



# Ahsay Proxy Redirector v2.01

## Administrator's Guide

Ahsay Systems Corporation Limited

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## Revision History

<b>Date</b>	<b>Descriptions</b>	<b>Type of modification</b>
28 Dec 2015	First revision of Ahsay Proxy Redirector v2.0 Release	New
20 Apr 2016	Modified template	Modified
29 July 2016	Modified syntax of the VHOST setting (IP address setting), as well as its requirement and suggestion in Chapter 4.4.4	Modified
12 Aug 2016	Updated Chapters 1.1, 1.2, 1.3, 3.1, 4.2, 4.3, 4.4.2, and made some formatting and style changes. Added Chapters 5 and 6.	Modified

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# 1 Overview

## 1.1 Conventions

A list of notations that are used throughout this document.

Convention	Description	Example
<b>Bold</b>	Important Information	<b>WARNING: You must check the timestamp of server.xml before proceeding to step2.</b>
<i>Italic</i>	Folder Path or File Path	<i>C:\Program Files\AhsayCBS</i>
[]	Graphical Interface Elements	[Manage Log]
%%	Filepath in Windows format	%CBS_HOME%
<i>italic</i>	Command	<i>mkdir d:\users</i>

Notation that are used specifically for API section:

Convention	Description
<Text inside angle brackets>	Placeholder for which you must supply a value.
[Text inside square brackets]	Optional items.
{Text insides braces}	Set of required items; choose one.
Vertical bar ( )	Separator for mutually exclusive items; choose one.
Ellipsis (...)	Items that can be repeated.

## 1.2 Definitions, Acronyms and Abbreviation

The following table shows the definitions, acronyms, and abbreviations used in this manual.

Term/Abbreviation	Definition
AhsayCBS	Ahsay Cloud Backup Suite
AhsayOBM	Ahsay Online Backup Manager
AhsayACB	Ahsay A-Click Backup
AhsayPRD	Ahsay Proxy Redirector
CBS_HOME	The install location of AhsayCBS. <b>Windows</b> <i>C:\Program Files\AhsayCBS</i>
CBS_HOME_BAK	The backup location of AhsayCBS. It is used temporarily during the install/upgrade process.

	<p><b>Windows</b> C:\Program Files\AhsayCBS.bak</p>
CONF_HOME	<p>The directory to store AhsayCBS configuration files.</p> <p><b>Windows</b> %CBS_HOME%\conf</p>
USER_HOMES	<p>The directories where AhsayCBS store the AhsayOBM and AhsayACB user accounts. The default location is: %CBS_HOME%\users</p>
POLICY_HOME	<p>The directory where AhsayCBS store its system users and group policy information.</p> <p><b>Windows</b> %CBS_HOME%\system\policy</p>
SYSTEM_HOME	<p>The directory where AhsayCBS store its system information.</p> <p><b>Windows</b> %CBS_HOME%\system</p>
WEBAPPS_HOME	<p>Location of the webapps directory inside the installation directory of AhsayCBS.</p> <p><b>Windows</b> %CBS_HOME%\webapps</p>
WEBAPP_HOME_BAK	<p>A backup of the webapps directory inside AhsayCBS.</p> <p><b>Windows</b> %CBS_HOME%\webapps.bak</p>
RECEIVER_HOME	<p>The location where the replicated data is stored for a particular replication receiver.</p>
JAVA_HOME	<p>The location where JAVA is installed.</p>

## 1.3 System Requirements

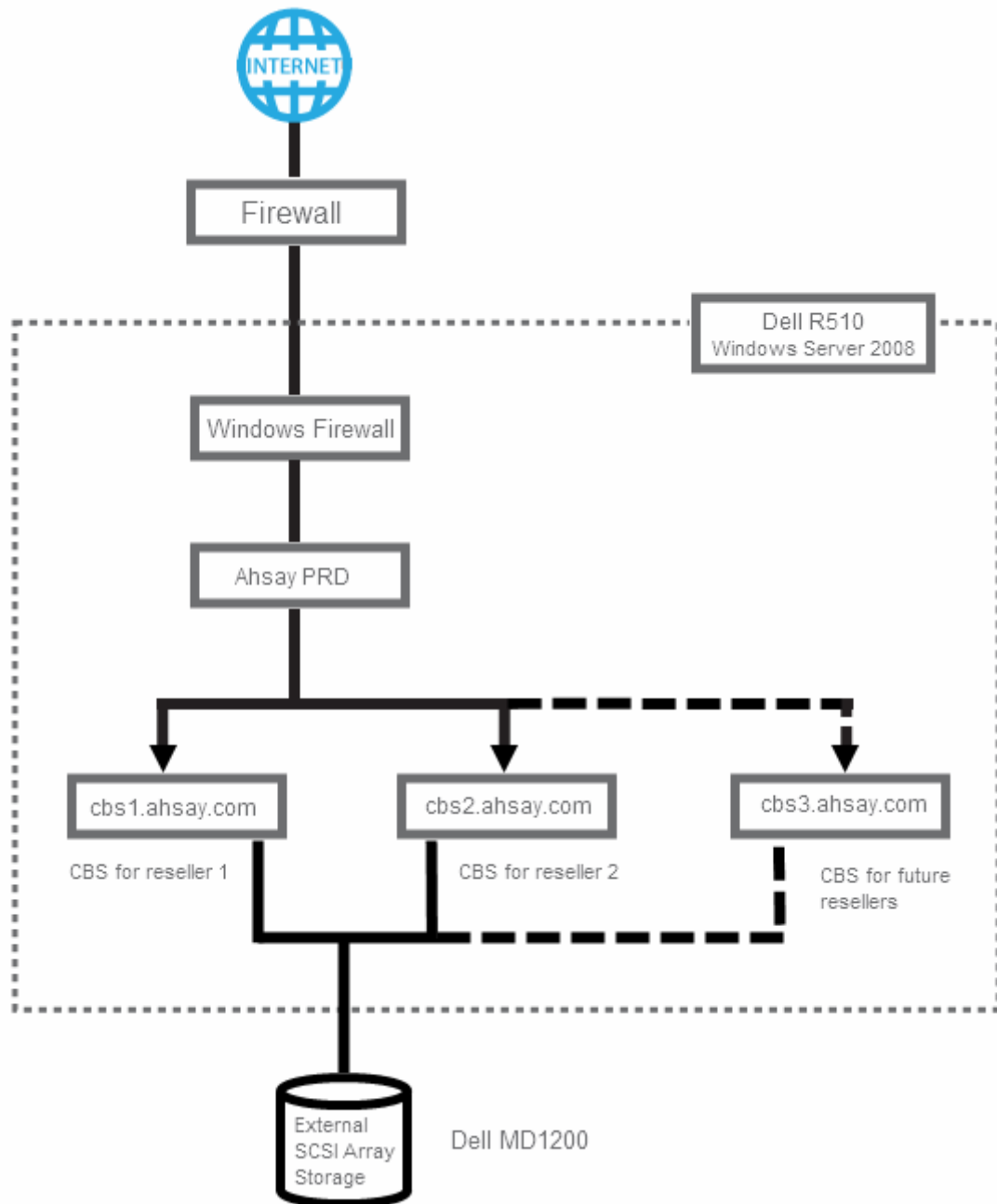
Please refer to the following article articles for the system requirements of AhsayCBS:  
[FAQ: Ahsay Software Compatibility List \(SCL\) for version 7.3 or above \(5001\)](#)  
[FAQ: Ahsay Hardware Requirement List \(HRL\) for version 7.3 or above \(5000\)](#)

