

# **RDS**

## **Directory Synchronization**

# **Installation and Setup Guide**

**Software Version 3.1.1**

**For Windows, Linux and UNIX operating systems**

**September 16, 2009**

---

RepliWeb, Inc., 6441 Lyons Road, Coconut Creek, FL 33073

**Tel:** (954) 946-2274, **Fax:** (954) 337-6424

E-mail: [info@repliweb.com](mailto:info@repliweb.com), Support: <http://support.repliweb.com>

Copyright © 2009 RepliWeb® Inc., All Rights Reserved

The information in this manual has been compiled with care, but RepliWeb, Inc. makes no warranties as to its accuracy or completeness. The software described herein may be changed or enhanced from time to time. This information does not constitute a commitment or representation by RepliWeb and is subject to change without notice. The software described in this document is furnished under license and may be used and/or copied only in accordance with the terms of this license and the End User License Agreement.

No part of this manual may be reproduced or transmitted, in any form, by any means (electronic, photocopying, recording or otherwise) without the express written consent of RepliWeb, Inc.

Windows, Windows XP and Windows Vista are trademarks of Microsoft Corporation in the US and/or other countries. UNIX is a registered trademark of Bell Laboratories licensed to X/OPEN.

Any other product or company names referred to in this document may be the trademarks of their respective owners.

**Please direct correspondence or inquiries to:**

RepliWeb, Inc.  
6441 Lyons Road  
Coconut Creek, Florida 33073  
USA

Telephone: (954) 946-2274  
Fax: (954) 337-6424

Sales & General Information: [info@repliweb.com](mailto:info@repliweb.com)  
Documentation: [docs@repliweb.com](mailto:docs@repliweb.com)  
Technical Support: <http://support.repliweb.com>  
Website: <http://www.repliweb.com>

