



Ahsay Redirector

v6

Administrator's Guide

Ahsay Systems Corporation
Limited

8 February 2013

Ahsay Redirector Administrator's Guide

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1 Overview

This document provides information on how to setup Ahsay Redirector and how to configure it to work with AhsayOBS.

1.1 Conventions

Convention	Meanings	Example
Bold	Important Information	WARNING: You must check the timestamp of obrA.jar before proceeding to step2.
<i>Italic</i>	Folder Path or File Path	<i>/usr/local/obs/conf</i>
[]	Graphical Interface Elements	[Manage Log]
%%	Filepath in Windows format	%AhsayOBSR_HOME%
\$	Filepath in Linux/SOLARIS/BSD format	\$AhsayOBSR_HOME
<i>italic</i>	Command	<i>mkdir /usr/local/obs</i>

1.2 Definitions, Acronyms and Abbreviation

Term/Abbreviation	Definition
AhsayOBS	Ahsay Offsite Backup Server
AhsayRPS	Ahsay Replication Server
AhsayRDR	Ahsay Redirector Server
AhsayOBM	Ahsay Online Backup Manager
AhsayACB	Ahsay A-Click Backup
AhsayRDR_HOME	The install location of AhsayRDR. <u>Windows</u> <i>C:\Program Files\AhsayRDR</i> <u>Linux/FreeBSD/Solaris</u> <i>/usr/local/rdr/</i>
AhsayRDR_HOME_BAK	The backup location of AhsayRDR. It is used

	<p>temporary during the install/upgrade process.</p> <p><u>Windows</u> <i>C:\Program Files\AhsayRDR.bak\</i></p> <p><u>Linux/FreeBSD/Solaris</u> <i>/usr/local/rdr.bak/</i></p>
CONF_HOME	<p>The backup location of AhsayRDR. It is used temporary during the install/upgrade process.</p> <p><u>Windows</u> <i>%AhsayRDR_HOME%\conf</i></p> <p><u>Linux/FreeBSD/Solaris</u> <i>\$AhsayRDR_HOME/conf</i></p>
SYSTEM_HOME	<p>The directory where AhsayRDR store its system information.</p> <p><u>Windows</u> <i>%AhsayRDR_HOME%\system\</i></p> <p><u>Linux/FreeBSD/Solaris</u> <i>\$AhsayRDR_HOME\system\</i></p>
WEBAPPS_HOME	<p>Location of the webapps directory inside the installation directory of AhsayRDR.</p> <p><u>Windows</u> <i>%AhsayRDR_HOME%\webapps.</i></p> <p><u>Linux/FreeBSD/Solaris</u> <i>\$AhsayRDR_HOME\webapps</i></p>
WEBAPP_HOME_BAK	<p>A backup of the webapps directory inside AhsayRDR.</p> <p><u>Windows</u> <i>%AhsayRDR_HOME%\webapps.bak</i></p> <p><u>Linux/FreeBSD/Solaris</u> <i>\$AhsayRDR_HOME\webapps.bak</i></p>
JAVA_HOME	<p>The location where JAVA is installed</p>

1.3 System Requirements

For the system requirements of RDR, please refer to in the [Ahsay Help Centre Article #2323](#).

- i. **AhsayRDR v6.9 supports AhsayOBS version 5.5.8.2 or above.**
- ii. **AhsayRDR does not support AhsayOBS with Windows Active Directory Authentication enabled.**

1.4 Limitations

AhsayOBS will be filtering out the log messages from AhsayRDR to avoid large amount of messages logged. When under multiple external IP environment with NAT setup, AhsayOBS may indentify the incoming AhsayRDR IP address as a different host/IP and will not filter out the log message. As a result, large amount of logs will be collected by the AhsayOBS.

To resolve this issue, please add the AhsayRDR IP address in the AhsayOBS host file, and also add the AhsayOBS IP address in the AhsayRDR host file as well.

Example:

In AhsayOBS host file

```
:  
:  
rdr.redirector.com    192.168.6.124  
:  
:
```

In AhsayRDR host file

```
:  
:  
obs1.redirector.com  192.168.6.126  
obs2.redirector.com  192.168.6.127  
obs3.redirector.com  192.168.6.128  
obs4.redirector.com  192.168.6.129  
:  
:
```

2 Installation

This chapter provides steps on how to install AhsayRDR onto your server and how to startup / shutdown the AhsayRDR service installed on your server.

2.1 Windows

The following steps are the instructions on how to install AhsayRDR with rdr-win.exe on Windows platform.

1. Logon as administrator to Windows.
2. Download the AhsayRDR v6 installer (rdr-win.exe) from our [website](#).
3. Double-click downloaded rdr-win.exe to start the AhsayRDR setup wizard.
4. When the installer detects an existing copy of AhsayRDR installed on the computer, the following message will be shown:



5. Clicking on the [Yes] button to allow the installer to handle the configuration for upgrade automatically. (Clicking the [No] button will remove all the previous setting which is not recommended.)

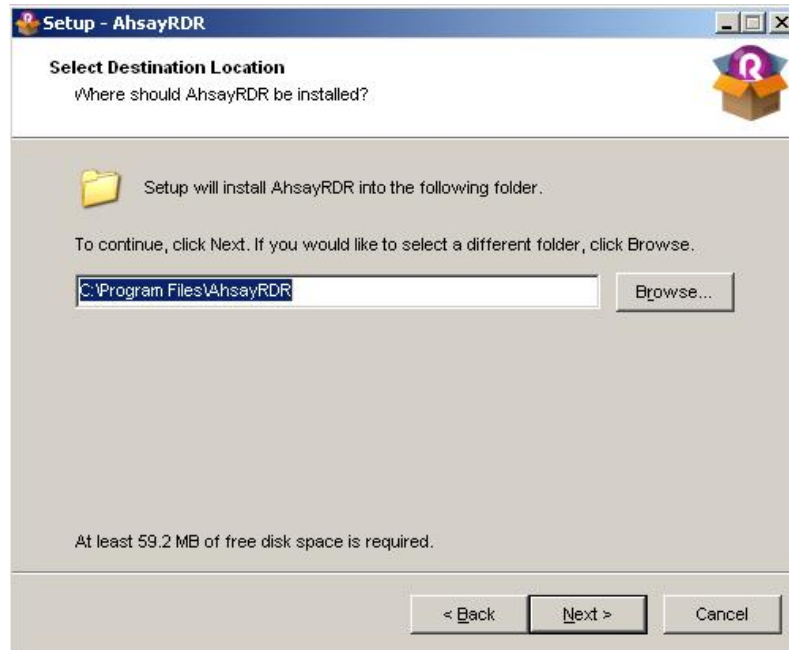
6. A welcome screen will be shown, please click [Next] button to go to the next step.



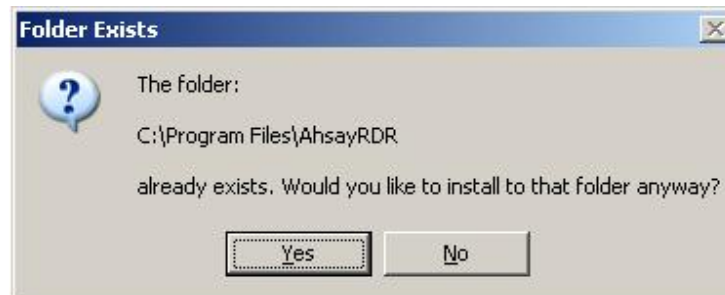
7. Choose [I accept the agreement] and click the [Next] button to start the installation after you have read the terms and conditions.



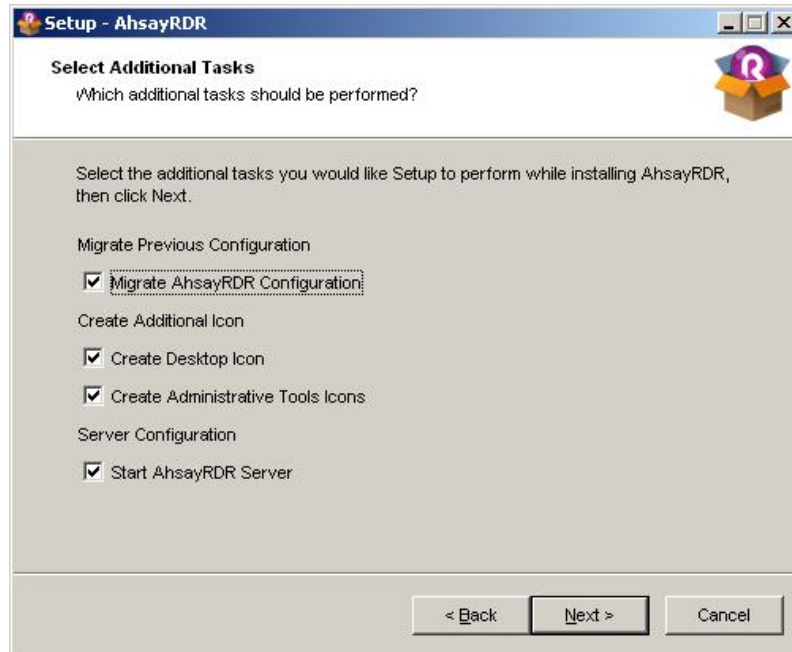
8. Select the folder that you would like to install AhsayRDR v6 and click [Next] button to go to the next step.



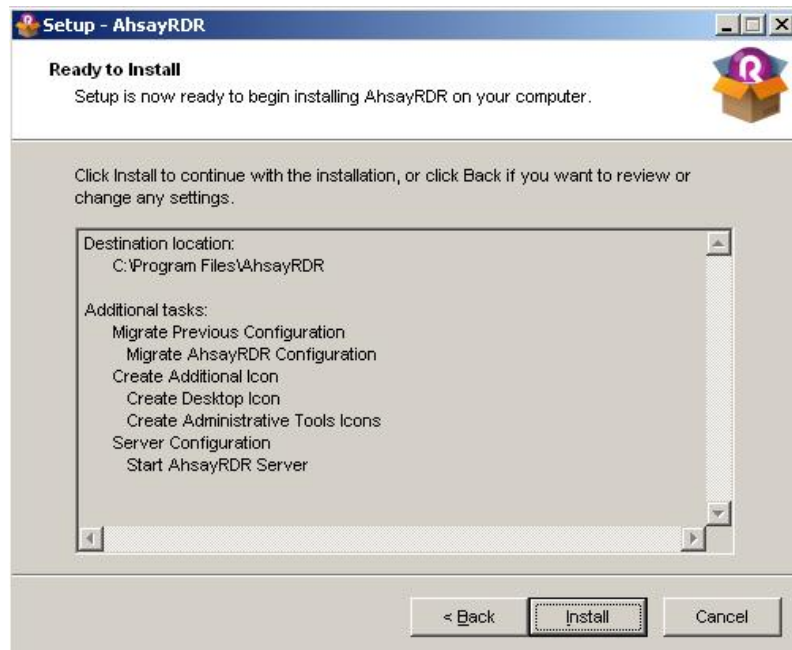
9. Select [Yes] button if you happy with the location path for installation:



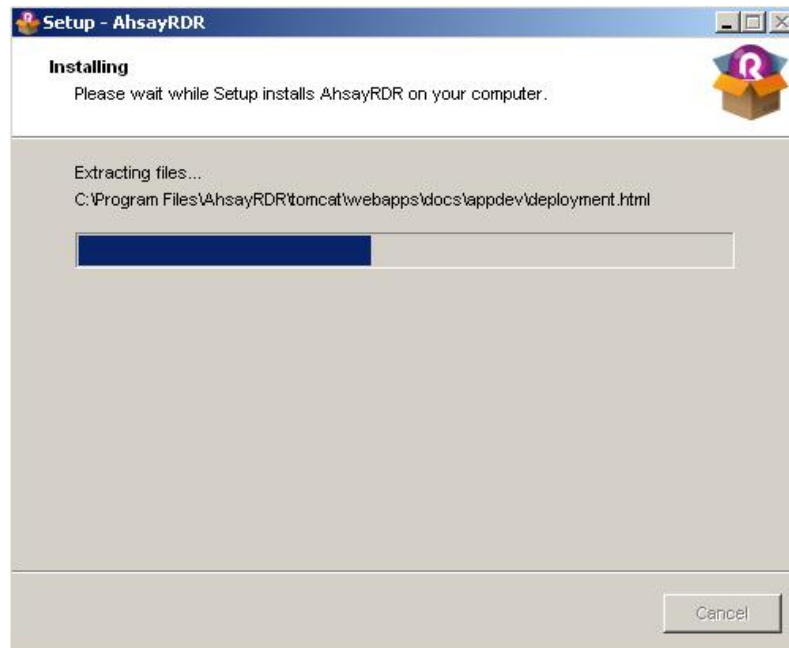
10. Select/deselect the options according to your preferences and click the [Next] button.



11. The next screen will provide a summary detail of the options selected. Please verify the installation options. If they are correct, click the [Install] button to begin the installation.



12. Wait until the upgrade process is completed.



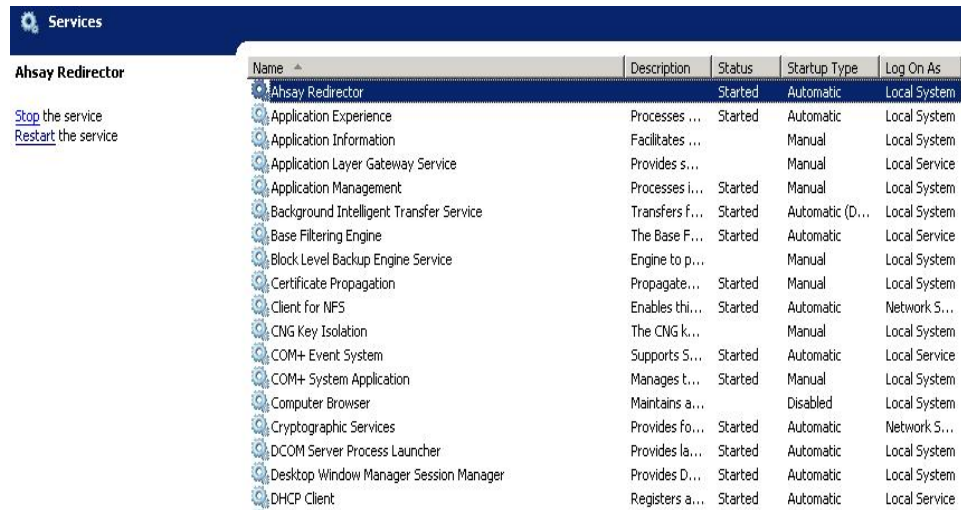
13. Click [Finish] button and AhsayRDR v6 should be started automatically.



14. Logon to the AhsayRDR Web Management console and press the [Update] button on the [Manage System] -> [Software License] page.
15. The installation of AhsayRDR is complete. For more details on configuring AhsayRDR, please refer to Chapter 5 of this guide.

