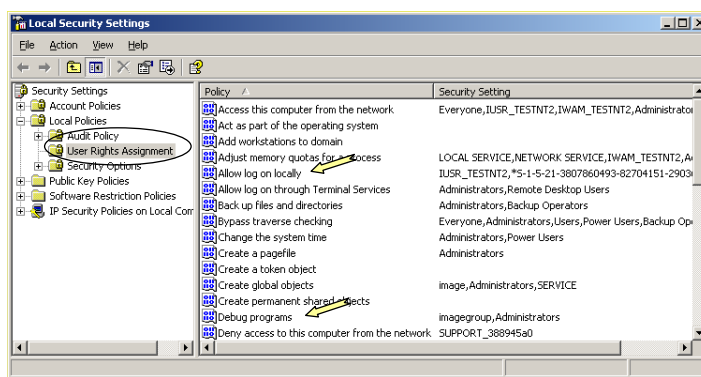
2. To assign the policies "Debug programs" and "Allow log on locally" to ImageGroup, do the following:

   a) Double-click Debug programs (See above). The Local Security Policy Setting window opens. Click Add.
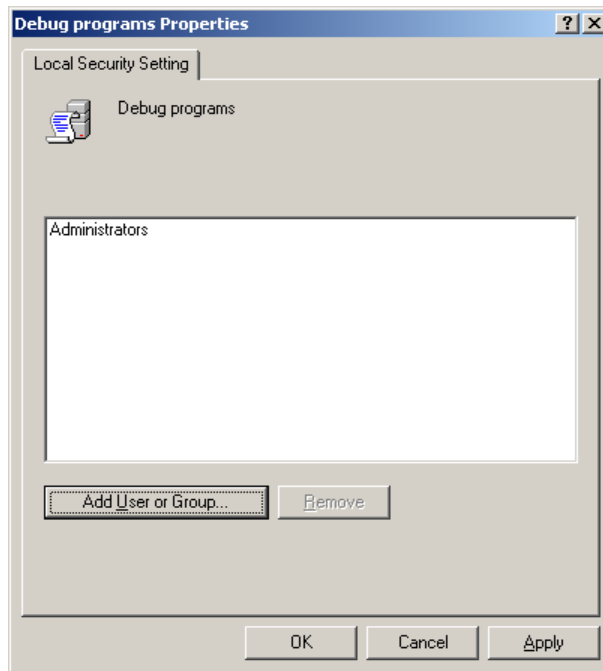
   b) The Select Users, Computers, or Groups window displays. Set the Object types field to include Groups.
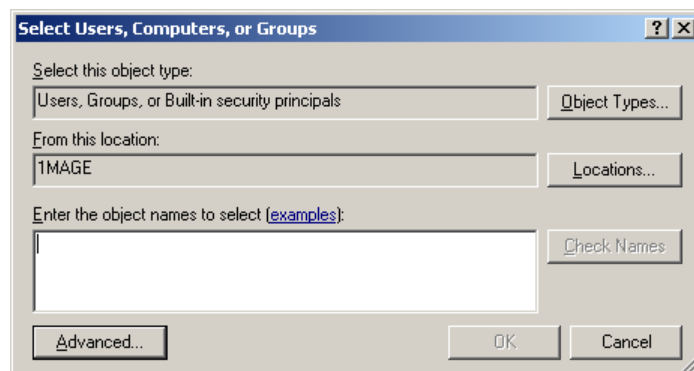
c) Select the location (local machine) where imagegroup resides by clicking Locations. A dialog box displays listing the local server name and the available domains. Select the local server.

d) Enter "imagegroup" in the text area and click "Check Names." The complete path for imagegroup automatically displays in the text area. Click OK

e) The Select Users, Computers, or Groups window closes and image group is assigned to the "Debug programs". Click OK to close the Debug programs Properties window.
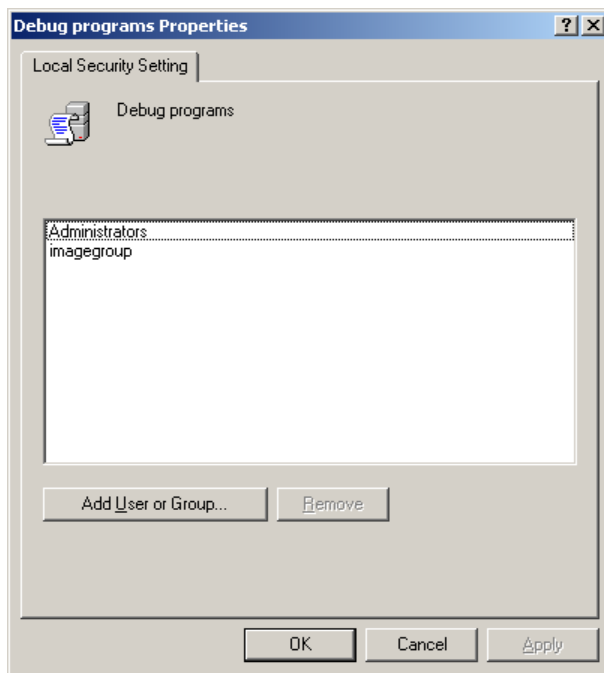
f) **Repeat Steps 2a-e to add the policy, *Log on locally*.**

Step 12. Create image system users

Before you begin: The following instructions for creating users assumes that 1MAGE is being installed on a stand-alone server. All users must be entered in the login database on the image server. If you logged onto this server as local administrator before you began this installation, you will be creating users in the correct location. 1mage Software Inc. does not recommend installing 1MAGE on a Domain Controller.

During 1MAGE installation, you need only create the default users of *image,* and *imageadm*; you may create other users as members of ImageGroup at a later time.

A reminder: all 1MAGE users must be entered in *both* the login database on the local server and in the Image Type Security screen (IM130) in UniVerse. If you do not wish to add 1MAGE user login names to the 1MAGE server's login database, then configure the \1MAGE.CTRL\isd.config file according to the instructions provided in Edit isd.conf on page 12.

1. Go to Start | Programs | Administrative Tools | Computer Management. Expand the Local Users and Groups directory. Right-click User and select New User. The New User window displays.

2. Configure the user named "image" using the following screen capture as an example. Set the password for the image user and click Create.

3. Click Close

Step 13. Add image to the ImageGroup and create a home directory

1. You are still in Start | Programs | Administrative Tools | Computer Management | Local Users and Groups | Users.
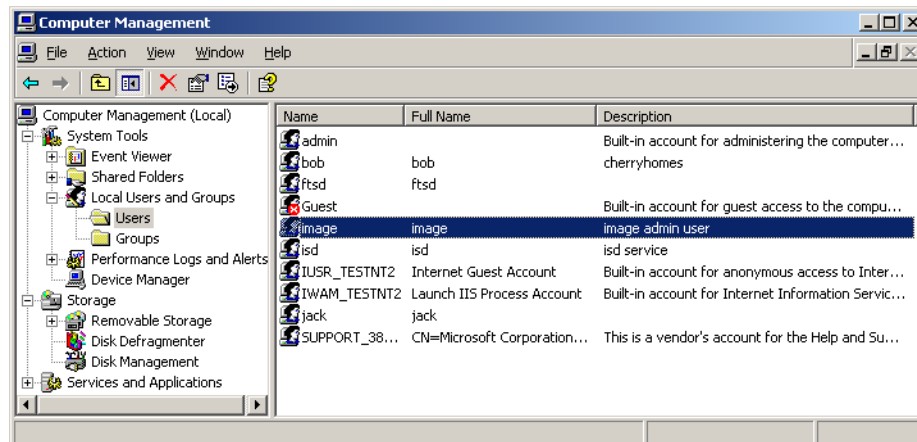
2. Double-click on *image*; the image Properties window displays.
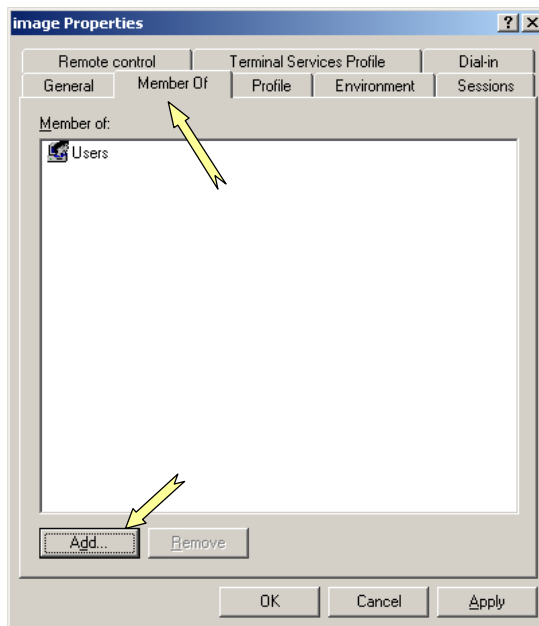
3. Do the following:

    - Select the Member Of tab.