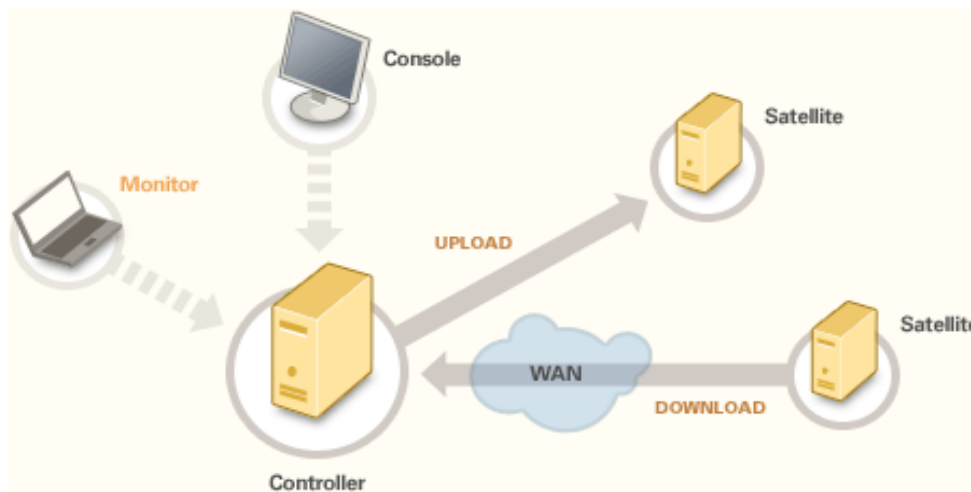
# Table of Contents

<b>1. INTRODUCTION</b> .....	<b>1</b>
LICENSING.....	2
RDS SECURITY.....	2
USER AUTHORIZATION.....	2
INSTALLATION LOCATION.....	2
<b>2. INSTALLATION PREREQUISITES</b> .....	<b>4</b>
NETWORK CONNECTIONS.....	5
UNIX PREREQUISITES.....	6
E-MAIL CONFIGURATION.....	6
<b>3. INSTALLATION</b> .....	<b>7</b>
VERIFYING PREREQUISITES.....	7
FIREWALLS CONSIDERATIONS.....	7
WINDOWS INSTALLATION.....	8
<i>Installation Wizard</i> .....	8
<i>Command Line Installation</i> .....	9
UNIX INSTALLATION.....	12
<i>UNIX Prerequisites</i> .....	12
<i>Unpacking the Installation Kit</i> .....	12
<i>Installing RDS</i> .....	12
<i>Working with NIS</i> .....	14
<i>Files Installed Outside the Installation Tree</i> .....	14
<b>4. CONFIGURATION</b> .....	<b>15</b>
LICENSE FILE.....	15
STARTING THE RDS SCHEDULER ON THE CONTROLLER.....	15
UPDATING PATH.....	15
<b>5. TESTING INSTALLATION</b> .....	<b>17</b>
TEST PROCEDURE – UNIX I.....	18
TEST PROCEDURE – UNIX II.....	18
TESTING PROCEDURE – UNIX III.....	19
TESTING PROCEDURE – UNIX IV.....	20
TEST PROCEDURE – WINDOWS I.....	20
TEST PROCEDURE – WINDOWS II.....	20
<b>6. ACTIVATING RDS</b> .....	<b>23</b>
<b>7. UNINSTALLING RDS</b> .....	<b>24</b>
UNINSTALLING FROM UNIX.....	24
UNINSTALLING FROM WINDOWS.....	24
<b>8. UPGRADING RDS</b> .....	<b>25</b>
GENERAL UPGRADE COMMENTS.....	25
UPGRADE PROCESS.....	25

# 1. Introduction

*Installation and Setup Guide* for RDS provides information about and instructions on how to implement the technical operating environment (system platform) described in the *System Guide* for RDS.

The RepliWeb Directory Synchronization (RDS) is a cross platform scheduled content replication and synchronization system for heterogeneous server environments (Windows, UNIX). RDS enables the scheduled replication and synchronization of file systems over networks regardless of content, volume or production environment. RDS is ideal for enterprises running both UNIX and Windows operating systems in production environments.



RDS's flexible architecture allows the user to run replication jobs regardless of network configuration. The target system can also be a Network Attached Storage (NAS) server. Cross-platform synchronization (Windows to UNIX or vice versa) is also supported.

An RDS job replicates between two computers: a **Controller** computer containing at least the RDS **Controller** component and a **Satellite** computer containing at least the RDS **Satellite** component.

Activation and monitoring is performed using the RDS **Console** component.

Each component is independent of the others, meaning that a given system can be a Controller, Satellite, or Console. The components that should be installed on a given system depend on the role that the system will fill in the replication topology. Also, any given system can be of a different platform (Windows or UNIX), regardless of the role it plays or the RDS components that are installed on it.

For an explanation about the roles of the RDS components, see the **Terminology** chapter.

For a complete explanation of the RDS system, see the *RDS User Guide*, referred to in the **Reference** chapter.

## Licensing

Each server that is a part of the replication process (Controller or Satellite) requires a unique license. The license enables the operation of both the Controller and the Satellite components. The installation process installs a temporary 15 days license. The permanent license is delivered in the form of a text file to be copied into a license directory in the installation. A server that needs only the Console functionality does not require a license.

**NOTE:** Some RDS features are optional and are available based on purchased licensing.

## RDS Security

RDS operates as a high level application. It does not run in Kernel mode. All the replication processes are running in user mode, requiring user and password authentication from the system and thus their access is being restricted to what that user can access. RDS does not add accounts to the system and does not require privileges that bypass system security in any way.

In addition, RDS allows authenticated and encrypted data transfer of valuable digital assets between hosts. All access can be denied by default, unless specifically permitted. Trusted IP addresses, subnets, users and schedules are supported, as well as the total anonymity of user/password/directory information from one host to another, thus allowing for secure transport between untrusted networks. This authentication proxy mechanism adds a layer of autonomy, enabling hosts that do not trust each other to synchronize massive content stores without having to divulge anything beyond the machine name or IP address, virtual user and virtual password.

## User Authorization

On Windows system, RDS should be installed by a user with Administrator privileges. This is required in order to define the RDS services.

On Unix, RDS must be installed by “root” so that TCP/IP services can be defined in the system configuration files.

## Installation Location

RDS is a non-intrusive, high-level application - installation on production servers does not require reboot or taking any application or user off-line.

All application files are installed under the installation target directory:

Windows default directory is ~:\Program Files\Repliweb\  
UNIX default directory is /usr/repliweb/

RDS is not sensitive to the installation location, and default values can be changed to suit the corporate convention.

## 2. Installation Prerequisites

This chapter lists all the prerequisites for installing the system. The first step is to check that all necessary equipment and other material are at hand.

