JetPatch

JetPatch Log Files

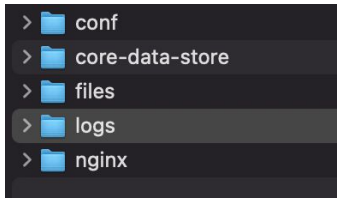
Understanding JetPatch's Log Files

Objectives:

- What logs files exists
- Where can they be found
- How to use the Logs for basic troubleshooting
- How to set the server’s logging level

JetPatch's Manager Logs

- JetPatch's Manager (server) log files are located in the archive that you can download from the JetPatch console (within the logs folder)



- Each log has up to 10 files (by default - this is configurable), overwritten, Ordered from 1 to 9, such as the most recent is named without the number (e.g. vmanage.log)

- **Discovery Source Logs**: discovery.log.*
  These logs are helpful in understanding automatic discovery thru discover sources (e.g. AWS, vCenter, Azure, Active Directory)

- **Patching Logs**: patching.log.*
  These are helpful in understanding problems related to remediation plans / patching

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JetPatch's Manager Logs

- **Manager Logs**: vmanage.log.*
  These are the logs used for aplicative logic done by the Manager server

- A**pache Tomcat (Application Server) Logs**:
  Can be useful in cases of application server failures. In cases of network problems or Java problems.

  access_tomcat.<date>.log.*
  catalina.<date>.log.*
  localhost.<date>.log.*
  worker.log.*

Other Log Files

Other logs: Depending on the possible sources of the problem, can be useful:

- WSUS related problems: WSUS log found on WSUS server
  Can be useful for findings MSFT WSUS related problems

- Connector related problems: Connector logs located under
  `/usr/local/intigua/vAgentManager/log` on every endpoint machine

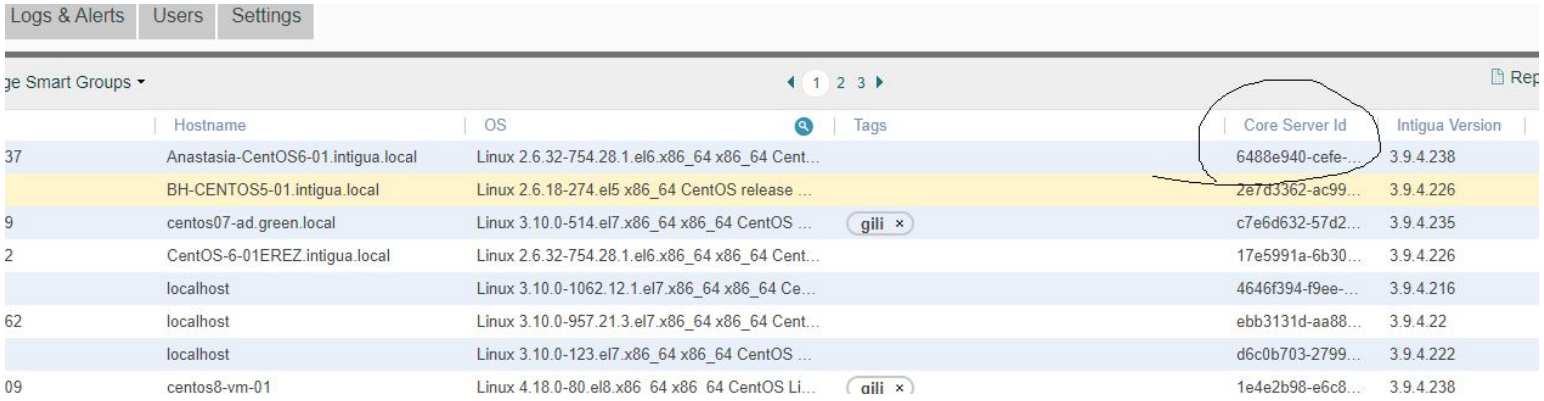
- Database Logs (typically it is /var/lib/pgsql/<version number>/data/). If the service is running you can use the following command to get the exact path:
  - ps -ef | grep postgres

- Nginx logs located under /var/log/nginx
  These log are useful to understand issues related to https connectivity problem between the Manager and Endpoints or client (UI) machines.

JetPatch's Manager Logs Tips

How to search vmanage.log.* logs files:

- First find the relevant host name or IP then look for its matching core server id.
  Then you can search the Manager's log file using this string (for example using the grep command)
  S=<core_server_id from endpoint_server table>
  e.g. 2019-12-17 11:33:24,852 - ERROR [T= Worker-10][**S=4af03548**>][OP=INSTALL_VLINK][R=123257-R]
- How to find core server id for a given endpoint: Simply add the field called: 'Core Server Id' to the Servers tab:



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JetPatch's Manager Logs Tips

- Another way is to search by (grep..) the time of failure. For example: "2019-12-17 11:33"

- Focus on Error & Failure severities.
  The logs is composed of Error, Failure, Warn and if configured Debug severities
  Looking for Error and Failure log entries can help poin-point the problem.