    - Click Add; the Select Groups window displays. Select Groups as the object type; select the local server name as the "Location;" and enter "imagegroup" in the text area.
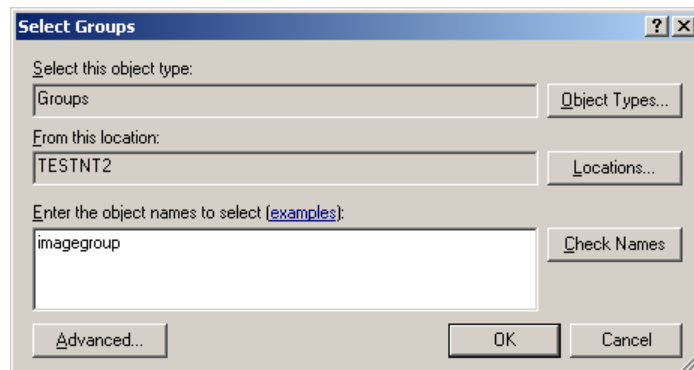
    - Click OK to re-display the image Properties window.

4. To create a home directory, do the following:

    - Select the Profile tab.

    - At Home folder, enter the path to the 1MAGE home directory. This path must be set or the image user will not be able to telnet directly into the 1MAGE server interface when using the telnet interface.
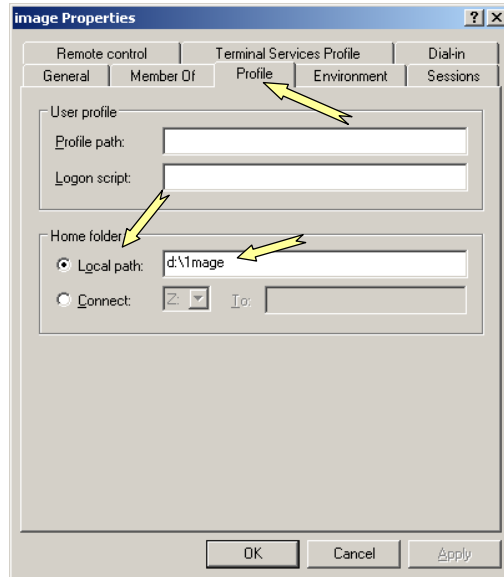
Step 14. Install services on the Windows server

The services: *1MAGE Server (isd)*, 1MAGE transfer Server (its), and *SwiftServe* must be running for 1MAGE to operate correctly.

Note: A service must be added to the Registry before it can be used and controlled by the Services subsystem. Registering a service with Services *does not start* the service. To start the service, go to Start | Administrative Tools | Services and start it manually or reboot the system after completing Step 16.

Install 1MAGE Server (isd.exe) service

This executable is the heart of the 1MAGE system. It performs a number of tasks for 1MAGE clients such as starting and stopping API servers (ISP) and providing 1COLD and 1NOTE data to remote users.

Open a new Windows command prompt. Go to the path where \1MAGE is loaded and then

cd$_\nabla$%IMAGEHOME%\bin

Type

isd$_\nabla$-install

To remove the service, first *stop* it in the Services dialog and then type isd$_\nabla$-remove at the command prompt.

Install its (its.exe) service

This service manages image transfers from 1Scan.

Open a new Windows command prompt. Go to the path where \1MAGE is loaded and then

cd▽%IMAGEHOME%\bin

Type

its▽-install

To remove the service, first *stop* it in the Services dialog and then type its▽-remove at the command prompt.

Install SwiftServe (svtiserv.exe & pwserv.exe) service

Swiftview's service provides images for remote users. The executable **pwserv** performs user licensing and the executable **svtiserv** handles image transfers via TCP/IP.

At the Window command prompt, enter the following command string:

Very Important: When installing SwiftServe using the command below, please take great pains to always use backslashes in the absolute path

%IMAGEHOME%\bin\svtiserv▽-l<license_string>▽-dr<1MAGE drive:>\▽-i

To activate a *single* SwiftServe license for testing purposes, use the license string "0005kfigodfnfn8"; for sufficient licenses for your installation, call 1mage Software Inc. for the appropriate license string. Please note that viewing and printing an image at the same time takes two licenses.

In this example, notice the lowercase "L" before the license string.

%IMAGEHOME%\bin\svtiserv▽-l0005kfigodfnfn8▽-drD:\ ▽-i

Very Important: In default installations "–dr" specifies the drive where %IMAGEHOME%\1MAGE.TEMP resides. If you will be passing *absolute pathnames* to the FLIP API then specify the drive to the *absolute* pathname.

To remove the service, first *stop* it in the Services dialog. Then type the following at the command prompt:

%IMAGEHOME%\bin\svtiserv▽-e

Step 15. Update VOC pointers in UniVerse

1. Bring up a Windows command prompt and change directory to %IMAGEHOME%.

2. Type **uv** to go to UniVerse. If you login to UniVerse, and a message displays saying that your VOC is out of date and asks if you would like to update, answer Yes. UniVerse updates the pointers.

3. Check the VOC entries for SH and DOS to make sure that they were updated correctly. To do this:

    - Type CT VOC SH. The VOC entry for SH displays.

    - Type CT VOC DOS. The VOC entry for DOS displays.

```
>CT VOC SH

     SH
0001 V
0002 sh.exe
0003 D
0004 TICE
>
>CT VOC DOS

     DOS
0001 V
0002 cmd.exe
0003 D
0004 TICE
>
```

Compare your entries to this example. If yours are different, use the UniVerse ED editor to edit these files or call 1mage technical support for assistance.

4. Type QUIT to exit UniVerse; then Exit the Command prompt.

Step 16. Configure Windows Scheduled Task Wizard to run url_groom.bat

Open Windows Scheduled Task Wizard and add a task to run the batch file "%IMAGEHOME%\bin\start.url.groom.bat" as needed. 1MAGE recommends nightly or more often as needed. The batch file, url_groom, removes files cached in 1MAGE.URL. .

Step 17. Test 1MAGE Installation

Restart the server. (as needed)

Check

 the 1MAGE related services start.

Telnet into 1MAGE and log in as image and confirm that 1MAGE has been installed correctly. If you are unable to start the 1MAGE server then review the installation checklist and make sure all of the steps have been completed. Configure printers

(See Appendix A: Printing procedures)

Step 18. Set the disk space checking threshold

(See Appendix B: Setting up disk space checking)

Step 19. Licensing

When 1MAGE software is shipped, it is shipped with a temporary license encrypted with an expiration date calculated by adding two months (60 days) to the current month.

Initial temporary permissions allow 500 images to be indexed and full access to the following program features for all users:

- Viewing

- Faxing

- Printing

- COLD (Computer Output to Laser Disk)

- Rendition Printing Management

- Web

- Workflow

After temporary licensing permissions expire and permanent licensing is enabled, customer's access is limited to the type and number of users and features purchased.

