

# Attunity RepliWeb Installation and Setup Guide

Software Version 6.2

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Attunity RepliWeb Version 6.2

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Author: RepliWeb, Inc.

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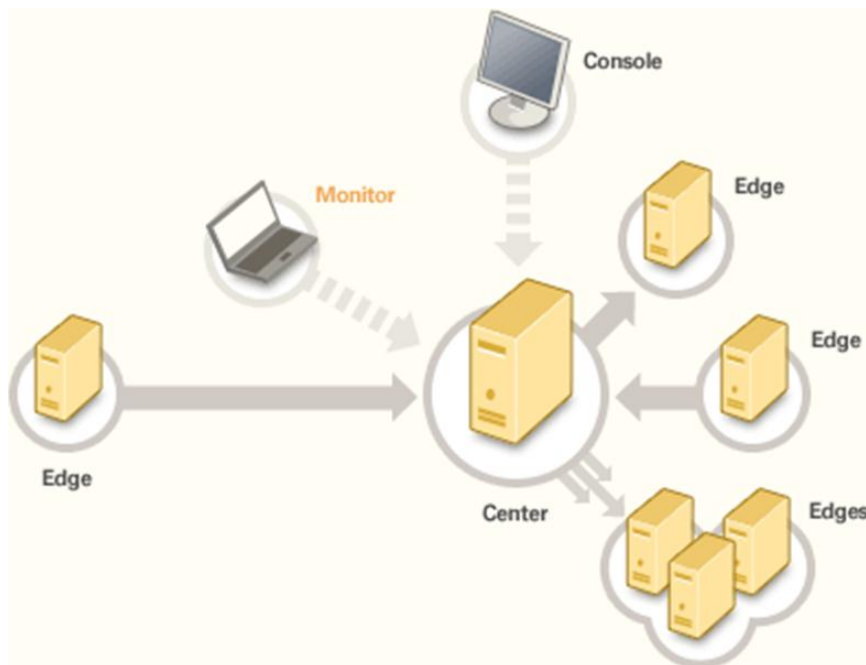
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# 1. Introduction

Attunity RepliWeb is a cost-effective, feature-rich web content and application deployment automation platform trusted by leading Global 2000 companies. Hundreds of enterprises and government organizations use Attunity RepliWeb to meet their mission-critical deployment needs. Ensuring that local and distributed servers as well as complete datacenters are synchronized with the most up-to-date content and code, Attunity RepliWeb is the single source solution for organizations of any size.

**Note:** Installing, upgrading or removing Attunity RepliWeb does not require a reboot.



Attunity RepliWeb accelerates business and drives revenue by guaranteeing production content and applications are available when and where they should be.

- An Attunity RepliWeb job replicates between two computers - a **Center** computer containing at least the Attunity RepliWeb **Center** component and an **Edge** computer containing at least one Attunity RepliWeb **Edge** component.
- Numerous systems may be involved in a single distribution job. In such a setup, one **Center** computer distributes data to multiple **Edge** computers.

Each component is independent of the others, meaning that a given system can be a Center, Edge, or Console. The components that should be installed on a given system depend on the role that the system will fill in the replication and distribution topology. Also, any given system

can be of a different platform (Windows or UNIX), regardless of the role it plays or the Attunity RepliWeb components that are installed on it.

For more information about the roles of the Attunity RepliWeb components, see the **Terminology** chapter. For a detailed explanation of the Attunity RepliWeb system, see the *Attunity RepliWeb User Guide*.

## Licensing

Each server that is a part of the distribution process (Center or Edge) requires a unique license. The license enables the operation of both the Center and the Edge components. The installation process installs a temporary 15 day 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 Attunity RepliWeb features are optional and are available based on purchased licensing.

## Attunity RepliWeb Security

Attunity RepliWeb operates as a high-level application. It does not run in Kernel mode. All the distribution processes run in user mode, requiring user and password authentication from the system and thus their access is restricted to the user's access privileges. Attunity RepliWeb does not add accounts to the system and does not require privileges that bypass system security in any way.

In addition, Attunity RepliWeb 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 un-trusted 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 computer name or IP address, virtual user and virtual password.

## User Authorization

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

On UNIX, Attunity RepliWeb must be installed by "root" so that TCP/IP services can be defined in the system configuration files.

## Installation Location

A non-intrusive application, Attunity RepliWeb 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/`

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

## 2. Installation Prerequisites

This chapter lists all the prerequisites for installing Attunity RepliWeb.

	UNIX	Windows
<b>Operating System</b>	<ul style="list-style-type: none"> <li>▪ Red Hat Linux 9.0 and above (Kernel 2.6.x) /Linux (SUSE)</li> <li>▪ Red Hat Enterprise Linux 3.0 and above / Fedora</li> <li>▪ Red Hat Enterprise Linux 5.5 and above (64-bit )</li> </ul> <p>The following installation kits are available on demand:</p> <ul style="list-style-type: none"> <li>▪ AIX 4.3 and above (IBM RS/600)</li> <li>▪ HP-UX 11 and above (Itanium)</li> <li>▪ Solaris 2.6 and above (Sun Sparc)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Windows Server 2003 (64-bit)</li> <li>▪ Windows Server 2008 R2 (64-bit)</li> <li>▪ Windows Server 2012</li> <li>▪ Windows Server 2012 R2</li> <li>▪ Windows 7 (64-bit)</li> <li>▪ Windows 8 (64-bit)</li> </ul>
<b>Browsers (For the Attunity RepliWeb Web UI)</b>		<ul style="list-style-type: none"> <li>▪ Internet Explorer 8 and above</li> <li>▪ Firefox 13 and above</li> <li>▪ Safari 5 and above</li> <li>▪ Chrome 22 and above</li> </ul>
<b>IIS (For IIS replication and the Attunity RepliWeb Web UI)</b>		<ul style="list-style-type: none"> <li>▪ IIS 6.0, 7.0, 7.5 and 8.0</li> </ul>
<b>*Installation package</b>	r1_rhel_x64_6.1_<build>_<revision>.tar.Z	r1_x64_6.1.<build>.<revision>.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	
<b>.NET</b>	.NET 4.0 and above	

\* The installation package name for UNIX contains the exact platform name for which the installation is intended. Thus, in `r1_<platform>.tar.Z`, “<platform>” represents the platform in use, e.g. `r1_rhlinux70.tar.Z` for a Red Hat Linux platform.