Startup/Shutdown AhsayRDR Services

16. Select [AhsayRDR] from [Control Panel] -> [Administrative Tools] -> [Services]. Which would provide a view similar to the screen shot below



17. To start AhsayRDR, press the [Start] button.
 18. To stop AhsayRDR, press the [Stop] button.

Note:

When stopping the service for AhsayRDR, please allow time for the service to stop. Depending on the current load, some systems may require extra time to complete the shutdown of the service.

2.2 Linux/Solaris

The following steps are the instructions on how to install AhsayRDR on Linux/Solaris platforms.

1. Logon as root user in the Linux/Solaris machine.
2. Create a new \$AhsayRDR_HOME directory (i.e. /usr/local/rdr):

```
# mkdir -p /usr/local/rdr
```

3. Download the AhsayRDR v6 installer (rdr-nix.tar.gz) from our [website](#) to \$AhsayRDR_HOME.
4. If running on a Solaris system, please install the "SUNWgtar" package from the Solaris Installation Media which contain the GNU tar util.
5. Expand rdr-nix.tar.gz to \$AhsayRDR_HOME:

```
# cd $RDR_HOME
# gunzip rdr-nix.tar.gz
# tar -xf rdr-nix.tar
```

For Solaris system, please run the following command

```
# cd $AhsayRDR_HOME
# gunzip rdr-nix.tar.gz
# gtar -xf rdr-nix.tar.gz
```

Please make sure the directory structure is similar to the followings:

```
drwxr-xr-x  2 root root 4096 Mar  4 17:22 bin
drwxr-xr-x  2 root root 4096 Mar  4 17:22 conf
drwxr-xr-x  7 root root 4096 Mar  4 17:22 java-linux-x64
drwxr-xr-x  7 root root 4096 Mar  4 17:22 java-linux-x86
drwxr-xr-x  2 root root 4096 Mar  4 17:22 licenses
drwxr-xr-x  2 root root 4096 Mar  4 17:22 logs
drwxr-xr-x  2 root root 4096 Mar  4 17:22 termsofuse
drwxr-xr-x  7 root root 4096 Mar  4 17:22 tomcat
drwxr-xr-x  4 root root 4096 Mar  4 17:22 util
-rwxr-xr-x  1 root root    7 Jan 19 11:09 version.txt
drwxr-xr-x  5 root root 4096 Mar  4 17:22 webapps
```

6. For systems running on Solaris, please remove the bundled Java, i.e. java-linux-x64 and java-linux-x86 using the commands:

```
# rm -rf /usr/local/rdr/java-linux-x64
# rm -rf /usr/local/rdr/java-linux-x86
```

7. For Solaris systems, create a symbolic link from \$AhsayRDR_HOME to \$JAVA_HOME with the command:


```
# ln -s /usr/java /usr/local/rdr/java
```

8. Run the install.sh script to install the startup script and run the AhsayRDR service:

```
# /etc/init.d/rdr start
# sh /usr/local/rdr/bin/install.sh
```

```
Verifying current user privilege ...
Current user has enough privilege to "install".

Start configuration on Generic Linux Platform (Linux)
Using RDR_HOME /usr/local/rdr
JVM is verified for installation!
Minimum supported JVM version: 1.5
Current JVM version is supported for installation.
Installing [ Ahsay Redirector ]
[ Ahsay Redirector ] Service Script created at /usr/local/rdr/bin/rdr
Install Service for NIX type OS
Using init script path /etc/init.d
Using run level script path /etc/rc.d
Copying script rdr to /etc/init.d
Creating symbolic link to run levels
You may start this service by:

sh "/etc/init.d/rdr" start &

[ Ahsay Redirector ] setup completed!
Startup [ Ahsay Redirector ]
Started [ Ahsay Redirector ]
[root@fed01 bin]# -----
You may set SYSTEM_DEBUG=0 to disable the debug message
-----
Current User Name      : root
Using SYSTEM_TYPE     : linux
Using SYSTEM_ARCH     : i686
Using PHYSICAL_MEM    : 1003 (MB)
Using SYSTEM_RESV     : 256 (MB)
-----
Using RDR_HOME        : /usr/local/rdr
Using JAVA_HOME       : /usr/local/rdr/java
Using CATALINA_HOME   : /usr/local/rdr/tomcat
Using CATALINA_OUT    : /usr/local/rdr/logs/catalina.out
Using JAVA_OPTS       : -Xss128k -Xms512m -Xmx512m -Xrs -XX:+UseConcMarkSweepGC -XX:+UseParNewGC -XX:NewRatio=
o4 -XX:SurvivorRatio=6 -XX:PermSize=128m -Dsun.net.inetaddr.ttl=3600 -Dnetworkaddress.cache.ttl=3600 -Dsun
n.net.inetaddr.negative.ttl=300 -Dnetworkaddress.cache.negative.ttl=300 -Djava.net.preferIPv4Stack=true -D
java.library.path=/usr/local/rdr/tomcat/lib
Using CATALINA_OPTS   : -Dtc.log.path=/usr/local/rdr/logs -Dtc.work.path=/usr/local/rdr/work -Dtc.rcr.conf.p
ath=/usr/local/rdr/conf -Djavax.servlet.context.tempdir=/usr/local/rdr/work
-----
Starting RDR service
```

Note: It has been found on some systems that the installation may appear to pause after displaying "Starting RDR service". If this occurs, please press the space bar to complete the install.

9. Logon to the AhsayRDR Web Management console and press the [Update] button on the [Manage System] -> [Software License] page.
10. The installation of AhsayRDR is complete. For more information on configuring AhsayRDR, please refer to chapter 5 of this guide.

2.3 FreeBSD

The following instruction shows the steps to install AhsayRDR on a FreeBSD platform.

Please note that the steps below assume that the FreeBSD installation is already using OpenJDK version 6. If this is not installed on the system, OpenJDK version 6 can be downloaded from:

For FreeBSD 7 (amd64):

<ftp://ftp.freebsd.org/pub/FreeBSD/ports/amd64/packages-7-stable/Latest/openjdk6.tbz>

For FreeBSD 7 (i386):

<ftp://ftp.freebsd.org/pub/FreeBSD/ports/i386/packages-7-stable/Latest/openjdk6.tbz>

For FreeBSD 8 (amd64):

<ftp://ftp.freebsd.org/pub/FreeBSD/ports/amd64/packages-8-stable/Latest/openjdk6.tbz>

For FreeBSD 8 (i386):

<ftp://ftp.freebsd.org/pub/FreeBSD/ports/i386/packages-8-stable/Latest/openjdk6.tbz>

For more reference, please refer to the following link:

<http://www.freebsdoundation.org/downloads/java.shtml>

1. Logon as root user in the FreeBSD machine.
2. Create a new \$AhsayRDR_HOME directory (i.e. /usr/local/rdr):

```
# mkdir -p /usr/local/rdr
```

3. Download the AhsayRDR v6 installer (rdr-nix.tar.gz) from our [website](#) to \$AhsayRDR_HOME.
4. Expand rdr-nix.tar.gz to \$AhsayRDR_HOME:

```
# cd $AhsayRDR_HOME
# gunzip rdr-nix.tar.gz
# tar -xf rdr-nix.tar
```

Please make sure the directory structure is similar to the followings:

```
drwxr-xr-x 12 root wheel 512 Mar 7 02:41 .
drwxr-xr-x 21 root wheel 512 Mar 7 02:34 ..
drwxr-xr-x 2 root wheel 512 Mar 7 02:35 bin
drwxr-xr-x 2 root wheel 512 Mar 7 02:35 conf
drwxr-xr-x 7 root wheel 512 Mar 7 02:36 java-linux-x64
drwxr-xr-x 7 root wheel 512 Mar 7 02:36 java-linux-x86
drwxr-xr-x 2 root wheel 512 Mar 7 02:36 licenses
drwxr-xr-x 2 root wheel 512 Mar 7 02:36 logs
drwxr-xr-x 2 root wheel 1024 Mar 7 02:36 termsfuse
drwxr-xr-x 7 root wheel 512 Mar 7 02:36 tomcat
drwxr-xr-x 4 root wheel 512 Mar 7 02:36 util
-rwxr-xr-x 1 root wheel 7 Mar 4 16:29 version.txt
drwxr-xr-x 5 root wheel 512 Mar 7 02:36 webapps
```

- For FreeBSD, remove bundled Java, i.e. java-linux-x64 and java-linux-x86:

```
# rm -rf /usr/local/rdr/java-linux-x64
# rm -rf /usr/local/rdr/java-linux-x86
```

- For FreeBSD, create a symbolic link from \$AhsayRDR_HOME to \$JAVA_HOME:

```
# ln -s /usr/local/diablo-jre1.6.0 java
```

- From the command line, run the following command:

```
# setenv JAVA_HOME /usr/local/Diablo-jre1.6.0
```

- Install and startup the AhsayRDR service by the following command:

```
# /usr/local/rdr/bin/install.sh
```

After executing the command, you should see the following output.

```

Verifying current user privilege ...
Current user has enough privilege to "install".

Start configuration on BSD distribution Platform (FreeBSD)
Using RDR_HOME /usr/local/rdr
"JAVA_HOME" variable is set.
Current Directory: "/usr/local/rdr".
Created symlink "java" to "/usr/local/diablo-jre1.6.0".
Minimum supported JVM version: 1.5
Current JVM version is supported for installation.
Installing [ Ahsay Redirector ]
[ Ahsay Redirector ] Service Script created at /usr/local/rdr/bin/rdr
Install Service for BSD type OS
Copying script rdr to /usr/local/etc/rc.d
You may start this service by:

sh "/usr/local/etc/rc.d/rdr" start &

Remember to add an entry: rdr_enable="YES" to /etc/rc.conf

[ Ahsay Redirector ] setup completed!
Startup [ Ahsay Redirector ]
Started [ Ahsay Redirector ]
Free8# -----
You may set SYSTEM_DEBUG=0 to disable the debug message
-----
Current User Name      : root
Using SYSTEM_TYPE     : bsd
Using SYSTEM_ARCH     : amd64
Using PHYSICAL_MEM    : 1010 (MB)
Using SYSTEM_RESV     : 256 (MB)
-----
Using RDR_HOME        : /usr/local/rdr
Using JAVA_HOME       : /usr/local/rdr/java
Using CATALINA_HOME   : /usr/local/rdr/tomcat
Using CATALINA_OUT    : /usr/local/rdr/logs/catalina.out
Using JAVA_OPTS       : -Xs256k -Xms754m -Xmx754m -Xrs -XX:+UseConcMarkSweepGC -XX:+UseParNewGC -XX:NewRatio=4 -XX:SurvivorRatio=6 -XX:PermSize=128m -Dsun.net.inetaddr.ttl=3600 -Dnetworkaddress.cache.ttl=3600 -Dsun.net.inetaddr.negative.ttl=300 -Dnetworkaddress.cache.negative.ttl=300 -Djava.net.preferIPv4Stack=true -Djava.library.path=/usr/local/rdr/tomcat/lib
Using CATALINA_OPTS   : -Dtc.log.path=/usr/local/rdr/logs -Dtc.work.path=/usr/local/rdr/work -Dtc.rcf.conf.path=/usr/local/rdr/conf -Djavax.servlet.context.tempdir=/usr/local/rdr/work
-----
Starting RDR service

```

Note: It has been found on some systems that the installation may appear to pause after displaying "Starting RDR service". If this occurs, please press the space bar to complete the install.

9. Logon to the AhsayRDR Web Management console and press the [Update] button on the [Manage System] -> [Software License] page.
10. The installation of AhsayRDR is complete.

Startup/Shutdown AhsayRDR

1. Logon as "root" to Linux/Solaris.
2. To startup AhsayRDR on Linux system please run the following command:

```
[root]# /etc/init.d/rdr start
```

For FreeBSD system, please use the following command.

```
[root]# /usr/local/etc/rc.d/rdr stop
```

After running the command, the following output should appear to advise that the service has started.

```
Starting up [ Redirector ]
-----
You may set SYSTEM_DEBUG=0 to disable the debug message
-----
Current User Name      : root
Using SYSTEM_TYPE     : linux
Using SYSTEM_ARCH     : x86_64
Using PHYSICAL_MEM    : 1002 (MB)
Using SYSTEM_RESV     : 256 (MB)
-----
Using RDR_HOME        : /usr/local/rdr
Using JAVA_HOME       : /usr/local/rdr/java
Using CATALINA_HOME   : /usr/local/rdr/tomcat
Using CATALINA_OUT    : /usr/local/rdr/logs/catalina.out
Using JAVA_OPTS       : -Xss256k -Xms746m -Xmx746m -Xrs -XX:+UseConcMarkSweepGC -XX:+UseParNewGC -XX:NewRatio=4 -XX:SurvivorRatio=6 -XX:PermSize=128m -Dsun.net.inetaddr.ttl=3600 -Dnetworkaddress.cache.ttl=3600 -Dsun.net.inetaddr.negative.ttl=300 -Dnetworkaddress.cache.negative.ttl=300 -Djava.net.preferIPv4Stack=true -Djava.library.path=/usr/local/rdr/tomcat/lib
Using CATALINA_OPTS   : -Dtc.log.path=/usr/local/rdr/logs -Dtc.work.path=/usr/local/rdr/work -Dtc.rcr.conf.path=/usr/local/rdr/conf -Djavax.servlet.context.tempdir=/usr/local/rdr/work
-----
Starting RDR service
```

Note: It has been found on some systems that the installation may appear to pause after displaying "Starting RDR service". If this occurs, please press the space bar to proceed

Once the service has been started, it would be possible to connect to the web console for AhsayRDR via a web browser.

3. To shutdown AhsayRDR on Linux, please run the command:

```
[root]# /etc/init.d/rdr stop
```

On FreeBSD system, please use the following command

```
[root]# /usr/local/etc/rc.d/rdr stop
```

When shutting the system down, the following output should appear to advise that the service has been stopped.

```

Shutting down [ Redirector ]
-----
--You may set SYSTEM_DEBUG=0 to disable the debug message-----
-----Current Us
er Name      : rootUsing SYSTEM_TYPE      : linuxUsing SYSTEM_ARCH      : x86_
64-----
---Using RDR_HOME      : /usr/local/rdrUsing JAVA_HOME      : /usr/lo
cal/rdr/javaUsing CATALINA_HOME : /usr/local/rdr/tomcatUsing CATALINA
_OUT : /usr/local/rdr/logs/catalina.outUsing JAVA_OPTS      : -Djav
a.net.preferIPv4Stack=true -Djava.library.path=/usr/local/rdr/tomcat/
libUsing CATALINA_OPTS : -Dtc.log.path=/usr/local/rdr/logs -Dtc.work.
path=/usr/local/rdr/work -Dtc.rdr.conf.path=/usr/local/rdr/conf -Dja
vax.servlet.context.tempdir=/usr/local/rdr/work-----
-----Stopping RDR service
Waiting for the RDR process (PID=16188) to terminate . OK
[ Redirector ] is stopped

```

3 Uninstallation

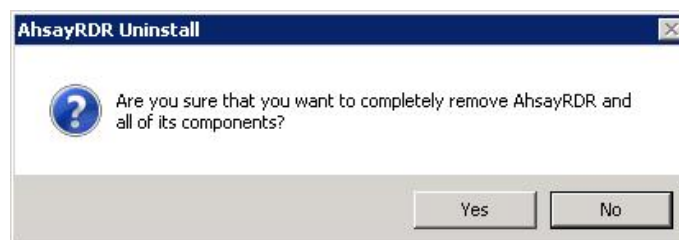
This chapter describes how to uninstall AhsayRDR from your computer.