Step 20. Custom Configuration

At this point, you should be able to log into the telnet interface to the image server. However, there are still tasks that must be completed in order to customize the image server to meet your business requirements. These remaining tasks are:

- Adding users

- Creating keys

- Creating types

- Creating categories

- Creating image queues

- Assigning scanning privileges to image queues

- Assigning indexing privileges to image queues

Before completing these tasks, you should have a plan in place in how these imaging components will be organized in your business environment. Consult your document imaging plan for specific details on how to configure these components.

If you do not have a document imaging plan and would like help creating one, please call 1mage Client Services at 1-800-844-1648. For specific instruction on how to complete these custom configuration tasks please refer to the system administration manual.

Appendix A: Printing procedures

Use the following procedures to configure printers for the 1MAGE server.

Overview

Printing capabilities for the 1MAGE system are functional only if a relationship has been configured between the Windows operating system and 1MAGE.

To configure 1MAGE Windows printing, do the following:

Step 1.   Confirm that the Network File and Print Services have all been loaded. (See page 24)

Step 2.   Create printers. (See page 25)

Step 3.   Define a sview.ini file in the 1VIEW directory that includes a printer ID number for **each** imaging printer. (See page 30)

Step 4.   Use IM185, Define Network Printers, to associate the printer you setup in Step 3 with the printer ID you defined in Step 4. (See page 33)

Step 5.   Change the default printer value for your default_id login. (See page 34)

Step 6.   (optional) Associate other printer values with user logins or client hostnames. (See page 36)

Step 1. Confirm that the Network File and Print Services have been loaded

To check that you have the necessary components, go to Start | Programs | Administrative Tools | Services and confirm that you can see the Service named TCP/IP Print Server. If the Service displays, go to Step 2 and create a printer.

If the Service does not display then install the "Print Services for Unix Window Component. This component is available as a Windows Component option on the Windows Server Installation Disk.

Step 2. Create a printer or printers

 Important | **All 1MAGE printers should be created on the local server using the LPR protocol.**

1. Go to Start | Settings | Printers and double-click on the icon labeled Add Printer. If you have added printers previously, you will see also see icons representing each printer.

6) The Add Printer Wizard opens. Click Next.

7) When the Local or Network Printer window displays, Local printer is selected by default. Uncheck "Automatically detect and install my Plug and Play printer" and click Next.
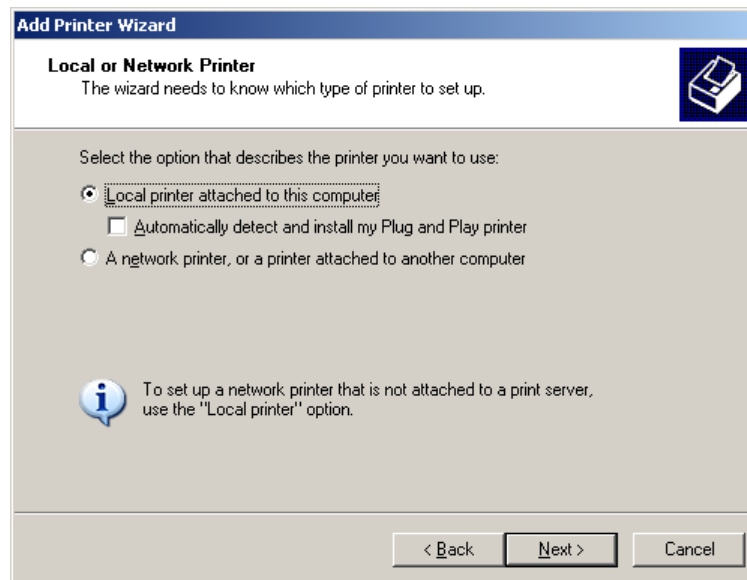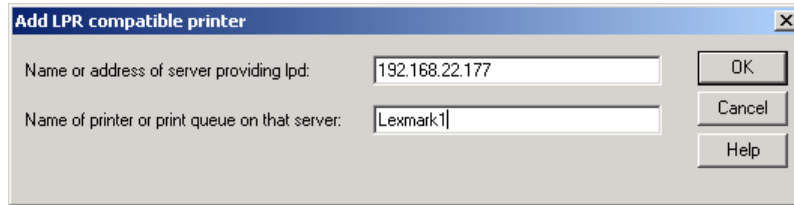
8) When the Select the Printer Port window displays, select "Create a new port." Then select LPR Port from the "Type" drop down list. Click Next to continue. 1MAGE can **only** use locally defined printers that attach directly to the network with the **LPR protocol.**
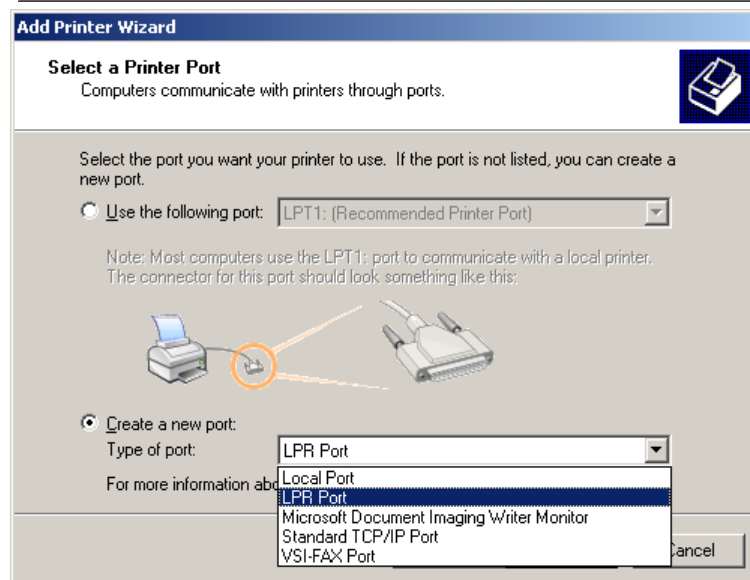
9) When the Add LPR compatible printer window displays, enter the name or address of your print device in the first field and the name of the printer that you will be creating in the

second. The name cannot contain a comma, backward slash or exclamation point. Do not embed spaces. Click OK when you're finished.

10) Select a manufacturer from the left-hand box and a printer model from the right-hand box. By default, Windows will use its own printer driver, however, if you have a newer driver or if the manufacturer or model of printer is not listed, click the Have Disk… button, and provide the path to the driver.

Click Next to continue.

Add Printer Wizard

Install Printer Software
The manufacturer and model determine which printer software to use.

Select the manufacturer and model of your printer. If your printer came with an installation disk, click Have Disk. If your printer is not listed, consult your printer documentation for compatible printer software.

Manufacturer	Printers
Konica	Lexmark Forms Printer 4227 Plus
Kyocera Mita	Lexmark Optra
Lanier	Lexmark Optra PS
LaserMaster	Lexmark Optra Plus
Lexmark	Lexmark Optra Plus PS
Linotronic	

This driver is digitally signed.
Tell me why driver signing is important

[Windows Update] [Have Disk...]

< Back   Next >   Cancel

11) If a print driver is already installed, Windows will ask if you want to use or replace it. Make your choice and click Next to continue.

Add Printer Wizard

Use Existing Driver
A driver is already installed for this printer. You can use or replace the existing driver.

Lexmark Optra L Series

Do you want to keep the existing driver or use the new one?

