



# Pacific Knowledge Systems

## RippleDown User Guide: Administrator

*This document focuses on the options and tasks available to RippleDown administrators and how to utilise these tools.*

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## Overview

The RippleDown Administrator is responsible for the following tasks

1. Manage User Groups
  - View user groups
  - Add user group
  - Remove user group
  - Modify user group permissions
  - Rename user group
  
2. Deploy new projects
  - Set up a new project
  - Interface project to Laboratory Information System
    - Describe the three interfaces:
      - Shared directory
      - Socket
      - SOAP (Web)
  - Map LIS attributes
  - Change project settings
  - Control global autovalidation setting
  - Define common attributes on the server
  - Interpret input message sent from LIS
  - Interpret RippleDown output message to LIS
  - Copy and rename a project
  
3. Perform RippleDown installation and upgrades
  - Install RippleDown server
  - Install RippleDown client
  - Upgrade existing RippleDown installation
  
4. Monitor and maintain RippleDown operation
  - Restart RippleDown server
  - Backup the archive
  - Perform troubleshooting procedures
  - Email an incident report

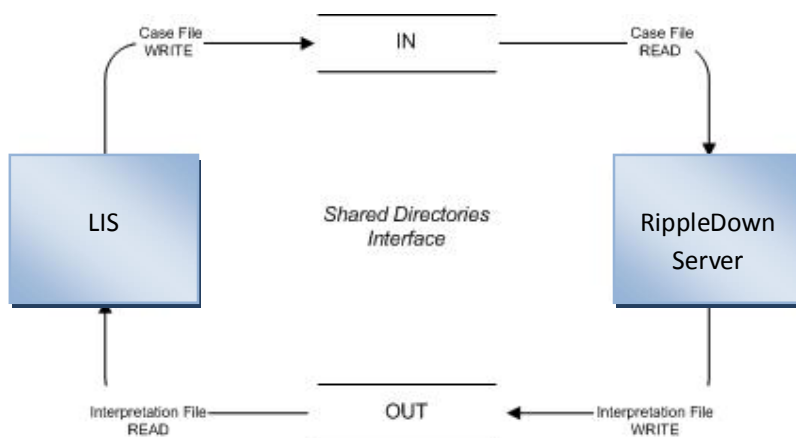
## Interfaces

There are 3 types of LIS to RippleDown interface types:

- Shared Directories
- Socket
- SOAP (WEB Services)

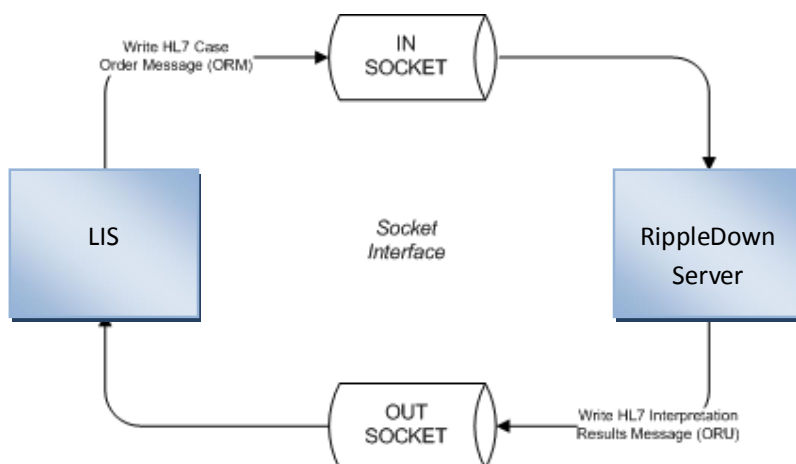
## Shared Directories

- Are used by ULTRA clients (Gribbles and IMVS)