Users should install Ahsay Proxy Redirector on a 64-bit server-grade O/S such as Windows 2008/Windows 2008 R2 or Windows 2012/Windows 2012 R2. However, for evaluation purposes, users can install Ahsay Proxy Redirector on Windows 7 or Windows 8 64-bit platforms instead.

## 2 Overview and Benefits

The Ahsay Proxy Redirector (AhsayPRD) is the tool for hosting multiple AhsayCBS instances on the same machine. The AhsayPRD redirects the incoming internet traffic calling to for example **CBS1.ahsay.com** or **CBS2.ahsay.com** through a specific port defined in the AhsayPRD configuration file.

### 2.1 Overview



In our example, we installed the AhsayPRD on a Windows 2008 server R2. We have 2 AhsayCBS instances named **cbs1.ahsay.com** and **cbs2.ahsay.com** for reseller 1 and reseller 2 respectively, and we can increase the number of AhsayCBS instances by making a



copy of the AhsayCBS template with some settings change in the AhsayPRD ([cbs3.ahsay.com](https://cbs3.ahsay.com) for future reseller). These steps will be described in later chapters.

## 2.2 Benefits

AhsayPRD provides an easy way for hosting multiple AhsayCBS instances on one physical backup server hardware, which give you many benefits as stated below.

1. As AhsayCBS is not resource demanding, setting up multiple AhsayCBS instances on a single hardware allows you to fully utilize the power of that hardware.
2. Only one operating system license is required, as all AhsayCBS instances are running on the same operating system. Therefore, you can save a great deal of expenditure on purchasing multiple operating system licenses.
3. Only one IP is required, as routing to the individual AhsayCBS instances can be done through the use of server ports. Thus, spending on purchasing multiple IPs can also be saved.
4. If the multiple AhsayCBS instances you intend to use can be under a same domain, only one SSL certificate is required. Thus, spending on purchasing multiple SSL certificates can be saved.
5. As you can add new AhsayCBS instances anytime, it provides you with the scalability for the expansion of your backup system in the future.

## 3 Best Practices and Recommendations

This chapter lists out all best practices and recommendations which you should consider before deploying AhsayPRD with AhsayCBS to a production environment.

### 3.1 Hardware Requirements

AhsayPRD should be installed on a machine supporting 64 bit multiple CPU and multiple cores. A 64 bit Operating System will allow AhsayPRD and AhsayCBS to run on a 64 bit Java JRE platform, as 64 bit Java is capable of supporting larger Java heap size settings. This type of configuration will provide sufficient capacity for future business expansion, to meet the needs of existing customers, and to support new AhsayCBS server features.

A more powerful machine will also reduce the need for frequent hardware upgrades, which will require service down time for data migration.

It is a good idea to ensure your server is equipped with some redundancy features, that is, power supply, network card, and is connect it to a UPS (Uninterruptible Power Supply).

The following lists the hardware requirements for AhsayPRD:

- **Processor**

Intel® Core™ 2 Duo or above, Intel® Xeon® CPU recommended.

- **Physical memory**

4 GB or above

The amount of RAM required on the AhsayPRD server is proportional to the number of AhsayCBS instances installed. For example, you can configure 8GB RAM to run two AhsayCBS instances (each instance configured with 2GB Java heap size). When additional AhsayCBS instances are required, or the number of backup users on the existing AhsayCBS instances increases, you will need to add extra RAM to the AhsayPRD server.

#### Note

When setting the maximum Java heap size for AhsayCBS, ensure there is sufficient memory reserved for the operating system.