	UNIX	Windows
<b>Operating System</b>	<ul style="list-style-type: none"> <li>▪ <b>Solaris 2.6</b> and above (Sun Sparc)</li> <li>▪ <b>HP-UX 11</b> and above (Itanium)</li> <li>▪ <b>Red Hat Linux 7.0</b> and above (Kernel 2.6.x) / <b>Linux (SUSE)</b></li> <li>▪ <b>Red Hat Enterprise Linux 3.0</b> and above / <b>Fedora</b></li> <li>▪ <b>Red Hat Enterprise Linux 4.4</b> and above (64-bit )</li> <li>▪ <b>AIX 4.3</b> and above (IBM RS/600)</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Windows Server 2000</b></li> <li>▪ <b>Windows Server 2003</b> (32/64-bit Editions)</li> <li>▪ <b>Windows XP</b> (32/64-bit Editions)</li> <li>▪ <b>Windows Vista</b> (32/64-bit Editions)</li> <li>▪ <b>Windows Server 2008</b> (32/64-bit Editions)</li> </ul>
<b>Installation package</b>	Rds_platform.tar.Z *	rds_win.exe
<b>Disk space</b>	Available disk space should be at least 6 times the size of the compressed package downloaded from the web (i.e. if your web .Z file is 10 MB, you need at least 60 MB to perform the installation).	500 MB
<b>Logged in user</b>	root	Administrator privileges required
<b>RAM</b>	No Requirements	

\* The installation package name for UNIX contains the exact platform name installation is intended for. Thus, in `rds_platform.tar.Z`, “platform” represents the platform in use, e.g. `rds_rhlinux70.tar.Z` for a Red Hat Linux platform.

## Network Connections

RDS does not use UDP or TCP dynamic ports. RDS components only use pure TCP/IP to communicate. As such, it uses only the following (standard) ports:

- 2837 – For Controller ↔ Console communication

**NOTE:** If the Console and Controller are on the same machine, the session is established internally and no changes need to be made to the firewall configuration.

**On the Controller** - If the Controller is behind a firewall, registered TCP port 2837 must be allowed to accept an inbound session from the Console.

**On the Console** - If the Console is behind a firewall, registered TCP port 2837 must be allowed to establish an outbound session to the Controller.

- 2837 & 5745 – For Controller ↔ Satellite / Controller ↔ Controller communication

**NOTE:** If the Controller and Satellite are on the same machine, the session is established internally and no changes need to be made to the firewall configuration.

**On the Controller** - Registered TCP port 2837 must be allowed to establish an outbound session to the Satellite.

In addition, if the WAN transport option is employed for data replication with the Satellite, registered TCP port 5745 must be allowed to establish an outbound session to the Satellite.

**On the Satellite** - Registered TCP port 2837 must be allowed to accept an inbound session from the Controller.

In addition, if the WAN transport option is employed for data replication, registered TCP port 5745 must be allowed to accept an inbound session from the Controller.

Port numbers and service names can be overridden by an administrator if they conflict with the corporate standards. Using the Console GUI, port configuration can be defined for Console communication and for the transfer engine used.

This functionality enables a Console to connect to a separate RepliWeb topology running on differing ports and to enable transfers in a B2B environment on differing ports.

- **Console – Controller** - To change Console communication port, in the Connection screen, press the Options button. Check the **Use Alternate Port** and

specify the **Port** to use.

- **Center – Satellite (Internal Communication & Transfer)** - To change internal communication and transfer ports, in the **Job Properties / Advanced Tab** check the **Use Alternate Port** and specify the **Ports** to use.

The connection request can be configured on any port but the **server** side must be pre-defined within the services file:

To change the ports on **Windows**, under `c:\WINNT\system32\drivers\etc` edit a file called `services`. On **UNIX**, edit the file under `/etc/` also called `services`.

The file looks the same on both operating systems; change the port numbers in the following line (or add the lines if they do not exist):

```
repliweb$scheduler 8909/tcp # used by RepliWeb
repliweb$cm 2837/tcp # used by RepliWeb - for Internal, LAN & LFA
fcopy$server 5745/tcp # used by FASTCopy - for WAN
```

RDS is engineered to perform in complex and dynamic IP networks, and will operate using any of the following (and any combination of): LAN, WAN, VPN or dial-up connections.

RDS can control bandwidth consumption during replication. This allows execution of the entire operation without having interactive system users experience high network latency, or web site visitors experiencing slow server response times. RDS enables specification of the maximum line bandwidth that a particular operation can use (absolute or relative). Each job can have its individual bandwidth priority that may be set by the network administrator.

## UNIX Prerequisites

Either `inetd` or `xinetd` should be up and running before starting the RDS installation process.

