1MAGE Tier-1 Tech Support Playbook

Document Version 1.14 — Rev 240425

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Part 1: Purpose of this Document

The purpose of this document is to provide a loose framework and quick reference guide—what we're calling a "Playbook"—that Support Agents can use to understand, troubleshoot, and hopefully resolve tech support issues relating to the 1MAGE DMS. This guide is intended for Tier-1 support, but the ideas discussed inside are both foundational to, and applicable for, all 1MAGE DMS support levels.

What this document is *not* is a comprehensive user or admin guide. Inside these pages, readers will find no code examples, network/system diagrams, technical requirements, or any other highly specific instruction. Instead, we will provide background information on some basic Tier-1 Support diagnostic tests, a description of some basic support utilities included on most installations, and an issue-by-issue description of how 1MAGE would like all Support Agents to respond to various types of tech support calls.

How to Use This Document

First, every Support Agent should read it one time through and have access to a copy of the most recent version of it while working for 1MAGE. Second, all Support Agents should have a solid understanding of the concepts, techniques, and programs described in Part 2: Basic Tier-1 Support. Finally, all Support Agents should refer to

Most of the above operations can also be performed from the front-end 1mageadmin program, but since this method require access to the same local network as the 1MAGE server, often the easiest/simplest way to make changes to the DMS is through these "greenscreen" programs.

1MAGE Tags

1MAGE Tags are special variables that can be assigned at either the individual user or group level using either 1mageadmin or IM130.GUM. There are tags for setting the default IP of the 1MAGE server, tags for controlling user access to indexing, deleting, or modification using client applications like 1Access, tags for injecting custom code into 1MAGE APIs, and much more. Below is a list of all tags that are currently in use.

More detailed descriptions, and some usage examples, can be found in the 1MAGE Admin Guide in **Appendix F: 1MAGE Tags**, available on our website at http://www.1mage.com/documents.

Tag Name	Value Expected	Description
1CIRCULATE.URL	STRING (Resolvable URL)	If a customer is using 1Circulate, this needs to be set to the URL to the V1A Web Server.
1FAX.COVER	STRING (Record ID)	If a customer is using VSI-Fax, this needs to be set to the RECORD_ID of the fax coversheet that a user will have automatically attached to their faxes/emails.

1FAX.EMAIL.ADDR	STRING (Email Address)	If a customer is using VSI-Fax, this needs to be set to the email address that the users want their recipients to see this email coming "from".
1FAX.EMAIL.FLAG	"A" or "S" or "F"	If a customer is using VSI-Fax, this tag value controls when an email is sent to a preconfigured email address. "S" will send a notification email whenever a fax succeeds. "F" will send whenever a fax fails. And "A" will send always an notification email no matter what.
1MAIL.ENABLE	BOOLEAN ("Y"/"N")	If a customer is using 1MAIL, this tag controls whether a particular user or group has access to 1MAIL.
1NOTES	BOOLEAN ("Y"/"N")	This tag controls whether the notes window will be shown by default for a particular user or group (default is "Y").
1PUBLISH	BOOLEAN ("Y"/"N")	This tag controls whether a group or user is allowed to use 1PUBLISH.
1VIEW.BLOCKSIZE	NUMBER	This tag sets the size of each "block" of data that is sent from SwiftServe to sview.exe.
ADMIN.USER	BOOLEAN ("Y"/"N")	This tag controls whether a user or group be considered an Admin on the 1MAGE system.
API.LOG.LIST	STRING (Record ID)	This tag points to a record contained in the Type-19 1MAGE.CTRL file that contains a custom list of APIs that should be logged. If this tag is left blank and API logging is enabled, all APIs will be logged by default.
API.LOG.PATH	STRING (Path)	This tag is a string that represents the path and filename to which the API log gets written out to. If this tag is left blank and API logging is enabled, then log data will be written to %IMAGEHOME%/logfile.
CLIENT.ADHOC	BOOLEAN ("Y"/"N")	This tag controls whether a user or group has access to the ad hoc workflow, which is only used in the Workflow module in V1A.
CLIENT.COPY	BOOLEAN ("Y"/"N")	This tag controls whether a user or group is allowed to copy pages/images from one image master to another in a program like 1Access.
CLIENT.MINE	BOOLEAN ("Y"/"N")	This tag controls whether a user or group is allowed to use the "mine" module in ICM.
CLIENT.DELETE	BOOLEAN ("Y"/"N")	This tag controls whether a user or group is allowed to delete image masters in a program like 1Access.
CLIENT.INDEX	BOOLEAN ("Y"/"N")	This tag controls whether a user or group is allowed to index images onto the system in a program like 1Access.
CLIENT.INQUIRY	BOOLEAN ("Y"/"N")	This tag controls whether a user or group is allowed to run queries on the system in a program like 1Access.
CLIENT.MODIFY	BOOLEAN ("Y"/"N")	This tag controls whether a user or group is allowed to modify existing image masters in a program like 1Access.
CLIENT.URL	STRING (URL)	This tag sets the URL where Jakarta/Tomcat will be serving up images from the 1MAGE server.

CLIENT.UNC	STRING	If a client wishes to put CLIENT.URL into a DMZ, this tag defines where that DMZ resides.
DATE.FORMAT	BOOLEAN ("ON"/"OFF")	This tag determines whether dates are formatted using the pattern "MMDDYYYY" (OFF) or "DDMMYYYY" (ON).
DEFAULT.MENU	STRING (Record ID)	This tag points to the record id in 1MAGE.MENUS that should be used to show the default menu for a user or group.
FXIM.OPTION1	STRING (Subroutine Name)	This tag is used to inject a custom subroutine into the FXIM API before FXIM sends a fax.
GIML.OPTION1	STRING (Subroutine Name)	This tag is used to inject a custom subroutine into the GIML API before GIML runs a search.
GURL.OPTION1	BOOLEAN ("Y"/"N")	This controls whether a JPG image is dithered or not.
HASHDIR.OPTION1	STRING (Subroutine Name)	This tag defines a subroutine that allows new images to be stored in a location that differs from the default storage location
ICMPDFTIF	BOOLEAN ("Y"/"N")	This tag determines whether ICM stores by default as a PDF or TIF.
IM130.OPTION1	STRING (Subroutine Name)	This tag is used to inject a custom subroutine into IM130 whenever IM130 is used to add a new item.
IM130.OPTION2	STRING (Subroutine Name)	This tag is used to inject a custom subroutine into IM130 whenever IM130 is saving or deleting an item.
INDEX.OPTION1	BOOLEAN ("Y"/"N")	This tag controls how the IM110 behaves when a new document a given doctype and index data is put into the system, and the system detects that an existing document already exists with that type and data. A "Y" will append to the existing document and a "N" will create a new image master.
INDEX.OPTION2	STRING (1VIEW Options)	This tag overrides the default buttons visible in a 1VIEW window when a user uses IM110 to index a new document.
MVIM.OPTION1	BOOLEAN ("Y"/"N")	This tag, if set to "N" will skip security checks, for a given user or group, when moving an image from one master to another.
OVERRIDE.TRANS	BOOLEAN ("Y"/"N")	This tag will override the translation formulas for all keys if set to "Y". This will allow a user or group to enter any values they wish for all keys when indexing.
PACKET.OPTION1	STRING (Subroutine Name)	This tag will provide a subroutine to PROCESS.PAKCET that will inject custom code before processing.
PACKET.OPTION2	STRING (Subroutine Name)	This tag will provide a subroutine to PROCESS.PAKCET that will modify which cold template it uses.
PACKET.OPTION3	STRING (Subroutine Name)	This tag will provide a subroutine to PROCESS.PAKCET that will modify how it prints images.
PARAM.OPTION1	BOOLEAN ("0"/"1")	This tag, if set to "1" will call the validation subroutine with different parameter, possibly related to debugging.

