
RIVERWARE ROAMING LICENSE USER GUIDE

This document is for users who are running RiverWare with a network floating license.

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INTRODUCTION

A RiverWare network floating license can be checked out from the license server to a system that will subsequently be physically disconnected from the network for a period of time. This allows RiverWare users to disconnect their laptop from the corporate network and continue to use RiverWare for a specified number of days. The temporarily checked out license is called a “roaming license.”

- A roaming license can be used for the number of days specified by the user (up to the maximum allowed 30 days) when the license was checked out from the network license server. It is checked back in to the license server automatically at the end of the specified days. It can be checked back in to the license pool early if desired.

- Once the license is checked out and the client machine is disconnected from the network, the license will behave as a node-locked, uncounted license on the disconnected system. This means unlimited RiverWare sessions can be started on the system.
- While a roaming license is checked out, the count of available licenses on the network license server is reduced by one.
- If the network floating license expires before the roaming license is checked back in to the license pool, the roaming license will expire on the same day as the network floating license.
- The roaming license will be available on the system until midnight on the last day of the roam. For example, if you specify one day, the license is available until midnight tomorrow.
- The license roaming operation is controlled by setting the environment variable RLM_ROAM on the will-be-disconnected system.
- RiverWare license file cadswes.lic must be placed on each system locally where a roaming license is to be used.

THE ROAMING LICENSE FILE

Started from March 1, 2012, all RiverWare floating licenses will be issued with the roaming capability enabled. For users who have a floating license file that was issued before March 1, 2012, please e-mail installsupport@colorado.edu to request a new license file.

A roaming license file contains a license key "rlm_roam" in the cadswes.lic file. The following is an example of the roaming license file (showing the lines between "# license key start" and "# license key end"):

```
HOST riverpc 001122abcdef 5099
ISV cadswes
LICENSE cadswes riverware 100.0 31-dec-2012 5 issuer=CADSWES
  customer="Happy Engineers" _ck=5fdafc8ac2 sig="60PG4529WPB1632PP8RPA
  UXVQA8UJU7SDU49KQ822M09U5GTAXKJCAP1DKM3K7S14SD54NG04U4G"
LICENSE cadswes rlm_roam 100.0 31-dec-2012 uncounted hostid=ANY
  issuer=CADSWES customer="Happy Engineers" _ck=e11efc375f sig="60PG45
  80HAN9DW1C7DUFT57URJ882THBVU3X0S0C08A0BV5XWXQFB5CTTFRJ8T9AA7KD5ENE8F
  PG"
```

HOW TO CHECK OUT A ROAMING LICENSE

Prerequisite

Before a roaming license can be checked out, the following conditions are required:

- The network floating license must be already started and running on the license server.
- The system that will be disconnected from the network must connect to the license server and be able to start RiverWare.
- Since license roaming is controlled by setting the environment variable RLM_ROAM on the will-be-disconnected system, make sure this variable is NOT set when starting RiverWare using the regular network floating license.
- A copy of the cadswes.lic file must be present in a location that is local to the will-be-disconnected system. Save a copy of the network floating license file cadswes.lic in the parent directory (i.e., one level up) from

where RiverWare is installed. For example, if RiverWare 6.4 is installed in C:\CADSWES\RiverWare 6.4\ folder, then save the cadswes.lic in C:\CADSWES\ folder.

- If the total available network licenses has already reached the limit (the allowed concurrent RiverWare sessions specified in the license file), then a roaming license cannot be checked out.

Steps for Checking Out a Roaming License

- Close all opened RiverWare sessions on the system.
- Open an Environment Variables window.
- From the Environment Variables window, create the variable named RLM_ROAM and set the variable value to the number of days that you would like to use the roaming license. Enter 1 for one day and 2 for two days, etc., up to the maximum allowed 30 days.
- To set the variable:
 - In the Environment Variables window, under the User variables for <user login name>, click on New... button.
 - In the New User Variable window, enter RLM_ROAM for the Variable name and enter a number (the number of days that you want to check out the roaming license) for the Variable value.