Check if either is running using the following command, for example:

```
> 'ps -ef|grep inetd'
```

## E-Mail Configuration

If you plan to use e-mail exit notification, you should have the SMTP Host Name ready. Communication with the SMTP server is performed over port 25.

Email configuration can be set during the Installation phase or at a later stage using the **Controller/ Manage** option.

## 3. Installation

This chapter gives an overview of the items that are installed when the system software is set up for the RDS. This chapter covers the following topics:

- Checking prerequisites
- Setting up the operating environment, for Windows and UNIX
- Firewall considerations

### Verifying Prerequisites

1. Make sure the logged-on user has Administrator privileges.
2. Installation package exists.
3. On UNIX / Linux systems, please make sure that `inetd` or `xinetd` are running.

### Firewalls Considerations

If you have a firewall between the Controller and a Console, registered TCP port 2837 must be configured to accept an inbound session from the Console to the Controller.

The file transfer itself (Controller  $\leftrightarrow$  Satellite) is performed over registered TCP ports 2837 and 5745 (if using WAN transfer engine). Since the Controller initiates every communication, only an outbound session from the Controller to the Satellite on ports 2837 and 5745 must be opened. This remains true regardless of the direction of the data flow, i.e. a download job pulling files from a Satellite to a Controller is still a single outbound TCP session from the Controller to the Satellite.

The exact procedure for opening this port is firewall dependant and should be included in your firewall documentation.

In a more complex topology one needs only ensure that the respective ports are opened for Controller  $\leftrightarrow$  Satellite and Controller  $\leftrightarrow$  Console communications.

If you plan to use e-mail exit notification, you need to make sure that the Controller you are installing can communicate with this SMTP server over port 25. If you put the server name, your Controller should be able to resolve it through its hosts file or DNS.

# Windows Installation

## Installation Wizard

The RDS Installation wizard performs standard installation of RDS on Windows.

1. Activate **Windows Explorer** and navigate to the path in which the installation package resides.
2. Double click on the installation file `rds_win.exe`.
3. Two windows open. The first is a Command Prompt window. This window remains open for the duration of the installation but is not to be used or closed by the user. The second window is the installation wizard. The wizard guides you through the installation process. A window titled **Welcome to the RepliWeb Directory Synchronization Setup Wizard** is opened. Click **Next**.
4. Read the **End-User License Agreement**, select the “**I accept the terms...**” option, and click **Next**.
5. The “**Custom Setup**” window is opened.
  - The default installation directory is `~:\Program Files\Repliweb\`. To change the installation directory click **Browse**.
  - By default, RDS installs its three (3) components: Console, Controller and Satellite. Click **Next**.
6. The **Mail Configuration** window is opened. Enter:
  - a. In the **SMTP Host Name** field, enter the appropriate **<IP address>** or **<name>**.
  - b. In the **Sender Name** field, enter an **<e-mail address>**.
  - c. Click the Next button.
7. The **Ready to Install** window appears. Click **Next**.
8. A new window opens, displaying the progress of the installation process. After a few seconds, the **Completing the RepliWeb Directory Synchronization Setup Wizard** window is opened. Click **Finish**.

This concludes the installation process. Both the Wizard and the Command Prompt windows are closed.

## Command Line Installation

The RDS Installation can be performed via command line, in silent mode.

### Installing RDS

#### To install using qualifiers:

1. From the command prompt, set: `set RW_INSTALL_MODE=silent`
2. The basic installation script/command should be:

Any components combination should be separated with a comma (,).

```
Set RW_INSTALL_PARAMS=ADDLOCAL=RW_ROOTDIR,CONSOLE,  
CONTROLLER,SATELLITE
```

**NOTE: REPLIWEB\_DIR=<installation path>** - Install RDS in a folder different from the default installation root.

For example

```
set RW_INSTALL_PARAMS=ADDLOCAL=RW_ROOTDIR,CONSOLE,  
CONTROLLER,SATELLITE REPLIWEB_DIR="d:\RepliWeb"
```

**NOTE: You must use RW\_ROOTDIR** in any component combination (Controller only, Controller and Console, etc).

3. Run the relevant RDS kit, for example, `RDS_x86.exe /s`

#### To install using msi:

1. Extract the installation **.exe** file into a folder. This folder will contain all the files that are required for the installation.
2. Install **Microsoft Visual C++ 2008 Redistributable** as follows:
  - On a 32-bit computer, run: `vcredist_x86.exe /q:a /c:"msiexec /i vcredist.msi /qb!"`
  - On a 64-bit computer, run: `vcredist_x64.exe /q:a /c:"msiexec /i vcredist.msi /qb!"`
3. The basic installation script/command should be as follows, run it from the command prompt or from a script:

**NOTE: You must use RW\_ROOTDIR** in any component combination (Controller only, Controller and Console, etc).

Components such as `CONSOLE` should be separated by a comma, and qualifiers such as `REPLIWEB_DIR` should be separated by a space.

```
msiexec /i repliweb.msi /qb- ADDLOCAL=CONSOLE,CONTROLLER,SATELLITE
```

**NOTE:** In order to install R-1 in a folder different from the default (C:\Program Files\RepliWeb), include `REPLIWEB_DIR=<installation path>`.

### Silent mode options:

- **qn+** - No UI except for a modal dialog box displayed at the end.
- **qb-** - Basic UI with no modal dialog boxes.
- **qb+** - Basic UI with a modal dialog box displayed at the end. The modal box is not displayed if the user cancels the installation.

**NOTE:** `/qb+` is not a supported UI level.

## SMTP Email Configuration

This option is available for both the msi and qualifiers installation methods.

- To configure **SMTP email configuration** (qualifiers example), use the following:

```
Set RW_INSTALL_PARAMS=ADDLOCAL=RW_ROOTDIR,CONSOLE,CONTROLLER,  
SATELLITE, SMTPHOSTNAME="10.0.12.5" SENDER="james@company.com"  
AUTH_USER="james" AUTH_PASS=***
```

## Uninstalling RDS using Command-Line

### To uninstall using qualifiers:

1. From the command prompt, set the environment variable **RW\_INSTALL\_MODE**:

```
set RW_INSTALL_MODE=remove
```

2. Run the relevant RDS kit, for example, `RDS_x86.exe /s`

### To uninstall using msi:

Use `msiexec.exe`, usually located under `~\Windows\System32\Msiexec.exe`.

1. Use the appropriate string:

For a 32-bit machine: {6D2FC441-5E70-11D5-A29E-0020AFBD3F71}

2. Open a command prompt to where the `msiexec.exe` is, and type the following command with the appropriate string:

For example,  
`msiexec.exe /x {6D2FC441-5E70-11D5-A29E-0020AFBD3F71}`

where `/x` is for uninstalling.

3. To uninstall in a silent mode, add **/qb-** to your command.

It should look like this:

```
msiexec.exe /x {6D2FC441-5E70-11D5-A29E-0020AFBD3F71} /qb-
```

# UNIX Installation

## UNIX Prerequisites

Either `inetd` or `xinetd` should be up and running before starting the RDS installation process.

Check if either is running using the following command, for example:

```
> 'ps -ef|grep inetd'
```

## Unpacking the Installation Kit

The RDS Installation package for UNIX is a compressed `tar` file. Unpacking it is required before the installation process can begin.

1. Uncompress the installation package file and create a temporary directory to unpack the installation package to.

```
# uncompress rds_platform.tar.Z  
  
# mkdir tempdir
```

2. In the temporary directory, unpack the installation package:

```
# cd tempdir  
  
# tar xvf ../rds_platform.tar
```

3. The directory now includes all files needed for installation. This directory may be deleted at the end of the installation process.

## Installing RDS

1. In the installation temporary directory type:

```
# ./install
```

2. You'll be requested to read and approve the license agreement:

```
This software is installed under a license agreement.  
To view the license agreement terms, press [L].  
To abort the installation, press [Q].  
To accept the license agreement and install, press any other  
key.
```

[L] - The license Agreement will be displayed on the screen page by page. Pressing "space" moves you to the next page.

After you see the license, you are prompted again with -

To abort the installation, press [Q].

To accept the license agreement and install, press any other key.

[Q] – Quit the installation process.

[Enter] – The installation process continues.

3. Select the target installation directory. Press ENTER to use the default (/usr/repliweb), or enter a new path and then press ENTER.
4. Select components for installation. Install all three components: Console, Controller and Satellite. Type:

# y and press ENTER – for each component.

5. E-mail configuration. Type:

# y – to configure e-mail, and press ENTER.

# <IP address> or <name> press ENTER.

# <e-mail address> of the mail sender. Press ENTER.

6. The installation process logs information on screen. The message: "RepliWeb Installation Completed" should be displayed.