PDF.FILE.TOOL	STRING ("svpdf+", "svpdf", or "svpdf1")	This tag is used by CPDF to determine what type of SwiftView licensing to use.
PRIM.GHOST	BOOLEAN ("Y"/"N")	This tag overrides the standard ghost that the PRIM API uses when overlaying COLD data for printing through SwiftServe.
PRIM.OPTION1	STRING (Subroutine Name)	This tag is used to inject a custom subroutine into the PRIM API prior to PRIM sending COLD data to a printer.
SECUREHTTP	STRING ("https" or "http")	This tag determines whether the GURL API appends either a "http" or a "https" to the beginning of the URL string. If unset, 'http' is default.
SERVER.IP	STRING (Resolvable IP Address)	This tag stores the IP address of the 1MAGE server as a string.
UPCASELOGIN	BOOLEAN ("Y"/"N")	This tag determines whether IM130.GUM and the CWRI API accept login names with upper case characters.
USER.STATS	BOOLEAN ("Y"/"N")	This tag is used in ISP and if set to "Y", ISP will run the SNAP.USERS subroutine to capture license usage stats.
USER.TIMEOUT	NUMBER	This tag is used in ISP to set the timeout value in seconds for ISP running on the server. If set, this tag overrides the timeout length set in SERVER.TIMEOUT, located in the 1MAGE.CTRL database. Default value is 3600 seconds (1 hour).
V1A.INQVALIDATE	BOOLEAN ("Y"/"N")	This tag is used by the V1A application running on the client side, not in our server code. This tag, if set to "N" will prevent V1A sessions from validating key data. Setting to "Y" will not impact default behavior in V1A.
VIEW.WATERMARK	STRING (Name of Watermark File)	This tag is used to set a watermark that should be overlaid when viewing any image.
WATERMARK.LOC	STRING ("X,Y")	This tag sets the location on an image where the watermark should be overlaid. Tag should probably be formatted as follows: (12,4 or 108,-6 or 0,0).
XRGET.OPTION1	BOOLEAN ("Y"/"N")	If this flag is set to "Y", entering a "?" at greenscreens or in 1mageadmin will return lists of one item only to the user and allow them to select the one item. If set to "N" (default behavior) the one item will be auto-filled.

Part 3: Tier-1 Support Playbook whenever they are interacting with a 1MAGE DMS customer.

Part 2: Basic Tier-1 Support

Providing support for 1MAGE Software can be intimidating due to the highly-customized nature of our clients' DMS implementations. Where other companies can rely on standardization for servicing their customers' systems, 1MAGE cannot. Regardless, all Support Agents should be familiar with the basics discussed in this section before taking 1MAGE Support calls.

Error Code List (abridged)

Below is a list of the error codes that Tier-1 Support Agents should be familiar with. Not all of these will be seen with frequency, and not all will be solvable at Tier-1, but understanding what is and isn't Tier-1 is important for quickly determining whether to escalate to Tier-2 or not.

Error #	Description	Page #
1	Cannot connect to server	16
2	Server not responding	16
3	Login incorrect	19
4	Environment variable $PATH not set	19
6	recv() call failed	16
7	recv() call timed out	16
11	bind() call failed	20
14	Environment variable $SERVER_ID not set	19
15	Environment variable $IMAGEDBSH not set	19
16	Environment variable $IMAGEHOME not set	19
17	Environment variable $IMAGEHOST not set	19
18	Environment variable $GW_CONNECT_TIMEOUT is invalid	19
26	gethostbyname() call failed	16
27	connect() call failed	16
28	send() call failed	20
111	Error executing cp command	20
130	Database error	20
137	No data returned	20
138	User does not have permission	20
140	Cannot open files	21
141	Cannot open image storage directory	21
142	Cannot read record from file	21
143	Cannot read record in 1MAGE.CATC	21
145	Cannot read record in 1MAGE.MASTER	21
146	Cannot read record in 1MAGE.NETPRT	21
148	Cannot read record in 1MAGE.WORKM	21
149	Cannot read record in 1MAGE.WORKD	21
150	Cannot read record in 1MAGE.XCTRL	21
152	Record already locked	21
157	Insufficient data to initiate search	21
158	Secure documents removed from returned list	21
160	Subroutine error detected; no action taken	21
168	Invalid combination of files	21
169	Image class or extension does not match	21
180	Output error	22
301	Cannot find license file	18
302	Invalid license syntax	18
304	Licensed number of users already reached	18
305	No such feature exists	18
309	Invalid host – In ISP	18
310	Feature has expired	18
1282	No application responded to a DDE initiate	22

Billable Hours

Paying 1MAGE's annual maintenance fee entitles customers to our customer support. However, this customer support is intended to address user errors and fix bugs in our code, if any appear. It is important to understand the variety of requests that would NOT fall under the normal tech support agreement. This list includes, but is not limited to:

- Setting up new users on the 1MAGE system.

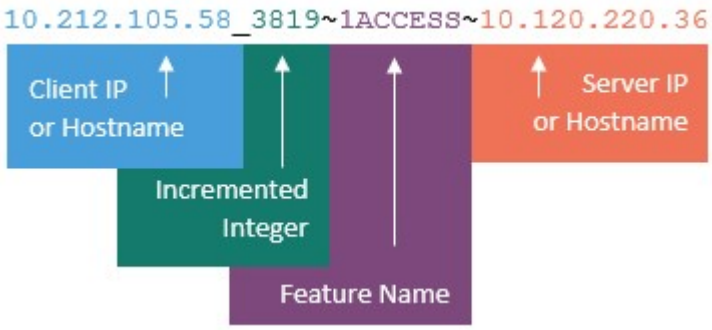
- Giving users permissions to DocTypes or Queues.
- Fixing connectivity issues (even between 1mage products).
- Deleting or recovering batches that were accidentally indexed or deleted, respectively.
- Setting up a 1MAGE Server or VM.
- Clearing disk space on an existing 1MAGE Server.
- Moving a 1Scan Station to a new machine.
- Upgrading to a new version of 1MAGE.
- API integration questions and requests.