However, it is not recommended to set excessively high values for the maximum Java heap size, as this could result in AhsayCBS performance issues during internal Java VM garbage collection or memory recycling routines.

- **Server**

Server with several removable hard disk bays is recommended.

- **Disk storage**

Two physical 1-2TB internal hard disks for OS and AhsayCBS application, four hard disks mounted on removable hard disk bay for reseller's client storage. SCSI type storage array or SAN recommended.

In our example, we have a pair of hard disks with RAID 1 formatted, and partitioned it into 2 volumes **C:\** and **D:\**. The Windows OS is installed on C while the CBS application will be installed on D drive. Each reseller's client data are stored into a dedicated disk with RAID 1 formatted. The amount of hard disks used and the RAID setup is purely for your reference. This setup would depend on the amount of storage required and the severity of your reseller service, RAID 5 or above setup may be required according to your reseller's requirement.

In our example, we are using RAID 1 for each reseller's user home. We setup the storage as RAID 1, this is because when your reseller requires getting the hard disk for restoring purpose, we can simply get take hard disk out from the data center and deliver the hard disk to your reseller.

#### • Operating system

Server grade OS such as Windows server 2008 (64-bit) or above, Windows server 2008 R2 SP1 recommended.

#### Note

A standard Windows Server 2008 R2 has a limitation of **32GB** of physical memory, if you are going to host more AhsayCBS instances or support more users on the same server, Datacenter or Enterprise edition may need to consider. Please refer to Windows Dev Center about the [Physical Memory Limits on Windows Server 2008 R2](#).

#### • Example

The following example is the hardware setup used in the following sections. It is a Dell server R510 with external disk array module MD1200. R510 has 12 slots (built-in) which use H700 internal integrated RAID controller. The external disk array module MD1200 has 12 slots and use H800 as the external RAID controller. H800 has 2 slots to control external disk array. You can add new disk array if more resellers or additional disk storage required.



Processor:	Intel® Xeon® CPU X5650 @2.67GHz (2 processors)
Installed RAM:	32.0 GB
RAID card:	PERC H700 Internal Integrated (internal disk array) and PERC H800 External Adapter for MD1200 (external disk array). If you have a PERC 6/E, you can connect it to an external MD1000 disk array module. However MD1000 may be discontinued in some countries.

## 3.2 Server Configuration

One of the most important factors in determining backup and restore performance is the disk performance of the server. You should consider using:

- A separate local drive for each individual AhsayCBS instance's user home.
- A separate local drive for AhsayCBS system home.

### Note

It is not recommended to use the O/S partition or drive as the AhsayCBS system or user home. If the O/S partition runs out of space, this will cause your O/S to become unstable and may even crash your AhsayCBS server.

## 3.3 Expose only TCP Ports 80 and 443 to the Public

It is recommended to expose only TCP ports **80** and **443** to the public on your firewall. Please consult the user's manual of your firewall for more information on how to do so.

## 3.4 Restricting Access on Administration Panel

For security reasons, we would recommend that the Administration Panel of AhsayCBS must be hidden from public access, i.e. it should be exposed to local area network only.

## 3.5 File System Tuning

In order to ensure optimal performance from a server file system, please ensure that you do the following:

1. Use local drives instead of network drives, i.e. iSCSI, NFS, SAMBA, etc.
2. Tune your file system. For example, for NTFS, run the following:

```
fsutil behavior set disable8dot3 1
fsutil behavior set mftzone 2
fsutil behavior set disablelastaccess 1
fsutil behavior set memoryusage 2
```

3. Turn off drive indexing feature for each system and user home drive(s). On MS Windows O/S this is used for faster searching.

## 3.6 Virus Software

If you have anti-virus software installed on your server, please make sure the user home and system home drives are excluded from scanning, as this may interfere with normal AhsayCBS operation.

## 3.7 Network Load Balancing Configuration

For servers which are configured with network load balancing, i.e. a dual WAN router or Round Robin routing. A static route should be configured for your AhsayCBS server

connection to the Ahsay license server (lic.ahsay.com). This will ensure the remote IP address sent by AhsayCBS to the Ahsay license server will remain the same during daily routine license checks. This will avoid potential license errors, i.e. 1011 or 1012 license errors which could result of the automatic shutdown of your AhsayCBS service.

### 3.8 Other AhsayCBS Settings

All other settings such as Java heap size, QPS settings, scheduling backup jobs, replication, SSL certificate, API or other AhsayCBS settings can generally follow the instructions in our [AhsayCBS administrator guide](#).

## 4 Setup Instruction

### 4.1 Getting Started

This chapter describes the minimum setup required to start using the AhsayPRD setup.

#### Caution

We assume that you have installed Windows server 2008 on a server with removable hard disks. If you are not sure on this setup, please check on [Chapter 3 Best Practices and Recommendations](#).

The following setup would be based on a Windows Server 2008 R2 installed on Dell R510 with an internal SCSI storage array with PERC H700.