- Once you got the relevant logs lines, you might be able to understand the cause of the failure or help JetPatch's support team zoom into the problem

Discovery Log Example

Discovery Source permission uses, causing discovery problem, taken from discovery log:

2020-04-03 09:06:33,005 - ERROR [T=velopment)][AmazonClientHelper:117]- Failed to retrieve VM instances from Amazon for region {RegionName: ca-central-1,Endpoint: ec2.ca-central-1.amazonaws.com} com.amazonaws.services.ec2.model.AmazonEC2Exception: You are not authorized to perform this operation. (Service: AmazonEC2; Status Code: 403; Error Code: UnauthorizedOperation; Request ID: 48dec85c-f946-4021-88c1-046f20a69e7e)

Severity: Error
Message: The error message can imply there is a permission problem to retrieve VM information from AWS discovery source on particular region

Logging Levels

Level	Definition	Usage in Production
FATAL	Anything that is about to kill our software	Always on
ERROR	Unexpected failure which is likely to indicate a bug in our software	Always on
WARN	Failure which is likely to be a result of misconfiguration by our staff or by a customer, NOT a bug in our software	Always on
INFO	Anything interesting in the lifecycle of the system, e.g. server was added, user did something, etc. **This level should be enough to reproduce 90% of the bugs.** A log file with log level >= INFO should last at least a few days, preferably a few weeks, before rolling.	Always on
DEBUG	For troubleshooting an issue at a high level	On, but rolls out of site quickly
TRACE	For troubleshooting in detail an issue which is known to originate in a particular area of our software	Off, turned on when we are trying to debug a specific issue

Setting the Manager's Logging Level

- Changing the Manager's logging level can be done by setting the logging level in the file called: usr/shr/intigua/conf/log4j.properties
- Attribute called: LOG_LEVEL
- After setting the logging level, the Manager's application (Tomcat) needs to be restarted
- For example setting the log level to debug:

```
#LOG_LEVEL=info
#DEBUG_FILE=NULL

LOG_LEVEL=debug
DEBUG_FILE=DEBUGFILE

MAX_FILE_SIZE=10MB
MAX_FILE_INDEX=20
LOG_FOLDER=${catalina.base}/logs
```

Backup

Rotation Policy

file	rotates after	rotation times
/tomcat/default/log/access_tomcat.*.log	1 hours	10
/tomcat/default/log/catalina.out	not rotating	

file	rotate when size reaches	rotation times
/tomcat/default/log/vmanage.log	10M	20
/tomcat/default/log/debug_vmanage.log	10M	20
/var/log/nginx/*log	10M	10

Deletion Policy

file pattern	size	deletes automatically after
/tomcat/default/log/*	<50M	15 days
/tomcat/default/log/*	>1G	5 days
/tomcat/default/log/*	>50M	2 days
/tomcat/default/log/access_tomcat*	all	10 hours
/tomcat/default/ltemp/*.zip	all	30 minutes

Connector Logs Tips

- Connector logs can be downloaded from the console and are located on every endpoint machine under:
  - Linux: **`/usr/local/intigua/vAgentManager/log`**
  - Windows: **`\Program Files\Intigua\vAgentManager\log`**

- Connector logs are also searchable for problems just like the Manager logs.

- Specific log file in the same location called: **`post_install_log*`**, can be used for troubleshooting connector installation issues. It captures the installation steps including various connector parameter settings:

```
1625  1625 2020-04-22 9:51:54.227 INFO |INSTALL: created new symlink: /usr/local/intigua/vAgentManager/PackageManager/vlink/vlink that links to: `./vlink_3.9.4.238`
1625  1625 2020-04-22 9:51:54.227 INFO |GENERAL: Searching deprecated init rc.d links
1625  1625 2020-04-22 9:51:54.227 INFO |GENERAL: Deploying shell scripts
1625  1625 2020-04-22 9:51:54.227 INFO |GENERAL: vLink vars initialized:
1625  1625 2020-04-22 9:51:54.227 INFO |GENERAL:      [__ALL_VLINKS_PATH__]:/usr/local/intigua/vAgentManager/PackageManager/vlink
1625  1625 2020-04-22 9:51:54.228 INFO |GENERAL:      [__CONNECTOR_INSTANCE_ARG__]:start_instance
1625  1625 2020-04-22 9:51:54.228 INFO |GENERAL:      [__CONNECTOR_SERVICE_ARG__]:process
1625  1625 2020-04-22 9:51:54.228 INFO |GENERAL:      [__CORE_ID__]:
1625  1625 2020-04-22 9:51:54.228 INFO |GENERAL:      [__CORE_SERVER_URL__]:
1625  1625 2020-04-22 9:51:54.228 INFO |GENERAL:      [__EXE_CMD__]:/usr/local/intigua/vAgentManager/PackageManager/vlink/vlink/bin/connector64 process
```