IMAGEHOME

The 1MAGE DMS's can be installed anywhere the client would like. That flexibility is nice, but means that technicians will need to be able to locate the installation directory. For this, we have a special ENV variable called IMAGEHOME, which can always be quickly referenced to locate this important root directory.

SERVER_ID

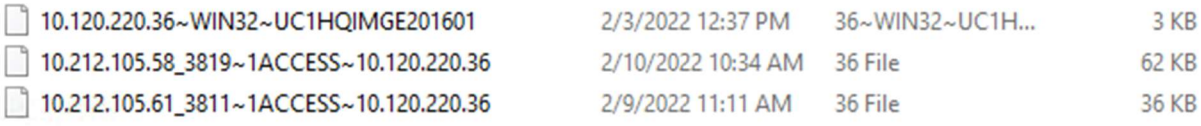
One of the most fundamental concepts in the 1MAGE world is that of the SERVER_ID. The SERVER_ID is a unique string that represents a unique 1MAGE session. Below is an example of a SERVER_ID, which is broken into 4 color-coded parts. A description of each part follows below.



Part Name	Description
Client IP or Hostname	The client which initiated the session
Incremented Integer	An optional unique integer value that distinguishes multiple sessions spawned from the same client using the same feature on the same server
Feature Name	The name of the licensing feature checked out for this session
Server IP or Hostname	The server with which the client is communicating for this session

Finding COMO Logs

When clients call in with errors, one of the first jobs for Tier-1 support is to locate their individual session log on the 1MAGE server. We call these files "COMO" logs, because they are stored in the "&COMO&" directory located under IMAGEHOME.



Above is a screenshot of 3 files located in &COMO& on 1MAGE's internal Windows 1MAGE Server. As you can see, COMO logs bear the name of the SERVER_ID that they are logging.

So, if a customer calls in with a 194 error, for example, Tier-1 Support can find any specific user's COMO log on the server if they know:

- The IP address (or hostname) that the client was running on
- The approximate time that the error happened
- The application in which the error occurred

Using only these three pieces of information, once can easily find the COMO log for any session.

Reading COMO Logs (Basic)

COMO logs can contain thousands of lines of information, and vary wildly from issue to issue. Because of this, support agents should only really focus on identifying where in the log an error occurs, and backtracking from there to see what the system was doing at the time. The image below illustrates a hypothetical 165 error:

```
447   10:34:34 09 FEB 2022: REQUEST = <ULUI>
448   10:34:34 09 FEB 2022:     IN1 = <SCAN-QUEUE1>
449   10:34:34 09 FEB 2022:     IN2 = <>
450   10:34:34 09 FEB 2022:     IN3 = <>
451   10:34:34 09 FEB 2022:     IN4 = <R>
452   10:34:34 09 FEB 2022: REPLY = <165>
```

So a support agent might open up this COMO log, and run a search for the error they are looking for. In this case, we can see the error on line 452. We backtrack from here to see that the API where this error occurred is "ULUI", and the arguments passed to it were "SCAN-QUEUE1", null , null, and "R", resulting in the 165 that the user reported.

Feature Types

As discussed above in the Finding COMO Logs section, one of the pieces of information embedded in the SERVER_ID is the Feature name. Features are different types of products or services that can be enabled or disabled with the 1MAGE DMS licensing system. As the example showed, "1Access" has its own feature type. Not all programs are this obvious, so please refer to the following chart to determine which programs use which features.

Feature Name	Related Programs
1Access	1Access
DTL	1Suite
WIN32/WTS	WinClient
V1A/JSP	V1A
ADMIN	1mageadmin

Diagnostic Programs

1MAGE ships many utility programs with its DMS. Many of these are useful for diagnostic purposes. The table below is provided for reference, and should give a good understanding of where each of these diagnostic programs is, and what they are used for.

Program Name	Description	Shell
check_1mage	Runs a series of 1MAGE diagnostic programs	BASH
telnet	Tests for network connectivity over a specified port #	BASH/CMD
grepphan	List Phantoms Currently Running	BASH/TCL/Cygwin
grepserv	List Servers Currently Running	BASH/TCL/Cygwin
fixtool	Examine or Fix a UV file	BASH/CMD
uvlictool	Generate UV license-seat usage report	BASH/CMD
tiffy	Analyzes a TIF file for debugging purposes	BASH/CMD
DBATCH	Manually delete files from inbound image queue(s)	TCL

check_1mage

"check_1mage" is an irreplaceable utility that makes diagnosing 1MAGE issues much quicker on Linux and AIX systems. It checks whether the essential 1MAGE processes "ISD" and "ITS" are running and provides the PIDs of each. It also checks if Jakarta/Tomcat is running and provides that PID as well. It will alert admins if too many ISDs are present and attempt to fix that issue automatically. It also checks for CPU usage of ITS. Running check_1mage should be the starting point of diagnosing all 1MAGE issues.

At this time, there is no check_1mage on Windows systems.

telnet

The "telnet" command is a basic TCP/IP suite command, and works from both the Linux command line and the Windows CMD prompt. It can tell us whether communications to a specific IP and PORT are open or not. Ensuring proper communications on specific ports is essential for proper 1MAGE function.

(Windows may say that it is not installed. If this happens, please search the internet for instructions describing how to install/enable the telnet command for your version of Windows.)

A typical telnet command will look something like:

```
telnet 192.168.0.10 2222
```

Above, the 1MAGE server is located at 192.168.0.10 on this network, and the port being tested is 2222.

grepphan

The grepphan program will query a 1MAGE server for any running UniVerse phantoms like "PROCESS.EXTSCAN" or others, and return to the user a list of any that are found. It is useful for determining what phantoms (1MAGE-related background processes) are currently running on any 1MAGE system.

grepserv

The grepserv program will query a 1MAGE server for any active imaging sessions and return the user the PID, and SERVER_ID for each that it finds. This is useful for determining a multitude of details about any active sessions.

fixtool

The fixtool program is a Rocket UniVerse utility that is useful for scanning and fixing any type-1 and type-30 UniVerse database files. This program is often run after transferring these database files from one system to another in order to verify and correct any database integrity issues.

uvlictool

The uvlictool program is a Rocket UniVerse utility that is useful for querying 1MAGE servers to determine current UniVerse license usage, and provides a PID for each active UniVerse license currently checked out. This will allow admins to release any stuck UV licenses that they like.

tiffy

The tiffy program is a program provided by SwiftView that will display all header information for .tif/.tiff files. It will display if a file is a TIF or not, whether the file is compressed with LZW/JPEG compression, display the number of pages, and a lot of other information. It is most commonly used when a particular TIF is proving troublesome and more information about that file is required.