3.1 Windows

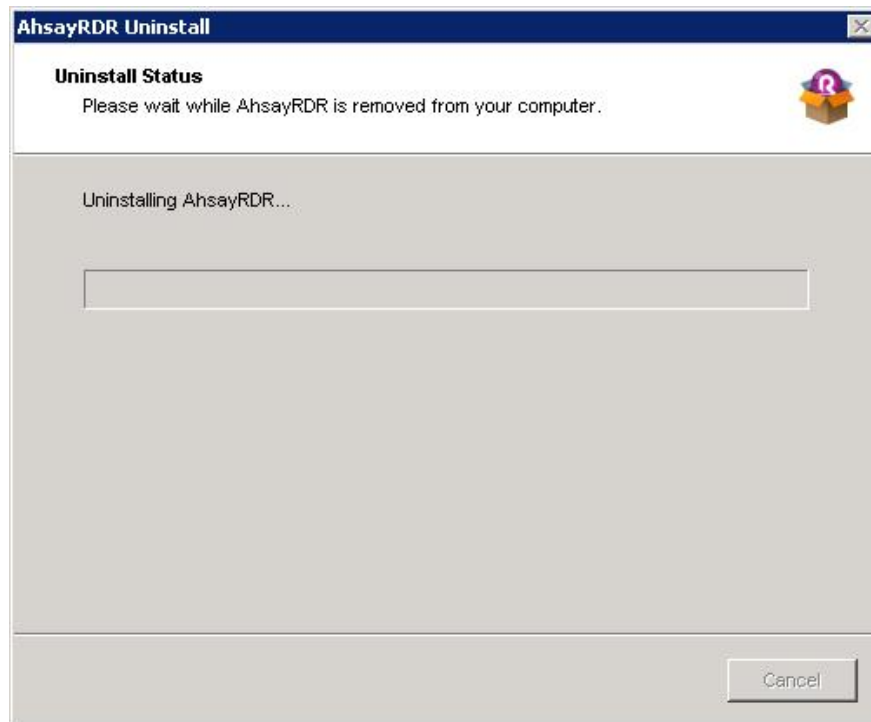
1. Go to [Start Menu] -> [Programs] -> [AhsayRDR] -> [Uninstall].



2. The uninstall wizard will be shown on the screen



3. Click [Yes] to start uninstalling AhsayRDR.



4. Once uninstall has completed, the system would show the following dialog box. Please click on the [OK] to continue.



The system would automatically open a window to the installation path, so that the configuration files can be copied/backed up if required.

5. AhsayRDR is now removed from your system.

3.2 Linux/Solaris/FreeBSD

1. Logon as root to the Linux/Solaris/FreeBSD machine.
2. Move to the \$AhsayRDR_HOME directory and run the uninstall script using the command shown below.

```
cd /usr/local/rdr
sh ./bin/uninstall.sh
```

The following output would appear after running the script. The script would stop AhsayRDR service and also remove the startup script so that the service will not start at boot up.

```
Verifying current user privilege ...
Current user has enough privilege to "uninstall".

Using RDR_HOME: /usr/local/rdr
Using JAVA_HOME: /usr/local/rdr/java
Try to shutdown [ Ahsay Redirector ]

-----You may set
SYSTEM_DEBUG=0 to disable the debug message-----
-----Current User Name : rootUsing SYSTEM_TYPE : 1
linuxUsing SYSTEM_ARCH : x86_64-----
-----Using RDR_HOME : /usr/local/rdrUsing JAVA_HOME : /usr
r/local/rdr/javaUsing CATALINA_HOME : /usr/local/rdr/tomcatUsing CATALINA_OUT : /
usr/local/rdr/logs/catalina.outUsing JAVA_OPTS : -Djava.net.preferIPv4Stack=
true -Djava.library.path=/usr/local/rdr/tomcat/libUsing CATALINA_OPTS : -Dtc.log.p
ath=/usr/local/rdr/logs -Dtc.work.path=/usr/local/rdr/work -Dtc.rdr.conf.path=/usr
/local/rdr/conf -Djavax.servlet.context.tempdir=/usr/local/rdr/work-----
-----Stopping RDR service
Waiting for the RDR process (PID=16485) to terminate . OK
Wait 5 seconds before [ Ahsay Redirector ] is down
Remove [ Ahsay Redirector ] (rdr) from service
Uninstall Service for NIX type OS
Using init script path /etc/init.d
Using run level script path /etc/rc.d
Removing symbolic link from run levels
Removing script file rdr from /etc/init.d
[ Ahsay Redirector ] uninstall service is complete!
It is now safe to remove files from /usr/local/rdr
```

3. (Optional) After the AhsayRDR service entry is removed from the system, you can remove the \$AhsayRDR_HOME by:

```
[root]# export AhsayRDR_HOME=/usr/local/rdr
[root]# rm -rf $RDR_HOME
```

This will remove all system files under the \$AhsayRDR_HOME directory.

4 Quick Start

This chapter describes the minimum steps required to start using AhsayRDR. Please consult the information in the following chapters for a complete reference to all features available in AhsayRDR.

4.1 Getting started

To setup your AhsayRDR, please do the followings:

1. Point your browser to `http://<your-rdr-server>/`.
2. Login as AhsayRDR administrator.

The default login name and password is "system" and "system" respectively.

[Administrator's Guide](#) | [Select Language](#)

Administrator Login | [User Login](#)

Login Name :

Password :

remember my login name

Troubleshooting:

- i. Check to see if your **CAPS LOCK** is on. Both the login name and password are case sensitive.
- ii. Please check to see if your system clock is correct. Cookies may not work correctly if your system clock is incorrect.

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Setup AhsayRDR.

[Manage System](#) | [Manage Log](#) [Administrator's Guide](#) | [Select Language](#)
[Server Configuration](#) | [Software License](#) [Logout](#)

System Settings

Login Name :
Password :
Host Name :
System Home :

Backup Server :

Login Name	Password	Protocol	Hostname	Port	Status
New <input type="text"/>	<input type="password"/>	http <input type="button" value="v"/>	<input type="text"/>	<input type="text"/>	Enable <input type="button" value="v"/>

Email System Settings

SMTP Server :

Host Name	Login Name	Password
1. <input type="text" value="your.smtp.server"/>	<input type="text"/>	<input type="password"/>
New <input type="text"/>	<input type="text"/>	<input type="password"/>

Report Sender :

Name	EMail
<input type="text" value="RDR Report Sender"/>	<input type="text" value="report.sender@your.company"/>

Administrator Contact :

Name	EMail
1. <input type="text" value="RDR Admin Contact"/>	<input type="text" value="admin.contact@your.company"/>
New <input type="text"/>	<input type="text"/>

System Job

Duplicated User Check :
 Enable Disable
 Daily At : MM

Options

Language Settings :

<input checked="" type="checkbox"/> Bulgarian	<input checked="" type="checkbox"/> Catalan	<input checked="" type="checkbox"/> Czech
<input checked="" type="checkbox"/> Danish	<input checked="" type="checkbox"/> German	<input checked="" type="checkbox"/> Greek Modern
<input checked="" type="checkbox"/> English	<input checked="" type="checkbox"/> Spanish	<input checked="" type="checkbox"/> Basque

Before using AhsayRDR, please do the following:

3. Set your backup server.

Enter the login name and password of system administrator of backup server in the [Login Name] and [Password] textbox of the [Backup Server] section.

Select the protocol, "http" or "https", communicated with the backup server in the [Protocol] drop down list.

4. Press the [Update] button.

5 Configure AhsayRDR

5.1 Overview

This chapter describes how you can use the [Manage System] -> [Server Configuration] page (shown below) to manage the configuration of AhsayRDR.

The screenshot shows the 'Server Configuration' page with the following sections:

- System Settings:** Login Name (system), Password (masked), Host Name (localhost), System Home (C:\Program Files\AhsayRDR\system).
- Backup Server:** A table with columns for Login Name, Password, Protocol (http), Hostname, Port, and Status (Enable).
- Email System Settings:**
 - SMTP Server:** Host Name (your.smtp.server), Login Name, Password.
 - Report Sender:** Name (RDR Report Sender), EMail (report.sender@your.company).
 - Administrator Contact:** Name (RDR Admin Contact), EMail (admin.contact@your.company).
- System Job:** Duplicated User Check (radio buttons for Enable/Disable), Time to run (Daily At 00:00 MM).
- Options:** Language Settings with checkboxes for Bulgarian, Catalan, Czech, Danish, German, Greek Modern, English, Spanish, and Basque.

The following table shows all settings under the [Manage System] -> [Server Configuration] Menu.

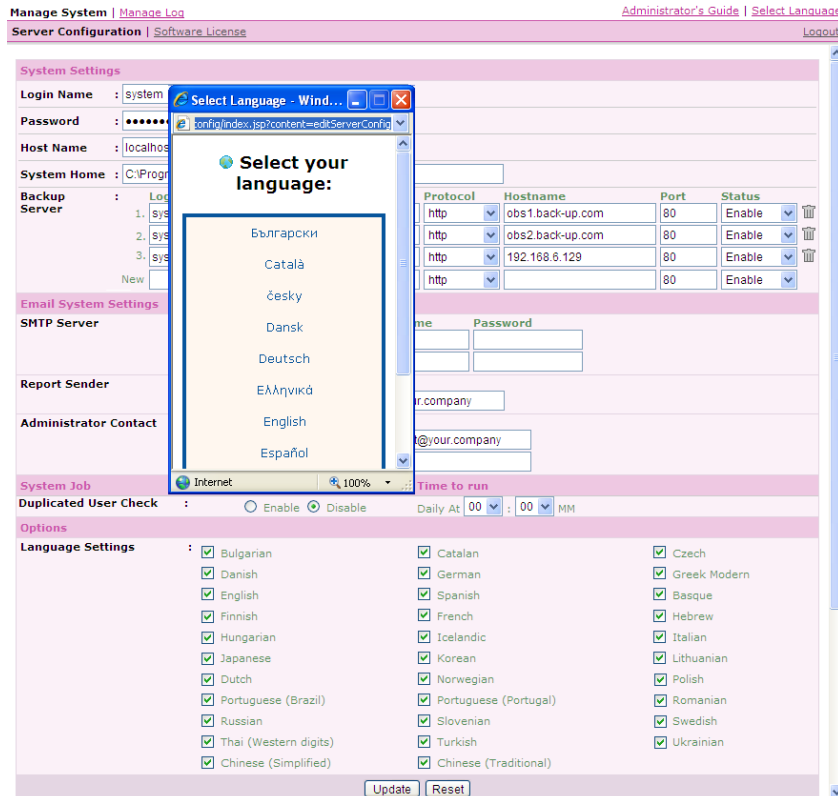
Key	Description
Login Name / Password	The username and password of the AhsayRDR system account.
Host Name	AhsayRDR Hostname.
System Home	The directory where AhsayRDR stores its system information. The default AhsayRDR system home is %AhsayRDR_HOME%\system. <i>(Normally, you do not need to modify the value of this setting unless you want to store this information elsewhere.)</i>
Backup Server	The AhsayOBS backup server(s) that AhsayRDR connects to.
SMTP Server	The SMTP server that AhsayRDR will use to

	deliver its email reports.
Report Sender	The name of email address that will be used as a sender for all outgoing emails.
Administrative Contact	The name(s) and email address (es) of the system administrator.
Duplicated User Check	System job to check duplicated users on the listed AhsayOBS
Language Setting	It determines whether different languages are enabled.

5.2 Language Settings

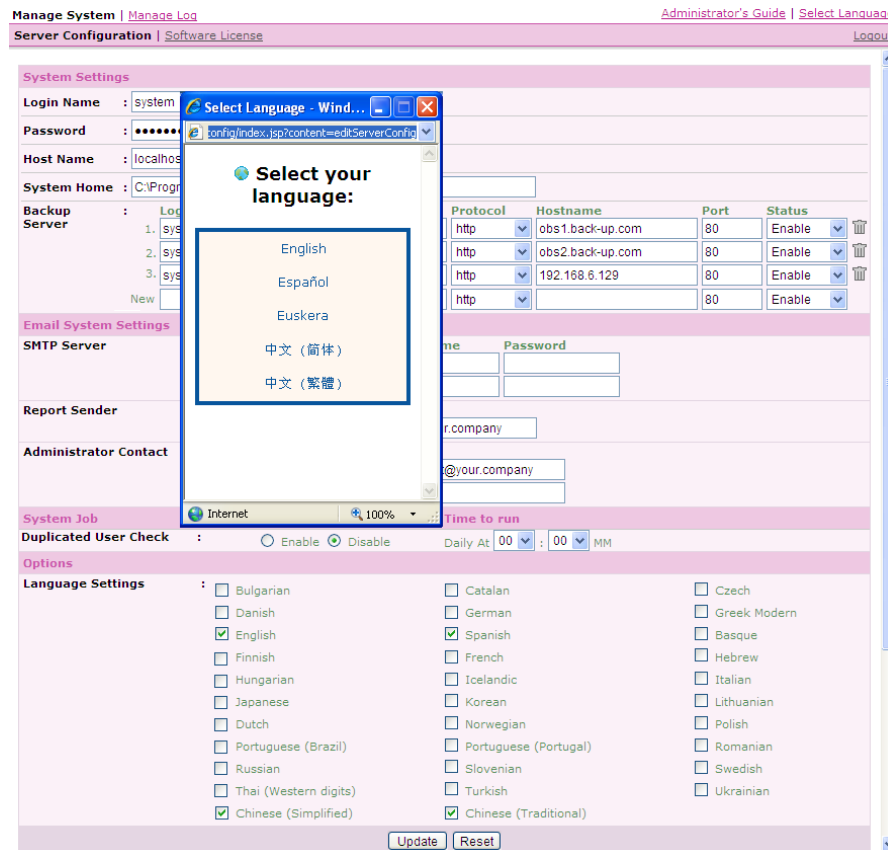
The language of web interface can be easily changed to another language by:

1. Click the [Select Language] link available on the top right hand corner of web interface.
2. Select the language of your choice.
3. All text messages from the original window are now displayed in the language you have just selected (see example below).



The languages supported by AhsayRDR are listed in the Appendix A.

If you uncheck all checkboxes for all languages available in [Manage System] -> [Server Configuration] -> [Language Setting], the [Select Language] will no longer be available on the top right hand corner of web interface (you need to refresh the top menu bar to see the change). Users will not be able to change the language of web interface.