## Network Connections

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

### 2837 – For Center ↔ Console communication

**Note:** If the Console and Center are on the same computer, the session is established internally and no changes need to be made to the firewall configuration.

- **On the Center** – If the Center 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 Center.

### 2837 & 5745 – For Center ↔ Edge / Center ↔ Center communication

**Note:** If the Center and Edge are on the same computer, the session is established internally and no changes need to be made to the firewall configuration.

- **On the Center** – Registered TCP port 2837 must be allowed to establish an outbound session to the Edge.  
  
In addition, if the WAN transport option is employed for data replication with the Edge, registered TCP port 5745 must be allowed to establish an outbound session to the Edge.
- **On the Edge** – Registered TCP port 2837 must be allowed to accept an inbound session from the Center.

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 Center.

Port numbers and service names can be overridden by an administrator if they conflict with the corporate standard. 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 - Center** – 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 - Edge (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, and LFA
fcopy$server 5745/tcp # used by FASTCopy – for WAN
```

Attunity RepliWeb operates in complex and dynamic IP networks (LAN, WAN, Internet, eCDN, Edge based, over Unicast and Multicast), and at each point in time determines the best policy for transferring the data.

Attunity RepliWeb 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. Attunity RepliWeb 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.

Attunity RepliWeb can perform the data transfer using multiple data streams. In the vast majority of replication environments, the use of concurrent streams will significantly reduce the replication time. This is especially true for replications performed over an Internet-based Virtual Private Network (VPN) where the limiting data transfer rate is much lower than the theoretical maximum.

When replicating over VPN or a high-speed LAN, transfer performance can be boosted when performing simultaneous parallel transfers of partial file lists. In a high-speed LAN environment, using data streams will result in maximizing the network throughput. When used on VPN environments (over the Internet), performance is maximized to nearly the network limit defined by your VPN connection.

## UNIX Prerequisites

Either `inetd` or `xinetd` should be up and running before starting the Attunity RepliWeb 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 **Center / Manage** option.

## IIS Replication

### **To replicate IIS using Attunity RepliWeb**

IIS 6, 7, or 7.5 should be installed both on the Center and the Edge(s).

### **To configure and use the Attunity RepliWeb Web UI**

IIS 6, IIS 7, or 7.5 should be installed on the Console.

## Attunity RepliWeb and Attunity-MFT Coexistence Issues

There are a few limitations when installing both Attunity RepliWeb and Attunity-MFT on the same server.

Both products use a different version of FASTCopy daemon and only one can be used at a specific time. During Attunity RepliWeb installation, if Attunity-MFT is already installed, you should select which FASTCopy daemon to use. The selection has the following implications:

Selected FASTCopy Daemon	Attunity RepliWeb Usage limitations	Attunity-MFT usage limitations
Attunity RepliWeb	None	Virtual Users can not be used. No MS-CAPI support. New transfer exit status qualifiers won't work.
Attunity-MFT	Filenames with Unicode cannot be used. Long file names ( >254 ) cannot be used. Virtual Users can not be used.	None

# 3. Installation

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

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

## Verifying Prerequisites

- Make sure the logged-on user has Administrator privileges.