DBATCH/DBATCH2

Finally, the DBATCH (or DBATCH2) program is a 1MAGE created utility that allows system admins to delete batches that had been previously scanned into the system. It is only runnable from the TCL prompt and will provide the user with numerous on-screen prompts that will allow them to select either a specific batch, or an range of batches, for deletion.

SwiftServe Setup

SwiftServe is requires is installed on the 1MAGE server for proper functioning of the system. SwiftServe is installed during initial server setup. Whenever the server is migrated from one machine to another, SwiftServe will need to be re-licensed, which can be accomplished by reaching out to 1MAGE. A unique password (license string) is issued for each computer that SwiftServe is installed on. As this license string is used quite frequently, it is a good idea to keep this license string in a safe place for future reference.

Windows Installation

Before running any commands, please ensure that the *PERM* binaries are in place in C:\1MAGE\bin\. On Windows, these include svtiserv.exe and pwserv.exe. Care should be taken to back up the *DEMO* binaries in this folder for future use.

The following commands are used to install, service, and uninstall SwiftServe on Windows. When running any of these commands, always enter the fully qualified path to the program (e.g. *C:\1MAGE\bin\sview.exe* instead of *sview.exe).*

Intention	Command to Run
Install SwiftServe	[path]\svtiserv.exe -l[LICENSE STRING] -drC:\ -i
Check License status	[path]\svtiserv.exe -l[LICENSE STRING] -v
Check License (alt)	[path]\pwserv.exe -l[LICENSE STRING] -v
Uninstall SwiftServe	[path]\svtiserv.exe -e

Note 1: Above, the "-l" indicates a lowercase "-L"

Note 2: All initial installations come with a demo SwiftServe license that will allow viewing of one-page documents only. The demo license string is 0005kfigodfnfn8. Using it requires the DEMO binaries.

Following this, please ensure that

Linux Installation

Before running any commands, please ensure that the *PERM* binaries are in place in /1MAGE/1VIEW/. On Linux, these include sviserv3, pwserv, and svsrvd. Care should be taken to back up the *DEMO* binaries in this folder for future use.

Following this, SwiftServe is installed by modifying the /1MAGE/bin/rc.ss file. All that needs to be done here is the license string should be typed in the following location:

```
fi
echo "starting SwiftServe"
svsrvd -l0005oinf1skd3aq -g-sn -g-t60 -g-dr/
if [ -z "$LOGNAME" -a -z "$USER" ] ; then
   sleep 2
fi
```

The file should then be saved and run manually using rc.ss.

Cygwin

The 1MAGE DMS is designed to run primarily on Systemd Linux/Unix systems like CentOS, Alma, or Rocky Linux. 1MAGE makes frequent OS-level calls that are formatted specifically for Linux, and uses . However, 1MAGE is able to offer support for Windows by making use of a 3rd party software package called Cygwin. What Cygwin does is it enables a Windows system to interpret and run Linux-style commands like “cd”, “cp”, “chmod”, and so forth.

Cygwin vs Cygserver

Normal Cygwin Setup is covered in the Windows Installation manual and will not be repeated here. However, it is important to note that 1MAGE has encountered system in the past where Cygwin, once installed, will take a very long time (≈30 seconds) to launch, and a similarly long time to execute single commands. As 1MAGE is fully reliant on efficient command interpretation and execution, this will fully prevent our system from running.

In such cases, we have provided an optional step in Cygwin’s installation instructions that provide the steps necessary to install Cygwin as a server, which eliminates all delays in either launching Cygwin or in its execution.

1MAGE Administration

1mageadmin

1MAGE will comes with a GUI Admin tool called 1mageadmin. 1mageadmin runs on a Tomcat web server on the 1MAGE server, so the tool is accessible through the use of a web browser running on the same local network as the 1MAGE server. The web address for 1mageadmin is usually the IP address of the 1MAGE server, followed by the port that tomcat is running on, followed by “1mageadmin” (e.g. “10.10.11.12:8080/1mageadmin”).

1mageadmin can be used to perform all the basic system setup and user management that are necessary for maintaining a 1MAGE system. For instance, it can be used to create users & groups, grant permissions to various DocTypes and Categories to those users, create new DocTypes, configure 1MAGE settings, and much more.

For information on using the GUI 1mageadmin program to make changes to the 1MAGE DMS, please see the admin guide available at https://www.1mage.com/documents.

Backend Administration (IM Programs)

1MAGE also ships with a large number of backend utilities that allow 1MAGE administrators to set up and modify the way their DMS works from the UniVerse TCL prompt. A list of these applications and their function is below. Each can be launched directly from the TCL prompt.

Command	Description
IM100	Manage Index Keys
IM103	Manage Image Categories
IM105	Manage Image DocTypes
IM110	Manage Index Entry
IM115	Manage Image Inquiry
IM130.GUM	Manage User or Group Security Policies for Image Types, Queues, and Tags
IM160	Manage Image Queues
IM163	Manage Image 1Scan Server Maintenance

Most of the above operations can also be performed from the front-end 1mageadmin program, but since this method require access to the same local network as the 1MAGE server, often the easiest/simplest way to make changes to the DMS is through these “greenscreen” programs.

1MAGE Tags

1MAGE Tags are special variables that can be assigned at either the individual user or group level using either 1mageadmin or IM130.GUM. There are tags for setting the default IP of the 1MAGE server, tags for controlling user access to indexing, deleting, or modification using client applications like 1Access, tags for injecting custom code into 1MAGE APIs, and much more. Below is a list of all tags that are currently in use.