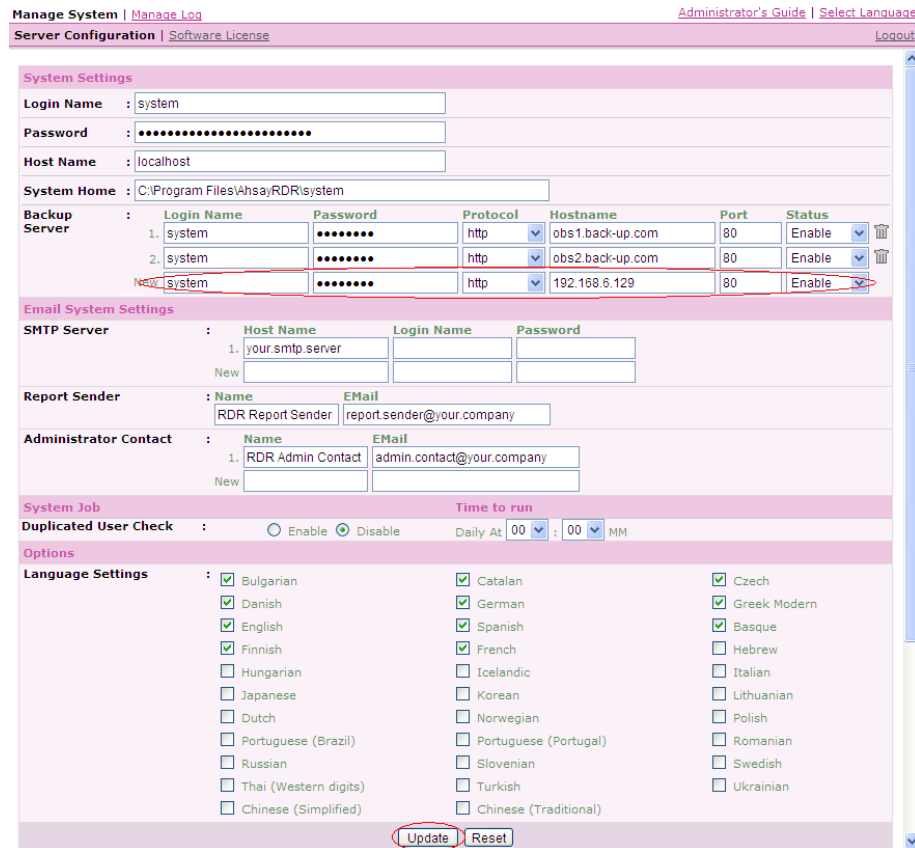
5.3 Adding a new AhsayOBS to the AhsayRDR

A new AhsayOBS member backup server can be added to AhsayRDR by:

1. Enter the login name and password for the system administrator of the newly added backup server in the [Login Name] and [Password] text box in the [Backup Server] section.
2. Select the protocol, "http" or "https" which can communicate to the newly added backup server in the [Protocol] drop down list.
3. Enter the hostname (or IP address) and port of the backup server in the [host name] and [port] textbox.
4. Press the [Update] button.

Example 1:

If a new host, 192.168.6.129 with port 80 is added to the AhsayRDR



The xml file in %AhsayRDR_HOME%/conf/rdr.xml will be shown as follows.

```

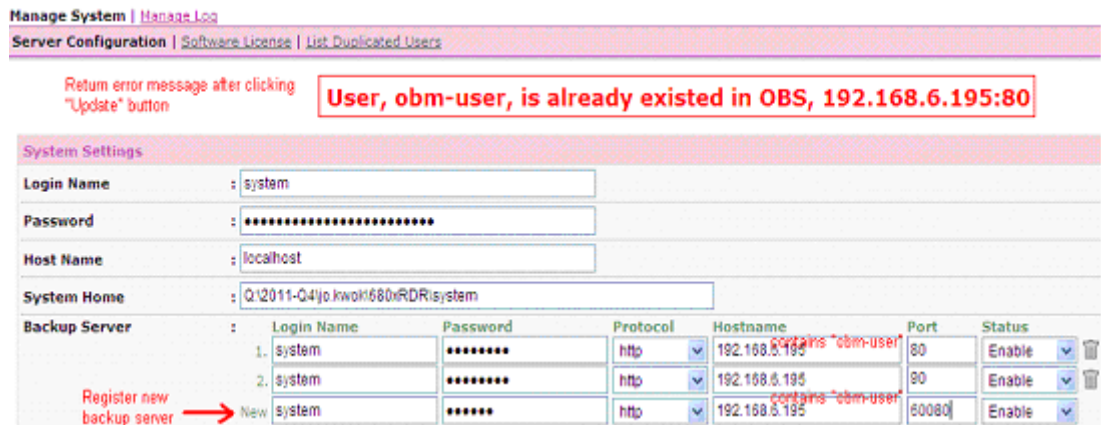
rdr.xml

<Key name="com.ahsay.rdr.core.key.rdr.Host" content="" allowMultiple="N">
  <Value name="rsv-id" inheritParentAttribute="Y" type="string" data="Host-1000002" />
  <Value name="rsv-system-login-name" inheritParentAttribute="Y" type="string"
data="system" />
  <Value name="rsv-system-password" inheritParentAttribute="Y" type="string"
data="2dLf2cvC" />
  <Value name="rsv-hashed-password" inheritParentAttribute="Y" type="boolean" data="Y" />
  <Value name="rsv-protocol" inheritParentAttribute="Y" type="string" data="http" />
  <Value name="rsv-hostname" inheritParentAttribute="Y" type="string" data="192.168.6.129"
/>
  <Value name="rsv-port" inheritParentAttribute="Y" type="long" data="80" />
  <Value name="rsv-status" inheritParentAttribute="Y" type="string" data="enable" />
</Key>

```

Example 2:

When a new AhsayOBS is registered to a group of backup servers in the AhsayRDR, if a user on the new AhsayOBS can be found on the existing groups of backup servers, the following message will be shown and the new AhsayOBS cannot be registered to the backup server group.



Note:

When adding a new AhsayOBS to the AhsayRDR, make sure they are able to communicate each of the AhsayOBS members through http or https. As AhsayOBS will always check if there are duplicate users when a new user is added. Please ensure that you have loosen the IP restriction "ApiAccess" filter in the following XML file located on each AhsayOBS:

%OBS_HOME%\webapps\obs\WEB-INF\web.xml

5.4 AhsayOBS Hostname Setting

For the first time setup, it is strongly recommended when a new AhsayOBS backup server is added to AhsayRDR. On the new AhsayOBS server the [Manage System] -> [Server Configuration] -> [Use Redirector (AhsayRDR)] option is enabled to allow enforced duplication login name checking for the backup user accounts.

Here is a summary of the hostname settings of different AhsayOBS versions.

AhsayOBS version	Backup Client Connection Host
6.9 or above	Applicable to backup client created by system administrator.

	<p> Manage System Manage Log Manage User Manage Group Server Configuration Routine Job Software License Replic </p> <p> <input checked="" type="checkbox"/> Use Redirector (RDR) </p> <p> Protocol : http <input type="button" value="v"/> Hostname : rdr.reseller.com Login Name : system Password : Administrator Hostname : rdr.reseller.com </p>
6.7	<p>Applicable to backup clients created by system administrator.</p> <p> Manage System Manage Log Manage User Manage Group Server Configuration Routine Job Software License Replic </p> <p> System Settings </p> <p> Login Name : system Password : Host Name : rdr.reseller.com </p>
6.5 or below	Use AhsayRDR's hostname.

Notes:

- Since version 6.9, it is required that **all AhsayOBS** in the AhsayRDR setup **to be able to connect to each other**, e.g. able to open/connect to the web interface of each other. Otherwise, some features may not be working properly, e.g. trial user registration and user authentication.

Please ensure that you have loosen the IP restriction "ApiAccess" filter in the following XML file located on each AhsayOBS:

%OBS_HOME%\webapps\obs\WEB-INF\web.xml

- Each connected member AhsayOBS server is required to update the [Manage System] -> [Server Configuration] -> [Administrator Hostname] field under [Use Redirector (RDR)] setting. For AhsayOBM/AhsayACB backup users created by the system administrator each backup client must connect to AhsayRDR using the Administrator hostname.
- If you are using AhsayOBS version 6.7, you are required to update the [Manage System] -> [Server Configuration] -> [Host Name] field under [System Settings], this value is equivalent to the [Administrator Hostname] field in AhsayOBS version 6.9 .

- For AhsayOBM/AhsayACB backup users hosted under AhsayOBS version 6.7 , each backup client must connect to AhsayRDR using host name field defined under [System Settings].
- For AhsayOBS version 6.5 or below, the hostname is NOT required to update. AhsayOBM/AhsayACB backup client must connect to AhsayRDR using the AhsayRDR hostname.
- If you upgraded AhsayOBS from version 6.7 to version 6.9 or above, you need to update the [Manage System] -> [Server Configuration] -> [Host Name] to AhsayOBS's host name manually.
- For AhsayOBM/AhsayACB backup users created by a reseller account each backup client must connect to AhsayRDR using the reseller hostname.

5.5 Removing an AhsayOBS from the AhsayRDR

An AhsayOBS backup server can be removed from AhsayRDR

1. Click on the recycle bin of the AhsayOBS server you want to remove and pressing [OK].

- On the respective AhsayOBS server the web console under the [Manage System] -> [Server Configuration] and unselect the [Use Redirector (RDR)] option and press [Update].

Example:

If the host (192.168.6.129) with port 80 is removed from the AhsayRDR 192.168.6.124, the following diagram shows this situation.

System Configuration | [Software License](#) | [Logout](#)

System Settings

Login Name : system

Password : *****

Host Name : localhost

System Home : C:\Program Files\AhsayRDR\system

Backup Server

1.	Login Name	Password	Protocol	Hostname	Port	Status
1.	system	*****	http	obs1.back-up.com	80	Enable
2.	system	*****	http	obs2.back-up.com	80	Enable
3.	system	*****	http	192.168.6.129	80	Enable
New			http		80	Enable

Email System Settings

SMTP Server

1.	Host Name	Login Name	Password
1.	your.smtp.server		
New			

Report Sender

Name	E-Mail
RDR Report Sender	report.sender@your.company
New	

Administrator Contact

1.	Name	E-Mail
1.	RDR Admin Contact	admin.contact@your.company
New		

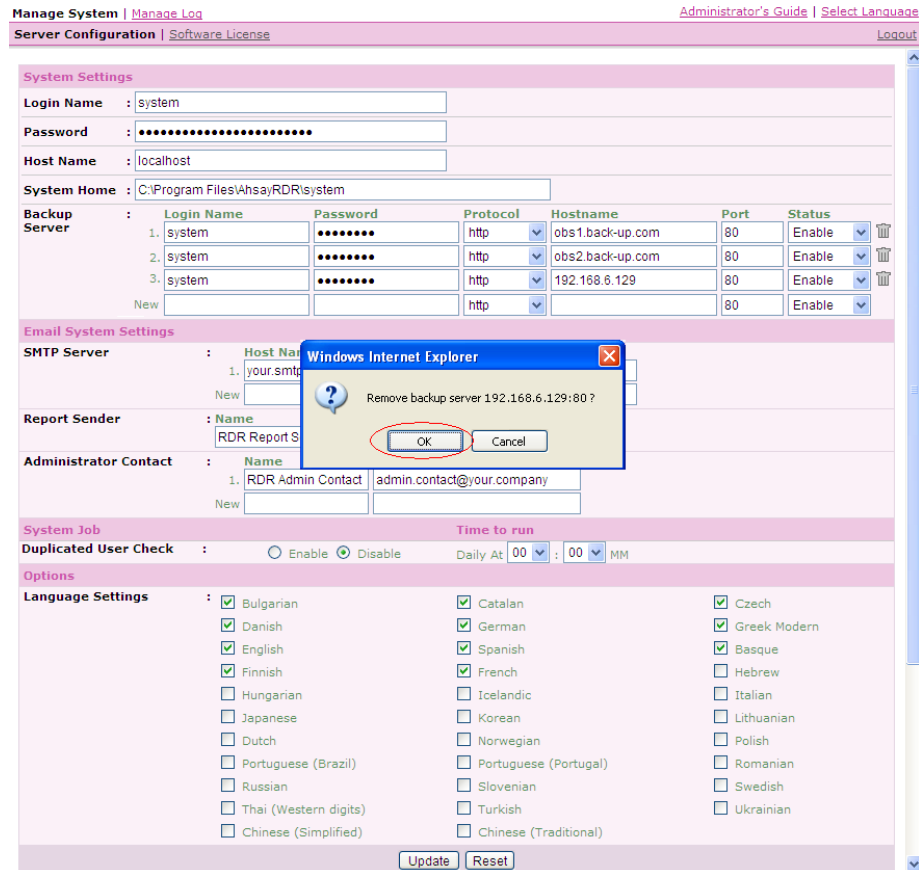
System Job

Duplicated User Check : Enable Disable Daily At 00 : 00 MM

Options

Language Settings

<input checked="" type="checkbox"/> Bulgarian	<input checked="" type="checkbox"/> Catalan	<input checked="" type="checkbox"/> Czech
<input checked="" type="checkbox"/> Danish	<input checked="" type="checkbox"/> German	<input checked="" type="checkbox"/> Greek Modern
<input checked="" type="checkbox"/> English	<input checked="" type="checkbox"/> Spanish	<input checked="" type="checkbox"/> Basque
<input checked="" type="checkbox"/> Finnish	<input checked="" type="checkbox"/> French	<input type="checkbox"/> Hebrew
<input type="checkbox"/> Hungarian	<input type="checkbox"/> Icelandic	<input type="checkbox"/> Italian
<input type="checkbox"/> Japanese	<input type="checkbox"/> Korean	<input type="checkbox"/> Lithuanian
<input type="checkbox"/> Dutch	<input type="checkbox"/> Norwegian	<input type="checkbox"/> Polish
<input type="checkbox"/> Portuguese (Brazil)	<input type="checkbox"/> Portuguese (Portugal)	<input type="checkbox"/> Romanian
<input type="checkbox"/> Russian	<input type="checkbox"/> Slovenian	<input type="checkbox"/> Swedish
<input type="checkbox"/> Thai (Western digits)	<input type="checkbox"/> Turkish	<input type="checkbox"/> Ukrainian
<input type="checkbox"/> Chinese (Simplified)	<input type="checkbox"/> Chinese (Traditional)	