⊙ Keep existing driver (recommended)
○ Replace existing driver

< Back   Next >   Cancel
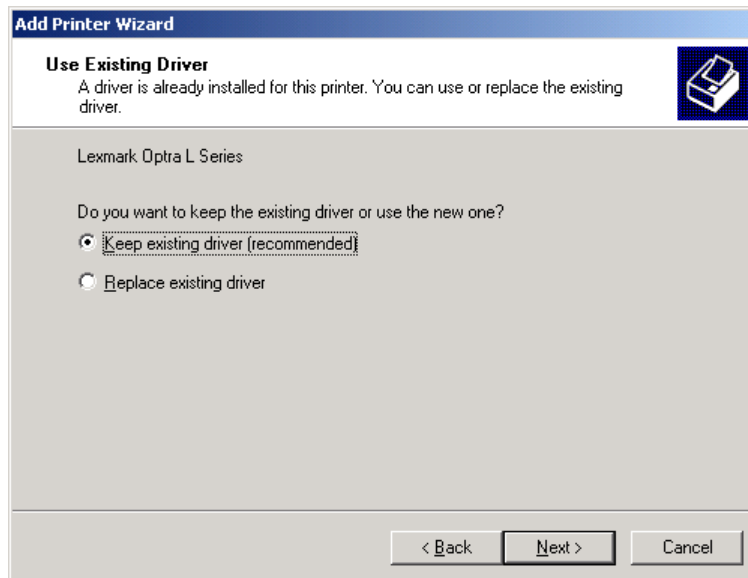
12) Give the printer a name. The name that you enter here should be the one that you entered when you named the LPR port and should also be entered in IM185, Define Network Printers.

Answer the question "Do you want your Windows-based programs to use this printer as the default printer?" and click Next. The default printer can be changed at any time through printer properties.

> **Important:** Be sure to define the **default** printer as printer "99" in sview.ini, ICS0. (See Step 3, Define an sview.ini file for more information.)

13) Choose a share name. Your printer's name defaults, but if you named your printer using more than one word or a forward slash, the wizard will combine the words into a single word with no more than eight characters to ensure MS DOS compatibility. If you don't have MS DOS clients, you may overwrite the change with your original naming convention. Click Next to continue.

> **Note:** All printers used by 1MAGE server must be shared. Failure to share 1MAGE printers will cause 1MAGE printing to fail.

14) When the Location and Comment window display, enter a Location and/or Comment that will help identify your printer for troubleshooting purposes. Click Next.

15) When the Print Test Page window displays, select Yes in response to the question "Do you want to print a test page?" and then click Finish. The Completing the Add Printer Wizard window displays. Verify the displayed information is correct and click Finish.

16) Click OK if the test page printed successfully, otherwise click Troubleshoot….
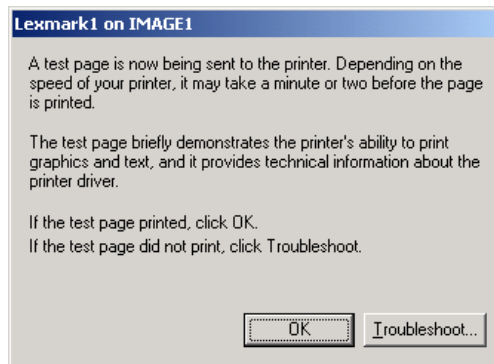
17) Your printer displays in the Start | Settings | Printers window. Highlight its icon to display its properties.
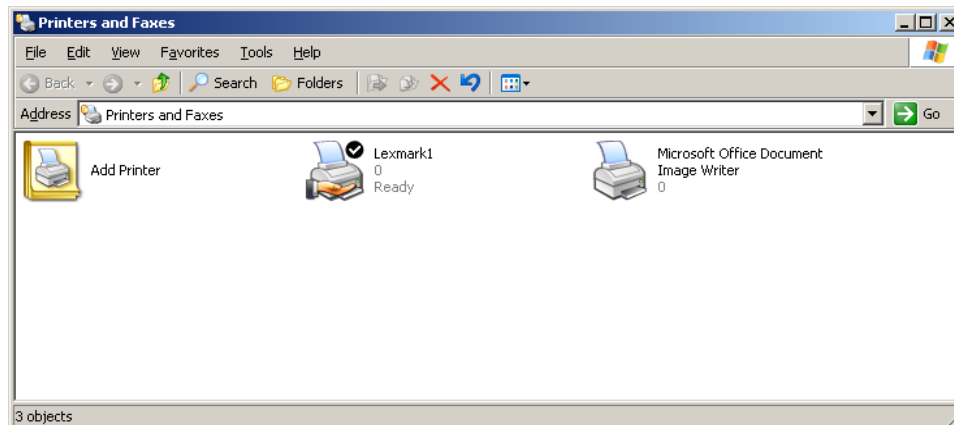
Step 3. Define an sview.ini file

The file \1MAGE\1VIEW\sview.ini.sample is a file that lists examples of ICS (Imaging Command Set) commands that may be executed at 1VIEW startup. These are a simple set of English text commands that control 1VIEW printing functions.

Using sview.ini.sample to Create sview.ini

Use the sview.ini.sample file in \1MAGE\1VIEW\ to create a customized file called sview.ini that reflects a site's unique hardware and naming conventions. (See Appendix E: sview.ini.sample. For assistance with examples contained in this sample file, contact 1MAGE Technical Support.)

Use a text editor (such as Wordpad) to create the new file using sview.ini.sample as a model, or simply copy sview.ini.sample to sview.ini and modify it. This file, like sview.ini.sample, should also reside in \1MAGE\1VIEW.

The sample file has two "uncommented" command lines, ICS0 and ICS1, that you may edit when you create your sview.ini file.

Syntax

To create an ICS command line for sview.ini, use the syntax:

ICS<n>=printer number <0-99> type <file or filter name> command "none" alias "**NA,NA,\\<host name>\<shared printer name>**"

where < > is a variable. (Please note quotation marks for the command and alias variables.)

- 1VIEW executes commands starting with ICS0 (line1) and proceeding in numeric order (ICS0, ICS1, ICS2…) until a number is missing.

- Lines beginning with a semi-colon (;) are comments.

Printer Number

Printer numbers range from 0 to 99 and are used exclusively by 1VIEW and 1MAGE.

The default printer must be

- Printer number "99"

- Defined in the first uncommented line of the sview.ini file as *ICS0*.

Use ICS*1*, ICS*2* … to define commands for *other* imaging printers.

Type

Type … is either an output type file or a filter. Some filters use sview command syntax and others print to default files identified by their absolute file name.

The most common output file types are HPLJ3 (HP LaserJet ¾-300dpi-PCL5 compressed images letter size) and P2_300 (PostScript Level 2 at 300 dpi using Group 4 PostScript filter).

> **Note:** A Windows filter may be identified by using MS_WIN and using a Windows specific alias definition to point to a Windows print driver. In the file named sview.ini.sample, line ICS0 uses MS_WIN for the default printer (99).

HPLJ	HP LaserJet 2 - PCL 4 - 75 dpi letter
HPLJPL	HP LaserJet 2 - PCL 4 - 150 dpi letter
HPLJ2	HP LaserJet 2 - PCL 4 - 300 dpi letter
HPLJ2LEG	Same but legal sized paper
HPLJ2B	Same but B sized paper
HPLJ2A4	Same but A4 sized paper
HPLJ2A3	Same but A3 sized paper
HPLJ3	**HP LaserJet 3/4 - 300 dpi - PCL 5 compressed images (letter)**
HPLJ3LEG	Same but legal sized paper
HPLJ3B	Same but B sized paper
HPLJ3A4	Same but A4 sized paper
HPLJ3A3	Same but A3 sized paper
HPLJ3_ORIGINAL	Uses the page sizes from the original PCL document to set paper size on output
P2_300	**PostScript Level 2 at 300 dpi using Group 4 PostScript filter**
P2_300LEG	Same but legal sized paper
P2_300B	Same but B sized paper
P2_300C	Same but C sized paper
P2_300D	Same but D sized paper
P2_300E	Same but E sized paper
P2_300A4	Same but A4 sized paper
P2_300A3	Same but A3 sized paper
P2_300A2	Same but A2 sized paper
P2_300A1	Same but A1 sized paper
P2_300A0	Same but A0 sized paper
P2_300ORIGINAL	Uses page sizes from the original PCL document to set paper size on output. Supports mixed legal and letter when printing if printer supports it.
POST300	PostScript Level 1 - 300 dpi
RHPGL_A	HPGL-2 plotters with HP's RTL (Raster Transfer Language) extension, A-E size The default model is HP250. Other HP plotter types are RHPGL_D set with the environment variable NDGHPGL
RHPGL_B	
RHPGL_C	
RHPGL_E	
TF_G4	TIFF Group 4
TF_UNC	TIFF Uncompressed
TF_PAK	TIFF PackBits
TF3_96	TIFF Fax compatible Group 3 - low res
TF3_192	TIFF Fax compatible Group 3 - high res
TF2	TIFF Group 3 - not fax compatible
CALS	CALS Raster Type 1 file
MS_WIN	MS Windows printer driver identified by Windows specific alias

Command

Define the command as "none".