- Check that the installation package exists.
- On UNIX / Linux systems, make sure that `inetd` or `xinetd` are running.

## Firewalls Considerations

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

The file transfer itself (Center  $\leftrightarrow$  Edge / Center  $\leftrightarrow$  Center) is performed over registered TCP ports 2837 and 5745 (if using WAN transfer engine). Since the Center initiates every communication, only an outbound session from the Center to the Edge 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 an Edge to a Center is still a single outbound TCP session from the Center to the Edge.

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

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

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

## Windows Installation

Install Attunity RepliWeb on Windows using either the Wizard or the [Command Line Installation](#).

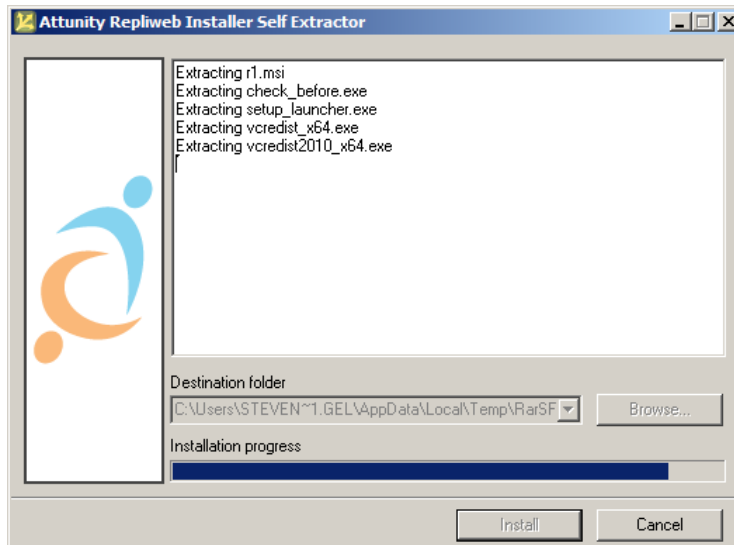
### Installation Wizard

The Attunity RepliWeb Installation wizard performs standard installation of Attunity RepliWeb on Windows.

#### To install using installation wizard:

1. In **Windows Explorer**, navigate to the path of the installation package and double click the setup file. The setup file has the following format: **r1\_<os-version>\_<version>.<build>.<revision>.exe** (e.g. r1\_x64\_6.1.102.112242.exe).

The **Attunity RepliWeb Installer Self Extractor** opens:



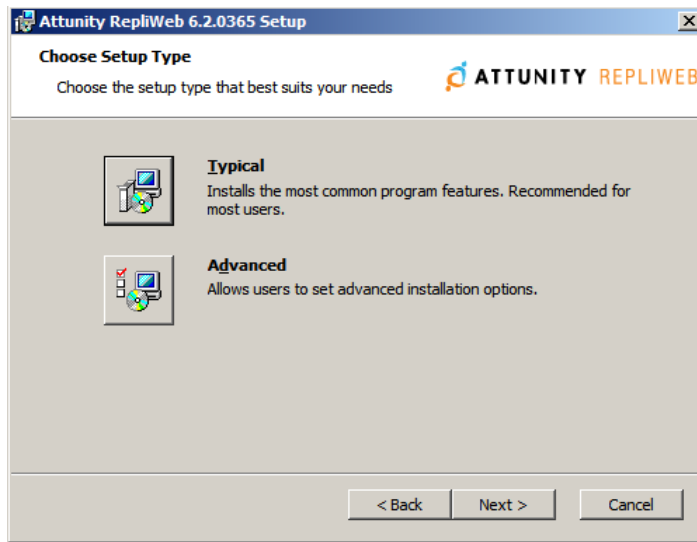
Once Attunity RepliWeb extraction is complete, the setup wizard opens.

2. Click **Next**.

The **End-User License Agreement** window appears.

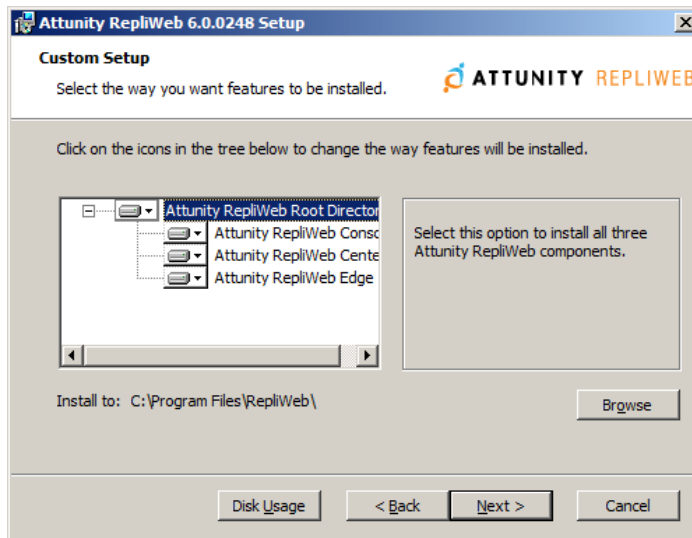
3. After reading the agreement, select the **I accept the terms in the License Agreement** option and then click **Next**.

The following window is displayed.



4. Select **Typical** or **Advanced**. Both of these options offer the same installation options. The **Advanced** option however, also lets you specify a local group or an Active Directory group. Only members of the specified group will be able to define, submit and control Attunity RepliWeb jobs.
5. Click **Next**.

The **Custom Setup** window appears.



6. If required, change the default installation directory and select which components to install:

The default installation directory is `~:\Program Files\Repliweb\`

To change the installation directory, click **Browse**.

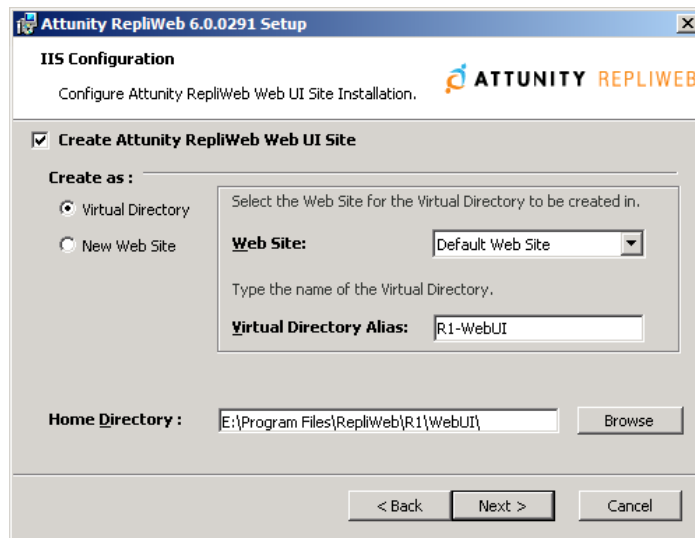
By default, Attunity RepliWeb installs its three (3) components: **Console**, **Center** and **Edge**.

**7.** Click **Next**.

If Attunity-MFT is already installed on this computer, you will be prompted to select the FASTCopy daemon to use. Selection implications for Attunity RepliWeb and Attunity-MFT are described in the [Attunity RepliWeb and Attunity-MFT Coexistence Issues](#) section above.

Otherwise, the **IIS Configuration** window appears.

**Note:** The **IIS Configuration** window is displayed only if IIS version 5/6/7/7.5 is detected and if installing (at least) a Console.



Using the Attunity RepliWeb Web UI, an IIS web site needs to be configured. This can be done in this window or configured using IIS at a later stage.

To modify, change, or configure IIS at a later stage, refer to the appendix titled [Setting up Attunity RepliWeb Web UI](#) in the *Attunity RepliWeb Web UI Configuration and Customization Guide*.

- a.** If creating a web site, select whether to create a **Virtual Directory** in an existing Web Site, or to create a new **Web Site**.
  - **Virtual Directory** – Select an existing Web Site and specify a name for the new Virtual Directory. Default name is **R1-WebUI**.
  - **Web Site** – If creating a new Web Site, enter the following fields:
    - **Description (Name)** – The name of the Web Site.. Default name is **R1-WebUI**.
    - **TCP Port** – Enter the port the Web Site will be using.

- **IP Address** – You can enter an IP address for the new Web Site.