If the installation procedure fails, the RDS installation creates a log file. The log file's name will be displayed on screen. Check the log file for the failure cause.

7. Remove the installation's temporary directory.

**NOTE:** Make sure that at the end of the installation you are still in the temporary directory where you started.

```
# cd ../
```

```
# rmdir -rf tempdir
```

## Working with NIS

When working with NIS, change directory to `/var/yp` and run `make`. This will load the `/etc/services` file into the NIS information system. On some systems a reboot is required after doing the above, for the changes to take effect.

## Files Installed Outside the Installation Tree

On UNIX and Linux, some files are installed outside the installation tree. These files are removed during uninstall.

The following files will be **created**:

```
/etc/repliweb.reg  
/etc/softlink.reg  
/etc/softlink.security  
/etc/softlink.login  
/etc/flogic.root
```

The following files will be **modified**:

```
/etc/inetd.conf  
/etc/services
```

**NOTE:** During the installation, `inetd` is refreshed; to make sure files are re-read.

The following link will be **created**:

```
/usr/bin/repliweb_scheduler → link to the repliweb_scheduler  
executable
```

## 4. Configuration

The following chapter gives instructions on how to configure the system.

### License File

The system is now running on an evaluation 15 days license. The installation is completely useable at this point. To replace the license with a permanent license for that server, provided by RepliWeb, you simply need to copy the license file that you received (by email or on a media) called `lic_repliweb.rw` to the “license” directory under the installation root. It should replace the existing file with the same name that resides there and contains the temporary license. There is no need to restart services, reboot the server or stop and start anything. Replacing the file is enough. The license replacement does not need to follow the installation. It can be done at any stage.

**NOTE:** Some RDS features are optional and are available based on purchased licensing.

### Starting the RDS Scheduler on the Controller

The RDS Scheduler should be activated before a server can be used as RDS Controller.

On a Windows installation, the RDS processes are running as services which are started automatically on system startup.

On a UNIX system, the system administrator should add the activation of the background processes to the system startup. RDS installation does not do that automatically as each system is configured differently according to corporate conventions.

The command that should be added to the UNIX startup is:

```
/usr/bin/repliweb_scheduler.
```

As a general policy, it is recommended that the startup of the RDS scheduler will be added to a later stage of the system initiation and rather than an early stage.

### Updating PATH

The Console CLI resides in the `~/repliweb/rds/console/bin` directory on a UNIX installation, and `~\RepliWeb\RDS\Console\Bin` on a Windows installation.

To activate the Console CLI from any directory on the system, the appropriate PATH should be added to the relevant systems.

On Unix, a symbolic link called “*rds*” is added to `/usr/bin`. If `/usr/bin` is in the common user search path, no path changes should be made and the `rds` command can be used from anywhere by the user.

## 5. Testing Installation

Use the tests provided in this chapter to ensure that RDS has been correctly set up. Read carefully through the instructions and agree with the business organization's representative on the appropriate test. Run the tests that affect the network with the relevant parties' consent only.

**NOTE:** If you run tests on a live module, inform site personnel of the testing in advance to avoid unnecessary confusion.

The RDS installation is verified by using the RDS Command Line Interface (CLI). Refer to the *RDS User Guide* for detailed explanation about the CLI format and options.

Using the RDS Command Line Interface (CLI) allows the user to submit, monitor, and control replication jobs. RDS affords the flexibility to choose between running the CLI on either a Windows or UNIX machine. The replication can then be run without regard to the location of the Controller and Satellite components.

The Console CLI resides in the `~/repliweb/rds/console/bin` directory on a UNIX installation, and `~\RepliWeb\RDS\Console\Bin` on a Windows installation.

On Windows, activating the RDS CLI is done using the Command Prompt.

**NOTE:** RDS does NOT create any default user or password. All user names and passwords used in this guide are samples only.

**Valid credentials should be used for Controller and Satellite connections.**

## Test Procedure – UNIX I

This test verifies that the RDS components are up and running.

1. # cd ~/repliweb/rds/console/bin
2. Activate the RDS **information** command. The command output will display the RDS version and build date of the Console and Controller installed.

```
# rds information -controller=localhost  
-controller_user=user_name -controller_password=password
```

The Command output will be like:

```
Console information:  
  Version : RDS 3.1  
  Build Date : Feb 2 2009 13:30:45  
Controller "localhost" information:  
  Version : RDS 3.1  
  Build Date : Feb 2 2009 14:03:28
```

3. Activate the RDS **healt\_hcheck** command.

```
# rds __health_check -controller=localhost  
-controller_user=user_name -controller_password=password
```

The Command output will be like:

```
Controller "localhost" is up and running
```

## Test Procedure – UNIX II

This test procedure will verify the RDS job activation. It will make sure that a job may be submitted, viewed and aborted.