## Socket

Used by ACT, Mater, STAR, ICPMR, BMD, Clinpath, SEALS



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

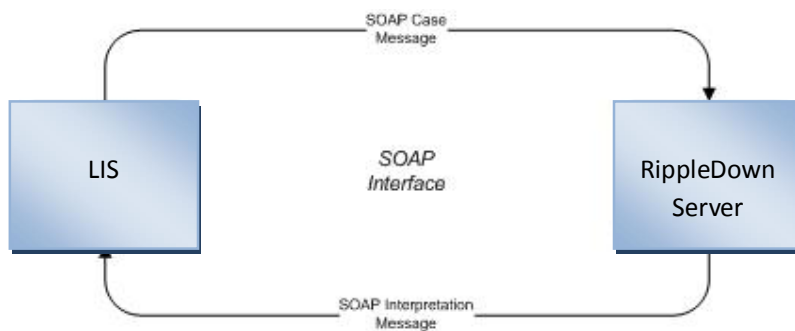
This is the requested interpretation that RippleDown returns to the Laboratory Information System. This transaction is implemented as a HL7 Unsolicited Observational Results message (ORU

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.

## SOAP (WEB Services)

Used by Phadia



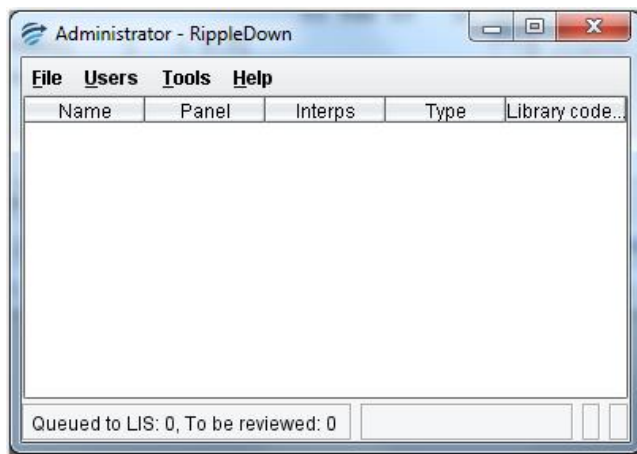
## Administrator Client

The RippleDown Administrator client application is required to manage users and user groups add projects.

1. From the menu shown below ensure the Administrator is selected:



2. Enter your username and password and click OK to open the Administrator:



## Managing Users and User Groups

The administrator client us is used to manage users and user groups for the RippleDown applications.

A user is the login name for each RippleDown user.

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.

Specific functions are

- Managing user accounts
- Adding a new user account
- Managing user groups
- Generating a user and group report

It is best to firstly set up the user groups and associated permissions and then add the users to the relevant User Group/s

## User Groups

### To modify an existing user group

1. Use the menu **Users | Manage user groups...**
2. Select the group that requires modification
3. Click the Modify button.
4. 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** allows 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.

### Create a new user group

1. Use the menu **Users | Manage user groups...**
2. Click the Add button. The Add user group dialog will appear.
3. Enter a descriptive name for the user group
4. Select the permissions for the user group, then click OK to save the user group.
5. You can now add users to this group by modifying their user accounts.

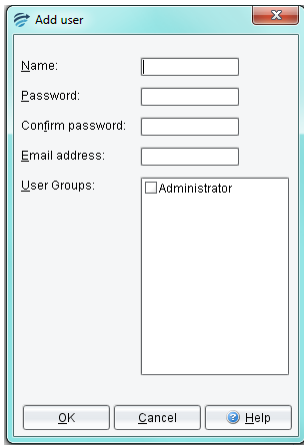
### Users

From the Users menu select Manage users...



The Users box opens and shows the list of user currently active in RippleDown

There are three options available:

|               |   |
|---------------|---|
| <b>Add</b>    | <ol style="list-style-type: none"> <li>1. Click Add to show the following:           <div data-bbox="615 241 917 682" data-label="Image">  </div> <ol style="list-style-type: none"> <li>2. Enter the name and password</li> <li>3. Confirm the password</li> <li>4. Enter the optional email address. This can be use if cases are to be referred to this user from the Auditor or Validator</li> <li>5. Select the user group that this user should belong to. If the list of user groups is empty it will be necessary to add user groups and then modify the user you have created</li> <li>6. Click OK</li> </ol> </li> </ol> |
| <b>Modify</b> | <ol style="list-style-type: none"> <li>1. Click on the user</li> <li>2. Click on Modify</li> <li>3. Edit as required and click OK</li> </ol>  |
| <b>Remove</b> | <ol style="list-style-type: none"> <li>1. Click on the user name</li> <li>2. Click on Remove and you will be asked to confirm the action</li> <li>3. Click on Yes if this is correct</li> </ol>   |