  - **Host Header** – You can enter a Host Header value for the new Web Site.
- b.** Browse to the **Home Directory** of the newly created Web Site or Virtual Directory. By specifying a path different than the default path displayed, a copy of the Web UI folder is created in the new path.

**Note:** The default directory content is updated with each product upgrade. To customize your site, you should use an alternative Home Directory.

**8.** Click **Next**.

The **Mail Configuration** window appears.

Attunity RepliWeb 6.0.0248 Setup

**Mail Configuration**

Please enter the following:

These fields should only be completed to enable e-mail notification feature.  
E-mail notification can be configured at a later time by using the Manage option.

SMTP Host Name: 10.0.51.4  
Example: 59.198.0.23 or Mail\_Server

Sender Address: r1@company.com  
Example: user@company.com

Use Secured Password Authentication:

Username:

Password:

< Back   Next >   Cancel

**9.** Fill in the following fields:

**SMTP Host Name** – Enter the appropriate **<IP address>** or **<name>**.

**Sender Name** – Enter an **<e-mail address>**.

**Use Secured Password Authentication** – If your email server requires an authenticated connection, fill in the following fields:

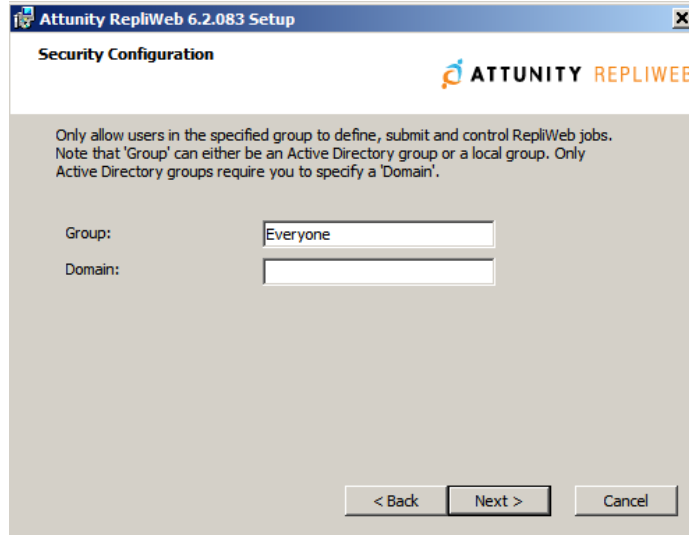
**Username** – Email server-authenticating user name.

**Password** – Password of the email server-authenticating user name.

10. Click **Next**.

The **Security Configuration** window appears.

**Note:** This window only appears if you selected the **Advanced** installation option.



11. The **Security Configuration** window allows you to install RepliWeb in Group mode.

To perform a standard installation, leave "Everyone" as the group name.

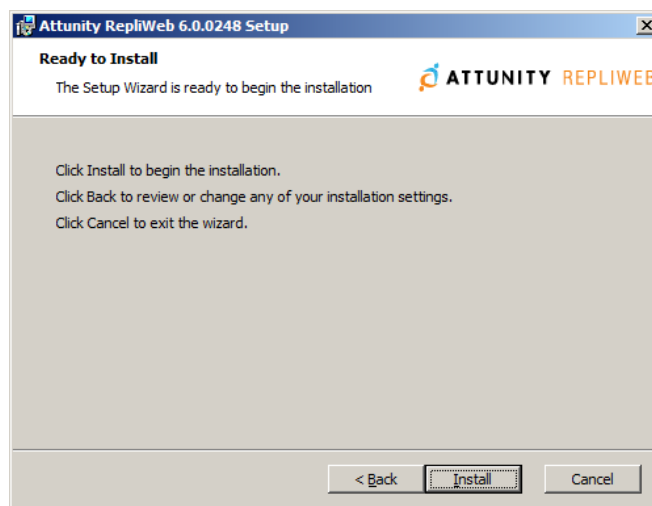
To only allow a specific Active Directory Group to access RepliWeb, specify the Active Directory Group name and Domain in the **Group** and **Domain** fields respectively.

To only allow a specific local group to access RepliWeb, specify the group name in the **Group** field.

**Note:** You can change the installation mode at any time simply by running Setup again and choosing **Modify > Advanced**. For more information, see [Upgrade Process](#).

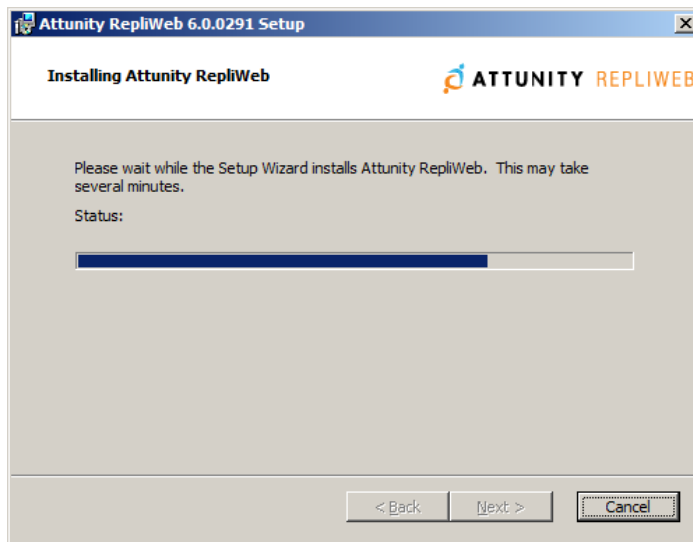
12. Click **Next**.

The **Ready to Install** window appears.

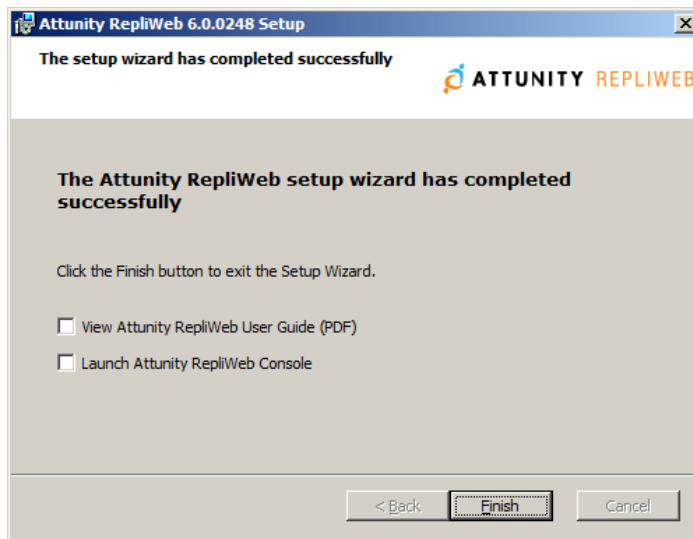


**13. Click Install.**

The installation progress window appears.



Once installation completes, the **Setup Completion** window appears.



**14. Click the appropriate checkbox to view the Attunity RepliWeb User Guide or automatically launch Attunity RepliWeb Console.**

**Note:** The selected option(s) will take effect when you click the **Finish** button.

**15. Click Finish to complete installation.**

## Command-Line Installation

Attunity RepliWeb can be installed in silent mode using a command line. You can install using either Attunity RepliWeb qualifiers or MSI.

### Installing Attunity RepliWeb

#### 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=R1_ROOTDIR,RWR1_CONSOLE,  
RWR1_CENTER,RWR1_EDGE`

**Note:** In order to install Attunity RepliWeb in a folder different from the default installation root (C:\Program Files\RepliWeb), include **INSTALLDIR=<installation path>**.

For example,

`set RW_INSTALL_PARAMS=ADDLOCAL=R1_ROOTDIR,RWR1_CONSOLE,  
RWR1_CENTER,RWR1_EDGE INSTALLDIR="d:\RepliWeb"`

**Note:** You must use **R1\_ROOTDIR** in any component combination (Center only, Center and Console, etc).

3. Run the relevant Attunity RepliWeb kit, for example, `R1_x86.exe /s`

Please do not change the executable's filename.

Attunity RepliWeb is now installed on your machine.

#### 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 **R1\_ROOTDIR** in any component combination (Center only, Center and Console, etc).

Components such as RWR1\_CONSOLE should be separated by a comma, and qualifiers such as INSTALLDIR should be separated by a space.