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Tag Name	Value Expected	Description
1CIRCULATE.URL	STRING (Resolvable URL)	If a customer is using 1Circulate, this needs to be set to the URL to the V1A Web Server.
1FAX.COVER	STRING (Record ID)	If a customer is using VSI-Fax, this needs to be set to the RECORD_ID of the fax coversheet that a user will have automatically attached to their faxes/emails.
1FAX.EMAIL.ADDR	STRING (Email Address)	If a customer is using VSI-Fax, this needs to be set to the email address that the users want their recipients to see this email coming "from".
1FAX.EMAIL.FLAG	"A" or "S" or "F"	If a customer is using VSI-Fax, this tag value controls when an email is sent to a preconfigured email address. "S" will send a notification email whenever a fax succeeds. "F" will send whenever a fax fails. And "A" will send always an notification email no matter what.
1MAIL.ENABLE	BOOLEAN ("Y"/"N")	If a customer is using 1MAIL, this tag controls whether a particular user or group has access to 1MAIL.
1NOTES	BOOLEAN ("Y"/"N")	This tag controls whether the notes window will be shown by default for a particular user or group (default is "Y").
1PUBLISH	BOOLEAN ("Y"/"N")	This tag controls whether a group or user is allowed to use 1PUBLISH.
1VIEW.BLOCKSIZE	NUMBER	This tag sets the size of each "block" of data that is sent from SwiftServe to sview.exe.
ADMIN.USER	BOOLEAN ("Y"/"N")	This tag controls whether a user or group be considered an Admin on the 1MAGE system.

API.LOG.LIST	STRING (Record ID)	This tag points to a record contained in the Type-19 1MAGE.CTRL file that contains a custom list of APIs that should be logged. If this tag is left blank and API logging is enabled, all APIs will be logged by default.
API.LOG.PATH	STRING (Path)	This tag is a string that represents the path and filename to which the API log gets written out to. If this tag is left blank and API logging is enabled, then log data will be written to %IMAGEHOME%/logfile.
CLIENT.ADHOC	BOOLEAN ("Y"/"N")	This tag controls whether a user or group has access to the ad hoc workflow, which is only used in the Workflow module in V1A.
CLIENT.COPY	BOOLEAN ("Y"/"N")	This tag controls whether a user or group is allowed to copy pages/images from one image master to another in a program like 1Access.
CLIENT.MINE	BOOLEAN ("Y"/"N")	This tag controls whether a user or group is allowed to use the "mine" module in ICM.
CLIENT.DELETE	BOOLEAN ("Y"/"N")	This tag controls whether a user or group is allowed to delete image masters in a program like 1Access.
CLIENT.INDEX	BOOLEAN ("Y"/"N")	This tag controls whether a user or group is allowed to index images onto the system in a program like 1Access.
CLIENT.INQUIRY	BOOLEAN ("Y"/"N")	This tag controls whether a user or group is allowed to run queries on the system in a program like 1Access.
CLIENT.MODIFY	BOOLEAN ("Y"/"N")	This tag controls whether a user or group is allowed to modify existing image masters in a program like 1Access.
CLIENT.URL	STRING (URL)	This tag sets the URL where Jakarta/Tomcat will be serving up images from the 1MAGE server.
CLIENT.UNC	STRING	If a client wishes to put CLIENT.URL into a DMZ, this tag defines where that DMZ resides.
DATE.FORMAT	BOOLEAN ("ON"/"OFF")	This tag determines whether dates are formatted using the pattern "MMDDYYYY" (OFF) or "DDMMYYYY" (ON).
DEFAULT.MENU	STRING (Record ID)	This tag points to the record id in 1MAGE.MENUS that should be used to show the default menu for a user or group.
FXIM.OPTION1	STRING (Subroutine Name)	This tag is used to inject a custom subroutine into the FXIM API before FXIM sends a fax.
GIML.OPTION1	STRING (Subroutine Name)	This tag is used to inject a custom subroutine into the GIML API before GIML runs a search.
GURL.OPTION1	BOOLEAN ("Y"/"N")	This controls whether a JPG image is dithered or not.
HASHDIR.OPTION1	STRING (Subroutine Name)	This tag defines a subroutine that allows new images to be stored in a location that differs from the default storage location
ICMPDFTIF	BOOLEAN ("Y"/"N")	This tag determines whether ICM stores by default as a PDF or TIF.
IM130.OPTION1	STRING (Subroutine Name)	This tag is used to inject a custom subroutine into IM130 whenever IM130 is used to add a new item.
IM130.OPTION2	STRING (Subroutine Name)	This tag is used to inject a custom subroutine into IM130 whenever IM130 is saving or deleting an item.