Notes: If the number exceeds the default number of 30 days, the user will receive the following error from a DOS window when starting RiverWare:

```
Roam time exceeds maximum/expiration (-27)
```

- Click OK to close the Environment Variables window.
- Start RiverWare and then close RiverWare immediately.
- Disconnect the system from the network.
- Start RiverWare. If RiverWare started successfully, then the roaming license has been checked out successfully.
- After a roaming license is checked out successfully, the variable RLM_ROAM can be deleted from the disconnected system. While the RLM_ROAM is not set:
 - When the system is disconnected from the license server, the checked out roaming license will be used.
 - When the system is connected to the license server, the regular network floating license will be used.
- The checked out roaming license will be automatically checked back in to the license server at the end of the specified days.

When the System is Connected to the Network

After the initial checkout of the roaming license, the value of the RLM_ROAM environment variable will affect how the roaming license works when the system is connected to the network. For example, if the RLM_ROAM value was set to 7 when the roaming license was initially checked out:

- If the RLM_ROAM value stays at 7, the license will always be available to you 7 days after the last time you started RiverWare.
- If the RLM_ROAM value is re-set to a number less than 7, the license remain available to you 7 days after the initial check out date.
- If the RLM_ROAM value is re-set to a number greater than 7, the license will be available to you for the new number of days you specified after the last time you started RiverWare.
- If the RLM_ROAM value is re-set to 0, the roaming license will still be available on the disconnected system for 7 days.

- If the RLM_ROAM variable is deleted from the user's environment, the roaming license will still be available on the disconnected system for 7 days.

To avoid accidentally extended the roaming period, it is recommended to re-set the RLM_ROAM value to 0 or delete the variable RLM_ROAM from the user's environment after the roaming license is checked out. This way the original roaming end date will remain unchanged, and no subsequent checkouts of the license will alter the final roaming date.

When the System is Disconnected from the Network

When the system is disconnected from the network after the initial checkout of the roaming license:

- During the time your system is disconnected, the environment variable RLM_ROAM must be deleted or remain set to a non-negative value. This license will be available on this system for the number of days you requested. Your system does not need to be connected to the license server from which the license was granted.
- On the network, the license server will show the license has been checked out to you. The total available licenses will be reduced by one.
- When RiverWare starts on the disconnected system, a License Notification window will appear displaying the number of days left for using the roaming license.

"Your riverware license will expires in 2 days"

RETURN A ROAMING LICENSE EARLY

A checked out roaming license can be returned to the network license pool before it expires.

- The license returning operation must be done when the system is connected to the network so the original license server can be contacted.
- If the original network license server is shut down before the roaming license expires, the checked out roaming license cannot be returned early. The user has to wait until the original license server is up and running again, or let the roaming license expire.
- On the license server system, after the original license server manager has restarted, the checked out roaming license(s) remains in effect. That means the available license count will still be the same, which is the total available licenses (the allowed concurrent RiverWare sessions specified in the license file) minus the checked out roaming license(s).

Return the Roaming License Before It Expires

- Reconnect the system to the network.
- Edit the environment variable RLM_ROAM and set the number to -1.
- Start RiverWare and then exit RiverWare immediately. The roaming license will be returned to the license pool on the license server.
- Delete the environment variable RLM_ROAM from the user's environment if it still exists. (From the Environment Variables window, select the RLM_ROAM variable and click the Delete button.)

Switch Back to Use the Network Floating License

- To start using the regular network floating license again, the environment variable RLM_ROAM must be deleted from the user's environment.
- If the RLM_ROAM variable still exists in the user's environment after the roaming license has been returned:
 - When RLM_ROAM is set to a negative number, RiverWare cannot check out a regular network floating license from the license server. The following error will be displayed in a DOS window when starting RiverWare:

```
No license for product (-1)
```
 - When RLM_ROAM is set to a positive number greater than or equal to 1, and the system is connected to the license server, a roaming license will be checked out again.
- If the license server is not available, the following error will be displayed in a DOS window when starting RiverWare:

```
Communications error with license server (-17)
```

Remove a Local Roaming License Unconditionally

When a local roamed license cannot be checked back into the network license pool early, set the RLM_ROAM environment variable to -100 allows the local roamed license to be returned unconditionally.