```
msiexec /i r1.msi /qb-  
ADDLOCAL=R1_ROOTDIR,RWR1_CONSOLE,RWR1_CENTER,RWR1_EDGE
```

**Note:** Please do not change the executable's filename.

**Note:** In order to install Attunity RepliWeb in a folder different from the default installation root (C:\Program Files\RepliWeb), include **INSTALLDIR=<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.

## Additional Installation Options

The following options are available for both the msi and qualifiers installation methods.

The examples used are for the qualifiers method:

### To configure SMTP email configuration, use the following:

```
Set RW_INSTALL_PARAMS=ADDLOCAL=R1_ROOTDIR,RWR1_CENTER,  
RWR1_CONSOLE,RWR1_EDGE, SMTPHOSTNAME="10.0.12.5"  
SENDER="james@company.com" AUTH_USER="james" AUTH_PASS=***
```

### To set a new port for each service, use the following:

**Note:** This option overwrites the default Attunity RepliWeb ports.

```
Set RW_INSTALL_PARAMS=ADDLOCAL=R1_ROOTDIR,RWR1_CONSOLE,  
RWR1_CENTER, RWR1_EDGE FCOPY_PORT="port value" REPLIWEB_CM_PORT="port  
value" REPLIWEB_SCHED_PORT="port value"
```

**Note:** You should set these ports on a clean installation.

### To configure IIS for the Attunity RepliWeb Web UI as a Web Site, use the following (for IIS 6 and above):

```
Set RW_INSTALL_PARAMS=ADDLOCAL=R1_ROOTDIR,RWR1_CONSOLE,  
RWR1_CENTER,RWR1_EDGE,R1_WEBSITE NEW_WEBSITE="My_Site"  
NEW_WEBSITE_PORT="8080" NEW_WEBSITE_IP="10.0.61.51"  
NEW_WEBSITE_HEADER="This_site_is_for_the_sales_department"
```

Where NEW\_WEBSITE\_IP and NEW\_WEBSITE\_HEADER are optional.

### To configure IIS for the Attunity RepliWeb Web UI as a Virtual Directory, use the following:

```
Set RW_INSTALL_PARAMS=ADDLOCAL=R1_ROOTDIR,RWR1_CONSOLE,  
RWR1_CENTER,RWR1_EDGE,R1_VIRDIR WEBSITE="Site_1"  
VIRTUALLDIR="Virtual_Site_1"
```

**Note:** Using IIS 6, **WEBSITE** is the existing Site ID. Using IIS 7 or 7.5, **WEBSITE** is the existing Site Name.

### To install Attunity RepliWeb in Group mode, use the following:

```
Set RW_INSTALL_PARAMS=ADDLOCAL=R1_ROOTDIR,RWR1_CONSOLE,  
RWR1_CENTER,RWR1_EDGE GROUP_NAME=group [GROUP_DOMAIN_NAME=domain]
```

Where **GROUP\_DOMAIN\_NAME=domain** is only required for Active Directory groups.

## Uninstalling Attunity RepliWeb

### To uninstall using Attunity RepliWeb qualifiers:

1. From the command prompt, set: `set RW_INSTALL_MODE=remove`
2. Run the relevant Attunity RepliWeb kit. For example, `R1_x86.exe /s`  
Attunity RepliWeb is removed from your machine.

### To uninstall using msi:

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

1. Use the appropriate string:  
For a 32-bit machine: `{FAE1E8C3-5776-11D6-A2E7-0020AFBD3F71}`  
For a 64-bit machine: `{755AAC63-CC58-4b03-8461-ACB08E5F25D0}`
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 {FAE1E8C3-5776-11D6-A2E7-0020AFBD3F71}
```

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 {FAE1E8C3-5776-11D6-A2E7-0020AFBD3F71} /qb-
```

## UNIX Installation

This section describes Attunity RepliWeb installation on a UNIX system.

### UNIX Prerequisites

Either `inetd` or `xinetd` should be up and running before you start the Attunity RepliWeb installation process.

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

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

### Unpacking the Installation Kit

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

#### To unpack the Attunity RepliWeb installation kit:

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

```
# uncompress r1_platform.tar.Z
# mkdir tempdir
```

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

```
# cd tempdir
# tar xvf ../r1_platform.tar
```

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

## Installing Attunity RepliWeb on UNIX

Follow this procedure to install Attunity RepliWeb on a UNIX system.

**Note:** To install Attunity RepliWeb on a Solaris zone, put a copy of the package in a loop-back file system (LOFS), and before installing, comment the following lines in the Attunity RepliWeb installation file:

```
#if [ "$installer" != "root" ]; then
#           echo "RepliWeb must be installed by root"
#           exit
#fi
```

### To install Attunity RepliWeb on UNIX:

1. In the installation's temporary directory, type:

```
# ./install
```

2. 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.
```

3. Press [L] to see the license Agreement on the screen.

4. Press [Space] to move you to the next page.

```
You are prompted again with -
```

```
To abort the installation, press [Q].
```

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

5. Press [Q] to quit the installation process.

6. Press [Enter] to continue with the installation process.

7. Select the target installation directory. Click [ENTER] to use the default (/usr/repliweb), or enter a new path and then click [ENTER].