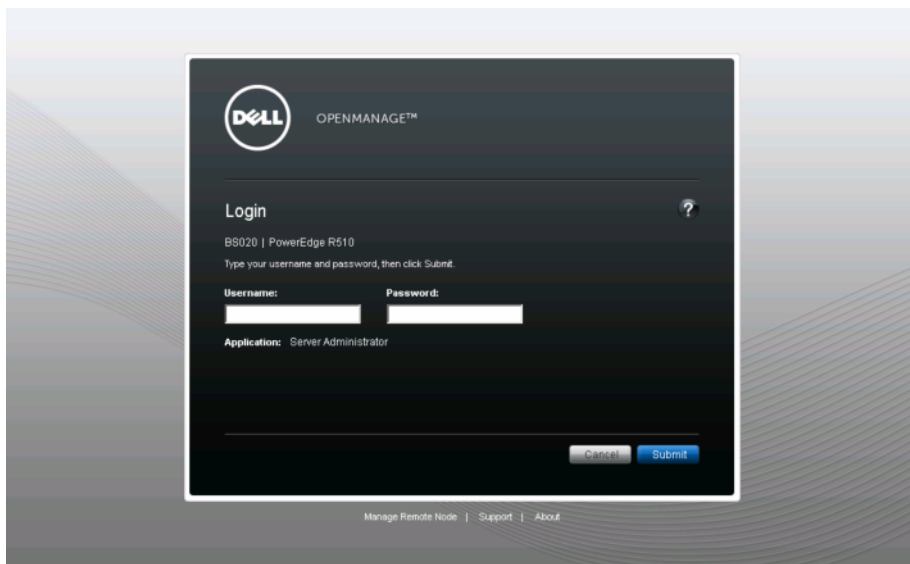
#### Note

You may use external MD1000 with PERC 6/E or external MD1200 with PERC H800. The MD1000 is an older model and may be discontinued in some countries.

### 4.2 Setting up the Hard Disk

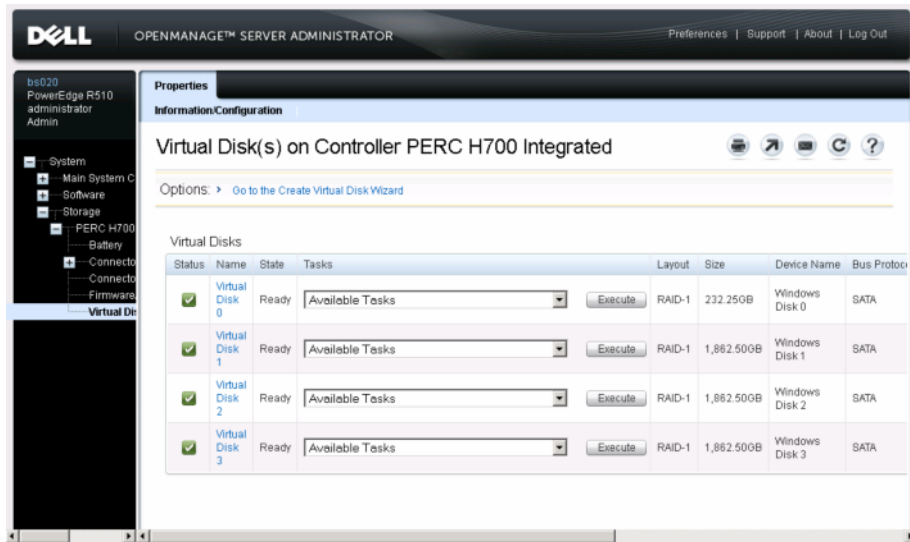
We will assign a pair of hard disks for the user home of each AhsayCBS. Follow the instructions below to set up the hard disk:

1. Enter `https://<your_servername>:1311` in your browser to open DELL OPENMANGE™.
2. Login as administrator (enter `<Username>` and `<Password>`, then click **Submit**).

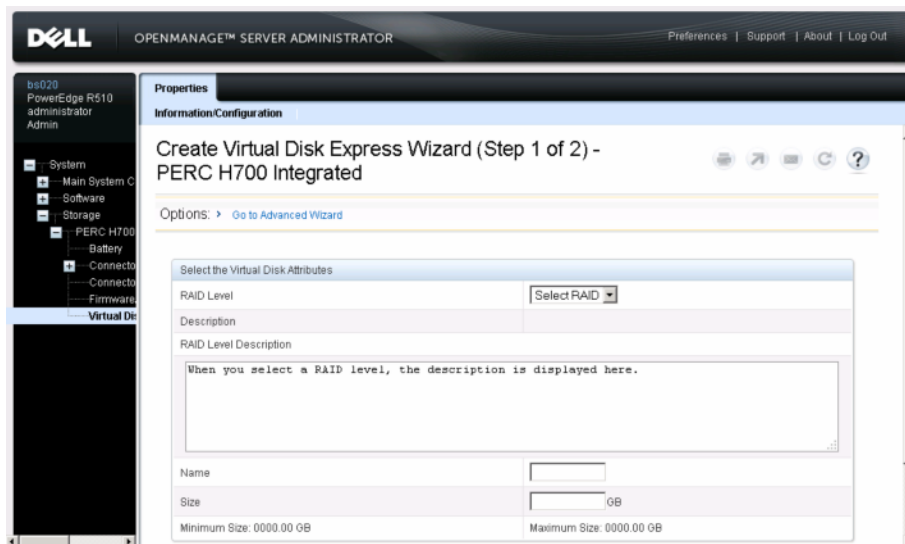


3. In the navigation bar on the left, select System > Storage > PERC H800 External Adapter (PCI Slot 4) > Connector 0 (RAID) > Virtual Disk.