**NOTE:** The submitted job need not succeed in transmitting data; the handling of the job is what actually tested in this test, and not the replication itself. Use may use dummy directories.

1. Submit a job.

```
# rds submit -satellite=localhost -source_directory=src  
-target_dir=trgt -user=user_name -password=password  
-controller=localhost -controller_user=user_name  
-controller_password=password
```

The command's output will be:

```
RDSAPI-S-SUS, job <1> successfully submitted
```

## 2. View the job's status:

```
# rds show -controller=localhost  
-controller_user=user_name -controller_password=password
```

The command's output will be:

```
1      RUN      UP      Mirror  START  
      Source Dir : src  
      Dest.  Dir  : trgt  
      Satellite : localhost  
-----
```

## 3. Abort the Job:

```
# rds abort -job=1 -controller=localhost  
-controller_user=user_name -controller_password=password
```

The command's output will be:

```
RDSAPI-S-AJS, job <1> successfully aborted
```

## 4. Delete the Job:

```
# rds delete -job=1 -controller=localhost  
-controller_user=user_name -controller_password=password
```

The command's output will be:

```
RDSAPI-S-DJS, job <1> successfully deleted
```

## 5. Activate the **show** command again. There should be no jobs running.

```
# rds show -controller=localhost  
-controller_user=user_name -controller_password=password
```

The command's output will be:

```
RDSAPI-E-NOJOB, no jobs matching query on "localhost"
```

# Testing Procedure – UNIX III

**NOTE:** The Controller must be installed on a UNIX machine in order to perform this test.

This test verifies Console to Controller connectivity with the Controller installed on a UNIX machine.

Connect to the Controller through a Console and verify connectivity.

## Testing Procedure – UNIX IV

**NOTE:** The Controller must be installed on a UNIX machine in order to perform this test.

This test verifies that the Scheduler's processes are running.

1. In the UNIX terminal window, run:

```
Ps -ef|grep scheduler
```

2. Verify that the following processes are running:

- RepliWeb Active Server
- RepliWeb Archive Server
- RepliWeb Scheduler API Server
- RepliWeb Submit Server

## Test Procedure – Windows I

This test verifies that the RDS components are up and running.

1. Open the command prompt: From the Start menu select: Programs / Accessories / Command prompt.

```
> cd ~\RepliWeb\RDS\Console\Bin
```

2. Activate the RDS information command. The command output will display the RDS version and build date of the Console and Controller installed.

```
> rds information -controller=localhost  
-controller_user=user_name -controller_password=password
```

The Command output will be like:

```
Console information:  
Version : RDS 3.1  
Build Date : Feb 2 2009 13:30:45  
Controller "localhost" information:  
Version : RDS 3.1  
Build Date : Feb 2 2009 14:03:28
```

## Test Procedure – Windows II

This test procedure will verify the RDS job activation. It will make sure that a job may be submitted, viewed and aborted. In Windows the RDS Console may be also controlled using the RDS Graphical User Interface (GUI). This test procedure will verify the job activation using both the CLI and the GUI

**NOTE:** The submitted job need not succeed in transmitting data; the handling of the job is what actually tested in this test, and not the replication itself. Use may use dummy directories.

1. Submit a job. The job need not succeed in transmitting data; the handling of the job is what actually tested in this test.

a.

```
> rds submit -source_directory=src -target_dir=trgt -
user=user_name -password=pass -satellite=localhost
-controller=localhost -controller_user=user_name
-controller_password=pass
```

The command's output will be:

```
RDSAPI-S-SUS, job <1> successfully submitted
```

2. View the job's status:

```
# rds show -controller=localhost -controller_user=user_name
-controller_password=pass -controller=localhost
-controller_user=user_name -controller_password=pass
```

The command's output will be:

```
1          RUN    UP      Mirror  START
          Source Dir  : src
          Satellite   : localhost
-----
```

3. Abort the Job:

```
# rds abort -job=1 -controller=localhost
-controller_user=user_name -controller_password=pass
```

The command's output will be:

```
RDSAPI-S-AJS, job <1> successfully aborted
```

4. Delete the Job:

```
# rds delete -job=1 -controller=localhost
-controller_user=user_name -controller_password=pass
```

The command's output will be:

```
RDSAPI-S-DJS, job <1> successfully deleted
```

5. Activate the **SHOW** command again. There should be no jobs running.

```
# rds show -controller=localhost
-controller_user=user_name -controller_password=pass
```

The command's output will be:

```
RDSAPI-E-NOJOB, no jobs matching query on "localhost"
```

6. Repeat step two to activate a job.
7. View and handle the job using the **RDS GUI Console**. Activate the RDS Console from the Start menu, using **Programs / Repliweb RDS / RDS Console**.