Alias

Use the alias "NA,NA,\\<hostname>\<sharedprinter name>".

6. Enclose the variable in quotes so that it will be treated as a single parameter.
7. Enter "NA,NA," (for Not Applicable; please note the two commas)

Examples

The following is an example of an sview.ini file for a site that is printing images on two Lexmark printers. Lines starting with a semi-colon (;) are comments.

[SwiftView]

;This line names *Lexmark1* as the default printer (number 99); and tells 1VIEW to use the ;filter MS_WIN to print.

ICS0=printer number 99 type MS_WIN command "none" alias NA,NA,\\officent\lexmark1"

;This line names *Lexmark2* as an alternate printer; and tells 1VIEW to use filter P2_300 to ;print PostScript Level 2 images at 300 dpi.

ICS1=printer number 0 type **P2_300** command "none" alias "NA,NA,\\officent\accounting"

Step 4. Define a network printer

This procedure associates a print queue with a printer and designates the nature of the image classes accepted by the print queue. This data is stored in the file 1MAGE.NETPRT.

1. Select M. define network printers from the maintenance menu options.

2. The Define Network Printers screen displays with the warning "lp0 IS NOT A VALID PRINT QUEUE." Press Return to continue.

```
IM185              Define Network Printers            16:38:58 23 JUL 1999

Ref  Printer            Description            sview.ini Ref    Class
---  ----------------   ----------------       --------------   -------















WARNING: "lp0" IS NOT A VALID PRINT QUEUE.
PRESS <RETURN> TO CONTINUE:
```

---

3. Delete entry for lp0. To delete lp0 entry, type 1 and press Enter to go to Line 1. Depress the space bar one time and press Enter.

4. To add your new printer, type A and press Enter. The cursor displays in the Printer field of line 1. Type the name of the shared printer that you defined using the Printer Wizard, and press Enter.

5. At Description, type a descriptive name for the printer, such as HP Laserjet III and press Enter. The cursor displays in the 1VIEW Ref field. A code description may include any combination of 20 alphanumeric characters and spaces.

6. At sview.ini Ref, type the printer number, which you used to define the printer in the sview.ini file and press Enter. For example, for ICS1=printer number 0 type HPLJ3 command "none" alias "NA,NA,\\officent\\Lexmark2", enter 0. (1MAGE uses this number internally to map to the ICS number.)

7. At Class, type one or more of the following C (for COLD), G (for GHOSTED), I (for IMAGE), L (for LINE PRINTER) and press Enter. The cursor displays at the prompt.

Note: You may enter combinations of C,G,I separated by commas (for example, C,G) but L (LINE PRINTER) may not be combined with any other class.

8. Type S and press Enter to save.

9. Repeat Steps 3-7 for all printers created using the Print Wizard. When all printers are defined, do one of the following:

- Type S and press Enter.

- Type EX and press Enter. If you have not saved changes, the message SAVE CHANGES (Y/N)? displays.

To Delete a Printer

- At the prompt in IM185, Define Network Printers, type the line reference number of the printer you want to delete and press Enter; the cursor displays at the line. Press the spacebar one time and press Enter again; the printer is deleted and the list is refreshed.

Step 5. Change the default printer value for your default_id login

The default value for the DEFAULT.PRINTER tag associated with the default_id login is set to lp0 when 1MAGE is installed. Change this value if your default printer is not lp0.

2. Select O. defaults value maintenance from the maintenance menu options.

```
<3. maint     >
+-------------------------------+
| A. index key codes            |
| B. image type codes           |
| C. image category codes       |
| D. image queues               |
| E. image type security        |
| F. cold templates             |
| G. workflow master            |
| H. phantom processes          |
| I. system parameters          |
| J. environment variables      |
| K. 1fax administration    => |
| L. disk space checking        |
| M. define network printers    |
| N. defaults tag maintenance   |
| O. defaults value maintenance |
+-------------------------------+
```

The Defaults Value Maintenance screen, IM295, displays.

```
IM295              Defaults Value Maintenance          10:43:09 02 FEB 2004

    Reference  \\\\\\\\\\\\\\\\\\\

Ref  Tag              Description          Default Value
---  ---------------  -------------------- -----------------------------












Enter logname or $DISPLAY, "?" to search, "N xxx" for new reference or "EX"
```

3. Do one of the following:

   - At Reference, type default_id, and press Enter. The cursor displays at the prompt.

   - Type ? and press Enter. 1MAGE displays the Code File Cross Reference Display. If there are so many records in the file that they cannot be displayed on one screen, type **F** to page forward or **B** to page backward until you locate the default_id. Type the line reference number that precedes it and press Enter. It populates the Reference field and the cursor displays at the prompt.

4. At the prompt, type the line reference number that precedes DEFAULT.PRINTER and press Enter. The cursor displays in the Tag field.

5. At Tag, press Enter to move the cursor to Default Value.

6. At Default Value, type the shared name of the default printer and press Enter; for example, Lexmark1.

7. Do one of the following:

   - Type S and press Enter.

- Type EX and press Enter. If you have not saved changes, the message SAVE CHANGES (Y/N)? displays.

Step 6. Associate printers with user logins or client hostnames

1. Select O. defaults value maintenance from the maintenance menu options.

```
<3. maint      >
+--------------------------------+
| A. index key codes             |
| B. image type codes            |
| C. image category codes        |
| D. image queues                |
| E. image type security         |
| F. cold templates              |
| G. workflow master             |
| H. phantom processes           |
| I. system parameters           |
| J. environment variables       |
| K. 1fax administration      => |
| L. disk space checking         |
| M. define network printers     |
| N. defaults tag maintenance    |
| O. defaults value maintenance  |
+--------------------------------+
```

The Defaults Value Maintenance screen, IM295, displays.

```
IM295              Defaults Value Maintenance           10:43:09 02 FEB 2004

        Reference  N\\\\\\\\\\\\\\\\\\\\

Ref  Tag              Description           Default Value
---  ---------------  --------------------  ----------------------------



















Enter logname or $DISPLAY, "?" to search, "N xxx" for new reference or "EX"
```

2. Do one of the following:

- **To associate a printer with a user** At Reference, type N, space, the user's login, and press Enter. This is a case-sensitive field. For example, type N∇ joe. If the login is in the Windows login database, the cursor displays at the prompt.

- **To associate a printer with a location** At Reference, type N, space, either an IP address or a client hostname, and press Enter. This field is case-sensitive. For example, type N∇100.0.0.88 or type N∇joespc

If the IP address or client hostname is in the hosts database, the cursor displays at the prompt.

3. At the prompt, type A and press Enter. The cursor displays in the Tag field.

4. At Tag, do one of the following:

- Type DEFAULT.PRINTER and press Enter.