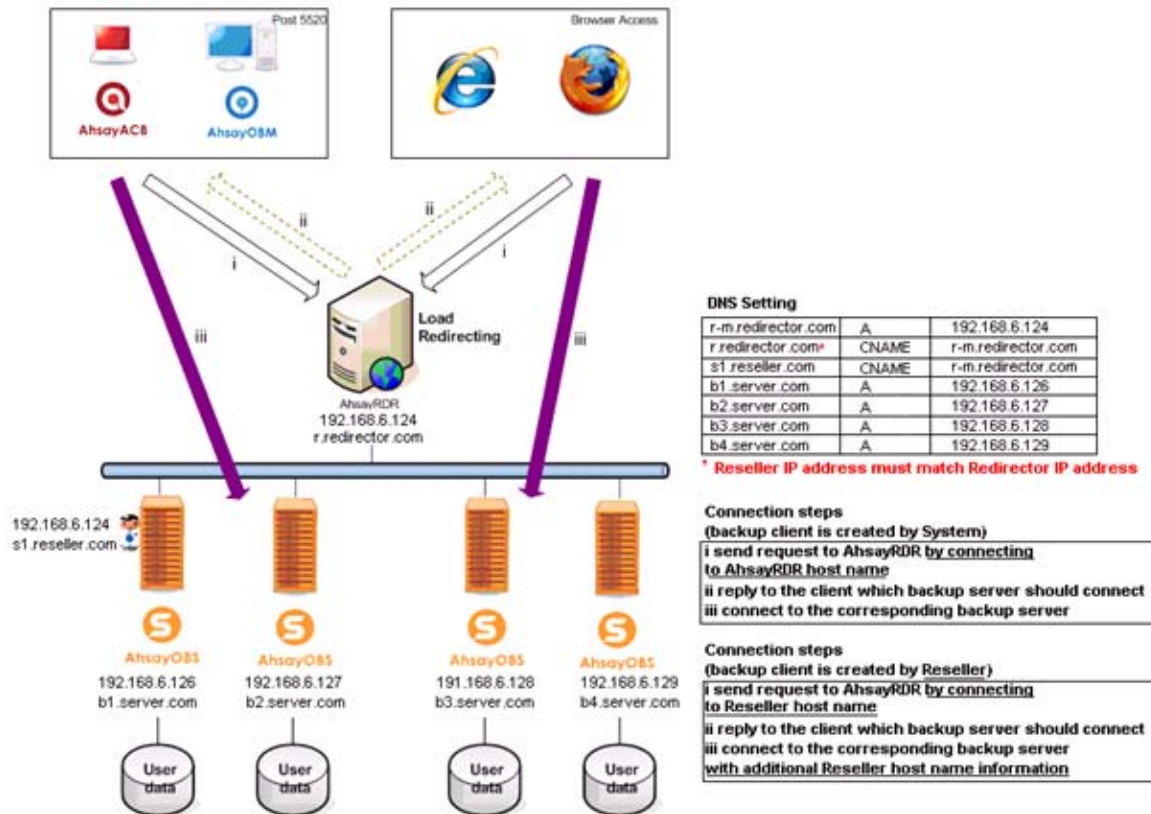


5.6 Advanced Settings

5.6.1 AhsayOBS with Reseller Panel Setup

To support the group policy feature/reseller panel feature in AhsayOBS, AhsayRDR, AhsayOBS, AhsayOBM and AhsayACB v6.7.0.0 or above are required. Same configuration will be used with additional work on DNS setting, AhsayOBS setting and logon behaviour.

The following is applicable to first time setup with resellers or existing setup and planned to accommodate resellers.



5.6.1.1 AhsayOBS Setting

To ensure correct backup client authentication, OBS system host name and reseller host name must be entered correctly prior to using AhsayRDR. Please refer to [chapter 5.3](#) for details.

5.6.1.2 DNS Setting

To ensure correct redirection, reseller IP address must match to Redirector IP address.

Name	Type	Value
r-m.redirector.com.	A	192.168.6.124
r.redirector.com.	CNAME	r-m.redirector.com.
s1.reseller.com.	CNAME	r-m.redirector.com.
s2.reseller.com.	CNAME	r-m.redirector.com.
b1.server.com.	A	192.168.6.126
b2.server.com.	A	192.168.6.127
b3.server.com.	A	192.168.6.128
b4.server.com.	A	192.168.6.129

Note: For the first time setup, it is strongly recommended to add backup servers in AhsayRDR and then enable AhsayRDR option in OBS to enforce duplication login name checking.

In general, login name cannot be duplicated in one single host. Therefore same reseller can be registered to one or more OBS as long as its backup clients passed duplication login name checking.

Duplication login name checking will be conducted when

- Adding new backup server in AhsayRDR
- Re-enabling backup server in AhsayRDR
- Update server configuration in AhsayRDR
- Enabling AhsayRDR option in AhsayOBS
- Change the system host name in AhsayOBS
- Change the reseller host name in AhsayOBS
- Create new backup client in AhsayOBS by system or reseller
- Create new trial backup client by AhsayOBM/AhsayACB

A system job can also help to detect any duplicated login name at specify time daily. This feature is introduced since v6.9.0.0. A system log message will be written when duplicated login name is found.

System Job		Time to run
Duplicated User Check	<input checked="" type="radio"/> Enable <input type="radio"/> Disable	Daily At 14 : 30 MM

1617	02:30:00 PM	[info][system][Thread][Job][DuplicatedUserCheck]Starting duplicated user check
1618	02:30:00 PM	[info][system][Thread][Job][DuplicatedUserCheck]Start: Duplicated user check
1619	02:30:00 PM	[info][system][Thread][Job][DuplicatedUserCheck]Duplicated Users '6031_ACB' was found in 'http://obs2.test:6700', 'http://obs1.test:6800'
1620	02:30:00 PM	[info][system][Thread][Job][DuplicatedUserCheck]Duplicated Users '6031_OBM' was found in 'http://obs2.test:6700', 'http://obs1.test:6800'
1621	02:30:00 PM	[info][system][Thread][Job][DuplicatedUserCheck]Duplicated Users '6031_tester' was found in 'http://obs2.test:6700', 'http://obs1.test:6800'
1622	02:30:00 PM	[info][system][Thread][Job][DuplicatedUserCheck]End:Duplicated user check

5.6.1.3 Logon Behaviour

To ensure correct backup client authentication, please connect to either RDR host or reseller host according to the account creation.

If backup account is created by OBS system administrator, backup client should connect to AhsayRDR host name. Register RDR host name on AhsayOBS is also required. Please refer to [chapter 5.4](#) for details.



If backup account is created by reseller, backup client should connect to reseller host name.



It is strongly **recommended** to use a valid host name and avoid IP address for backup server connection.

AhsayOBM / AhsayACB version v6.7.0.0 or above can connect to the corresponding reseller by the following steps.

- i. Send request to AhsayRDR

AhsayOBM/AhsayACB/web browser connects to the AhsayRDR with the user login credentials to make a query which AhsayOBS should be connected to.

- ii. Reply to the client which backup server should be connected to

AhsayRDR will reply AhsayOBM/AhsayACB/web browser that the user is located at AhsayOBS on the IP/domain name eg: 192.168.6.127 . AhsayOBM/AhsayACB/web browser will establish a new connection according to the following settings defined in the AhsayRDR management console.

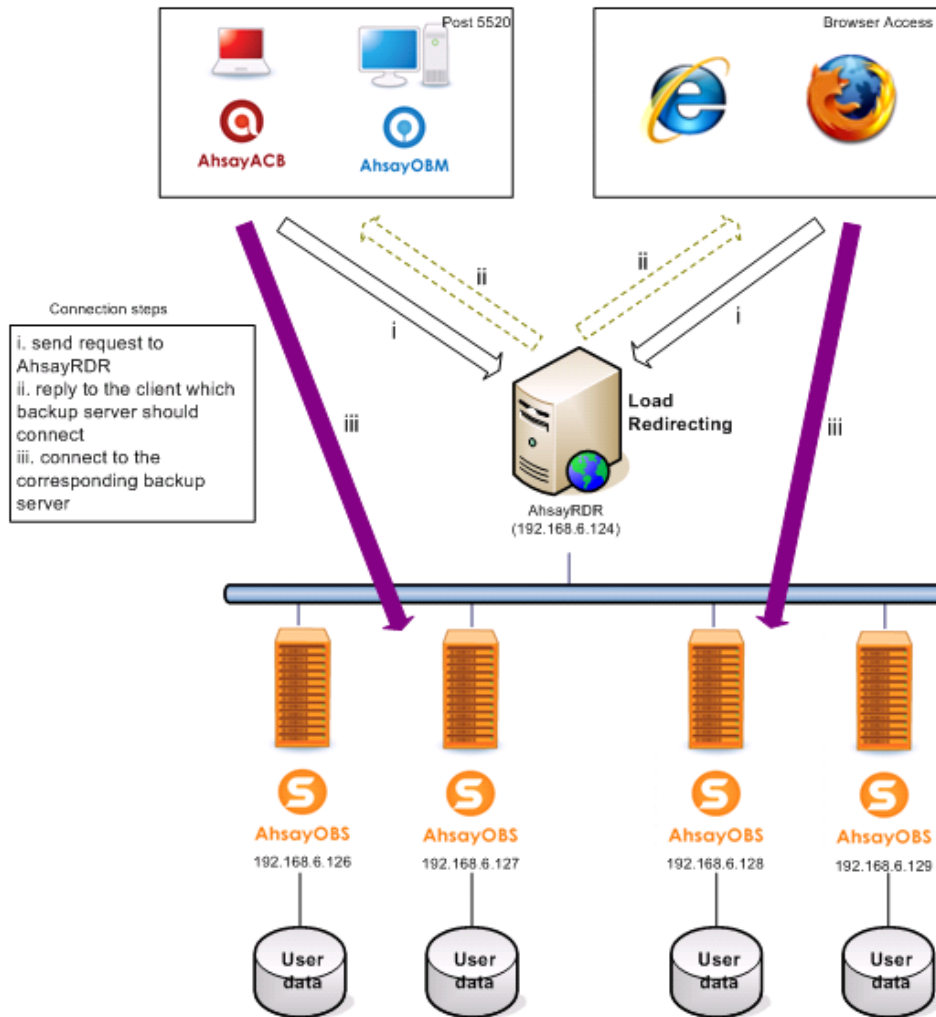
Backup Server	Login Name	Password	Protocol	Hostname	Port	Status	
1.	system	*****	https	192.168.6.126	443	Enable	
2.	system	*****	http	192.168.6.127	80	Enable	
3.	system	*****	https	192.168.6.128	443	Enable	
4.	system	*****	http	192.168.6.129	80	Enable	
New			http			Enable	

Suggestion: Due to the security concerns, it is recommended to use https as the default protocol. If http connection protocol is used, all clients' connection protocol (no matter using http/https) will be using http instead.

- iii. Connect to the corresponding backup server

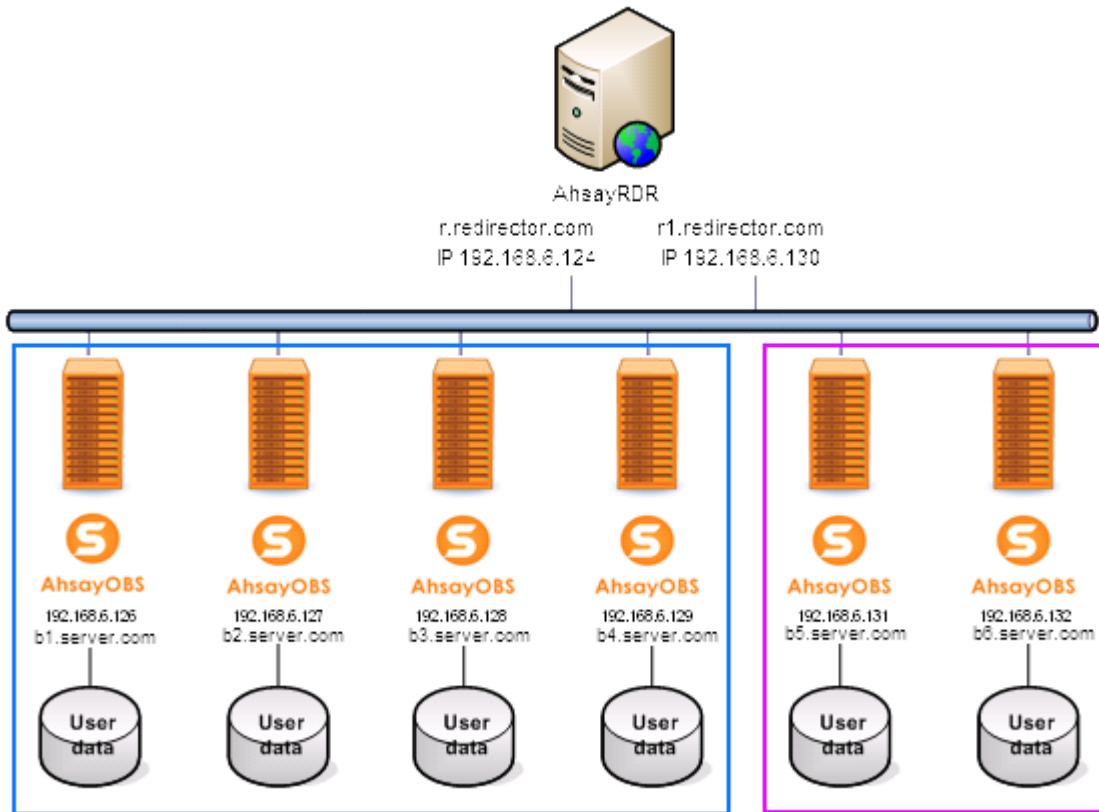
AhsayOBM/AhsayACB/web browser will establish a new connection to the AhsayOBS (192.168.6.127) using http protocol.

Example:



5.6.2 Add Additional Domain to the AhsayRDR

If a new domain is added to the AhsayRDR eg: r1.redirector.com to the existing setup. Add another IP address to the AhsayRDR and configure the connector in the server.xml to listen to the port of the newly added IP address are required.



DNS settings

Name	Type	Value
r.redirector.com.	CNAME	r-m.redirector.com.
r-m.redirector.com.	A	192.168.6.124
r1.redirector.com.	CNAME	r-m1.redirector.com.
r-m1.redirector.com.	A	192.168.6.130
b1.server.com.	A	192.168.6.126
b2.server.com.	A	192.168.6.127
b3.server.com.	A	192.168.6.128
b4.server.com.	A	192.168.6.129
b5.server.com.	A	192.168.6.131
b6.server.com.	A	192.168.6.132

New connectors are required to add to the server.xml file on the AhsayRDR server. The %AhsayRDR_HOME%\conf\server.xml file is required to change as highlighted below.