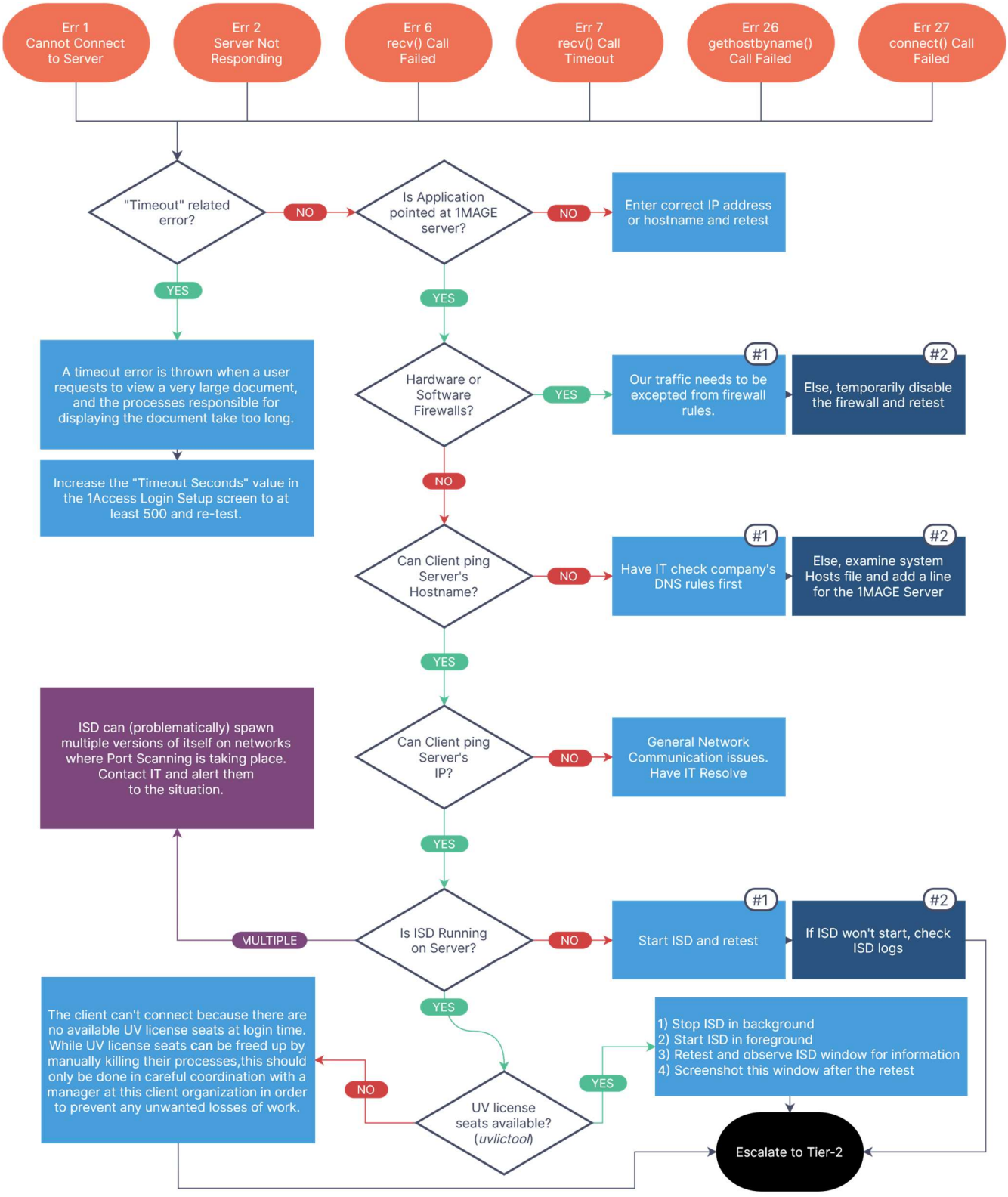
INDEX.OPTION1	BOOLEAN ("Y"/"N")	This tag controls how the IM110 behaves when a new document a given doctype and index data is put into the system, and the system detects that an existing document already exists with that type and data. A "Y" will append to the existing document and a "N" will create a new image master.
INDEX.OPTION2	STRING (1VIEW Options)	This tag overrides the default buttons visible in a 1VIEW window when a user uses IM110 to index a new document.
MVIM.OPTION1	BOOLEAN ("Y"/"N")	This tag, if set to "N" will skip security checks, for a given user or group, when moving an image from one master to another.
OVERRIDE.TRANS	BOOLEAN ("Y"/"N")	This tag will override the translation formulas for all keys if set to "Y". This will allow a user or group to enter any values they wish for all keys when indexing.
PACKET.OPTION1	STRING (Subroutine Name)	This tag will provide a subroutine to PROCESS.PAKCET that will inject custom code before processing.
PACKET.OPTION2	STRING (Subroutine Name)	This tag will provide a subroutine to PROCESS.PAKCET that will modify which cold template it uses.
PACKET.OPTION3	STRING (Subroutine Name)	This tag will provide a subroutine to PROCESS.PAKCET that will modify how it prints images.
PARAM.OPTION1	BOOLEAN ("0"/"1")	This tag, if set to "1" will call the validation subroutine with different parameter, possibly related to debugging.
PDF.FILE.TOOL	STRING ("svpdf+", "svpdf", or "svpdf1")	This tag is used by CPDF to determine what type of SwiftView licensing to use.
PRIM.GHOST	BOOLEAN ("Y"/"N")	This tag overrides the standard ghost that the PRIM API uses when overlaying COLD data for printing through SwiftServe.
PRIM.OPTION1	STRING (Subroutine Name)	This tag is used to inject a custom subroutine into the PRIM API prior to PRIM sending COLD data to a printer.
SECUREHTTP	STRING ("https" or "http")	This tag determines whether the GURL API appends either a "http" or a "https" to the beginning of the URL string. If unset, 'http' is default.
SERVER.IP	STRING (Resolvable IP Address)	This tag stores the IP address of the 1MAGE server as a string.
UPCASELOGIN	BOOLEAN ("Y"/"N")	This tag determines whether IM130.GUM and the CWRI API accept login names with upper case characters.
USER.STATS	BOOLEAN ("Y"/"N")	This tag is used in ISP and if set to "Y", ISP will run the SNAP.USERS subroutine to capture license usage stats.
USER.TIMEOUT	NUMBER	This tag is used in ISP to set the timeout value in seconds for ISP running on the server. If set, this tag overrides the timeout length set in SERVER.TIMEOUT, located in the 1MAGE.CTRL database. Default value is 3600 seconds (1 hour).

V1A.INQVALIDATE	BOOLEAN ("Y"/"N")	This tag is used by the V1A application running on the client side, not in our server code. This tag, if set to "N" will prevent V1A sessions from validating key data. Setting to "Y" will not impact default behavior in V1A.
VIEW.WATERMARK	STRING (Name of Watermark File)	This tag is used to set a watermark that should be overlaid when viewing any image.
WATERMARK.LOC	STRING ("X,Y")	This tag sets the location on an image where the watermark should be overlaid. Tag should probably be formatted as follows: (12,4 or 108,-6 or 0,0).
XRGET.OPTION1	BOOLEAN ("Y"/"N")	If this flag is set to "Y", entering a "?" at greenscreens or in 1mageadmin will return lists of one item only to the user and allow them to select the one item. If set to "N" (default behavior) the one item will be auto-filled.

Part 3: Tier-1 Support Playbook

Connectivity Issues

An application is unable to connect to and/or communicate with the 1MAGE DMS for whatever reason. See flowchart below for remediation.



Required 1MAGE Ports

In addition to the flowchart above, it should be known that various ports on both the 1MAGE server and a client machine will need to be open to allow the 1MAGE DMS to function correctly. The table below lists these ports and gives some information for each of them:

Port #	Program/Service	Client/Server
2222	ISD	Server
5555	ITS	Server
6100	SwiftServe	Server
32000 – 64000	WinClient Listening Port	Server
3333	WinClient	Client
3333 – 4000	WinClient (Term Servers Only)	Client

Diagnosing Networking Issues

When network issues get in the way of the 1MAGE server communicating with client sessions, the system may throw one of the errors in the flowchart above (1, 2, 6, 7, 26, 27) or a less common error like 5, 13, 21, 22, 23, 24, 25, or 28. Additionally, when networking issues are the problem, users may see various Winsock errors, usually looking something like “11004”, “10060”, and so forth. *NOTE: 1MAGE errors are never 5 digits long.*

In situations like these, it is crucial for the system admin to understand that network changes may have been applied to one or more machines using the 1MAGE system, and these changes are now preventing either the 1MAGE server, or a client running 1MAGE software, from communicating successfully. Hence the new errors. These network changes may have been caused by an auto-update on one or more machines; they may have been caused by a 3rd party installing new networking devices on the system, reworking how the internal DNS works, or assigning new IPs or hostnames; or they may be caused by some other unknown action.

Regardless of the source of the trouble, networking issues are never 1MAGE’s responsibility to prevent, investigate, diagnose, consult on, or resolve. 1MAGE will be happy to send this document to customers to get them started diagnosing the issue. Any further interaction between 1MAGE and a customer on networking issues will incur billable hours.