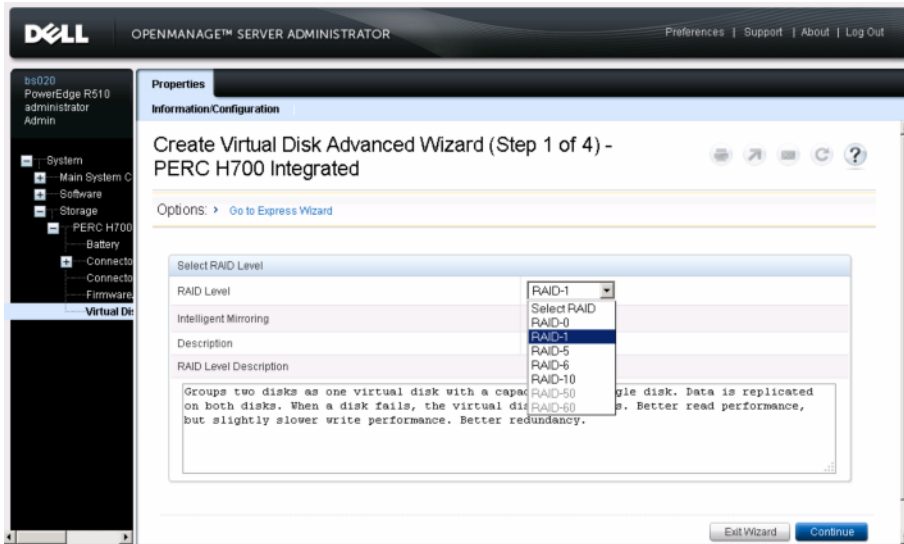
In the main window on the right, go to **Options > Go to Create Virtual Disk Wizard**.



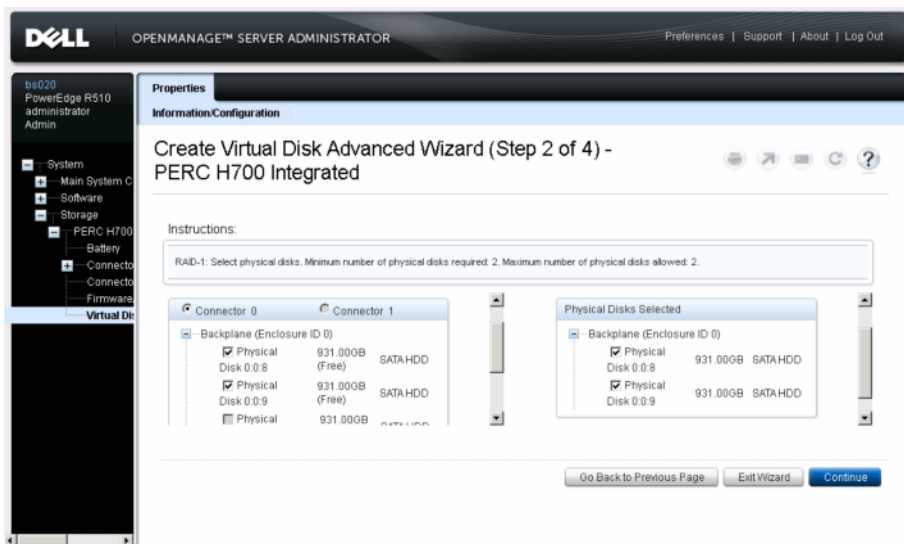
4. Click **Options > Go to Advanced Wizard** to start the **Create Virtual Disk Express Wizard**.



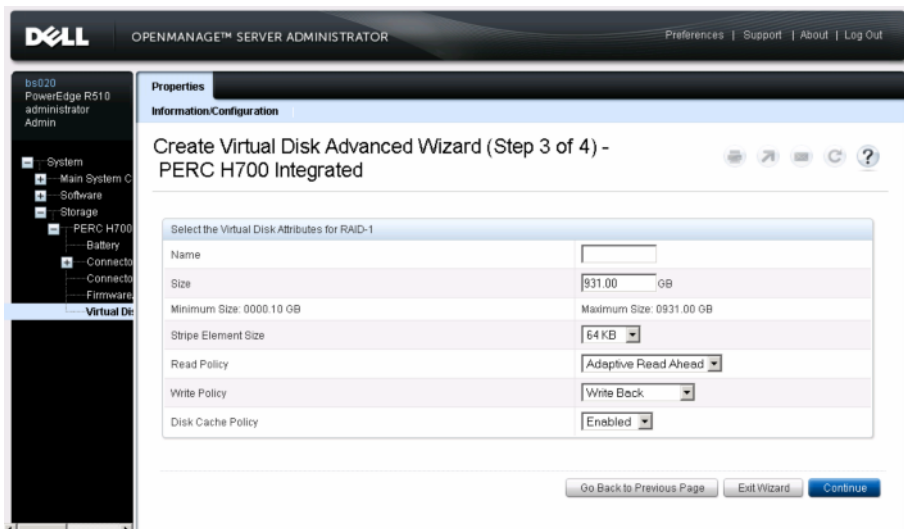
5. Select **RAID-1** from the **RAID Level** dropdown menu, then click **Continue**.



6. Select the disks in the Connector box on the left. You can see the selected hard disks in the box on the right hand side. Click **Continue**.