- Type ? and press Enter. 1MAGE displays the Tag Code File Cross Reference.

```
Code file cross-reference display

    Code                    Description

 1) 1SUITE.ADMIN            STRING (Y or N)
 2) 1SUITE.INDEX            STRING (Y or N)
 3) 1SUITE.INQUIRY          STRING (Y or N)
 4) DEFAULT.MENU            RECORD ID
 5) DEFAULT.PRINTER         RECORD ID
 6) IM130.OPTION1           CALL @VARIABLE
 7) IM130.OPTION2           CALL @VARIABLE
 8) INDEX.OPTION1           STRING (YES or NO)
 9) INDEX.OPTION2           STRING (1VIEW OPTS)
10) PACKET.OPTION1          CALL @VARIABLE
11) PACKET.OPTION2          CALL @VARIABLE
12) SCRMF.EX.SUBST          RECORD ID
13) XRGET.OPTION1           STRING (YES or NO)




PAGE 1 OF 1  (13 items)
(F)orward, (B)ack, (P)# for page, line number, <RETURN> or (EX)it :\\\\
```

If there are so many records in the file that they cannot be displayed on one screen, type F to page forward or B to page backward until you locate the DEFAULT.PRINTER. Type the line reference number that precedes it and press Enter. The tag displays.

5. At Default Value, do one of the following:

- Type a defined network printer name and press Enter. For example, type accounting.

- Type ? and press Enter. If there are so many records in the file that they cannot be displayed on one screen, type F to page forward or B to page backward until you locate the defined network printer name you want. Type the line reference number that precedes it and press Enter. The Default Value displays.

6. Do one of the following:

- Type S and press Enter.

- Type EX and press Enter. If you have not saved changes, the message SAVE CHANGES (Y/N)? displays.

Appendix B: Setting up disk space checking

Disk space checking is used to check a directory's available disk space and to set the "high water mark" for valid image storage partitions. When this limit is reached 1MAGE displays a warning and/or aborts a process. This is done by comparing a value for the maximum percentage of disk space allowed with the currently available disk space.

Step 1. Select L. disk space checking from the maintenance menu options.

```
<3. maint     >
+--------------------------------+
| A. index key codes             |
| B. image type codes            |
| C. image category codes        |
| D. image queues                |
| E. image type security         |
| F. cold templates              |
| G. workflow master             |
| H. phantom processes           |
| I. system parameters           |
| J. environment variables       |
| K. 1fax administration      => |
| L. disk space checking         |
| M. define network printers     |
| N. defaults tag maintenance    |
| O. defaults value maintenance  |
+--------------------------------+
```

The Disk Space Checking Parameters screen, IM175, displays.

```
IM175              Disk Space Checking Parameters      12:49:14 14 APR 2000

01) Command          df -P
02) Location of %used  60,4

Ref  Partition                      Max. Pct
---  ------------------------------ --------




















PAGE 0 OF 0
(A)dd, (C)heck, (D)isplay, (F)orward, (B)ack, (S)ave, Line # or (EX)it :\\\\
```

Step 2. Add a partition(s) and set the threshold

Go to IM175, Disk Space Checking Parameters and add parameters for the drives on which the following reside:

- Operating system
- \1MAGE
- Image storage partitions (IMAGESxx)

Type A and press Enter. The cursor displays at a new line in the Partition column. Enter a drive name in the following format: "E:/" Use the drive letter where the image storage directories reside. Press Enter. If the drive is valid, the system accepts your entry.

Enter a maximum percentage and press Enter. For example, enter "90" and press enter. 90% will display in the "Max. Pct" column.

```
IM175                    Disk Space Checking Parameters          15:23:47 03 AUG 2004

01) Command              df -P
02) Location of %used    60,4

Ref  Partition                          Max. Pct          ┐
---  ---------------------------------  --------          ├──  Location of Operating
03)  C:/                                  90%             ┘
04)  D:/                                  90%             ├──  Location of /1MAGE
05)  E:/                                  90%             ┐
                                                          ├──  Location of Image
                                                          ┘    storage directories




PAGE 1 OF 1
(A)dd, (C)heck, (D)isplay, (F)orward, (B)ack, (S)ave, Line # or (EX)it :█\\\
```

Step 3. Re-define field 02 if necessary

Fields 01 and 02 are populated by default at installation. Field 01 (Command) is specific to the Windows environment and will not need to be changed. This command reports the current disk space usage status.

Field 02 is preset to 60,4 and will rarely need to be changed. These values tell 1MAGE how to read the output from the df –P command. The default entry 60,4 means, "read the output of the df –P command beginning at column 60 and continue for four characters."

01) Command	df -P
02) Location of %used	60,4

To verify that 60,4 is the correct setting for your Windows environment select option (D)isplay to use the "Display disk space used parameters" utility (see below). Confirm that at least four characters (three digits plus the % symbol) display in the location as it is defined. (This means that using a length of four will ensure that "100%" will generate an error.)

Display Disk Space Used Parameters for All Directories

- Type D(isplay) and press Enter to display the File System screen. For Windows, column headings display the File system, total KB, KB used, KB available, % Capacity and where the file is mounted.

  Check that all characters of the threshold percentage you defined will be recognized at the location defined in field 02. Re-define the location if necessary.

The plus sign indicates a count of "5." In this example, 85% begins display in column 60 and continues for four columns.

```
File Systems

....+...10....+...20....+...30....+...40....+...50....+...60....+...70....+....
Filesystem          512-blocks       Used   Available   Capacity Mounted on
C:/                    2039712     1713664      326048        85% C:
D:/                    5462096     3108016     2354080        57% D:
E:/                   10233400     1738112     8495288        17% E:
G:/                    3170880     2992512      178368        95% G:
....+...10....+...20....+...30....+...40....+...50....+...60....+...70....+....



Press <RETURN> to continue:
```

To re-define field 02, do the following:

1. At the command line, type 2 for line number

2. Type the start location and the length of the new "capacity used %" display and press Enter.

3. Do one of the following:

   - Type S and press Enter.

   - Type EX and press Enter. If you have not saved changes, the message SAVE CHANGES (Y/N)? displays.

Step 4. Save modifications and exit the screen

Do *one* of the following:

- Type S and press Enter.
- Type EX and press Enter. If you have not saved changes, the message SAVE CHANGES (Y/N)? displays.

To Check Disk Space

Type C(heck) and press Enter to display the Checking Disk Space screen.

1MAGE checks the file system disk space and reports any file systems that exceed their threshold.

```
IM175 Checking Disk Space



This checks the file system disk space and reports any errors
just like it does during normal operation.


There are no file systems that exceed their threshold percent.
Press <RETURN> to continue:
```

Appendix C: Setting up Apache-Tomcat and 1MAGE.URL Virtual Directory

Software needed:

Apache-Tomcat 10.x.

Java 17.x

1mageadmin.war or v1a.war (as needed)

1) Download and install Java

2) Download and install Tomcat .

All items can currently be found at "ftp://ftp.1mage.com/pub/client_software/"

During the install you may choose or need to change the port used by Apache-Tomcat. The default port is 8080 you may changed to 80 if that port is unused. Note the port used will depend on what other Web apps are installed. You will need to set the Apache Tomcat Service "Startup Type" to Automatic.

3) Download the 1mageadmin.war or the v1a.war file/s and place the file/s in the Tomcat's "webapps" directory. Tomcat should see the new file and extract it creating the directory /webapps/v1a.

4) In the new directory "D:\...\...\Tomcat 6.0\webapps\1mageadmin\WEB-INF\classes". Edit the file application.properties with correct info. Do the same for v1a if you are also using it

```
#Server setting parameters
imageHost=ServerIPAddress        ← Insert your server IP here without brackets
isdPort=2222
ispPor=0
traceFlag=true
connectTimeout=60
PasswordRequiredFlag=true
```

5) Define the 1mage.url virtual directory. Under the directory "D:\Apache\Tomcat 6.0\conf\" save a copy of the "server.xml" file. Stop the Apache Tomcat service; then edit the "server.xml file" adding one of the following context statements after this section of the server.xml file:

```
<Host name="localhost" appBase="webapps"
unpackWARs="true" autoDeploy="true"
xmlValidation="false" xmlNamespaceAware="false">

<Context path="/1mage.url" docBase="E:\1MAGE\1MAGE.URL" debug="0">
</Context> (Use this context when Apache-Tomcat os loaded on the imageserver.)
```

```
<Context path="/1mage.url" docBase="\\imageserver_hostname\1mage.url"
debug="0">
```

</Context> (Use this context if Apache-Tomcat is loaded on a box other then the imageserver and 1mage.url is a Windows/SAMBA type share from the imageserver)

You will need to edit the "docBase" path to match your install location of 1MAGE.URL

Note that both V1A and 1ACCESS use this virtual directory to receive images.

