# RippleDown Administrator Guide

This Administrator guide provides detailed information including:

- Interfaces
- Managing users and user groups
- Managing new projects
- Changing settings
- Upgrading an existing RippleDown installation
- Restarting RippleDown services
- Archive back-up
- Troubleshooting

More information regarding RippleDown, including training modules and product help, can be found at:

**www.pks.healthcare/support**

# Overview

The RippleDown Administrator is responsible for the following tasks:

**Manage users & groups**

- View user groups
- Add user groups
- Remove user groups
- Modify user group permissions
- Rename user groups

**Manage projects**

- Set up a new project
- Interface project to Laboratory Information System (LIS)
  - Describe the three interfaces:
    - Shared directory
    - Socket
    - SOAP (Web)
- Manage LIS attributes
- Change project settings
- Control global autovalidation setting
- Define common attributes on the server
- Interpret input message sent from LIS
- Interpret RippleDown output to LIS
- Copy and rename project

**Perform RippleDown installations and upgrades**

- Install RippleDown server
- Install RippleDown client
- Upgrade existing RippleDown installation

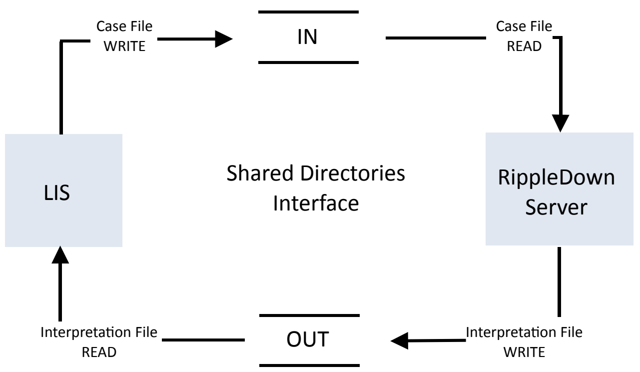
**Monitor and maintain the operation of RippleDown**

- Restart RippleDown server
- Backup the archive
- Troubleshooting
- Email an incident report

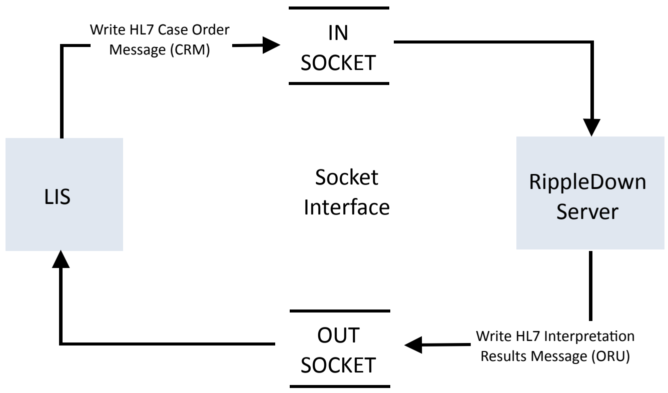
## Interfaces

There are three types of LIS RippleDown interfaces:

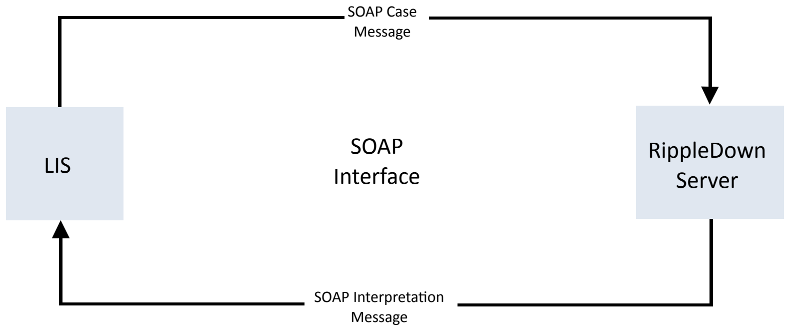
**Shared Directories**




**Socket**




**SOAP (WEB Services)**



**RFI = Request for Interpretation**

This is a request from the LIS to RippleDown to provide an interpretative comment on a single case. The message will include one or more previous pathology test orders and results in OBR / OBX segments, providing a history of the patient's results.

The Request will be acknowledged by RippleDown with a HL7 Order Response message (ORR).

Once the Request has been acknowledged, RippleDown will process the Request and, after validation, return the corresponding Interpretation Result message to the LIS.

**Interpretation message**

This is the requested interpretation that RippleDown returns to the Laboratory Information System. This transaction is implemented as a HL7 Unsolicited Observational Results message (ORU).

It consists of core parts of the original order as well as the text of the interpretation, the abnormality indicator, and the review recommendation.

