

# Krestfield PKCloud

## Logging

version 2.0  
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## Overview

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The system produces several logs but these can be split into Processing logs and the Management log. The Management log is written to by the Management Console Web Application. The Processing Logs are written to by the underlying EzSign Server instances and interfaces

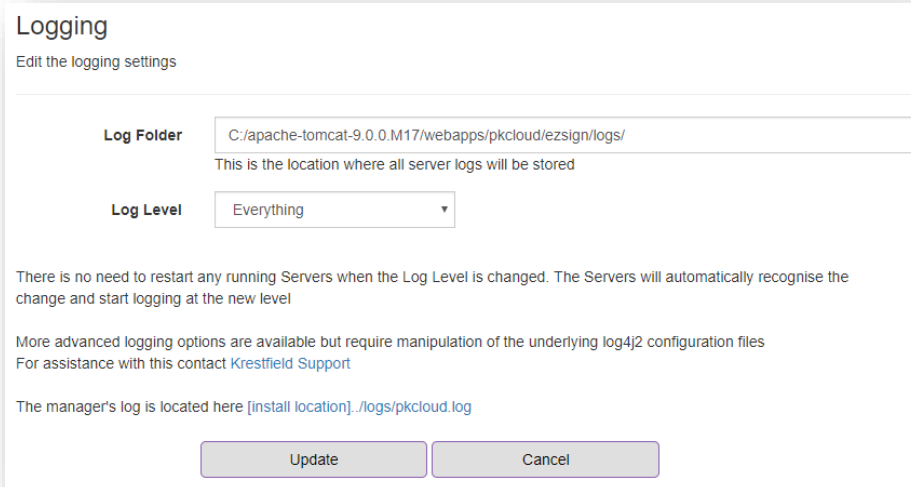
All logs are located here:

```
[Install Location]\logs\
```

e.g.

**Windows:** C:\Program Files\Krestfield\PKCloud\logs\  
**Linux/Solaris:** /opt/apps/pkcloud/logs/

But this location can be changed by navigating to the **Logging** menu and updating the **Log Folder**:



The screenshot shows a dialog box titled "Logging" with the subtitle "Edit the logging settings". It contains two main configuration fields: "Log Folder" and "Log Level". The "Log Folder" field is a text input containing the path "C:/apache-tomcat-9.0.0.M17/webapps/pkcloud/ezsign/logs/" and has a tooltip that says "This is the location where all server logs will be stored". The "Log Level" field is a dropdown menu currently set to "Everything". Below these fields, there is explanatory text: "There is no need to restart any running Servers when the Log Level is changed. The Servers will automatically recognise the change and start logging at the new level". Further down, it states: "More advanced logging options are available but require manipulation of the underlying log4j2 configuration files. For assistance with this contact [Krestfield Support](#)". At the bottom, it says: "The manager's log is located here [\[install location\]../logs/pkcloud.log](#)". At the very bottom of the dialog are two buttons: "Update" and "Cancel".

# Management Log

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The management console writes to a log file named pkcloud.log

This log contains entries relating to users logging in, generating CSRs, deleting certificates etc. as well as other debugging and system information

This log is formatted using log4j2, details of which can be found [here](#)

To alter the logging behaviour edit the `log4j2.xml` file (in line with the log4j2 specification) located in the `.\WEB-INF\classes` folder where the web app has been deployed

e.g.

```
C:\Program Files\Krestfield\PKCloud\apache-tomcat\webapps\pkcloud\WEB-INF\classes\log4j2.xml
```

If unsure of the updates required, contact Krestfield Support with your requirements

To access this log from the Management Console, select the **Logging** menu and click the following link

Logging

Edit the logging settings

**Log Folder** C:/apache-tomcat-9.0.0.M17/webapps/pkcloud/ezsign/logs/  
This is the location where all server logs will be stored

**Log Level** Everything

There is no need to restart any running Servers when the Log Level is changed. The Servers will automatically recognise the change and start logging at the new level

More advanced logging options are available but require manipulation of the underlying log4j2 configuration files  
For assistance with this contact Krestfield Support

The manager's log is located here [install location] ./logs/pkcloud.log

Update Cancel

The log may also be accessed from the Server Log View, by selecting the **Download Manager Log** button