8. Enter the path for the RepliWeb man pages (default is /usr/repliweb).

9. Select which components to install. Unless you only require the functionality of a specific component, install all three components: Console (CLI), Center and Edge.

```
Type [y] and click [ENTER] for each component.
```

10. After you have selected which components to install, you can choose whether to add external links to the RepliWeb binaries. Type [n] if you do not want to expose the RepliWeb installation directories to non-privileged users.

```
Add external links? (default=y) y/n
```

Type **[y]** to add external links to the RepliWeb binaries (CLI, Scheduler) in **/usr/bin/**

11. You will then be prompted to install FastCopy (the RepliWeb WAN engine).

If you do not need to transfer files over the WAN or if you have a license for the RepliWeb LFA (Large File Accelerator) engine, you can answer **[n]** to this prompt. Note that the RepliWeb WAN engine requires port 5745 to be open.

```
Install FastCopy? (default=y) y/n
```

12. If you elected to install RepliWeb Console, you will be prompted to install the RepliWeb CGI.

The RepliWeb CGI enables RepliWeb Web UI functionality. If you do not intend to connect to this machine using the RepliWeb Web UI, you can answer **[n]** to this prompt.

```
Install RepliWeb CGI? (default=y) y/n
```

13. You will then be prompted to choose an installation mode.

By default, the RepliWeb is installed as root. For security considerations, you may want RepliWeb to be installed as a different user or even as a specific group.

**Note:** If you choose to install RepliWeb in User mode, you can only use virtual users. For information on creating virtual users, refer to the *Attunity RepliWeb User Guide*.

**IMPORTANT:** Both in User and in Group mode, the specified user/group will not be able to perform any management-related tasks on the RepliWeb Center.

```
Select an installation mode: S=Standard, U=User, G=Group  
(default=S):
```

**Note:** You can change the installation mode at any time simply by running the installation again.

14. Optionally, configure your SMTP Server settings.

```
Would you like to configure email notification? y/n.
```

- a. To configure email, type **[y]** and then press **[ENTER]**.

The following prompt appears:

```
Please provide SMTP host name or IP address:
```

- b. Type the IP address/host name of your SMTP Server and then press **[ENTER]**.

The following prompt appears:

```
Please provide default email sender (joe@company.com):
```

- c. Specify a default sender and then press **[ENTER]**.

15. A message for each stage of the installation is displayed. When the installation completes, the message: "RepliWeb Installation Completed" should appear.

If the installation procedure fails, the Attunity RepliWeb installation creates a log file. The log file's name appears on the screen. Check the log file for the cause of failure.

16. 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 that files are re-read.

The following link will be **created**:

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

## Moving the `rw_password` and `rw_security` Files

By default, the `rw_password` and `rw_security` security configuration files are installed in `{repliweb_installation_dir}/rds/config/`. You can move these files to a shared location that is accessible by multiple RepliWeb Center machines.

### To move the security configuration files:

1. Stop the RepliWeb Scheduler by running the following command:  

```
repliweb_scheduler -stop
```
2. Move the `rw_password` and `rw_security` files to the desired location.
3. Open the file `etc/repliweb.reg` and change the **Value** of the `[SecurityFileLocation]` and `[PasswordFileLocation]` sections to point to the new location.

```
[SecurityFileLocation]
Value=/tmp/rw_security.cf
Type=1

[PasswordFileLocation]
Value=/tmp/rw_password
Type=1
```

4. Save the file.
5. Start the RepliWeb Scheduler as root by running the following command:

```
repliweb_scheduler -start
```

-OR-

Start the RepliWeb Scheduler as a different user by running the following command:

```
sudo -u {username} repliweb_scheduler -start
```

## Setting SSL Parameters using a CLI

The `rw_ssl_cli` command line utility enables you to configure which SSL authentication parameters to use when establishing sessions with the following Attunity RepliWeb components: Console, Center (control and data) and Edge.

The full path to the utility is `~/rds/common/rw_ssl_cli.exe` on UNIX and `~\rds\common\rw_ssl_cli.exe` on Windows. Any commands that you issue using the utility should be issued from this directory.

### The “set” Command

To set SSL parameters, use the “set” command. The “set” command accepts the following parameters:

- `[-center_control]` – Sets the SSL setting for the Center (Server).
- `[-center_data]` – Sets the SSL setting for the Center (Client).
- `[-edge]` – Sets the SSL setting for the Edge (Server).
- `[-console]` – Sets the SSL setting for the Console (Client).
  
- `[-certificate=]` – The certificate to use for authentication.
- `[-cert_private_key=]` – The private key to use for authentication.
- `[-private_key_phrase=]` – The private key passphrase to use for authentication.
- `[-scrambled_private_key_phrase=]` – The scrambled private key passphrase.
- `[-authentication={certificate,name}]` – Specify “certificate” to verify that the certificate is valid or “name” to verify that the Common Name (CN) field of the certificate matches either the hostname of the client/server or the value of the `-peer_common_name` qualifier described below.
- `[-peer_common_name=]` – The Common Name (CN) field of the client certificate when it is not the hostname.
  
- `[-ca_type={file,path}]` – Whether to specify a specific CA file or a folder containing CA certificates.
- `[-ca_file=]` – The full path to the CA certificate file when `-ca_type=file`.
- `[-ca_path=]` – The directory containing the CA certificate when `-ca_type=path`.