Example:

```
server.xml
:
:
<Connector address="192.168.6.124" port="80"
```

```

maxHTTPHeaderSize="8192" socketBuffer="16384" maxThreads="2000"
minSpareThreads="20" maxSpareThreads="2000"
maxKeepAliveRequests="100" enableLookups="false" redirectPort="443"
acceptCount="200" connectionTimeout="60000"
disableUploadTimeout="true" URIEncoding="utf-8" />

<Connector address="192.168.6.124" port="443"
maxHTTPHeaderSize="8192" socketBuffer="16384" maxThreads="2000"
minSpareThreads="20" maxSpareThreads="2000"
maxKeepAliveRequests="100" enableLookups="false" redirectPort="443"
acceptCount="200" connectionTimeout="60000"
disableUploadTimeout="true" URIEncoding="utf-8" SSLEnabled="true"
scheme="https" secure="true" keystoreFile="conf/keystore"
keystorePass="changeit" clientAuth="false" sslProtocol="TLS" />

<Connector address="192.168.6.130" port="80"
maxHTTPHeaderSize="8192" socketBuffer="16384"
maxThreads="2000" minSpareThreads="20"
maxSpareThreads="2000" maxKeepAliveRequests="100"
enableLookups="false" redirectPort="443" acceptCount="200"
connectionTimeout="60000" disableUploadTimeout="true"
URIEncoding="utf-8" />

<Connector address="192.168.6.130" port="443"
maxHTTPHeaderSize="8192" socketBuffer="16384"
maxThreads="2000" minSpareThreads="20"
maxSpareThreads="2000" maxKeepAliveRequests="100"
enableLookups="false" redirectPort="443" acceptCount="200"
connectionTimeout="60000" disableUploadTimeout="true"
URIEncoding="utf-8" SSLEnabled="true" scheme="https"
secure="true" keystoreFile="conf/keystore"
keystorePass="changeit" clientAuth="false" sslProtocol="TLS" />

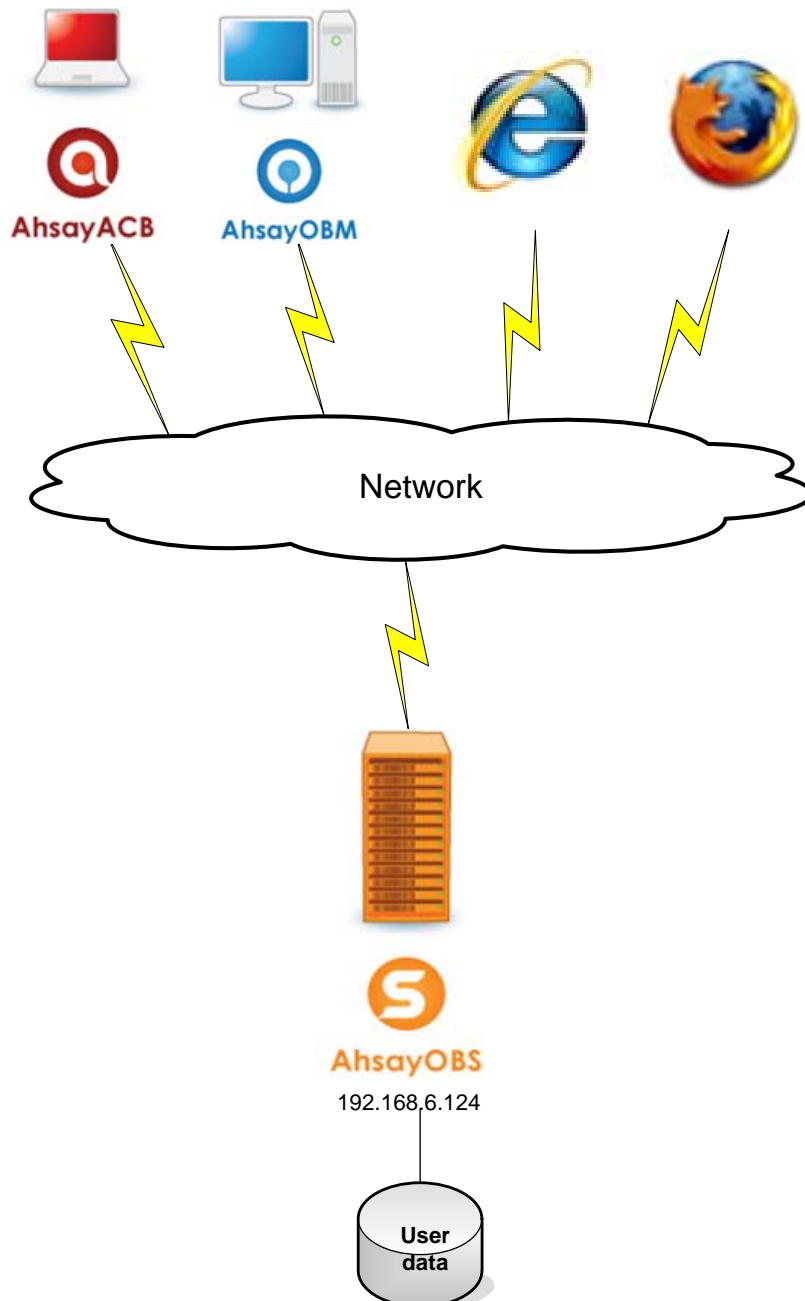
:
:

```

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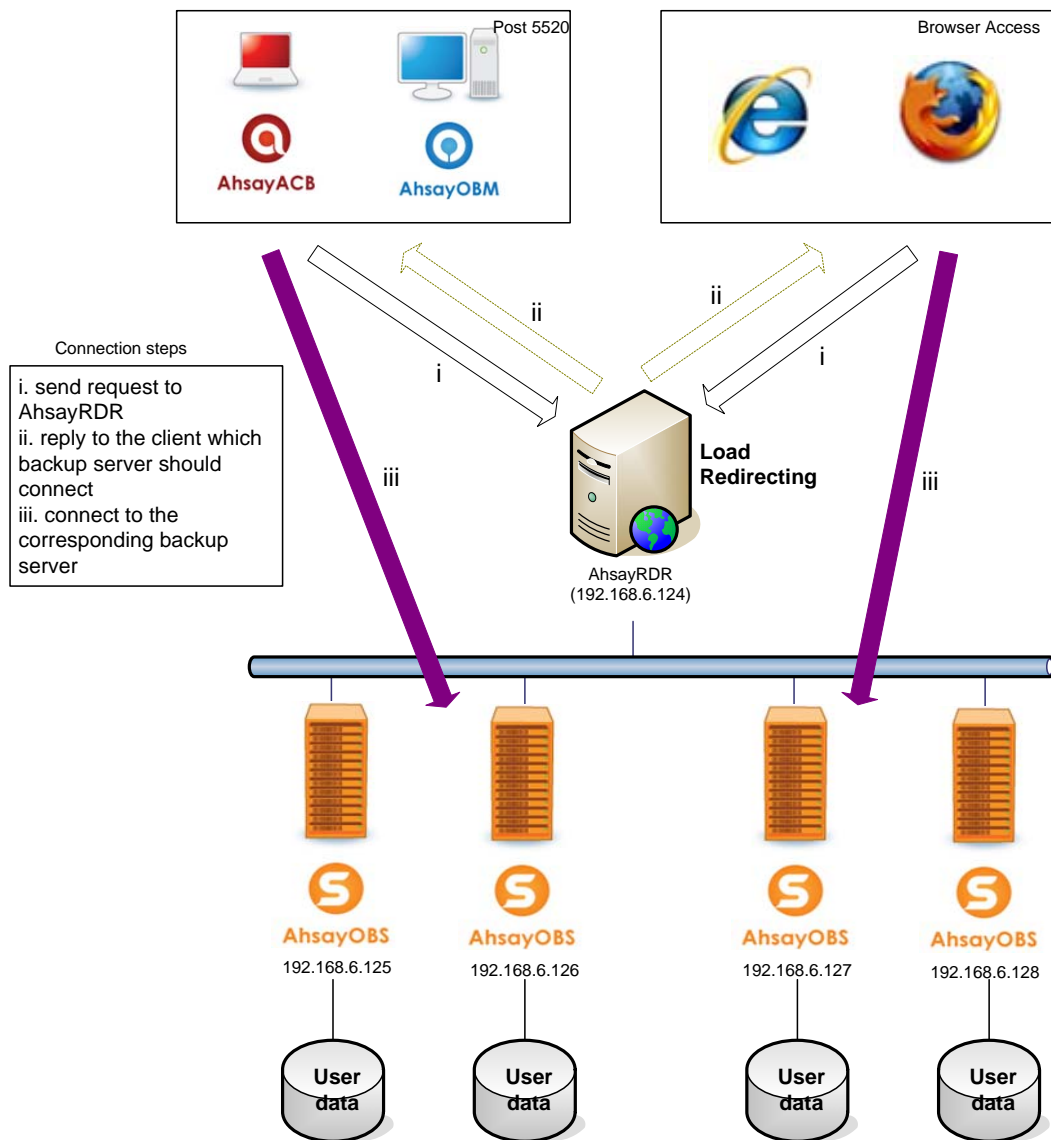
This chapter mentions how you can share the workload of a backup server with huge amount of backup users by using the AhsayRDR.

For example, a backup server with IP address 192.168.6.124 contains 1000 backup users. The following diagram illustrates this scenario.



Now, 4 backup servers with IP addresses 192.168.6.125 - 128 are used. Each backup server contains 250 backup users. A new AhsayRDR, which is installed in the machine (IP: 192.168.6.124, same as the original backup

server), controls the traffic to four backup servers (192.168.6.125 – 128) from the request of AhsayOBM / AhsayACB as shown in the following diagram.



To perform the migration, please follow the steps below:

1. Stop the service of current backup server, 192.168.6.124.
2. Setup four instances of backup server on different machines, using IP address: 192.168.6.125 – 128.
3. Separate the original user home in the original backup server into four different user homes stored by four different machines (192.168.6.125 – 128). For information on how to move users from one user home to another, please refer to our [AhsayOBS Administrator's Guide](#).

4. Set individual user home location in the xml file (obs.xml) in the directory, %AhsayOBSR_HOME%\conf in each backup server.
5. Start the service of all backup servers.
6. Install the AhsayRDR in the machine (192.168.6.124).
7. Logon to the AhsayRDR as system administrator.
8. Set the configuration of each backup server in the [Manage System] -> [Server Configuration] menu as follows. The login name, password, IP addresses, communication protocol and port of the four backup servers are system, system, 192.168.6.125 – 128, http and 80 respectively.

The screenshot shows the 'Server Configuration' page in the AhsayRDR administrator interface. The 'Backup Server' section contains a table with the following data:

Backup Server	Login Name	Password	Protocol	Hostname	Port	Status
1.	system	*****	http	192.168.6.125	80	Enable
2.	system	*****	http	192.168.6.126	80	Enable
3.	system	*****	http	192.168.6.127	80	Enable
4.	system	*****	http	192.168.6.128	80	Enable

Other visible settings include: Login Name: system, Password: *****, Host Name: localhost, System Home: C:\Program Files\AhsayRDR\system, SMTP Server: your.smtp.server, Report Sender: RDR Report Sender, Administrator Contact: RDR Admin Contact, and various language settings.

9. Start the service of AhsayRDR.
10. Migration is completed successfully.

The above steps describe how to migrate one backup server to four backup servers by using AhsayRDR. Any latest version (v5.5.2.0 or after) of AhsayOBM / AhsayACB can connect to the corresponding backup server by the following steps.

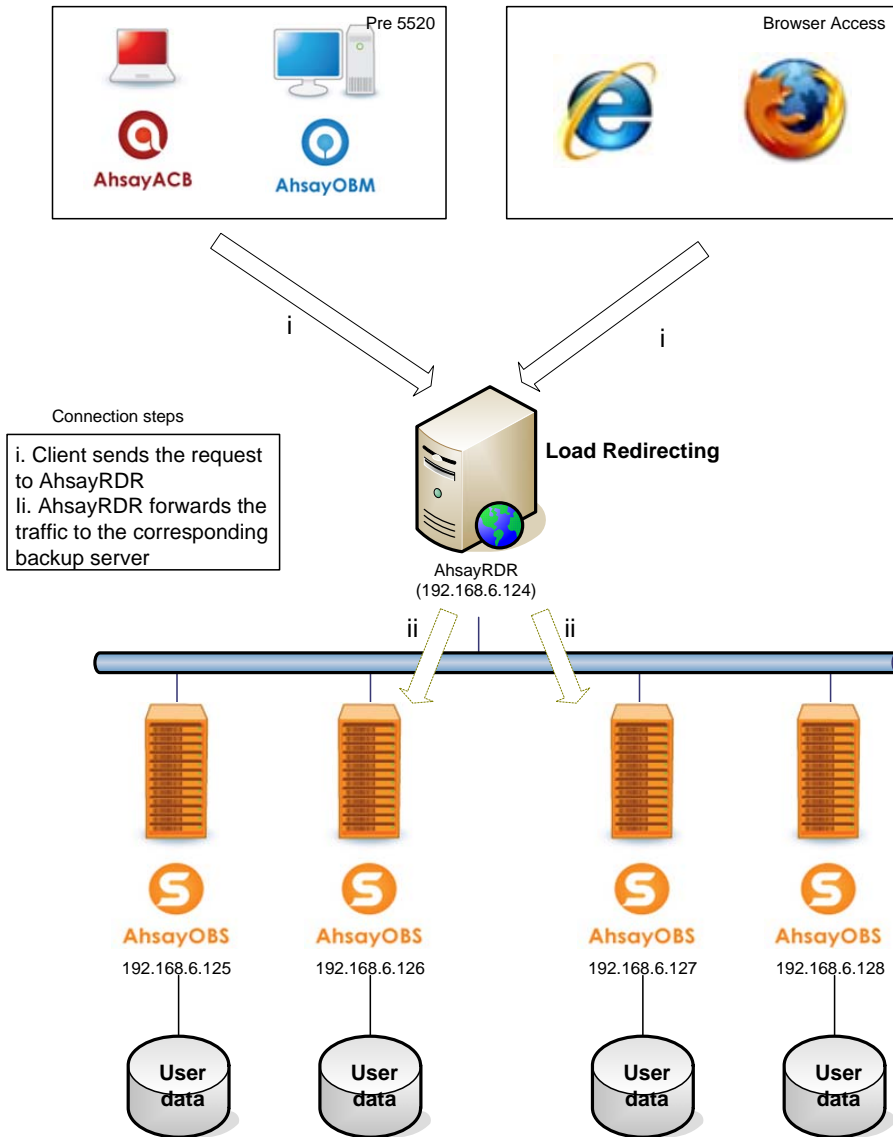
11. Send request to the AhsayRDR (192.168.6.124).

12. Receive the reply from RDR (192.168.6.124) which contains the information of the backup server (one of the four backup servers) that the AhsayOBM / AhsayACB should connect to.
13. Connect to the corresponding backup server.

Any legacy version (v5.5.1.0 or before) of AhsayOBM / AhsayACB can connect to the corresponding backup server by the following steps. The following diagram shows this situation.

14. Send request to the AhsayRDR (192.168.6.124).
15. RDR (192.168.6.124) forwards the backup or restore traffic to the corresponding backup server since the AhsayRDR contains all information of backup server (192.168.6.125 – 128).

In this case, the users do not need to know the information of corresponding backup server and still can connect to the corresponding backup server.



7 Monitoring System Activities

This chapter describes how you can use the [Manage Log] -> [System Log] page (shown below) to review system activities of AhsayRDR.

7.1 Reviewing System Log

When you click the [Manage Log] -> [System Log] link available at the top menu, the [System Log] panel will appear. It lists all system messages / warnings / errors logged within the date shown on the drop down list. You can review the system messages / warnings / errors logged on any particular date by selecting the required date from the dropdown list.



Key	Description
Date	The date when all message are logged.
Rows / Page	The number of rows to display per page.
Timestamp	The time when the message was logged.
Message	The system log message.

8 Working with AhsayOBS

This chapter describes the steps required for AhsayRDR to work with other components, e.g. AUA and API.

8.1 IP Restrictions in configuration file of AhsayOBS.

AhsayOBS, by default, accepts and handles only the API requests originating from the same local machine only. To allow the use of API via AhsayRDR (AhsayRDR calls AhsayOBS API) and allow AhsayOBS to call API to each other AhsayOBS, you must loosen this restriction ("**ApiAccess**" filter) on the %OBS_HOME%\webapps\obs\WEB-INF\web.xml located on AhsayOBS.