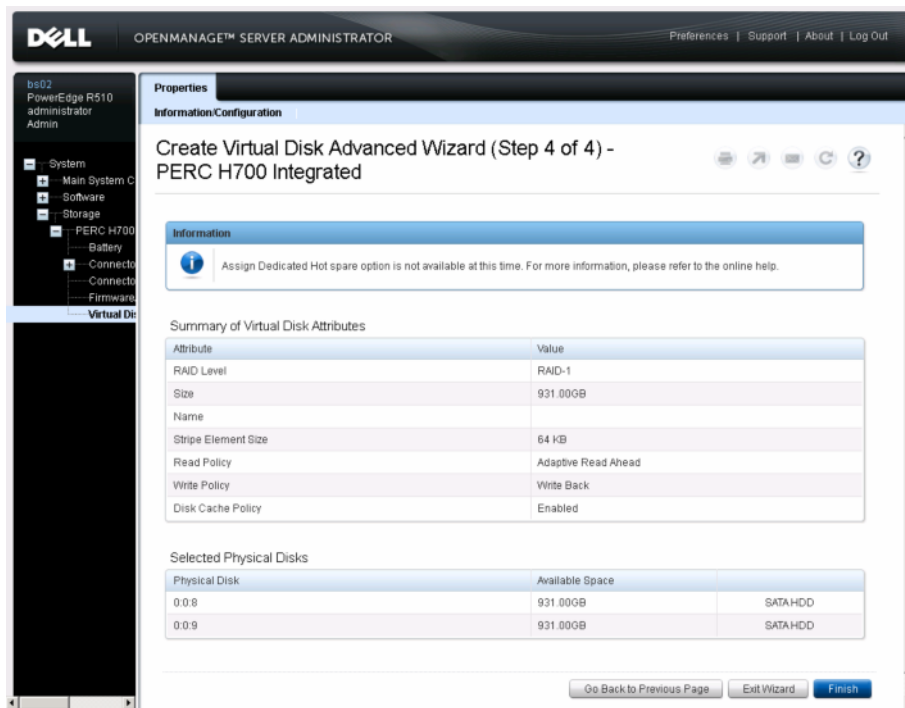


7. Click **Continue**.

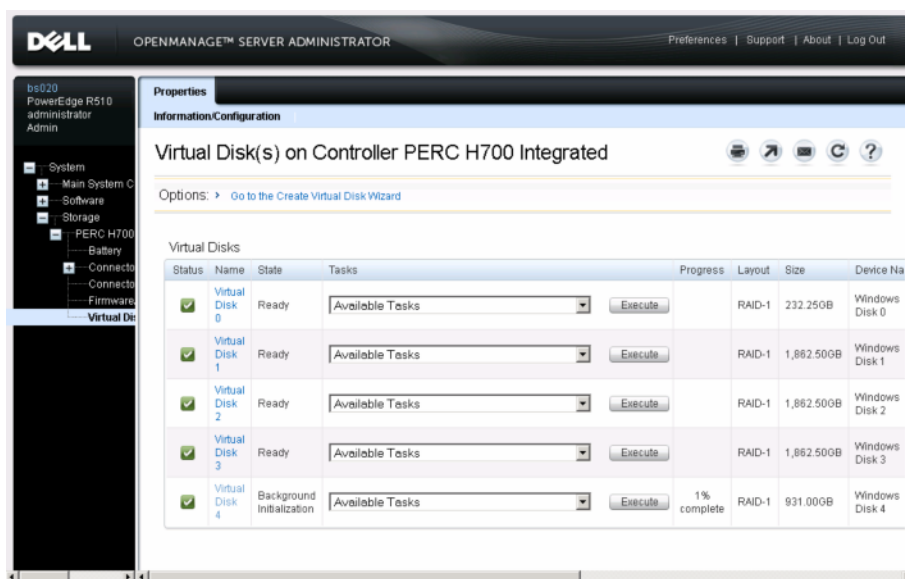




8. Click **Finish**.

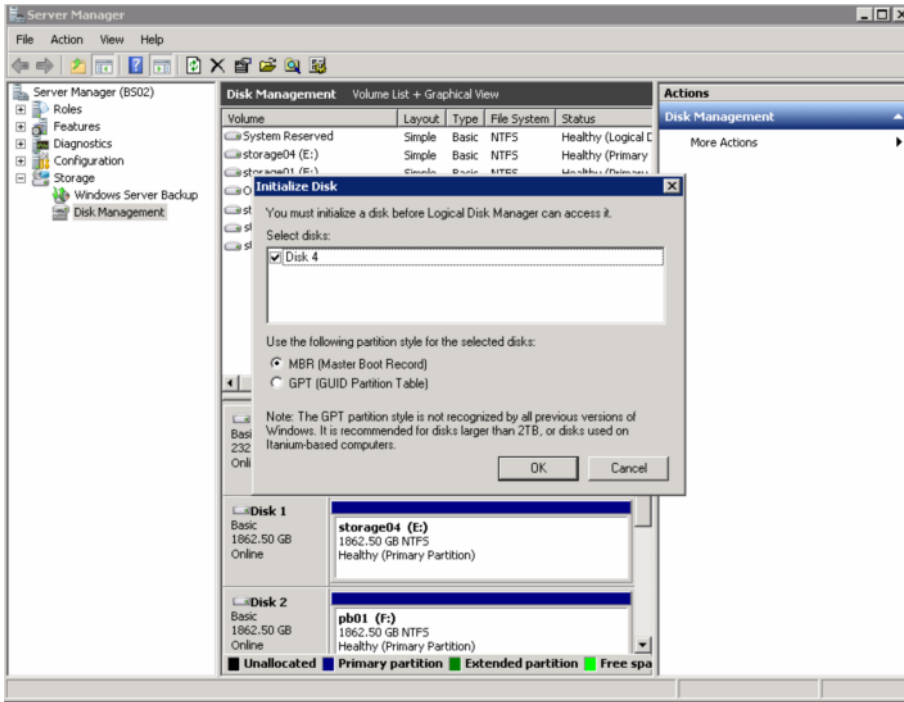


9. Wait for a few minutes, then refresh the screen. The background initialization of the virtual disk starts.

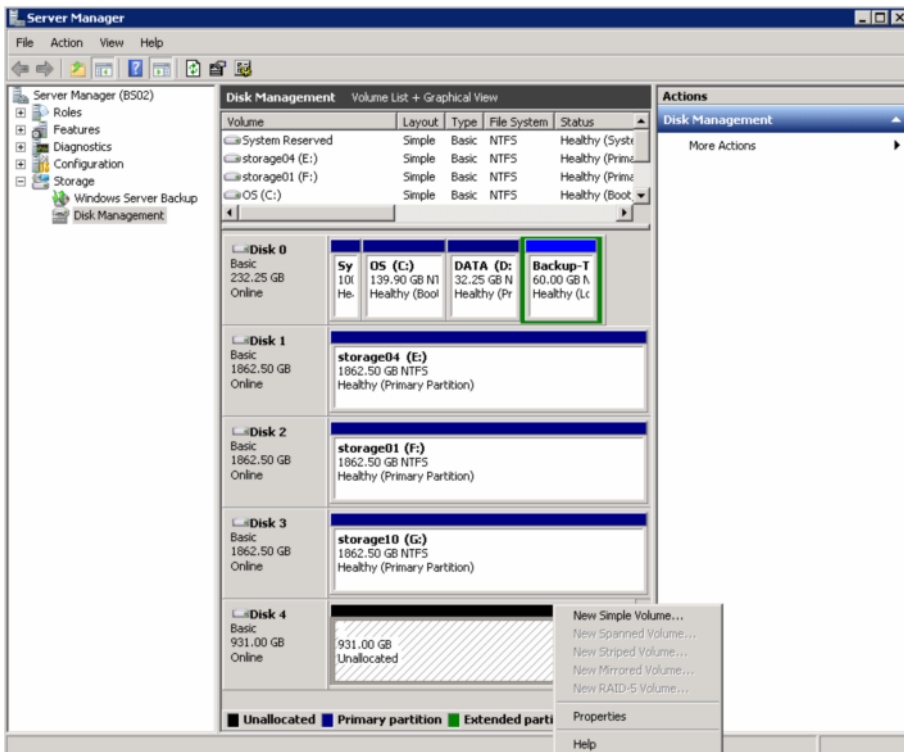


10. Go to the **Server Manager > Disk Management** in Windows. An **Initialize Disk** dialog box appears informing you that you have a new disk.