Connector Logs Tips - Cont’

```
1625  1625 2020-04-22 9:51:54.228 INFO |GENERAL:      [__EXE_PATH__]:/usr/local/intigua/vAgentManager/PackageManager/vlink/vlink/bin/connector64
1625  1625 2020-04-22 9:51:54.228 INFO |GENERAL:      [__PID_FILE__]:/var/run/intiguaConnector
1625  1625 2020-04-22 9:51:54.228 INFO |GENERAL:      [__RUNLEVEL_PRIORITY__]:70
1625  1625 2020-04-22 9:51:54.228 INFO |GENERAL:      [__SERVICE_NAME__]:intigua
1625  1625 2020-04-22 9:51:54.228 INFO |GENERAL:      [__STOPLEVEL_PRIORITY__]:30
1625  1625 2020-04-22 9:51:54.228 INFO |GENERAL:      [__VERSION__]:3.9.4.238
1625  1625 2020-04-22 9:51:54.228 INFO |GENERAL:      [__VLINK_BINDIR__]:/usr/local/intigua/vAgentManager/PackageManager/vlink/vlink/bin
1625  1625 2020-04-22 9:51:54.228 INFO |GENERAL:      [__VLINK_LOG_DIR__]:/usr/local/intigua/vAgentManager/PackageManager/vlink/log
1625  1625 2020-04-22 9:51:54.228 INFO |GENERAL:      [__VLINK_PROC_NAME__]:connector64
1625  1625 2020-04-22 9:51:54.228 INFO |GENERAL:      [__VLINK_VER_PATH__]:/usr/local/intigua/vAgentManager/PackageManager/vlink/vlink_3.9.4.238
1625  1625 2020-04-22 9:51:54.229 INFO |GENERAL: Expanding vlink vars in:
"/usr/local/intigua/vAgentManager/PackageManager/vlink/vlink_3.9.4.238/bin/init_functions.sh"
1625  1625 2020-04-22 9:51:54.230 INFO |GENERAL: Expanding vlink vars in:
"/usr/local/intigua/vAgentManager/PackageManager/vlink/vlink_3.9.4.238/bin/uninstallHelper.sh"
1625  1625 2020-04-22 9:51:54.231 INFO |GENERAL: Done deploying shell scripts
1625  1625 2020-04-22 9:51:54.496 INFO |GENERAL: Enabling intigua service as systemd based service
```

Connector Log Example 1

1. Connector connectivity problem toJetPatch's Manager, taken from the connector's log:

local/intigua/vAgentManager/temp/Runnables/Runnables/e5f5240a-c578-4572-92ae-0f71bf4ffb7e
iid=InternalDummy timeout=3600000 policy=InternalDummy extraEnv size=8
4815 5082 2020-04-22 13:44:09.636 ERROR|HTTP : Http Request Failed. request (RegisterMsg: statusData = ?) error (Failed to connect to 10.231.143.48 port 443: Connection timed out) ErrorCode:(7)
log/post_install_log.1587577312544.txt_3.9.4.226_jdk000064400000000000000000000034155136501007530177
706 0ustar rootroot[Install Script] Running command: /var/tmp/

Severity: Error
Message: Can be easily understood… HTTPS connection times out… to Manager's IP.

Connector Log Example 2

2. Connector Installation problem, taken from the Manager's log:

2020-04-23 07:59:38,844 - ERROR [T= Worker-13][S=152a67d4>][OP=INSTALL_VLINK][R=4213-R] [LogServiceImpl:280]- ERROR admin 1.1.1.1 Failed to install Intigua 3.9.4.235 on server 1.1.1.1 java.net.UnknownHostException: 1.1.1.1 INSTALL VLINK

Severity: Error
Message: The error message can imply on some sort of host resolution problem.. Can be a DNS problem or connectivity problem

Other Folders (files and conf)

Under the files folder, you can find a manifest file (name: MANIFEST.*number*.MF). If you open this file (with a text editor) you can get additional information on the Manager system, including version and build information (fields called 'Implementation-Version' and 'Implementation-Build'):

- Manifest-Version: 1.0
- Implementation-Title: vmanage-server
- Implementation-Version: 4.1.0
- Archiver-Version: Plexus Archiver
- Built-By: root
- Implementation-Build: 56
- Implementation-Vendor-Id: com.intigua
- Created-By: Apache Maven 3.2.1
- Build-Jdk: 1.8.0_91

Under the conf folder, you can find intigua.properties and intigua.config.xml