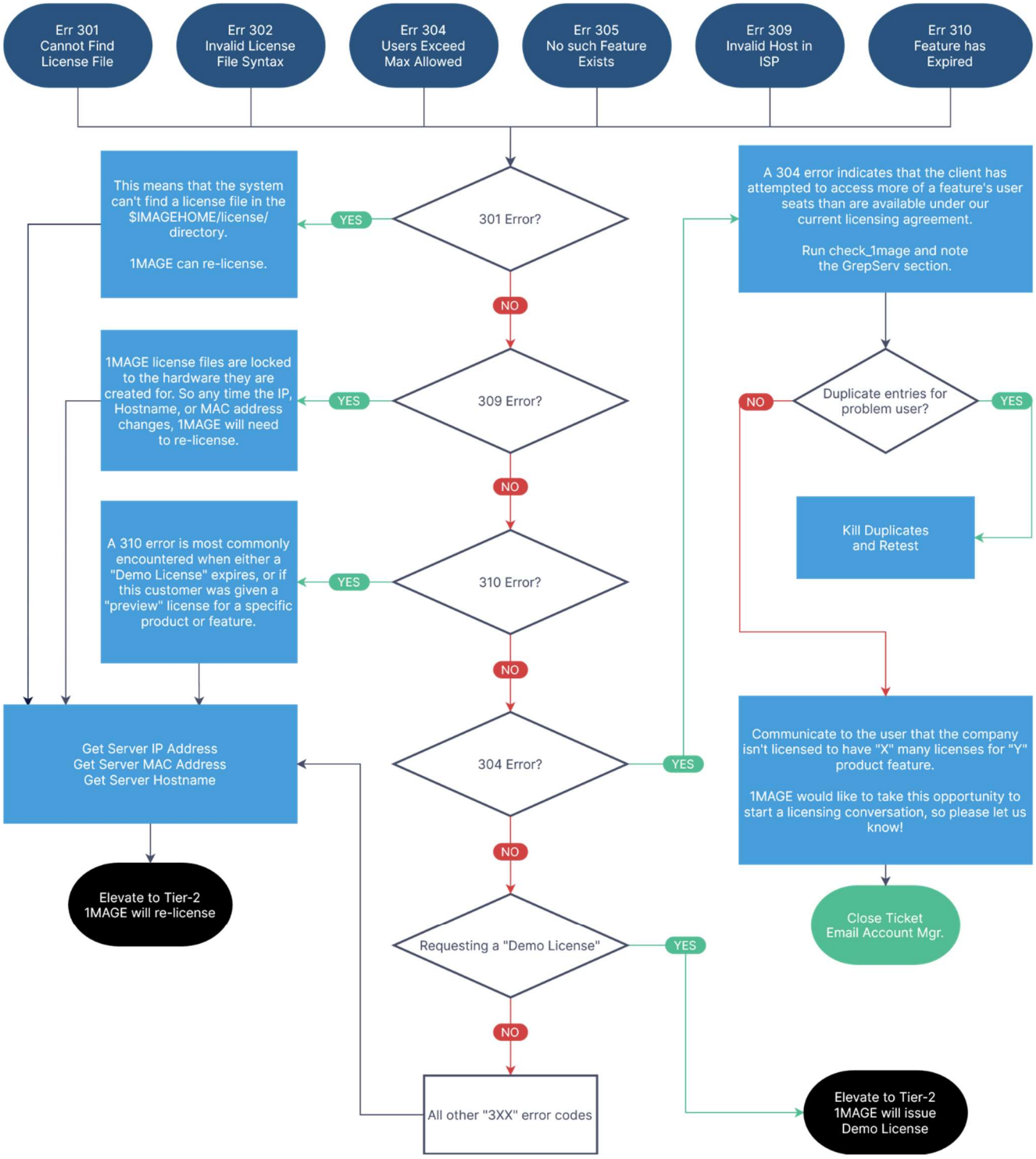
Below is a checklist to help admins understand what might be going on:

- ☐ Are ISD, ITS, and SwiftServe all running on the 1MAGE server?
- ☐ If WinClient is used, is it running on the client machine?
- ☐ Can the client communicate with the server on ports 2222, 5555, and 6100
- ☐ Can the client communicate with the server’s WinClient Listening Port range?
- ☐ Is there a firewall on the client machine preventing specific 1MAGE applications like 1Access, 1Suite, or WinClient from communicating with the server?

The telnet command is discussed on page 9 of this manual. Running telnet is an important step for determining if communication is happening effectively. NOTE: these tests may cause the program/service in question (in particular ISD) to crash on the server, so always take steps to restart any affected services after testing.

Licensing Issues

Licensing errors are represented by error codes 3XX. Most of the time these errors will only be resolved by 1MAGE generating a new license file for the client. Regardless, below is a flowchart to provide some background information on a few common issues.



Environment Variable Issues

ENV variable issues are very rare, since a significant portion of the initial 1MAGE setup process is dedicated to configuring them correctly. If any of these error codes comes up while servicing 1MAGE customers, please check the status of whichever ENV variable is throwing the error on the system, and correct it according to the table below:

ENV Variable Name	Value
$PATH	Escalate to Tier-2 if unset
$SERVER_ID	Escalate to Tier-2 if unset
$IMAGEDBSH	Path to the UniVerse shell executable
$IMAGEHOME	Path to the 1MAGE installation directory
$IMAGEHOST	Hostname of the image server
$GW_CONNECT_TIMEOUT	Escalate to Tier-2 if unset

Java Issues

Java must be installed on client systems for various 1MAGE programs to function correctly. If Java is not installed, or if it has recently been updated, then it is likely that users will encounter errors associated with this. These issues can be remedied by opening up the Java configuration tool, navigating to the “Java” tab, and correcting the path to javaw.exe.

Jakarta/Tomcat Issues

In order for customer to be able to use V1A and the GUI 1mageadmin tool, Apache Tomcat (Jakarta) needs to be set up and running on the 1MAGE server. This should all have been done already by 1MAGE during setup. If users report issues with connecting to either service, please check if Jakarta is running and start or restart if necessary. On Windows, if Java has been updated recently, please check the Apache Tomcat configuration to ensure that it can find jvm.dll. Otherwise escalate to Tier-2.

Phantom Issues

Phantoms are (roughly) the UniVerse equivalent of Daemons: processes that run in the background to accomplish some given task. Many of our customer systems rely on an array of Phantoms to process files scanned-to or dropped-into a specific folder(s) on the server.

