

# Documentation Addendum:

## New Features in StarLicense 1.3x

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## What's New in this Release

This release of the StarLicense Server introduces the following new features and improvements:

- Improved logging and journaling
- Support for Solaris x86 and Linux on System Z

Appendixes:

- Updated documentation for journal files
- Advanced Client Configuration on UNIX: Using DNS Resolution
- UNIX Troubleshooting Hints

## **Improved logging and journaling**

The Journal and Server Logs now use ISO formatted timestamps - "YYYY-MM-DD HH:MM:DD[.mmm]".

The journal file name is now of the form "YYYY-MM-DD.jrn".

Some systems now provide millisecond resolution in the timestamps.

Journal entries are now displayed as full words rather than single character codes.

A new disposition "Revoked" has been added to the Journal to identify agency-directed check-in events. Typically these may be caused by clients disconnecting without checking in (in the case of "hard-licenses") or because the soft-license grace period has expired.

A new column "Grace Period" has been added to the Journal. A non-zero value indicates the number of seconds associated with a soft-license. A zero value indicates that soft-license policy is not in use.

A new column "Reason" has been added to the Journal to provide details for the disposition.

## **Updated documentation for journal files**

The following information replaces the description of journal contents documented on the "Logging License Activity" page (under Managing License Servers) of StarLicense for Windows Manager Help, and documented for the server-journallevel-set parameter in the starlic-admin Command Reference chapter of StarLicense Server for UNIX User's Guide:

## Introduction to Journaling:

The Journal feature provides a record of license activity. The information is delimited by quotation marks and commas so it can be imported into another application, such as Microsoft Excel, for further analysis or reporting.

You can record the activity by service (license) and/or by client checkout. In the following example journal entries, journaling was configured to show both service and client activity; the first two lines show the client and service data for a Checkout, and the third and fourth lines show data for a Checkin.

```
"2010-07-27 16:32:40.032", "Client", "Checked-Out", "Success", "127.0.0.1", 60147, "SQ", "/usr/share/starlicense/client_tester", 19595, "0804B018", 30, "None"
```

```
"2010-07-27 16:32:40.032", "Service", "Checked-Out", "Success", "SQ9999-01-01 5", 5, 1, 0, 0, 30, "None"
```

```
"2010-07-27 16:32:42.023", "Client", "Checked-In", "Success", "127.0.0.1", 60147, "SQ", "/usr/share/starlicense/client_tester", 19595, "0804B018", 30, "Client initiated check-in"
```

```
"2010-07-27 16:32:42.023", "Service", "Checked-In", "Success", "SQ9999-01-01 5", 5, 0, 1, 0, 30, "Client initiated check-in"
```

## Enabling Journaling on Windows:

1. In StarLicense Manager, right-click on the server icon and select Configuration.
2. Select the Logging panel
3. Click the Enable checkbox under the Journaling option.
4. Select whether you want to record the activity By License and/or By Checkout.
5. Specify how many days to retain the journal, or enter 0 (zero) if you want to retain the journal indefinitely.
6. When you are ready to write the activity to the journal, disable the Journaling option by deselecting the Enable checkbox.

The journal is created with a filename of YYYY-MM-DD.jrn and stored in the StarQuest\StarLicense\Logs subdirectory of the Shared Documents folder on the local computer.

On Windows Server 2003, Windows XP, and Windows 2000, the journals are located in

```
C:\Documents and Settings\All Users\Documents\StarQuest\StarLicense\Logs
```

On Windows Vista, Windows Server 2008, and Windows 7, the journals are located in

```
C:\Users\Public\Shared Documents\StarQuest\StarLicense\Logs
```

## Enabling Journaling on UNIX:

Use the `server-journallevel-set` option of the `starlic-admin` command to enable journaling:

### Example:

```
# cd /opt/starlicense
# ./starlic-admin server-journallevel-set 2
Ok - changed from 0x0000 to 0x0002
```

Alternatively, you can use a text editor to edit the `JournalLevel` field in the [Global] section of `/etc/starlicense.rc`.

Restart the License Server daemon to apply your changes.

The following tables list the `JournalLevel` values:

JournalLevel Value	Description
0	No journaling of license activity
1	Captures Service (License) statistics
2	Captures Client statistics
3	Captures both Client and License statistics

The `server-journalretain-set` parameter of `starlic-admin` (or editing the `JournalRetain` field of `/etc/starlicense.rc`) sets the number of days that the journal of license activity will be retained. Specifying a value of 0 (zero) retains the journal indefinitely.