Note 1. User Permissions and Domain Users Permissions may need to be set for proper access.

Note 2. The virtual directory name needs to match up with the value set in the 1MAGE CLIENT.URL tag, this value is used by 1ACCESS, and V1A and only needs to be setup once.

Appendix D: Re-naming "Administrator"

Microsoft recommends changing the Administrator login name after installing the Windows Server. "After Setup is completed, for best security, change the name of the Administrator account (it cannot be deleted) and keep a strong password on the account at all times."

Changing the name of the Administrator account prohibits intruders from taking advantage of well-known usernames.

If you do re-name Administrator, remember to go into IM295 (Defaults Value Maintenance) to create a reference for the new Administrator name. To do so:

1) Create the replacement name.

2) Copy the Administrator's defaults to your new administrator reference.

3) Lastly, use IM130 (Image Type Security) to create a new reference for the Administrator's name.

Appendix E: sview.ini.sample

;*** SwiftView(R) Windows initialization file SVIEW.INI (example)

;*** Northern Development Group, Inc.

;*** See http://www.swiftview.com or contact us at tech@swiftview.com

;

;*** General Information

;*** This file is normally placed in the same directory as SVIEW.EXE

;*** and SVIEW16.EXE for easier access.

[SwiftView]

;*** Replace the window title

;Title=SwiftView

;*** Example ICS commands executed at SwiftView startup.

;*** Commands are executed starting with 0 until a number is missing. (ICS0, ICS1, ...)

;*** Lines starting with ; are comments. All are commented here to enable use of

; select commands.

;*** These are examples provided by 1MAGE for printer setup.

;*** Printer number 99 is the default and needs to be defined here.

;*** The printer type, host and printer name will be different for your system.

ICS0=printer number 99 type MS_WIN command NONE alias "NA,NA,\\ntimage\\lp0"

ICS1=printer number 0 type HPLJ3 command NONE alias "NA,NA,\\ntimage\\lp0"

;*** These are examples of HPGL pen color settings

;ICS0=hpgl pen 1 red 255 green 0 blue 0 width normal

;ICS1=hpgl pen 2 red 0 green 0 blue 255 width normal

;ICS2=hpgl pen 3 red 0 green 255 blue 0 width normal

;ICS3=hpgl pen 4 red 255 green 0 blue 255 width verybold

;*** Define buttons (continuing with ICS numbering from above)

; These are the default settings. First clear any GUI definitions.

;ICS4=gui controls clear

;ICS5=gui button label "Exit" icon exit info "Exit" command "quit"

;ICS6=gui button label "All" icon all info "Show entire page" command "draw all"

;ICS7=gui button label "Wide" icon wide info "Use full window width" command "draw widetop"

;ICS8=gui button label "Rotate" icon rotate info "Rotate clockwise" command "rotate next|draw"

;ICS9=gui button label "Print" icon print info "Print document" command "gui dialog print"

;ICS10=gui button label "Open" icon open info "Open document" command "gui dialog open"

;ICS11=gui button label "Help" icon help info "Tips" command "gui dialog help"

;*** Enable pagecontrol and tooltips (enabled by default)

;ICS12=gui pagecontrol enable

;ICS13=gui tooltips enable

;*** Set style, position of toolbar

;ICS14=gui controls style both

;ICS15=gui controls display topbuttons

;*** Enable / disable logo

;ICS16=gui logo enable

Appendix F: 1MAGE Installation Checklist

This checklist is provided for your convenience. We suggest that you print this checklist before installing 1MAGE, and check off each item as they are completed.

☐ Step 1   Install Third-Party Software

☐ Step 2   Extract 1MAGE to the drive reserved for image applications

☐ Step 7   Create storage directories

☐ Step 3 Install the 1MAGE application

☐ Step 4 Add Environmental Variables

☐ Step 5 Modify the Path Variable

☐ Step 6 Modify the TMPDIR Variable

☐ Step 7 Create storage directories

☐ Edit %SystemRoot%\system32\drivers\etc\services

☐ Edit %SystemRoot%\system32\drivers\etc\hosts

☐ Edit 1MAGE.CTRL\MODULO

☐ Edit IMAGE.CTRL\IMAGE.ENV

☐ **Error! Reference source not found.**1mage.clic

☐ Edit isd

☐ Step 9 Update UniVerse with 1MAGE GCI link dll

☐ Step 10 Create a group named ImageGroup

☐ Step 11 Assign rights to ImageGroup

☐ Step 12 Create image system users

☐ Step 13 Add image to the ImageGroup and create a home directory

☐ Step 14 Install services on the Windows server

☐ Step 15 Update VOC pointers in UniVerse

☐   Step 16 Configure Windows Scheduled Task Wizard to run url_groom.bat

☐   0 Setup of Apache-Tomcat and 1MAGE,.URL Virtual Directory

☐   Step 18 Restart the server

☐   Step 19 Test 1MAGE Installation

☐   Step 20 **Error! Reference source not found.**

☐   Step 21 Configure printers

☐   STEP 22 Set the disk space checking threshold

☐   STEP 23 Licensing

☐   Step 24Custom Configuration

Appendix G: Image Content Management

The 1mage Software Document Management System now includes a new module called "Image Content Management" (ICM). This module consists of the "Auto-Indexing" and "OCR Data Mining" components:

Auto-Indexing processes AZURE supported file types, (pdf, tif, tiff, jpg, jpeg, png, gif), returning all OCR read information on the image(s).1MAGE then indexes the image(s) by the OCR read information automatically.

Data Mining provides a way to search for specific information (data mine) indexed documents for any information that is contained on those documents using search criteria to specify what kind of data being searched for or to simply mine all the data on an image.

Auto-Indexing Component

This is a process to make the task of indexing and archiving images into the 1MAGE.MASTER image archive simple and easy. The program PROCESS.OCRINDEX will process all AZURE supported file types placed into the 1MAGE.OCRQ queue, sending them to Azure, receiving the OCR information back, and then indexing the files using the OCR data. The process creates a 1MAGE document and makes it accessible thru the SEARCH ALL feature of 1ACCESS, V1A, or through custom coding using 1MAGE APIs for integration with proprietary software.

Data Mining Component

This is a process used by companies to turn raw data into useful information. By using software to look for patterns in large batches of data, businesses can learn more about their customers to develop more effective marketing strategies, increase sales, decrease costs, and identify sensitive data for both internal and external security reasons.

By combining the capabilities of Microsoft Azure and Image Content Management, it is now possible to search for OCR text information from any document stored in your 1mage system and either output that information in the form of a report, or in the form of UniVerse data file, or in the form of a custom developed user program or in the form of an Excel compatible delimited file that can be analyzed by your own custom processes.

ICM Data Mining can be performed from the "Data Mine" tab in V1A, using PROCESS.OCRINDEX to mine in the background, or through the new MOCR API that will mine in "real-time" mode.