On linux systems these phantoms are managed within the 1MAGE system itself. Linux/Unix phantoms rarely require much maintenance. Windows systems, however, do not give us the same access or reliability that Linux/Unix provides. Instead, we rely on the Task Scheduler system to run an Executable that will run the rest of the Phantom within the UniVerse environment. Occasionally, these Windows scheduled tasks get "stuck" and will need to be restarted. Please check on these first before escalating to Tier-2.

Error 3 — Login Incorrect

An Error #3 simply means that the entered password is not valid for the entered username. 1MAGE does not keep records of user passwords or offer password retrieval/reset services. That is a job for the client organization’s 1MAGE administrator.

Error 6 — Recv() Call Timeout

This error is discussed briefly in the diagram on page 16. If increasing 1Access’s timeout value doesn’t work, then check if opening a single page TIF works. If so, check if the server’s IP has recently changed. If it has, then this customer probably needs a new SwiftServe license.

Error 11 — Bind() Call Failed

An Error #11 is usually caused by a corrupted SERVER.PORTS record inside of the 1MAGE.CTRL file. Our recommendation here is to wipe out the entire SERVER.PORTS record and re-create it from scratch as follows:

```
0001: 10000
0002: 36767
0003: 36767
```

Regarding the above, please check with the System or Network administrator to ask if they have custom specific port ranges for security reasons.

One other cause for this error is when ISD has been killed manually, but the port ISD uses has not been cleared, so the system thinks it is unavailable. In this case, the port will need to be cleared manually before ISD will be able to start successfully.

Error 28 — Send() Call Failed

An Error #28 is sometimes seen when something is sent to WinClient, but WinClient isn't running. Naturally, the first remediation step is to check if WinClient is running on the client machine. If so, then please check if a recent Windows update has put a firewall in place. If not, then please examine the WinClient log in the Windows System Tray during a re-test, and escalate to Tier-2 if necessary.

Error 111 — Error Executing 'cp' Command

An Error #111 simply means that a system command was unable to operate on some file on the Server. Find the correct COMO Log to get a record of which file the system is looking for. Does the file still exist? Is the file's permissions configured for "777" and owned by "root"? If not please update this information and re-test.

Error 130 — Database Error

An Error #130 generally indicates corrupted files or records within the UniVerse system. First step is to locate the relevant COMO Log and find the section within where the 130 is thrown. Second step is to identify the particular UniVerse file or record associated with triggering this error. Third step is to Run FIXTOOL -FILE [FILENAME] to diagnose the extent of the issue, and then finally run FIXTOOL -FIX [FILENAME] to repair.

If these steps do not resolve the issue, escalate to Tier-2.

Error 137 — No Data Returned

We sometimes get calls alerting from customers who get this message, with the customer claiming that an error occurred. In reality, this just means that the inquiry that the customer ran as expected, but no hits were found in the database. The question to the customer, therefore, should seek to discover why they expected this inquiry to return results in the first place.

If they are searching for an item recently scanned into an auto-indexing folder the document may simply still be waiting to be processed still.

Error 138 — User Does Not Have Permission

An Error #138 usually indicates that a 1MAGE Administrator needs to provide this particular user with access to the correct batches/queues.

Errors 140-150 — Cannot Open [X] || Cannot Read [X]

Most often encountered when some UV file or another is suddenly missing. Gather info about recent system changes and ask about any data-restorations that may have occurred. Escalate as needed.

Error 152 — Record Already Locked

Sometimes occurs when a user is indexing manually and the system crashes. This file lock will need to be cleared manually. Note which file is locked. Log to the UV prompt. First enter the “LIST.READU” command, which will list out all the active account locks. Then locate the locked file in this list, and note the User number associated. Finally, enter the command "UNLOCK [USER_NUMBER] ALL". This will unlock all locked files for this user at the UniVerse level. USER_NUMBER may be omitted in the command above, but if so, please ensure no other users are currently using the 1MAGE system.

(Also, this error may resolve itself before an agent gets the chance to do so)

A much simpler but less careful method is to get to the TCL prompt as an admin, make sure you are in the 1MAGE account, and enter the command “UNLOCK ALL”. This should unlock everything.

Error 157 — Insufficient Data to Initiate Search

An Error #157 indicates that a user initiated a search that contained a complex key, but that user did not provide all of the required simplex keys (which are subordinate to the complex key) for the search to be run successfully. If the user requires further specific information about what they have done wrong, the 157 error can be found in the COMO log for this session, where it will be able to better illustrate any specific issues with the query.

Error 158 — Secure Documents Removed from Returned List

An Error #158 is more of a warning than an “error,” and is likely the system working as intended. Here’s a hypothetical to illustrate: Suppose a user, who has been given access to all HR documents in the IT department, runs an inquiry on ALL DOCUMENTS from March 1st. The API that generates the initial SELECTLIST will contain documents that this user shouldn’t have access to. Well, this 158 error is simply informing the user that the API has removed documents from the FINAL list based on his lack of security access rights.

This can be remedied by the organization’s 1MAGE Administrator.

Error 160 — Subroutine Error Detected; No Action Taken

WinClient itself may be returning this error.

If a user attempts to open an “O”ther type document, then WinClient is going to take that document and copy it into its own temporary cache area. The 160 Error gets thrown if WinClient is unable to write to this area on disk. First step is to update the permissions of this cache area on the client workstation so that anyone can read/write.

NOTE: WinClient’s temporary cache area location depends on what version of Windows is running. On modern systems it can usually be found at AppData/local/1MAGE Software/WinClient/Cache. System Administrators will need to be able to find this location on their own.

Error 168 & 169 — Invalid Combination of Files || Image Class or Extension Mismatch

The 1MAGE DMS stores images as proprietary objects that allow us to represent multi-page images using multiple references to different image files at different locations on the server. This system works very well, but is not without its limits. One common limit is that this system does not allow images of different “type” to be combined this way. The three most common types are laid out below:

Image Type	Description
“I”mage	The file is an image type file: JPG, BMP, TIF, PNG, etc.
“C”OLD	Documents are ASCII data
“O”ther	The image is any other type of file (usually a PSD)

Looking at the chart above, please understand that combining two or more images into a single multi-page image will only work if both source images are of type “I”. If a user attempts to combine any other combination of image types, an error 168 or 169 will be thrown and the operation will fail.

Error 180 — Output Error

SwiftConvert was called without a SwiftConvert license available. This is a licensing issue related to SwiftView, not 1MAGE. However, Tier-1 should still gather the required information for our contact to update this license. In addition to the standard information, please be sure to get the 1MAGE Server IP and Hostname before escalating.

Error 1282 — No Application Responded to a DDE Initiate

An Error #1282 is usually more of a warning than an error. This error indicates that a user has manually closed a window before a program could close that same window gracefully. Therefore, aside from startling the user into calling tech support, there isn’t much to do.