## Generating a User and Group report

To generate a PDF report of the users and user groups that have been defined:

1. Use the Administrator menu **Users | User and Group report...**
2. A dialog will appear prompting you for the name and location for the report. Enter the file name and folder name you require. Note: the file name you enter should end with the extension ".pdf", for example, "users.pdf"
3. Click the User and Group report button.
4. After a few seconds a dialog will appear indicating that the report has been exported
5. You can open the file with a PDF viewer and print if required.

The report comprises of two sections:

**Users** :The first section of the report lists each user, the groups that user is a member of, and the complete list of permissions these groups confer on that user.

**Groups**: The second section of the report lists each user group, the users in that group, and the permissions associated with that group.

## Deploy New Projects

- Interface project to Laboratory Information System
  - Describe the three interfaces:
    - Shared directory
    - Socket
    - SOAP (Web)
    - Configuring the Auditor interface
    - Configuring the Auditor interface for Labosys
- Map LIS attributes
- Change project settings
- Control global auto-validation setting
- Define common attributes on the server
  - Managing attributes in the server
- Interpret input message sent from LIS
- Interpret RippleDown output message to LIS
- Copy and rename a project

## Setting Up a New Project

To setup a new project for use by a Clinical user, and interface it to the Laboratory Information System.

- Create 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)
  - the library code prefix ( if Ultra )
  - 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.
- If an Ultra site, the 2 character item code and description 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 triglycerides and cholesterol. These test sets share test codes, and are both set up on the LW project 'LIPIDS'. On the LW 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 LW 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.

## To Rebuild an Existing Project

A suggestion:

To create a project populated with cases:

1. Export all the comments
2. PKS to obtain a copy of the project
3. This project will remain live
4. PKS to remove all rules, derived attributes, report sections and ? comment
5. PKS to place the project on site server
6. Need to modify user group permissions for this project
7. Users build Knowledge Base using the existing cases and can have rules checked by pathologist etc
8. When ready to switch – log into Administrator
9. During this switch there is a change cases may be reported with no comment
10. Note the panel code for the project to be superseded
11. From File menu select 'Remove project'
12. From File menu select 'Add project'
13. Select project and enter the panel coded noted in step 9
14. Select project type and click OK

## Changing Project Settings and Controlling Global Auto-Validation Settings

### Mapping of LIS Attributes

The IT user shall understand the use of an attribute “lookup”, i.e., how LIS item codes are mapped to attribute names.

*The first step to creating a project is to decide which test results, episode and patient elements are required. This is decided by the project expert. This information is then given to the IT Administrator, who configures the LIS to send those items in the case, to the project.*

*Next the LW rule writer will need to set the project up in knowledge builder (just with project name – otherwise blank at this stage). They will then need to log into LW Administrator and put the project on-line. Part of this includes defining the panel codes for the project.*

*Once this is done, cases will come across the interface, into the project. The values of the defined patient and episode will be populated. The unique LIS ID for each element comes into LW and can be seen in attribute Editor. In LW, attributes have internal and external names. The external refers to the LIS name, and the internal refers to the LW name. When an attribute 1<sup>st</sup> comes across into a project both the internal and external names are the same.*