The command will merge existing SSL settings with the settings specified in the command. When a key phrase is specified, the corresponding registry keys will also be set. The command

will also switch on the “Use Alternate Files” flag where applicable (for a description of this flag, refer to user guide).

**Usage:**

```
~\rds\common\rw_ssl_cli.exe set [-center_control | -center_data | -edge |  
-console] -certificate=c:\certs\certiciate.pem  
-cert_private_key=c:\certs\private_key.pem [-private_key_phrase=PLAIN_TEXT_PHRASE |  
-scrambled_private_key_phrase=SCRAMBLED_PHRASE] -authentication=[certificate |  
name}] -peer_common_name=cn1 -ca_type=[file | path] -ca_file=c:\certs\ca.pem  
-ca_path=c:\certs
```

**Example:**

```
rw_ssl_cli.exe set -center_control -  
certificate="C:\temp\certificates\certificates\cert1\agent-certificate.pem"  
-cert_private_key="C:\temp\certificates\certificates\cert1\agent-private-  
key.pem"  
-private_key_phrase="7Z38U/GGVpWHrmF8Z7j8Yilg65fDGPqTXh7FxxqJlktk8rxtVS"  
-authentication=name -peer_common_name=Maestro -ca_type=file  
-ca_file="C:\temp\certificates\certificates\cert1\agent-ca.pem"
```

## The “factory\_reset” Command

Use the “factory\_reset” command to reset all settings to the installation defaults. The “factory\_reset” command accepts the following parameters:

- [-center\_control] – Resets the Center Control SSL settings.
- [-center\_data] – Resets the Center Data SSL settings.
- [-edge] – Resets the Edge SSL settings.
- [-console] – Resets the Console SSL settings.
- [-all] – Resets the SSL settings for all Attunity RepliWeb components.

**Example:**

```
rw_ssl_cli.exe factory_reset -center_control
```

# 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 Attunity RepliWeb features are optional and are available based on purchased licensing.

## Starting the Attunity RepliWeb Scheduler on the Center

The Attunity RepliWeb Scheduler should be activated before a server can be used as Attunity RepliWeb Center.

On a Windows installation, the Attunity RepliWeb 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. Attunity RepliWeb 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 Attunity RepliWeb 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/R-1/console/bin` directory on a UNIX installation, and `~\RepliWeb\R-1\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 a UNIX, a symbolic link called “*R-1*” is added to `/usr/bin`. If `/usr/bin` is in the common user search path, no path changes should be made and the Attunity RepliWeb command can be used from anywhere by the user.

# 5. Verifying the Installation

Use the tests provided in this chapter to ensure that Attunity RepliWeb 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 Attunity RepliWeb installation is verified by using the Attunity RepliWeb Command Line Interface (CLI). Refer to the *Attunity RepliWeb User Guide* for detailed explanation about the CLI format and options.

Using the Attunity RepliWeb Command Line Interface (CLI) allows the user to submit, monitor, and control distribution jobs. Attunity RepliWeb affords the flexibility to choose between running the CLI on either a Windows or UNIX computer. The distribution can then be run without regard to the location of the Center and Edge components.

The Console CLI resides in the `~/repliweb/r1/console/bin` directory on a UNIX installation, and `~\RepliWeb\r1\Console\Bin` on a Windows installation.

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

**Note:** Attunity RepliWeb 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 Center and Edge connections.**

## Prerequisites for Testing

Before performing the following tests, verify connectivity on port 2837 if using LAN or LFA, or on port 5745 if using WAN.

## Test Procedure – UNIX I

**Note:** The Console and Center must be installed on a UNIX computer in order to perform this test.

### To verify that the Attunity RepliWeb components are up and running:

1. # cd ~/repliweb/r1/console/bin
2. Activate the Attunity RepliWeb information command. The command output will display the Attunity RepliWeb version and build date of the Console and Center installed.

```
# r1 information -Center=localhost  
-center_user=user_name -center_password=pass
```

The Command output will be similar to the following:

```
Console information:  
Version : R-1 4.1.1 (x86)  
Build Date : May 19 2009 14:28:58  
  
Center "localhost" information:  
Version : R-1 4.1.1 (x86)  
Build Date : May 24 2009 15:55:19
```

## Test Procedure – UNIX II

**Note:** The Console and Center must be installed on a UNIX computer in order to perform this test.

This test procedure will verify the Attunity RepliWeb 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.

**To verify that a job is activated:**

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

```
# r1 submit localhost -source_directory=src
-target_dir=trgt -user=user_name -password=pass
-center=localhost -center_user=user_name -center_password=pass
```

The command's output will be:

```
R1-API-S-SUS, job <1> successfully submitted
```

2. View the job's status:

```
# r1 show -Center=localhost
-center_user=user_name -center_password=pass
```

The command's output will be:

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

3. Abort the Job:

```
# r1 abort -job=1 -Center=localhost
-center_user=user_name -center_password=pass
```

The command's output will be:

```
R1-API-S-AJS, job <1> successfully aborted
```

4. Delete the Job:

```
# r1 delete -job=1 -Center=localhost
-center_user=user_name -center_password=pass
```

The command's output will be:

```
R1-API-S-DJS, job <1> successfully deleted
```

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

```
# r1 show -Center=localhost
```

```
-center_user=user_name -center_password=pass
```

The command's output will be:

```
R1-API-E-NOJOB, no jobs matching query on "localhost"
```

## Test Procedure – UNIX III

**Note:** The Center must be installed on a UNIX computer in order to perform this test.

**To verify Console to Center connectivity with the Center installed on a UNIX computer:**

Connect to the center through a Console and verify connectivity.