For more information about updating the IP restrictions of AhsayOBS, please refer to the [Advanced Configuration Section of AhsayOBS Administrator's Guide](#).

Alternatively, AhsayOBS application will connect to the AhsayRDR in a similar way. To allow AhsayOBS to access AhsayRDR, you must also loosen this restriction ("**UserConsole**" filter) on the %RDR_HOME%\webapps\rdr\WEB-INF\web.xml located on AhsayRDR.

8.2 Auto Update Agent

The AUA service that is bundled with v5.5.1.x or below would not be able to update from AhsayOBSR via AhsayRDR. To address this, the service itself would need to update from AhsayRDR server directly. The update files would need to be placed under %AhsayRDR_HOME%\webapps\obs\liveUpdate. Then, the AUA can be updated to a latest version automatically.

Once the AUA service is updated, it will be able to update the AhsayOBM and AhsayACB from AhsayOBSR backup server via AhsayRDR.

Note: AUA v2 does not support OBC upgrade from v5 to v6 on the following platforms:

- FreeBSD
- Solaris
- Mac OS X

AUA may update details on bundled Java that is packaged with AhsayOBM installation. Due to this reason, AUA will not support upgrades on these platforms as propriety Java are in use

8.3 AhsayOBS API with AhsayRDR

You may need to supply extra parameters when using AhsayOBS with AhsayRDR. For more information, please refer to the [AhsayOBS Administrator's Guide](#).

8.4 AhsayOBS Host Name

For the host name settings in the AhsayOBS management console -> Manage settings, please refer to [chapter 5.4](#) for details.

8.5 AhsayRDR with AhsayOBS Reseller Panel

In order to use AhsayOBS with Reseller Panel enabled in an AhsayRDR setup, both AhsayOBS and AhsayRDR must be on v6.7.0.0 or above. In addition, all backup user accounts created by each reseller must be using AhsayOBM/AhsayACB v6.7.0.0 or above otherwise the backup clients may not be able to connect to AhsayOBS properly.

8.6 Reseller Host Name

If reseller is created, a valid reseller host name is required.

[Manage System](#) | [Manage Log](#) | [Manage User](#) | [Manage Group Policy](#) | **Manage System User**
[My Profile](#) | [Add System User](#) | [List System User](#)

System User Settings	
Login Name	: <input type="text" value="reseller"/>
Role	: <input type="text" value="Sub Admin"/> ▼
Password	: <input type="password" value="••••••••"/>
Name	: <input type="text" value="reseller"/>
Email	: <input type="text" value="reseller@backup.com"/>
Host Name	: <input style="border: 2px solid red;" type="text" value="s1.reseller.com"/>

9 Secure connection with AhsayRDR and AhsayOBS

This chapter describes how you can create secure connection with your AhsayRDR and AhsayOBS.

9.1 Overview

Default installation of AhsayRDR enables SSL (Secure Socket Layer) support using a dummy certificate (non-secure). For your own security, you are advised to replace the pre-installed dummy SSL certificate with a secure SSL certificate from a trusted CA (Certificate Authority). No matter your AhsayOBS and AhsayRDR are using the same domain name or using different domain name, any type of SSL cert can be used for the secure connection.

9.2 Installing a trusted SSL certificate

To replace the non-secure dummy SSL certificate with a secure SSL certificate, please do the following:

1. Identify the location of the keystore file.

You need to store your SSL certificate in a keystore file. The default location of the keystore file is %RDR_HOME%\conf\keystore.

2. Delete dummy certificate from keystore.

You can delete the dummy SSL certificate from the keystore by running:

```
%RDR_HOME%\java\bin\keytool -delete -alias tomcat -keystore
%RDR_HOME%\conf\keystore.
```

You will be prompted for the keystore password. The default password is "changeit".

Platform	Example
Windows	<i>C:\Program Files\AhsayRDR\conf> "C:\Program Files\AhsayRDR\java\bin\"keytool -delete -alias tomcat -keystore keystore</i>
Linux	<i>[root]# keytool -delete -alias tomcat -keystore /usr/local/rdr/conf/keystore</i>

3. Generate RSA key pair.

A SSL certificate contains a RSA key pair. You can generate a RSA key pair by running:

```
%RDR_HOME%\java\bin\keytool -genkey -alias tomcat -keyalg  
RSA -keysize 2048 -keystore %RDR_HOME%\conf\keystore
```

Also, the key password for the alias "tomcat" must be the same as the keystore password. Please simply press the [Enter] key when you are prompted for the key password for tomcat (i.e. Press [Enter] when you see the "key password for <tomcat>" prompt).

Platform	Example
Windows	<code>C:\Program Files\AhsayRDR\conf> "C:\Program Files\AhsayRDR\java\bin\"keytool -genkey -alias tomcat -keyalg RSA -keysize 2048 -keystore keystore</code>
Linux	<code>[root]# keytool -genkey -alias tomcat -keyalg RSA -keysize 2048 -keystore /usr/local/rdr/conf/keystore</code>

4. Create a local Certificate Signing Request (CSR).

You can create a CSR for your SSL certificate by running:

```
%RDR_HOME%\java\bin\keytool -certreq -keyalg RSA -alias  
tomcat -file ssl.csr -keystore %RDR_HOME%\conf\keystore
```

Platform	Example
Windows	<code>C:\Program Files\AhsayRDR\conf> "C:\Program Files\AhsayRDR\java\bin\"keytool -certreq -keyalg RSA -alias tomcat -keystore keystore</code>
Linux	<code>[root]# \$RDR_HOME/java/bin/keytool -certreq -keyalg RSA -alias tomcat -keystore \$RDR_HOME/conf/keystore</code>

5. Submit the CSR file to a trusted CA of your choice. This process may take several hours to several days.
6. Download the SSL certificate from your CA, if your CA comes with intermediate certificate, please download it and import it into your keystore before you import your SSL certificate. Since the instruction may be different for different CA, please check with your CA for detailed instructions.
7. Import signed SSL certificate to the keystore from which the CSR was generated by:

```
%RDR_HOME%\java\bin\keytool -import -alias tomcat -  
trustcacerts -file ssl.crt -keystore  
%RDR_HOME%\conf\keystore
```

Platform	Example
Windows	<code>C:\Program Files\AhsayRDR\conf> "C:\Program Files\AhsayRDR\java\bin\"keytool -import -alias tomcat -trustcacerts -file ssl.crt -keystore</code>

	<code>%RDR_HOME%\conf\keystore</code>
Linux	<code>[root]# \$RDR_HOME/java/bin/keytool -list -alias tomcat -keystore \$RDR_HOME/conf/keystore</code>

If you are getting the “**keytool error: java.lang.Exception: Failed to establish chain from reply**” message when importing the SSL certificate file from CA, please try double-clicking the ssl.crt file on Windows to view all **intermediate certificates** being used to sign your certificate and import all intermediate certificates (downloadable from your CA) into your keystore file before importing your SSL certificate. You can check with your CA for detailed instructions.

8. Check if you have installed the SSL certificate correctly by:

```
%RDR_HOME%\java\bin\keytool -list -alias tomcat -keystore
%RDR_HOME%\conf\keystore
```

Platform	Example
Windows	<code>C:\Program Files\AhsayRDR\conf>"C:\Program Files\AhsayRDR\java\bin"keytool -list -alias tomcat -keystore keystore</code>
Linux	<code>[root]# \$RDR_HOME/java/bin/keytool -list -alias tomcat -keystore \$RDR_HOME/conf/keystore</code>

Sample Output:

```
Tomcat, 2003/6/13, keyEntry, Certificate fingerprint (MD5):
xx:xx:xx:xx:xx:xx:xx:xx:xx:xx:xx:xx
```

Please make sure that you are getting the type “keyEntry” instead of “trustedCertEntry” from the output above. If you are getting “trustedCertEntry”, the most likely cause of this is that you are NOT importing the SSL certificate back into the same keystore from which the CSR was generated. The only solution to this is to find this keystore file and import the certificate(s) to the keystore file again. If you can't find this file, please repeat the instructions in this section from step 1 and try again.

* When asked for your “first and last name” during the key generation, please specify the domain that you will be using this certificate for. Please refer to the following example:

Full Example
<pre>C:\Program Files\AhsayRDR\conf> "C:\Program Files\AhsayRDR\java\bin"keytool -genkey -alias tomcat -keyalg RSA -keystore keystore Enter keystore password: changeit What is your first and last name? [unknown]: www.secure-company.com</pre>

```

What is the name of your organizational unit?
[unknown]: NOT SECURE
What is the name of your organization?
[unknown]: NOT SECURE
What is the name of your City or Locality?
[unknown]: NOT SECURE
What is the name of your State or Province?
[unknown]: NOT SECURE
What is the two-letter country code for this unit?
[unknown]: NS
Is <CN=www.secure-company.com, OU=NOT SECURE, O=NOT
SECURE, L=NOT SECURE, ST=NOT SECURE, C=NS> correct?
[no]: yes

Enter key password for <tomcat>
(RETURN if same as keystore password):

C:\Program Files\AhsayRDR\conf> "C:\Program
Files\AhsayRDR\java\bin\"keytool -certreq -keyalg RSA - alias tomcat -
file certreq.csr -keystore keystore
Enter keystore password: changeit

C:\Program Files\AhsayRDR\conf> "C:\Program
Files\AhsayRDR\java\bin\"keytool -import -alias tomcat -keystore
keystore -trustcacerts -file ssl.crt
Enter keystore password: changeit
Certificate reply was installed in keystore

C:\Program Files\AhsayRDR\conf> "C:\Program
Files\AhsayRDR\java\bin\"keytool -list -alias tomcat -keystore keystore

Tomcat 2003/06/13, keyEntry, Certificate fingerprint (MD5):
XX:XX:XX:XX:XX:XX:XX:XX:XX:XX:XX:XX:XX:XX:XX

```

Note: General SSL cert issued by CA is sufficient for the need of backup purpose. Extended Validation (EV) cert can also be used, it is designed for high-security usage, mainly used in browser. The cost of this cert is more expensive. Unified Communications Certificates (UCC) are also supported, please refer to <http://support.godaddy.com/help/3908> for more information.

Please refer to the Chapter 19 of [AhsayOBS Administrators Guide](#) for the AhsayOBS SSL installation instruction.

10 External API References

This chapter describes the API's that can be called directly from AhsayRDR and how you can invoke different APIs. **A full list of API calls can be found in Chapter 25 of the [AhsayOBS Administrators Guide](#).**

10.1 Overview

AhsayRDR API's can be invoked by using standard HTTP request method (i.e. either POST or GET). For example, to invoke the [Get License] API, simply use any programming/scripting language of your choice to invoke: http://AhsayRDR_SERVER/rdr/api/GetLicense.do?SysUser=system&SysPwd=system&Host=obs.yourserver.com to get the product version of AhsayOBS used and unused licenses available on a specified AhsayOBS server.

URL encoding must be applied to all non-alphanumeric parameters when submitting the API requests as specified in the HTTP protocol specification. For example, a value of "GMT-08:00 (PSL)" must be submitted to AhsayRDR as "GMT%2d08%3a00+%28PST%29" via an external API.

10.2 Limitations

API's invoked from AhsayRDR supports only System Administrator account (i.e. system user specified in %AhsayRDR_HOME%\conf\rdr.xml).

10.3 IP Restrictions

To avoid AhsayRDR API's from being exploited by hackers from an unauthorized network, AhsayRDR, by default, accepts and handles only the API requests originating from the same local machine. To loosen this restriction, please do the followings:

1. Open %AhsayRDR_HOME%\webapps\rdr\WEB-INF\web.xml.
2. Locate the LocalHostOnly filter under the "filter" section near the beginning of "web.xml".
3. Change the [Range1] parameter value from "127.0.0.1-127.0.0.1" (shown in red and bold above) to another range of IP addresses from where APIs can be invoked.

web.xml
<pre>... <filter> <filter-name>LocalhostOnly</filter-name> <filter-class>com.ahsay.obs.www.IPFilter</filter-class></pre>


```

<init-param>
  <param-name>Range1 </param-name>
  <param-value>localhost</param-value>
</init-param>
<init-param>
  <param-name>Range2</param-name>
  <param-value>127.0.0.1-127.0.0.1</param-value>
</init-param>
</filter>
...

```

For example, changing [Range1] value from "127.0.0.1-127.0.0.1" to "192.168.1.1-192.168.1.255" to allow the 192.168.1.x network to invoke the APIs.

web.xml (Updated)

```

...
<filter>
  <filter-name>LocalhostOnly</filter-name>
  <filter-class>com.ahsay.obs.www.IPFilter</filter-class>
  <init-param>
    <param-name>Range1 </param-name>
    <param-value>localhost</param-value>
  </init-param>
  <init-param>
    <param-name>Range2</param-name>
    <param-value>192.168.1.1-192.168.1.255</param-value>
  </init-param>
</filter>
...

```

Please note that you can configure more than two IP ranges by adding additional init parameters (i.e. "Range3", "Range4" and so on) to the filter XML tag. For example:

```

<filter>
  <filter-name>LocalhostOnly</filter-name>
  <filter-class>com.ahsay.obs.www.IPFilter</filter-class>
  <init-param>
    <param-name>Range1 </param-name>
    <param-value>localhost</param-value>
  </init-param>
  <init-param>
    <param-name>Range2</param-name>
    <param-value>192.168.1.1-192.168.1.255</param-value>
  </init-param>
  <init-param>
    <param-name>Range3</param-name>
    <param-value>192.168.2.1-192.168.2.255</param-value>
  </init-param>
</filter>

```

4. Restart your AhsayRDR service.

Note: A full list of API calls can be found in Chapter 25 of the [AhsayOBS Administrators Guide](#).

11 Further Information

If you need any additional information, please submit your questions to our support team via our [Help Centre Ticketing System](#).

Appendix

Appendix A List of Supported Languages

Language Code	Language
bg	Bulgarian
ca	Catalan
cs	Czech
da	Danish
de	German
el	Greek Modern
en	English
es	Spanish
eu	Basque
fi	Finnish
fr	French
hu	Hungarian
is	Icelandic
it	Italian
iw	Hebrew
ja	Japanese
ko	Korean
lt	Lithuanian
nl	Dutch
no	Norwegian
po	Polish
pt_BR	Portuguese (Brazil)
pt_PT	Portuguese (Portugal)
ro	Romanian
ru	Russian
sl	Slovenian
sv	Swedish
th_th	Thai (Thai Digit)
tr	Turkish
uk	Ukrainian
zh_CN	Chinese (Simplified)
zh_TW	Chinese (Traditional)

Appendix B Details of AhsayRDR configuration file

The configuration of AhsayRDR is such as the login name and password for the system administrator is stored in the following xml file, %AhsayRDR_HOME%\conf\rdr.xml. The detail of each attribute in the xml file is shown in the following tables and there is an example xml file, rdr.xml as shown below.