Complete connection information in the Connect dialog:

Controller: <**localhost**>

User: <**user\_name**>

Password: <**pass**>|

Click **Connect**.

8. The RDS Console window opens, showing the submitted job. Using the mouse, select the job, using the **SELECT** button.
9. Abort the job by clicking the **MENU** button. A menu will be displayed, select the **Abort** menu option. A confirmation message will be displayed, verifying the Abort operation. Click **Yes**.
10. Use the [**F5**] button to refresh the view. After a few seconds the job state icon will change.
11. Delete the job, using the same method. Click the **MENU** button and select the **Delete** menu option. A confirmation message appears, verifying the delete operation. Click **Yes**.
12. Press the [**F5**] button to refresh the view. After a few seconds the job disappears from the jobs list.

## 6. Activating RDS

Assuming all testing procedures have pass, the RDS is ready to use. No additional tasks should be performed.

For more information on how to use the RDS Console GUI or Command Line Interface (CLI), please refer to the [RDS User Guide](#), or use the Console GUI <F1> key for on-line help.

# 7. Uninstalling RDS

This chapter explains how to un-install RDS from both Windows and UNIX servers.

## Uninstalling from UNIX

1. In the installation directory, you will a folder named **uninstall**.
2. Type the following commands:

```
#cd uninstall  
#./uninstall <installation path>
```

For example, if RDS is installed in /usr/rds your uninstall command should be  
`./uninstall /usr/rds`

3. The command's output will be:

```
Stopping RepliWeb scheduler  
Finished RepliWeb uninstall ...  
RepliWeb was uninstalled
```

This will indicate that RDS was uninstalled properly.

## Uninstalling from Windows

1. From the Start menu, open the **Control Panel**. (Start → Settings → Control Panel → Add / Remove Programs).
2. Select **RepliWeb RDS** and press on the **Remove** button.
3. You will be prompted to confirm the software removal. Press **Yes**.
4. Once the removal process is complete, RDS will not be available.

To uninstall via command line, refer to the [Command Line Installation](#) section.

**NOTE:** Removing RDS does not require a reboot.

## 8. Upgrading RDS

This chapter explains how to upgrade RDS to a newer version.

**NOTE:** Installing or upgrading RDS does NOT require reboot.

### General Upgrade Comments

1. Using the Windows Console GUI, close the Console before running the installation kit.
2. If opened, closed the Windows Services window.
3. The installation will automatically stop and restart the Scheduler processes.

**NOTE:** If you are upgrading a production network, it is advised to upgrade those servers performing as Satellites, first.

**NOTE:** before attempting to upgrade to a 32-bit RDS kit on a 64-bit environment, you should run a backup, uninstall the 32-bit kit and then install the 64-bit kit.

### Upgrade Process

In order to upgrade to newer R-1 versions, just install over the previous installation:

**To upgrade your R-1 version:**

1. Make sure that you have the latest version from the RDS Download Page.
2. Backup your containers, templates, and your license.  
Please refer to the [Containers and Templates Location FAQ](#).
3. Upgrade the Satellites first and then the Controller.
  - a. In the Windows Wizard setup, select **Repair/Update** to install over the previous installation.
  - b. Using the command prompt:
    - i. **Using RDS qualifiers, set:** `set RW_INSTALL_MODE=silent`  
Run the relevant RDS kit, for example, `RDS_x86.exe /s`
    - ii. **Using msi**, from the extracted R-1 installation files directory,  
`run:msiexec /fvamuse repliweb.msi`

- c. Using UNIX, simply install over the existing installation.
2. Restore your containers, templates, and your license, if needed.

**NOTE:** In the Console GUI, after performing an upgrade, if all of the jobs are in Administrative hold, uncheck the **Hold all running jobs** option in the **Manage / Schedule** tab.