- Before performing a checkout of the license (this means before starting a RiverWare session), set the RLM_ROAM environment variable to -100.
- Start RiverWare.
- The checkout process still attempts to return the roamed license early. But, if the license server cannot process the request, the local roaming license information will still be removed on the client machine.
- Close RiverWare.
- After the roaming license returned successfully, the RLM_ROAM variable must be deleted, or set to a new positive number if checking out a new roaming license is desired. If the RLM_ROAM is still set to -100, RiverWare cannot be started, even when a network license is available. User gets the error message "No license for product (-1)."

If you still get error after the roamed license has been returned to the license pool or after the RLM_ROAM variable has been correctly set, sometimes restart the machine will clear up the tangled roaming data left on the system.

MONITORING THE ROAMING LICENSE ON THE NETWORK

The license server administrative tool RLM Web Server is provided to monitor license usage on the network. The RLM web server is an embedded web server that has a web-based interface. A web browser is required to use the web server. On RiverWare Sponsor & User Pages <http://riverware.org/users/>, the document "License Server Configuration Guide (for floating license users only)" contains the information of how to start and use the RLM Web Server. Here we will only demonstrate how to verify the roaming license status.

RLM Web Server can be viewed from any host that is connected to the local network. You need to obtain the license server host name and the port number that the web server is running on. The person who started the license server manager has this information.

Open the RLM Web Server

To start a RLM Web Server, point your browser to:

http://ServerHostName:PortNumber

For example:

http://rserver:5054

To view the current status of the license server and license usage, from the main page “Reprise License Server Administration,” select manual item “Status” on the left. You will get a view titled “Status for “rlm” on <hostname> (port #####).” This screen displays all of the active RLM license servers on the system. For example:

The screenshot shows the Reprise License Server Administration web interface. The main content area displays the status for "rlm" on "danshuei" (port 5053). The interface includes a navigation menu on the left, a main content area with a title bar, and several data tables and buttons.

RLM Administration Commands

Choose a command from the list below

- Status
- Shutdown
- Reread/Restart Servers
- Switch Reportlog
- New Reportlog
- Switch Debuglog
- Manage Windows Service
- Activate License
- Diagnostics
- RLM Manual...
- System Info
- About...

Reprise License Server Administration
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Status for "rlm" on danshuei (port 5053)

RLM software version	v9.0 (build:2)
RLM comm version	v1.1
debug log file	roam0224.log
license files	danshuei-floating-roam.lic

rlm Statistics	Since Start	Since Midnight	Recent
Start time	02/24 12:16:16	02/24 12:16:16	02/24 14:48:26
Messages	1 (0/sec)	1 (0/sec)	0 (0/sec)
Connections	1 (0/sec)	1 (0/sec)	0 (0/sec)

[EDIT rlm Options](#)
[SHOW rlm Debug Log](#)

ISV Servers											
Name	port	Running	Restarts	Server Status	License Usage	Debug Log	REREAD	OPTIONS	TRANSFER	SHUTDOWN	
cadswes	60666	Yes	0	cadswes							

Click on the “cadswes” button under Server Status. A view of “ISV cadswes status on <hostname> (port #####)” then displays the overall cadswes license server status on the system. To view the license usage from here, under License Pool Status, click on “usage...” under Show License Usage. The following are some examples:

Before a Roaming License is Checked Out

A 5-seat (under “count”) floating license is running and 2 (under “inuse”) licenses are checked out.

License pool status

Product	Pool	Ver	Expires	count	soft lim	inuse	res	hostid	timeout	share	transactions	Show License Usage
riverware	1	100.0	31-dec-2012	5	5	2	0		0	None	2	usage...
rlm_roam	2	100.0	31-dec-2012	Uncounted	0	0	0	ANY	0	None	0	usage...

Clicking “Usage...” for product “riverware” shows user “Jessica” on host “bluedell” and user “jhl” on host “danshuei” are the two users who have checked out a license.