- ▶ If your disk is less than 2TB, click the **MBR (Master Boot Record)** radio button.
  - ▶ If your disk is larger than 3TB, click the **GPT (Guild Partition Table)** radio button.

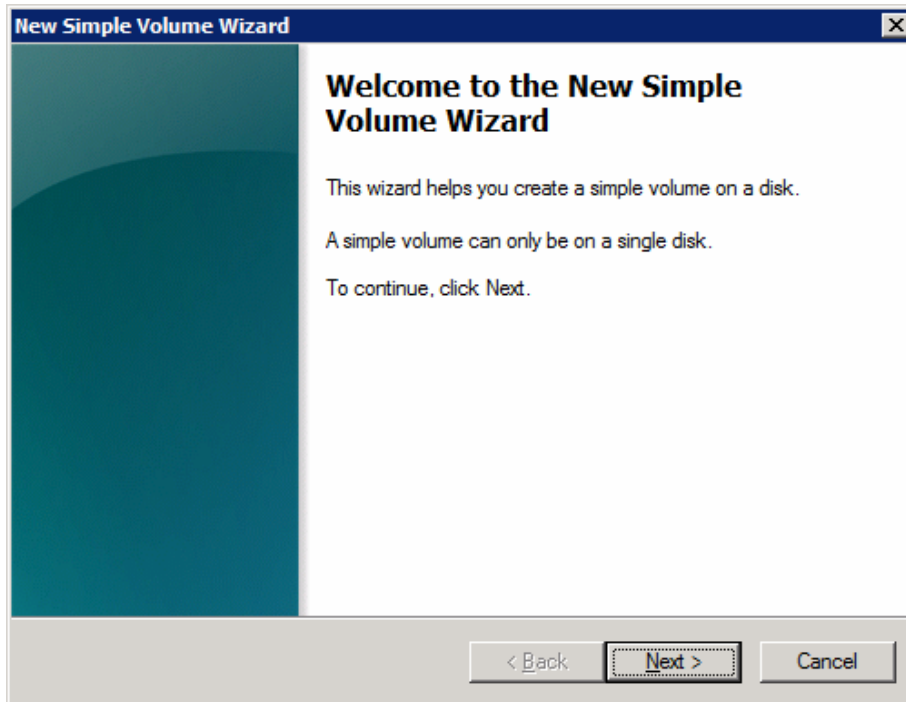
Click **OK**.



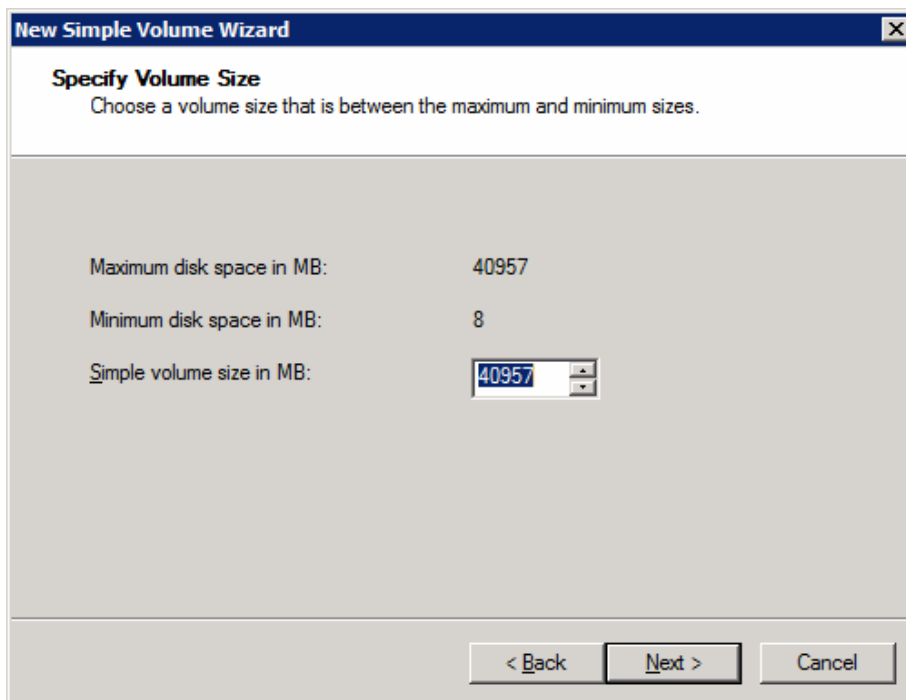
11. Right click the new disk (Disk 4 in our example), then select **New Simple Volume**.