Image Content Management Diagram
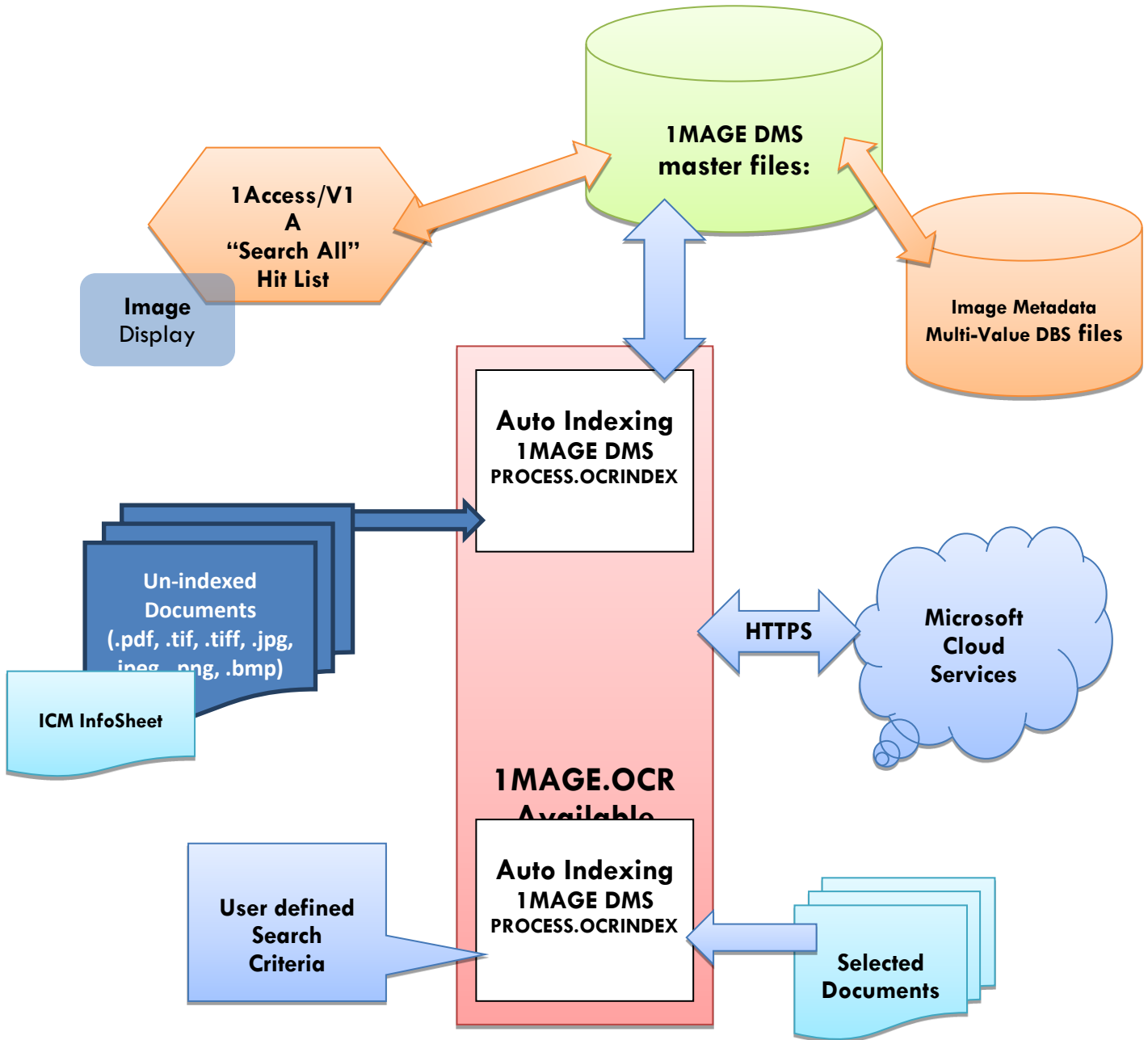
Python Installation

For ICM to successfully communicate with Azure, the image server will need to have Python installed. We recommend installing Python version 3.6 or higher.

Windows Installation

1. Open a web browser to https://www.python.org/downloads/
2. Download Python v3.6+
3. Run the executable file on the image server.
4. During installation, check the box that installs for all users. (see below)
5. Additionally, check the box that adds Python to PATH. (see below)
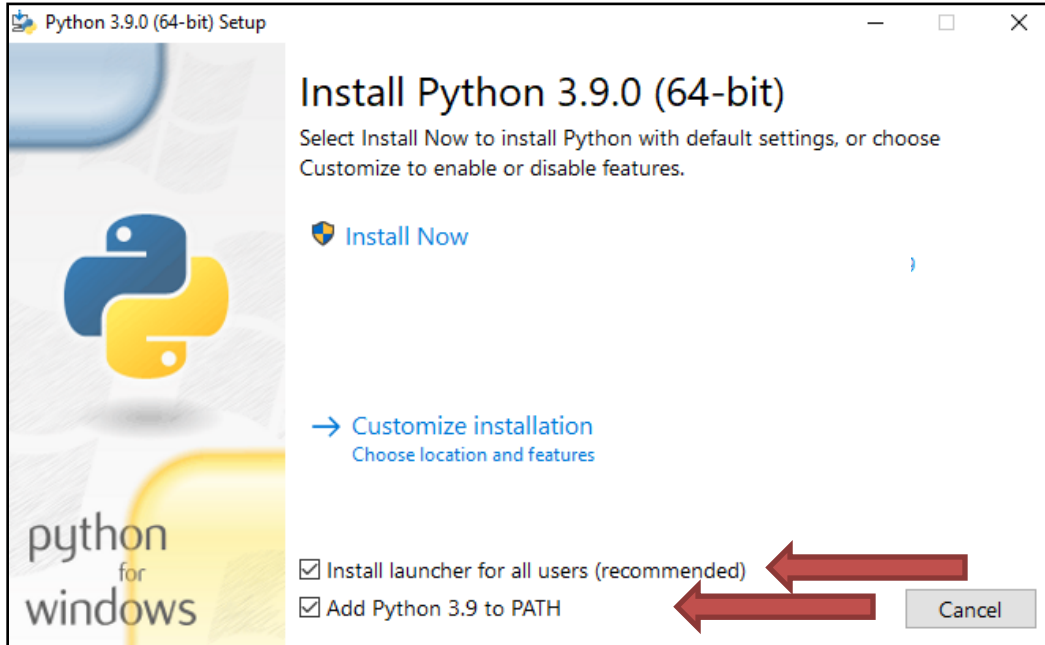
6. Click "Install Now" and allow the wizard to complete installation.
7. Open a command prompt.
8. Install the requests library with: `python -m pip install requests`
9. Restart UniVerse and ISD

Linux Installation (CENTOS and Red Hat only)

1. Open a bash terminal on the image server
2. Enable the EPEL package library with the command: `sudo yum install epel-release`
   a. Enter the root user password and/or answer yes (y) to install the package
3. Install Python with: `sudo yum install python36`
   a. Answer yes (y) to install the package
4. Install PIP with: `sudo yum install python-pip`
   a. Answer yes (y) to install the package
5. Make sure pip is up to date with: `sudo pip install –upgrade pip`
6. Install the requests library with: `sudo pip install requests`
7. Restart UniVerse and ISD

ICM Azure Setup

In addition to the initial 1mage installation process (or 1mage upgrade process in the case of an upgrade) ICM requires a small amount of additional online setup before the OCR and Data-Mining modules will function correctly. To keep everything as simple for our customers as possible, 1mage will take care of this entire initial setup process themselves.

For technical reference, however, here are the basic steps 1mage will follow to connect ICM to Azure:

1. New Resources, Groups, and Permissions will need to be created for a new customer in 1mage's root Azure account;

2. Azure will provide an endpoint where ICM will need to send images for OCR and Data-Mining processing;

3. 1mage will provide the new account key that will need to be used when sending images to Azure;

   a. The key and endpoint need to be entered on the Image Server in the "1MAGE.OCTRL" file, under the "AZURE" record. From the UV prompt, use the following command to view/edit this record: **ED 1MAGE.OCTRL AZURE**

<div align="center">Here is example output of this record:</div>

```
0001: https://westus.api.cognitive.microsoft.com/vision/v2.0/
0002: 24aef4cdc2916233800abcde910106d2
Bottom at line 2.
```

NOTE The security key above in line 0002: was generated randomly and will not function

Regenerating Keys

If needed, 1mage can regenerate the unique key value at any time. When a new key is created, the new value will need to be updated in this record for 1mage and Azure to continue working together in productive harmony.