License status for ISV cadswes

Product	Pool	Ver	user	host	PID	req ver	# lic	# res	Out time	Click to REMOVE
riverware	1	100.0	jessica	bluedell	3404	6.1	1	0	02/23 15:00	Remove
riverware	1	100.0	jhl	danshuei	5148	6.1	1	0	02/23 15:02	Remove

After a Roaming License is Checked Out

A 5-seat (under “count”) floating license is running and 2 (under “inuse”) licenses are checked out. One of the two licenses in use is a roaming license (under “roam”).

License pool status

Product	Pool	Ver	Expires	count	soft lim	inuse	res	roam	hostid	timeout	share	transactions	Show License Usage
riverware	1	100.0	31-dec-2012	5	5	2	0	1		0	None	1	usage...
rlm_roam	2	100.0	31-dec-2012	Uncounted	0	0	0	0	ANY	0	None	0	usage...

Clicking “Usage...” for product “riverware” shows user “Jessica” on host “bluedell” has checked out a roaming license on 02/23 15:08 (under “Out time”) and it is scheduled to be returned to the license pool on the midnight of 02/26 (under “in (hold) time”). User “jhl” on host “danshuei” has checked out a regular floating license on 02/24 12:16.

License status for ISV cadswes

Product	Pool	Ver	user	host	PID	req ver	# lic	# res	Out time	In (hold) time	Click to REMOVE
riverware	1	100.0	jessica	bluedell	0	6.1	1	0	02/23 15:08	02/26 00:00	Remove
riverware	1	100.0	jhl	danshuei	4952	6.1	1	0	02/24 12:16	None	Remove

TROUBLE SHOOTING

If RiverWare encounters any problems when trying to access a license file, a DOS window will appear and display an error message. The error message can be viewed in one of the following two ways:

- The error message may be cut off by the default sized DOS window. Use the Maximize button to enlarge the DOS window to display the entire error message.
- The location of the error output file is displayed at the bottom of the DOS window after the line "The error message has also been written to the file:"

The following are some of the common errors (displayed in the DOS window) and solutions.

- **Error:**
All licenses in use (-22)

Cause:
The total available network floating licenses have already reached the limit (normally 5 concurrent RiverWare sessions).

Solution:
One of the active RiverWare sessions has to stop before another license can be checked out.
- **Error:**
Bad server hostname in license file or port@host (-43)

Cause:
The host name of the license server cannot be resolved by the name server. This normally indicates that the client machine cannot connect to the license server. If this is a roaming license and the machine is not connected to the license server, it may also indicate that the roaming license has expired.

Solution:
Contact your network system administrator. If this is an expired roaming license, reconnect the machine to the license server.
- **Error:**
Cannot checkout rlm_roam license (-34)

Cause:
RiverWare cannot check out a roaming license.

Solution:
Contact the person in your organization who is in charge of RiverWare network floating license administration. Verify that the floating license file contains the license key for license roaming.
- **Error:**
Communications error with license server (-17)

Cause:
RiverWare cannot communicate with the license server. This normally indicates the license server is down.

Solution:
Start the license server on the network.

- **Error:**
License has expired (-3)

Cause:
The checked out roaming license has expired.

Solution:
Delete the RLM_ROAM variable on the system and connect the system to the network to use the network floating license.
- **Error:**
No license for product (-1)

Cause:
After the roaming license has been returned to the license pool, the RLM_ROAM environment variable has not been deleted from the system, or has not been set to a new positive number if checking out a new roaming license is desired.

Solution:
Delete the variable RLM_ROAM from the user's environment.
- **Error:**
Roam time exceeds maximum/expiration (-27)

Cause:
The number of days set for the RLM_ROAM variable exceeds the maximum allowed 30 days.

Solution:
In the Environment Variables window, enter a value number that is less than or equal to 30 for the RLM_ROAM variable.

CONTACT RIVERWARE LICENSE/INSTALLATION SUPPORT

To contact RiverWare license and installation support, please e-mail the following:

installsupport@colorado.edu