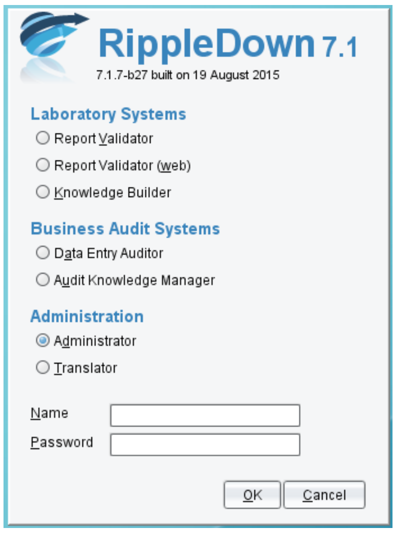
The receipt of this message by the LIS is confirmed via a simple acknowledgment (ACK – HL7 V2.3 section 7.2.1) message.

## Using RippleDown Administrator

The RippleDown Administrator application is required to manage users and user groups, as well as managing projects.

To open RippleDown Administrator:

- Select the ´**Administrator**´ from the menu
- Enter your username and password and click ´**OK**´ to open the Administrator




## Managing Users and User Groups

RippleDown Administrator is used to manage users and user groups for the RippleDown applications.

Individual user logins and user groups can easily be created in RippleDown Administrator. A user group is a named set of user permissions that can be defined to allow you to grant permissions to the applications, projects and queues for each user.

Specifically, RippleDown Administrator can be used for:

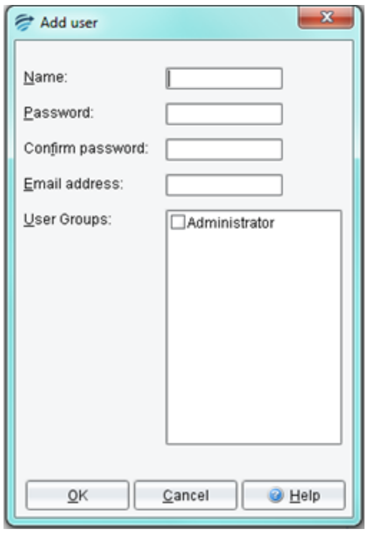
- Managing user accounts
- Managing user groups
- Generating a user and group report

It is recommended to firstly set up the new user groups and their associated permissions, before adding specific users to the group/s.

## Adding or modifying users

To add or modify a user, from the ´Users´ menu select ´**Manage users...**´. The ´Users´ box will then open and show the list of users currently active in RippleDown.

You can then choose to add, modify or remove users.




### Add

- Within the user box, select ´**Add**´ which will open the ´**Add user**´ box.
  enter the name and password of new user.
- Confirm the password.
- Enter the optional email address. This will be used in instances where cases need to be referred to this user from RippleDown Auditor of Validator.
- Select the user group that this user should belong to. If the list of user groups is empty, you will need to add a user group/s and then modify the user you have created.
- Click ´**OK**´.

### Modify

- Click on the user.
- Click on ´**Modify**´.
- Edit as required and click ´**OK**´.

### Remove

- Click on the user name.
- Click on ´**Remove**´ and you will be asked to confirm the action.
- Click on ´**Yes**´ if this is correct and the user will be removed.

## Adding or modifying user groups

**Creating a new user group:**

- From the ´Users´ menu select ´**Manage user groups...**´
- Click the ´**Add**´ button and the ´**Add user group**´ box will then open.
- Enter a descriptive name for the user group.
- Select the permissions for the user group, then click ´**OK**´ to save the user group.
- You can now add users to thie group by modifying their user accounts.

**Modifying an existing user group:**

- From the ´Users´ menu select ´**Manage user groups...**´
- Select the group that required modification.
- Click the ´**Modify**´ button.
- Click the appropriate check box against the required options as follows:

  **Login Permissions** allow a user to login to the corresponding RippleDown application. The following application permissions are possible:

  - Report Validator
  - Knowledge Builder (clinical)
  - Data Entry Auditor
  - Audit Knowledge Manager
  - Administrator
  - Translator

  **Project Permissions** allow a user to access a specific project and its associated validation queues or translations. The following project permissions are possible:

  - Knowledge Builder - this allows a user to open the specific project using the Knowledge Builder
  - Original queues - this allows a user to validate the default queue for the project, or a queue defined by rules
  - Copy queues - this allows a user to review a copy queue for the project. (All copy queues are defined by rules)
  - Translations - this allows a user to open a specific translation for the project using the Translator
  - Report sections (only applicable to the Data Entry Auditor) - when a report is viewed in the Auditor, only those report sections for which a user has privileges will be shown

## Generating a User and Group report

To generate a PDF report of any of your users of user groups:

- From the Administrator menu, select ´Users´ and then **´User and Group report...´**
- A dialog box will then appear prompting you for the name and location for the report. Enter the fule name and folder name you require. Note: the file name you enter should end with the extension ¨.pdf¨. For example ¨userreport.pdf¨
- Click the **´User and Group report´** button
- After a few seconds a dialog will appear indicating that the report has been exported
- You can open the file with a PDF viewer and print if required

## New projects

To set up a new project for use by the user and interface it to the LIS, start by creating a new project.