Key Name	Descriptions
com.ahsay.rdr.core.key.rdr.Rdr	Stores the configuration of AhsayRDR
com.ahsay.rdr.core.key.rdr.Host	Stores the configuration of AhsayOBS under the AhsayRDR.
com.ahsay.rdr.core.key.rdr.Language	Stores the configuration of language selection window.
com.ahsay.rdr.core.key.rdr.License	Stores the configuration of license.
com.ahsay.rdr.core.key.rdr.SmtpServer	Stores the configuration of STMP server.
com.ahsay.rdr.core.key.rdr.ReportSender	Stores the configuration of report sender.
com.ahsay.rdr.core.key.rdr.AdminContact	Stores the configuration of admin contact

Value Name	Type	Description
rsv-id	string	Indicates the ID value of AhsayRDR or AhsayOBS under AhsayRDR This value is unique.
rsv-login-name	string	Indicates the system login name of AhsayRDR.
rsv-password	string	Indicates the system password of AhsayRDR. During the startup of AhsayRDR service, if the system password is not hashed (by checking the field "rsv-hashed-password"), it will be considered as a clear text password. Then, the clear text password will be hashed and a hashed password is saved.
rsv-hashed-password	Boolean	Indicates whether the system password is hashed.

		<p>The default value is "Y" indicating that the password is hashed for AhsayRDR while the default value is "N" indicating that the password is NOT hashed for the host under AhsayRDR.</p> <p>- System password must not be hashed for AhsayOBS.</p>
rsv-system-home	string	Indicates the location of system home of AhsayRDR.
rsv-system-login-name	string	Indicates the system login name of AhsayOBS.
rsv-system-password	string	Indicates the system password of AhsayOBS.
rsv-protocol	string	Indicates the communication protocol of AhsayOBS.
rsv-hostname	string	<p>Indicates the hostname of AhsayOBS, i.e. the public IP accessible by AhsayACB/AhsayOBM.</p> <p>- Please make sure not blocked by firewall</p>
rsv-port	long	Indicates the port of AhsayOBS.
rsv-xx *where xx is the abbreviation of language	boolean	Indicates the language is shown in the language selection window.

rdr.xml

```

<?xml version="1.0" encoding="UTF-8"?>
<Setting>
  <Key name="com.ahsay.rdr.core.key.rdr.Rdr" allowMultiple="N">
    <Value name="rsv-id" inheritParentAttribute="Y"
type="string" data="Rdr-1000001" />
    <Value name="rsv-login-name" inheritParentAttribute="Y"
type="string" data="system" />
    <Value name="rsv-password" inheritParentAttribute="Y"
type="string" data="VLUwclQO7rj46TQ+cfKBdg==" />
    <Value name="rsv-hashed-password"
inheritParentAttribute="Y" type="boolean" data="Y" />
    <Value name="rsv-system-home" inheritParentAttribute="Y"
type="string" data="C:\Program Files\AhsayRDR\system" />
    <Value name="rsv-host-name" inheritParentAttribute="Y"
type="string" data="rdr.dev.ahsay.com" />
    <Key name="com.ahsay.rdr.core.key.rdr.Language"
allowMultiple="N">
      <Value name="rsv-id" inheritParentAttribute="Y"
type="string" data="LANGUAGE-1000001" />
      <Value name="rsv-bg" inheritParentAttribute="Y"
type="boolean" data="Y" />
      <Value name="rsv-ca" inheritParentAttribute="Y"
type="boolean" data="Y" />
      <Value name="rsv-cs" inheritParentAttribute="Y"
type="boolean" data="Y" />
      <Value name="rsv-da" inheritParentAttribute="Y"
type="boolean" data="Y" />
      <Value name="rsv-de" inheritParentAttribute="Y"
type="boolean" data="Y" />
      <Value name="rsv-el" inheritParentAttribute="Y"
type="boolean" data="Y" />
      <Value name="rsv-en" inheritParentAttribute="Y"
type="boolean" data="Y" />
      <Value name="rsv-es" inheritParentAttribute="Y"
type="boolean" data="Y" />
      <Value name="rsv-eu" inheritParentAttribute="Y"
type="boolean" data="Y" />
      <Value name="rsv-fi" inheritParentAttribute="Y"
type="boolean" data="Y" />
      <Value name="rsv-fr" inheritParentAttribute="Y"
type="boolean" data="Y" />
      <Value name="rsv-iw" inheritParentAttribute="Y"
type="boolean" data="Y" />
      <Value name="rsv-hu" inheritParentAttribute="Y"
type="boolean" data="Y" />
      <Value name="rsv-is" inheritParentAttribute="Y"
type="boolean" data="Y" />
      <Value name="rsv-it" inheritParentAttribute="Y"
type="boolean" data="Y" />
      <Value name="rsv-ja" inheritParentAttribute="Y"
type="boolean" data="Y" />
      <Value name="rsv-ko" inheritParentAttribute="Y"
type="boolean" data="Y" />

```

```

        <Value name="rsv-lt" inheritParentAttribute="Y"
type="boolean" data="Y" />
        <Value name="rsv-nl" inheritParentAttribute="Y"
type="boolean" data="Y" />
        <Value name="rsv-no" inheritParentAttribute="Y"
type="boolean" data="Y" />
        <Value name="rsv-pl" inheritParentAttribute="Y"
type="boolean" data="Y" />
        <Value name="rsv-pt_BR" inheritParentAttribute="Y"
type="boolean" data="Y" />
        <Value name="rsv-pt_PT" inheritParentAttribute="Y"
type="boolean" data="Y" />
        <Value name="rsv-ro" inheritParentAttribute="Y"
type="boolean" data="Y" />
        <Value name="rsv-ru" inheritParentAttribute="Y"
type="boolean" data="Y" />
        <Value name="rsv-sl" inheritParentAttribute="Y"
type="boolean" data="Y" />
        <Value name="rsv-sv" inheritParentAttribute="Y"
type="boolean" data="Y" />
        <Value name="rsv-th_th" inheritParentAttribute="Y"
type="boolean" data="Y" />
        <Value name="rsv-tr" inheritParentAttribute="Y"
type="boolean" data="Y" />
        <Value name="rsv-uk" inheritParentAttribute="Y"
type="boolean" data="Y" />
        <Value name="rsv-zh_CN" inheritParentAttribute="Y"
type="boolean" data="Y" />
        <Value name="rsv-zh_TW" inheritParentAttribute="Y"
type="boolean" data="Y" />
    </Key>
    <Key name="com.ahsay.rdr.core.key.rdr.License" content=""
allowMultiple="N">
        <Value name="rsv-id" inheritParentAttribute="Y"
type="string" data="License-1000001" />
        <Value name="rsv-licensee-name"
inheritParentAttribute="Y" type="string" data="Ahsay-RDR-
SKIP_LIC_CHECK" />
        <Value name="rsv-license-key"
inheritParentAttribute="Y" type="string" data="t7dMA-JePFo-hF+Sz-
z68XG-+g" />
        <Value name="rsv-email" inheritParentAttribute="Y"
type="string" data="" />
        <Value name="rsv-company" inheritParentAttribute="Y"
type="string" data="" />
        <Value name="rsv-contact-name"
inheritParentAttribute="Y" type="string" data="" />
        <Value name="rsv-phone" inheritParentAttribute="Y"
type="string" data="" />
    </Key>
    <Key name="com.ahsay.rdr.core.key.rdr.Host" content=""
allowMultiple="N">
        <Value name="rsv-id" inheritParentAttribute="Y"
type="string" data="Host-1000001" />
        <Value name="rsv-system-login-name"

```



```

inheritParentAttribute="Y" type="string" data="system" />
    <Value name="rsv-system-password"
inheritParentAttribute="Y" type="string" data="xcnf3tfcxNTf" />
    <Value name="rsv-hashed-password"
inheritParentAttribute="Y" type="boolean" data="Y" />
    <Value name="rsv-protocol" inheritParentAttribute="Y"
type="string" data="http" />
    <Value name="rsv-hostname" inheritParentAttribute="Y"
type="string" data="obs1.dev.ahsay.com" />
    <Value name="rsv-port" inheritParentAttribute="Y"
type="long" data="80" />
    <Value name="rsv-status" inheritParentAttribute="Y"
type="string" data="enable" />
    </Key>
    <Key name="com.ahsay.rdr.core.key.rdr.Host" content=""
allowMultiple="N">
    <Value name="rsv-id" inheritParentAttribute="Y"
type="string" data="Host-1000002" />
    <Value name="rsv-system-login-name"
inheritParentAttribute="Y" type="string" data="system" />
    <Value name="rsv-system-password"
inheritParentAttribute="Y" type="string" data="xcnf3tfcxNTf" />
    <Value name="rsv-hashed-password"
inheritParentAttribute="Y" type="boolean" data="Y" />
    <Value name="rsv-protocol" inheritParentAttribute="Y"
type="string" data="http" />
    <Value name="rsv-hostname" inheritParentAttribute="Y"
type="string" data="obs2.dev.ahsay.com" />
    <Value name="rsv-port" inheritParentAttribute="Y"
type="long" data="80" />
    <Value name="rsv-status" inheritParentAttribute="Y"
type="string" data="enable" />
    </Key>
    <Key name="com.ahsay.rdr.core.key.rdr.Host" content=""
allowMultiple="N">
    <Value name="rsv-id" inheritParentAttribute="Y"
type="string" data="Host-1000003" />
    <Value name="rsv-system-login-name"
inheritParentAttribute="Y" type="string" data="system" />
    <Value name="rsv-system-password"
inheritParentAttribute="Y" type="string" data="xcnf3tfcxNTf" />
    <Value name="rsv-hashed-password"
inheritParentAttribute="Y" type="boolean" data="Y" />
    <Value name="rsv-protocol" inheritParentAttribute="Y"
type="string" data="http" />
    <Value name="rsv-hostname" inheritParentAttribute="Y"
type="string" data="obs3.dev.ahsay.com" />
    <Value name="rsv-port" inheritParentAttribute="Y"
type="long" data="80" />
    <Value name="rsv-status" inheritParentAttribute="Y"
type="string" data="enable" />
    </Key>
    <Key name="com.ahsay.rdr.core.key.rdr.SmtpServer"
content="" allowMultiple="N">
    <Value name="rsv-id" inheritParentAttribute="Y"

```

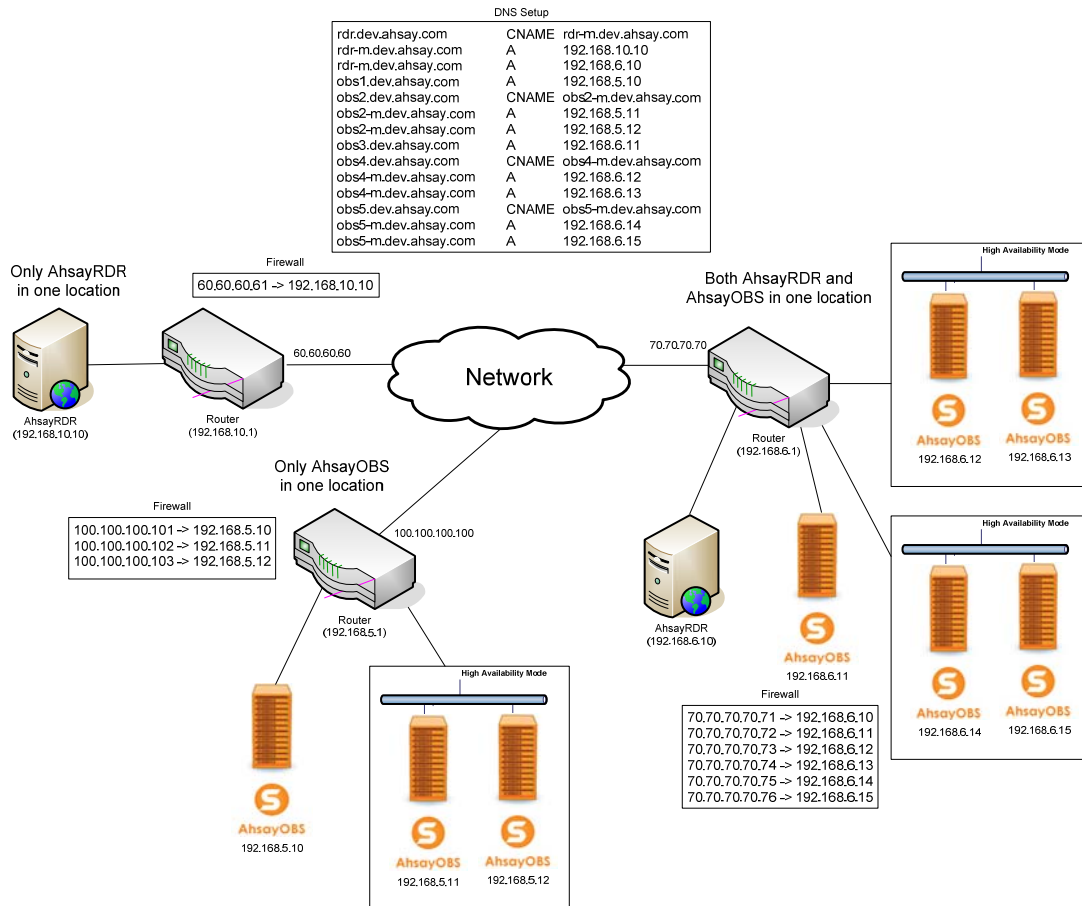
```

type="string" data="SmtpServer-1000001" />
    <Value name="rsv-host-name"
inheritParentAttribute="Y" type="string" data="smtp.dev.com" />
    <Value name="rsv-login-name"
inheritParentAttribute="Y" type="string" data="kevin.wong" />
    <Value name="rsv-password" inheritParentAttribute="Y"
type="string" data="0tLWmJiYmpk=" />
    <Value name="rsv-hashed-password"
inheritParentAttribute="Y" type="boolean" data="Y" />
    </Key>
    <Key name="com.ahsay.rdr.core.key.rdr.ReportSender"
content="" allowMultiple="N">
    <Value name="rsv-id" inheritParentAttribute="Y"
type="string" data="ReportSender-1000001" />
    <Value name="rsv-contact-name"
inheritParentAttribute="Y" type="string" data="RDR Report Sender"
/>
    <Value name="rsv-email" inheritParentAttribute="Y"
type="string" data="reportSender@smtp.dev.com" />
    </Key>
    <Key name="com.ahsay.rdr.core.key.rdr.AdminContact"
content="" allowMultiple="N">
    <Value name="rsv-id" inheritParentAttribute="Y"
type="string" data="AdminContact-1000001" />
    <Value name="rsv-contact-name"
inheritParentAttribute="Y" type="string" data="RDR Admin Contact"
/>
    <Value name="rsv-email" inheritParentAttribute="Y"
type="string" data="adminContact@smtp.dev.com" />
    </Key>
    </Key>
</Setting>

```

Appendix C Setup Example

The following diagram shows an example for the setup of AhsayRDR and AhsayOBS. It is recommended to use the high availability option of AhsayOBS to store the critical data since the other AhsayOBS can still work properly if one of them is stopped.



Appendix D Product Documentations

Please visit this [link](#) for the documentations of Products.