### Example:

```
# ./starlic-admin server-journalretain-set 30
Ok - changed from 0 to 30 days
```

The journal is created with a filename of `YYYY-MM-DD.jrn` and stored in the `/var/tmp` directory.

## Contents of the Journal file:

The following tables describe the data that is written to the journal for both Client and Service activity.

Journal Data for Clients		
Field	Data	Description
Timestamp	" YYYY-MM-DD HH:MM:DD[.mmm]"	the time of the license activity
Record Type	"Client"	indicates that the journal activity is for a Client
Disposition	"Checked-In", "Checked-Out" or "Revoked",	indicates whether the license was checked in, checked out, or revoked
Status	"Success" or "Failure"	indicates whether the license checkin or checkout was successful or failed
Client IP	nnn.nnn.nnn.nnn	the IP address of the client that is checking the license in or out
Client Port	nnnn	the number of the TCP port that the client is using for communications
Product ID	PP (2-byte product ID)	an ID, such as SQ for StarSQL, that identifies which StarQuest product is licensed. See table below.
App name	"xxxxxxx"	the name of the application that is checking the license in or out
Process ID	nnnn	the Process ID of the application checking the license in or out
Client ID	"nnnnnnnn"	an ID assigned to the client by the application checking the license in or out
Grace Period	n	number of seconds associated with a soft-license. A zero value indicates that soft-license policy is not in use
Reason	"text"	Reason for the disposition.

<b>Journal Data for Service (Licenses)</b>		
Field	Data	Description
Timestamp	"YYYY-MM-DD HH:MM:DD[.mmm]"	the time of the license activity
Record Type	"Service"	indicates that the journal activity is for a Service.
Disposition	"Checked-In", "Checked-Out" or "Revoked",	indicates whether the license was checked in, checked out, or revoked.
Status	"Success" or "Failure"	indicates whether the license checkin or checkout was successful or failed
Product ID, License expiration, and License count	"PPyyyyymmdd nnn"	the product ID, such as SQ for StarSQL, that identifies which StarQuest product is licensed (See table below), the date the license expires (a date of 9999-01-01 indicates a permanent license) and the number of checkouts that the license allows, or 0 (zero) if the license is for unlimited use.
License count	nnn	the number of checkouts that the license allows, or 0 (zero) if the license is for unlimited use.
Checkouts	nnn	the number of licenses that are currently checked out
High water mark	nnn	the maximum number of licenses that have been checked out since the server was started
Failure	nnn	the number of checkout failures against the license since the server was started
Grace Period	n	number of seconds associated with a soft-license. A zero value indicates that soft-license policy is not in use
Reason	"text"	Reason for the disposition.

## StarQuest Product IDs

Product	Product ID
Client Access for UNIX	CA
Data Replicator Manager (SQDR)	DR
SQDR Plus for iSeries	A+
SQDR Plus for UDB (Linux & UNIX)	U+
SQDR Plus for UDB (Windows)	W+
StarPipes	SP
StarSQL <sup>1</sup>	SQ
StarSQL for iSeries <sup>2</sup>	CA
StarSQL for UDB <sup>3</sup>	UX

1. StarSQL is comprised of StarSQL for Windows, StarSQL for UNIX, and StarSQL for Java. Any variant of StarSQL can use the same license. StarSQL is capable of connecting to any supported host.

2. StarSQL for iSeries only supports connections to DB2/400 or DB2/i5OS.

3. StarSQL for UDB only supports connections to DB2 UDB for Linux, UNIX & Windows.

## Disposition Reasons

Connection closed
Client initiated check-in
License removal
Revoked by administrator during grace period
None

## Advanced Client Configuration on UNIX: Using DNS Resolution

The StarLicense service is initially configured with DNS resolution enabled with a symbolic name of starlic for the license server. If you install and configure a primary license server with the default DNS hostname that uses the default port 4999 for communication, the client computers can access the license server with no additional configuration of the client.

To change the default hostname of the license server that a client will use, create this entry in the [Global] section of /etc/starlicense.rc on the client machine, using the desired hostname in place of licserver.mycompany.com.

```
DNSServerName=licserver.mycompany.com
```

To disable the DNS resolution feature, create this entry in the [Global] section of /etc/starlicense.rc on the client machine:

```
DNSServerNameDisable=1
```

On Windows, these parameters are stored in the registry; see **Using DNS Resolution under Configuring a License Server** in the **StarLicense Manager Help** for the equivalent function on Windows.

## **UNIX Troubleshooting Hints**

If the system has more than one IP address, make sure that the listener is configured for 0.0.0.0, or configure the listener for a particular IP address and make sure that the client is configured for that same IP address.