- Shutdown RippleDown and configure the LIS to send a few cases for this panel in test mode - so that they go to the Knowledge Builder working case list.

- Start the server and the Administrator, and add the project with the appropriate settings:

    - communications settings (port if HL7; directories if Ultra)
    - panel code (s)
    - pre-validate (the RippleDown Validator setting)

- Open the project and rename and re-order attributes for this panel

- Copy and rename a project, in particular for the purposes of retaining the attribute names and attribute order

Note: If you´re an Ultra site, the two character item code and descriptiom is mapped to attribute names using the lookup feature.

## Interfacing the Project to the LIS

**Panel codes**

The panel code is the code(s) the LIS uses to refer to a project. There may be multiple panel codes per project, however a panel code can belong to only 1 project.

E.g. in LIS may have 2 test sets (panels) LP = Full Lipids and CT = screen for trigs and cholesterol. These test sets share test codes, and are both set up on the RippleDown project 'LIPIDS'. On the RippleDown side of things panels LP and CT have been mapped to the project LIPIDS (done in Administrator when project is put on-line). A new episode is created in the LIS with test set CT. The CT case is sent across the interface to the RippleDown Server. Using the mapping table, the CT case is sent to the LIPIDS project for interpretation. The interpretation is sent back to the LIS via the interface, using the panel code CT to know which test set on the episode the interpretation belongs to.

## Upgrade an existing RippleDown Installation

To upgrade an existing RippleDown installation, please refer to the RippleDown Installation guide for more detail.

## Restarting the RippleDown service

To restart the RippleDown Server after a system crash:

- Stop the server and one of each type of client
- Kill the server using the task manager
- Note that the Knowledge Builder and Administrator will also hang – kill them also with the tasks manager. The
- Validator should be OK when disconnected from the server
- Restart the server
- Note that the Validator should automatically re-connect. Start the Knowledge Builder and Administrator manually

## Archive back-up

The archive is important to maintain for diagnostic purposes, in particular, so that PKS can check upgrades against real cases, and can remotely check the "health" of knowledge bases.

At regular intervals, a backup should be made of the projects used by the Server, and all the files in the archive. The archive files can then be deleted.

## Monitoring and Dealing with Problems

| Fault | Remedial actions |
|---|---|
| Cases queuing for RippleDown, but not being interpreted | • Ensure that the server is running.<br>• Ensure that the corresponding project or projects have been added<br>• Ensure that the communications settings are correct<br>• Ensure that the "Panel" code for the project matches the file names of the cases queued up (i.e. the panel code is a substring of the file names) |
| Cases are interpreted, but not processed by the LIS | • Ensure that the LIS process responsible for processing the interpreted cases is running<br>- For Ultra this is the load_lw.dmn<br>- For PLS, this is the RippleDown machine interface |
| Cases are being processed, but all have a blank interpretation | • Ensure that the project itself has rules (i.e. is not some blank or test project)<br>• Ensure that at least one "reported conclusion" has been set by the Knowledge Builder (as evidenced by a non-blank interpretation in the "interpretation" panel)<br>• Ensure user has permissions to access the project, report sections and queues |
| All cases are being sent to Validation, even though some interpretations have been specified as "auto validate" | • Ensure that the "auto validate" setting on the Administrator is checked |
| Interpretations seen in the Knowledge Builder do not match the interpretations seen in Validation for that case when reviewed | • This may not be a problem, but may be due to the fact that the case has changed from the time it was reviewed and "approved with change" to the time it was re-interpreted in the Knowledge Builder.<br>• The most common cause is that when the case was interpreted, tests on an associated panel were still "pending". However, by the time the case was rejected and sent back to RippleDown, those tests have completed and now have values in the case, which may change the interpretation. |
| Clients unable to connect to the server | • Check Client and Server log files<br>• End any current client sessions<br>• Restart the server<br>• Notify PKS |

**About PKS**

Pacific Knowledge Systems (PKS) works with healthcare organizations around the world to better capture, manage and leverage their human expertise to improve the performance of their business and deliver better patient outcomes.

PKS owns a patented, new generation clinical expert intelligence system – RippleDown – which integrates patient data with a knowledge base that is managed by clinical domain experts, to deliver patient-specific reports, recommendation and alerts.

www.pks.healthcare/support