## Test Procedure – UNIX IV

**Note:** The Center must be installed on a UNIX computer in order to perform this test.

### To verify 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

**Note:** The Console and Center must be installed on a Windows computer in order to perform this test.

### To verify that the Attunity RepliWeb components are up and running:

1. Open the command prompt: From the **Start** menu, access the command prompt through: **Programs / Accessories**.  

```
> cd ~\RepliWeb\R1\Console\Bin
```
2. Activate the r1 information command. The command output will display the Attunity RepliWeb version and build date of the Console and Center installed.  

```
> r1 information -Center=localhost  
-center_user=user_name -center_password=pass
```
3. The Command output will be like:

```
Console information:  
Version : R-1 4.1.1 (x86)  
Build Date : May 19 2009 14:28:58  
  
Center "localhost" information:  
Version : R-1 4.1.1 (x86)  
Build Date : May 24 2009 15:55:19
```

## Test Procedure – Windows II

**Note:** Console and Center must be installed on a Windows computer in order to perform this test.

This test procedure will verify the Attunity RepliWeb job activation. It will make sure that a job may be submitted, viewed and aborted. In Windows the Attunity RepliWeb Console may be also controlled using the Attunity RepliWeb 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.

### To verify that an Attunity RepliWeb job is active:

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

```
> r1 submit -source_directory=src -target_dir=trgt -user=user_name -password=pass
localhost -center=localhost -center_user=user_name -
center_password=pass
```

The command's output will be:

```
R1-API-S-SUS, job <1> successfully submitted
```

2. View the job's status:

```
# r1 show -Center=localhost
-center_user=user_name -center_password=pass
```

The command's output will be:

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

3. Abort the Job:

```
# r1 abort -job=1 -Center=localhost
-center_user=user_name -center_password=pass
```

The command's output will be:

```
R1-API-S-AJS, job <1> successfully aborted
```

4. Delete the Job:

```
# r1 delete -job=1 -Center=localhost
-center_user=user_name -center_password=pass
```

The command's output will be:

```
R1-API-S-DJS, job <1> successfully deleted
```

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

```
# r1 show -Center=localhost
```

```
-center_user=user_name -center_password=pass
```

The command's output will be:

```
R1-API-E-NOJOB, no jobs matching query on  
"localhost"
```

6. Repeat step 2 to activate a job.
7. View and handle the job using the Attunity RepliWeb GUI Console. Activate the **Attunity RepliWeb Console** from the **Start** menu, using **Programs / Repliweb / R-1 Deployment / R-1 Console**.

Complete connection information in the **Connect** dialog:

```
Center: <localhost>
```

```
User:    <user_name>
```

```
Password: <pass>
```

Click the **Connect** button.

8. The **Attunity RepliWeb Console** window opens, showing the submitted job. Select the job, click the **SELECT** button.
9. Abort the job by clicking the **MENU** button.
10. From the menu that appears, select the **Abort** menu option. A confirmation message appears, verifying the Abort operation. Click **Yes**.
11. Press the [F5] button to refresh the view. After a few seconds the job state icon will change.
12. Delete the job, using the same method. Click the **MENU** button; on the menu select the **Delete** menu option. A confirmation message will be displayed, verifying the delete operation. Click **Yes**.
13. Press the [F5] button to refresh the view. After a few seconds the job will disappear from the jobs list.

## 6. Activating Attunity RepliWeb

Assuming that all testing procedures have passed, Attunity RepliWeb is ready to use.

No additional tasks are required.

For more information on how to use the Attunity RepliWeb Console GUI or Command Line Interface (CLI), please refer to the *Attunity RepliWeb User Guide*, or press the **[F1]** key while in the Console GUI for the on-line help.

# 7. Uninstalling Attunity RepliWeb

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

## Uninstalling from UNIX

### To uninstall Attunity RepliWeb from UNIX:

1. In the installation directory, locate the **uninstall** folder.
2. Type the following commands:

```
#cd uninstall
```

```
#./uninstall
```

The uninstall process locates the Attunity RepliWeb installation directory and uninstalls it accordingly.

3. The command's output will be:

```
Stopping RepliWeb scheduler
```

```
Finished RepliWeb uninstall...
```

```
RepliWeb was uninstalled
```

This indicates that Attunity RepliWeb was uninstalled properly.

## Uninstalling from Windows

**Note:** Removing Attunity RepliWeb does not require a reboot.

### To uninstall Attunity RepliWeb from Windows:

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

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

# 8. Upgrading Attunity RepliWeb

This chapter explains how to upgrade Attunity RepliWeb from a previous installation to a newer Attunity RepliWeb version.

**Note:** Installing or upgrading Attunity RepliWeb does NOT require reboot.

## General Upgrade Comments

1. Using the Windows Console GUI, close the Console before running the installation kit.
2. If opened, close the Windows Services window.

The installation will automatically stop and start the Scheduler processes.

**Note:** If you are upgrading a production network, we recommend upgrading the servers performing as Edges, first.

**Note:** If you accidentally upgraded to a 32-bit Attunity RepliWeb kit on a 64-bit environment, you should run an Attunity RepliWeb backup, completely uninstall the 32-bit kit and then re-install the 64-bit kit.

## Upgrade Process

In order to upgrade to newer Attunity RepliWeb versions, just install over the previous installation.

### To upgrade your Attunity RepliWeb version:

1. Make sure that you have the latest version from the Attunity RepliWeb Download Page.
2. Backup your containers, templates, and your license.
3. Upgrade the Edges first and then the Center.
  - **Using the Windows Wizard setup wizard:**
    - a. Run the setup file and click **Next** at the **Updating Attunity RepliWeb** screen.
    - b. Click **Modify** and then select either **Typical** to upgrade without changing the configuration or **Advanced** to change certain configuration settings before upgrading. The **Advanced** option allows you to add or remove components, edit

the mail server settings, modify the Attunity RepliWeb Web UI settings, and specify a different local or Active Directory group. Only members of the specified group will be able to define, submit and control RepliWeb jobs.

- c.** If you selected **Typical**, click **Update** to upgrade the installation.
  - d.** If you selected **Advanced**, edit the configuration settings as required and then click **Update** to upgrade the installation.
- **Using the command prompt:**
    - Using Attunity RepliWeb qualifiers**, set: `set RW_INSTALL_MODE=silent`  
Then, run the relevant Attunity RepliWeb kit, for example, `r1_x64_6.2.exe /s`
    - Using msi**, from the extracted Attunity RepliWeb installation files directory, run:  
`msiexec /fvamuse r1.msi`
    - On UNIX**, simply install over the existing installation.
- 4.** 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 / Scheduler** tab.