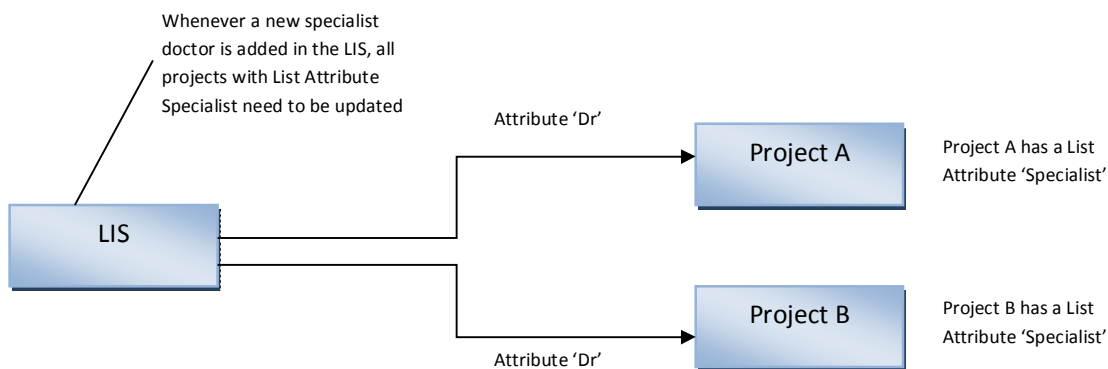
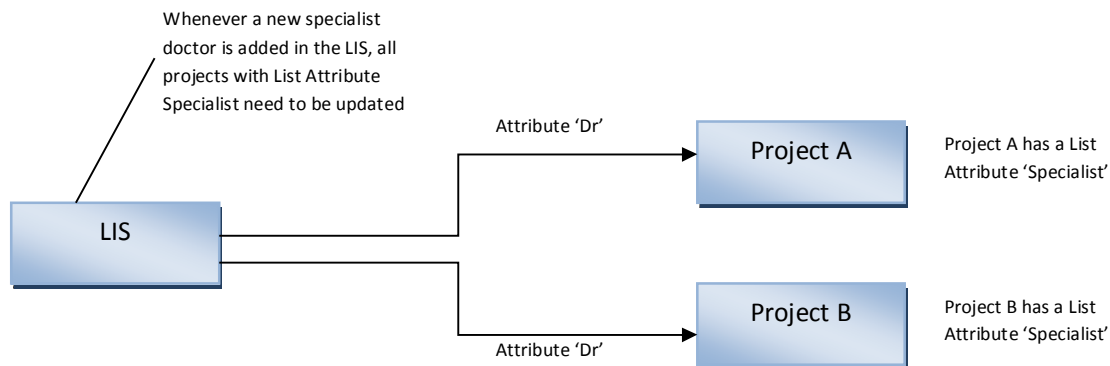
Changing a project setting, and the global auto validation flag:

- Start the server
- Add a project with a specified panel code, GL
- Remove the project
- Re-add the project with an additional panel code GTT (i.e. there are now 2 panel codes – GL, GTT)
- Whilst this procedure is a bit of a bother, it needs to be done infrequently

## System Attributes

Defining common attributes on the sever

Without this set-up system will work like this:



## Upgrade Existing RippleDown Installation

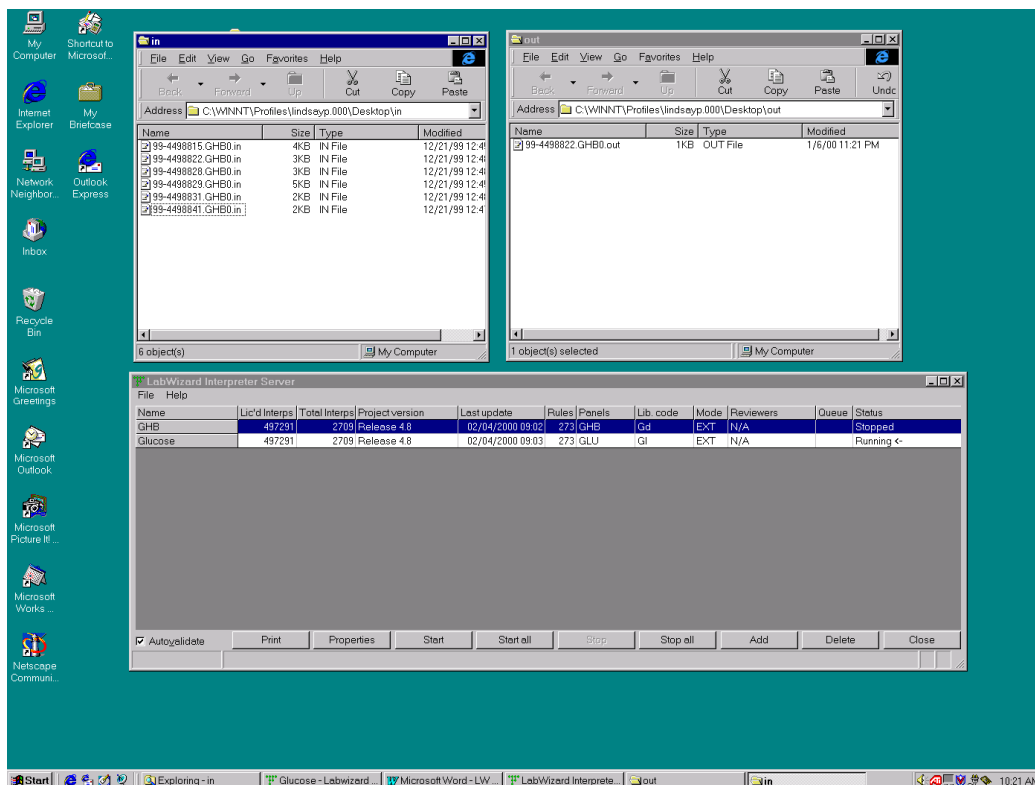
To upgrade the existing RippleDown installation with a new release, or with a patch.