## Server Log View

Server "1" log data

### Log Data

```
2018-11-07 14:29:31.858 [pool-2-thread-1] EVENT EzSignServerLog - T773170422936615111,Returning Message To /
Message:DNAR-0-xlw6e0TNLq0KxzRx6hP23Q0e/b9c/QOLSSuzxbGHJuTd0mjlvX672U0j1GeYdq9lgZjJNq9QRzornLHmPztVcEPjFRZ3
1tqdlfrJszCS61ZDDdkH2bfQ==
2018-11-07 14:29:31.858 [pool-2-thread-1] EVENT EzSignLog - T773170422936615111,PKIHSM,Generated 100 random
2018-11-07 14:29:31.858 [pool-2-thread-1] EVENT EzSignLog - T773170422936615111,PKIHSM,Generating 100 random
2018-11-07 14:29:31.858 [pool-2-thread-1] EVENT EzSignServerLog - T773170422936615111,Received Message From
Message:RAND-PKIHSM-100
2018-11-07 14:29:31.856 [Thread-2] DEBUG EzSignServerLog - Found worker instance 1 to process message
2018-11-07 14:29:31.856 [Thread-2] DEBUG EzSignServerLog - Accepted connection from 127.0.0.1
2018-11-07 14:29:31.061 [pool-2-thread-5] EVENT EzSignServerLog - T628070422135839604,Returning Message To /
Message:DNAR-0-gj21I6UTQ+3JusMBH5Bh4+/rogBCITU1ynfjY4GIPpWC80upYISrt66nyN7EDEaw1uIcCIiybqFR1s+++EcunTmak8vtN
S3KRZHZX76W0U+opZ7pjjN9Q==
2018-11-07 14:29:31.060 [pool-2-thread-5] EVENT EzSignLog - T628070422135839604,PKIHSM,Generated 100 random
2018-11-07 14:29:31.060 [pool-2-thread-5] EVENT EzSignLog - T628070422135839604,PKIHSM,Generating 100 random
2018-11-07 14:29:31.057 [pool-2-thread-5] EVENT EzSignServerLog - T628070422135839604,Received Message From
```

Download This Log File

Refresh

Other log files:

Download Rest Log

Download Manager Log

# Processing Logs

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## Server Logs

These files will contain the main server logs including the transaction logs relating to operations such as signature generation, verification, random number generation etc.

There will be one file per server of the form `ezsign_s[server number].log` e.g. if you were running two servers, the following files would exist: `ezsign_s1.log`, `ezsign_s2.log`

By default these log files will rollover once a day or when they reach 100Mb in size when they will be zipped and placed in a date named folder at the same location (e.g. `./2020-01/ezsign_s1-2020-01-22-1.log.gz`)

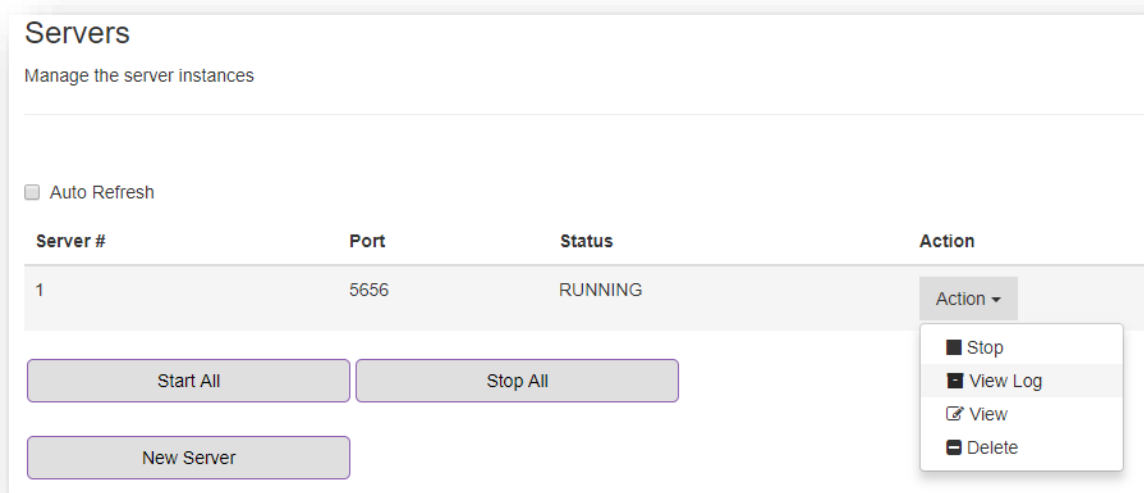
These files are formatted using log4j2, details of which can be found [here](#)

To alter the logging behaviour of these files edit the `log4j2_template.xml` file (in line with the log4j2 specification) located at the WEB-INF folder in the application deployment location e.g.

```
C:\Program Files\Krestfield\PKCloud\apache-tomcat\webapps\pkcloud\WEB-INF\classes\log4j2.xml
```

If unsure, contact Krestfield Support with your requirements. If the `log4j2_template.xml` file is edited, be sure to preserve the `[LOG_FILENAME]` and `[LOG_FOLDER]` placeholders as these are replaced by the Management Application when a server is started

To view these logs from the Management Console, select the **Servers** menu. From the Action drop down, select **View Log** for the server whose log you wish to view



## Restful Server Logs

These files contain debug information written by the restful interface. They will include details when a user authenticates to the rest API etc.

There will be one file per server of the form `ezsign_r[server number].log` e.g. if you were running two servers, the following files would exist: `ezsign_r1.log`, `ezsign_r2.log`

## Output and Error Logs

The following log files contain output and system error information that may be useful during debugging purposes. These logs will not contain any transaction data but may be required by support to assist with any queries. If an issue is encountered the Support team may request these logs

- Rest api error log  
`r[server number].err` e.g. `r1.err`
- Rest api output log  
`r[server number].out` e.g. `r1.out`
- Server error log  
`s[server number].err` e.g. `s1.err`
- Server output log  
`s[server number].out` e.g. `s1.out`