- Copy the complete installation directory to another location, in case the upgrade needs to be reversed
- Read the release notes, and note any special installation instructions
- Shut down all the clients and then the server
- Replace the specified jar file (i.e. pks.jar) in the installation directory
- Restart the server, and check that no errors are detected
- Copy the new jar file to each client that has a full client installation. *(This step is not needed for clients using the "shortcut" installation)*
- Restart the clients

## RippleDown Input and Output Files

- An RFI (request for interpretation) message for the appropriate interface at this site, with all the data items sent from the LIS
- Interpretation message for the appropriate interface at this site

Show the IT users a typical Ultra or HL7 server desktop, as shown below:



## Restarting the RippleDown Service

To re-start the Interpreter Server after a system crash

- Start 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

The importance of a daily backup of the RippleDown projects.

## Monitoring and Dealing with Problems

| Fault   | Remedial Actions   |
|---|--|
| Cases queuing for RippleDown, but not being interpreted | <p>Ensure that the server is running.</p> <p>Ensure that the corresponding project or projects have been added</p> <p>Ensure that the communications settings are correct</p> <p>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)</p> |
| Cases are interpreted, but not processed by the LIS     | <p>Ensure that the LIS process responsible for processing the interpreted cases is running</p> <ul style="list-style-type: none"> <li>▪ For Ultra this is the load_lw.dmn</li> <li>▪ For PLS, this is the RippleDown machine interface</li> </ul>  |



|  |   |
|--|---|
| <p>Cases are being processed, but all have a “blank” interpretation</p>  | <p>Ensure that the project itself has rules (i.e. is not some blank or test project)</p> <p>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)</p> <p>Ensure user has permissions to access the project, report sections and queues</p>  |
| <p>All cases are being sent to Validation, even though some interpretations have been specified as “auto validate”</p>               | <p>Ensure that the “auto validate” setting on the Administrator is checked</p>  |
| <p>Interpretations seen in the Knowledge Builder do not match the interpretations seen in Validation for that case when reviewed</p> | <p>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.</p> <p>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 LW, those tests have completed and now have values in the case, which may change the interpretation.</p> |
| <p>Clients unable to connect to the server</p>   | <p>Check Client and Server log files</p> <p>End any current client sessions</p> <p>Restart the server</p> <p>Notify PKS</p>   |

## Emailing an Incident Report

To generate an Incident Request:

- Fill out an IR form
- Ensure all required fields are entered
  - Product name and version
  - Description of Problem or Enhancement (If a problem, give a sufficient description to enable the problem to be reproduced. Include screen shots if possible)
  - Knowledge Base and cases (if applicable)
- PKS support numbers and email address (Help | About | Support on any RippleDown client)

## Contact Us

For technical support, contact:

E-mail : [info@pks.com.au](mailto:info@pks.com.au)  
Phone : +61 (0)2 8313 9990  
Fax : +61 (0)2 8399 2178