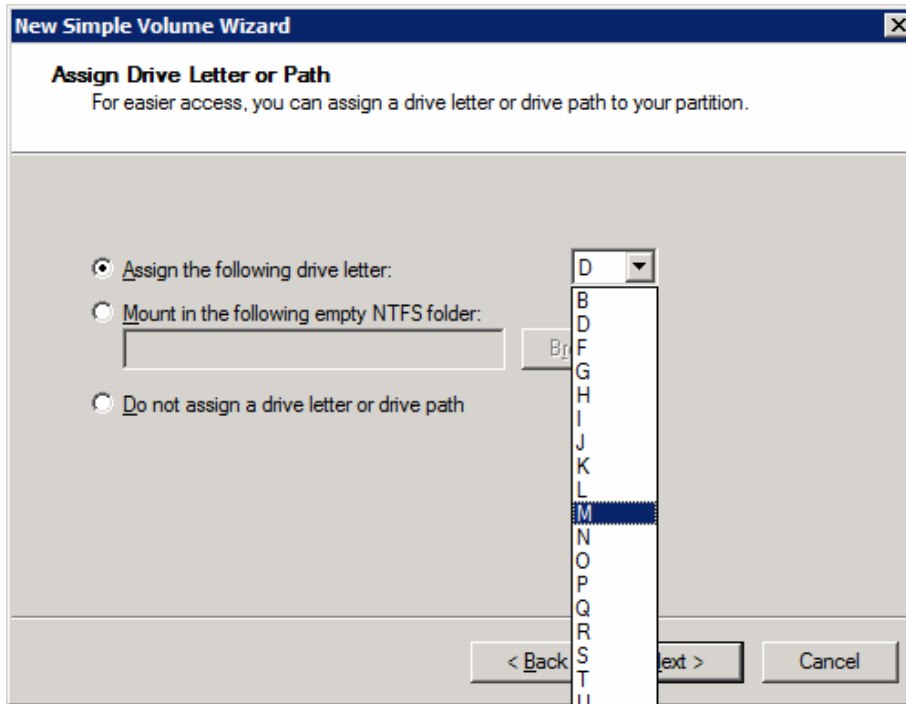
12. The **Welcome to the New Simple Volume Wizard** appears. The wizard provides you with step by step instructions on how to create a simple volume on a disk. Click **Next**.



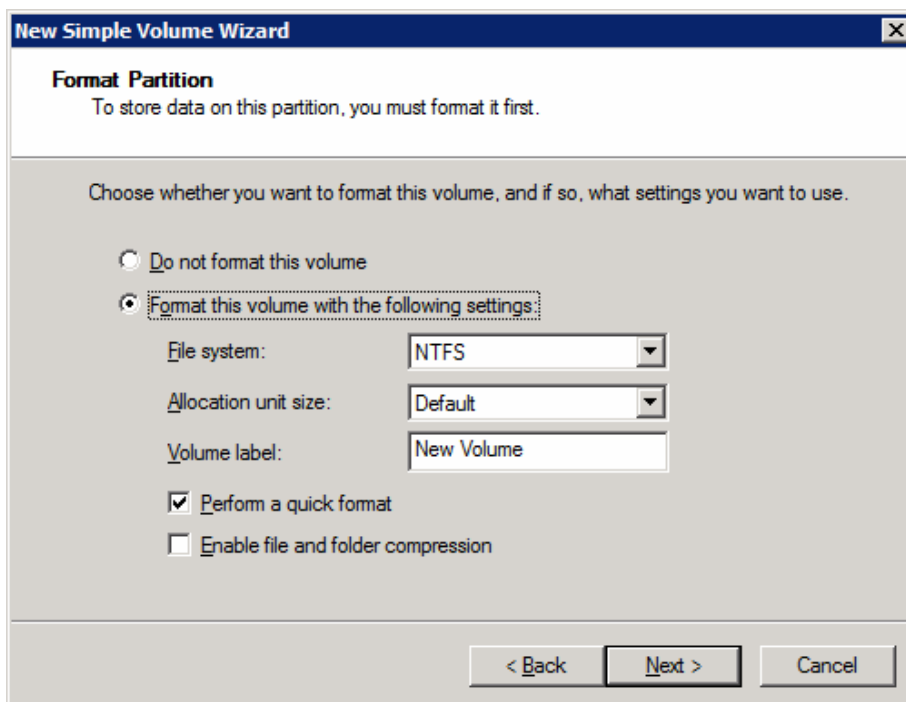
13. Specify the volume size of the disk you want to create. The value must be between the maximum and minimum disk space in MB. Click **Next**.



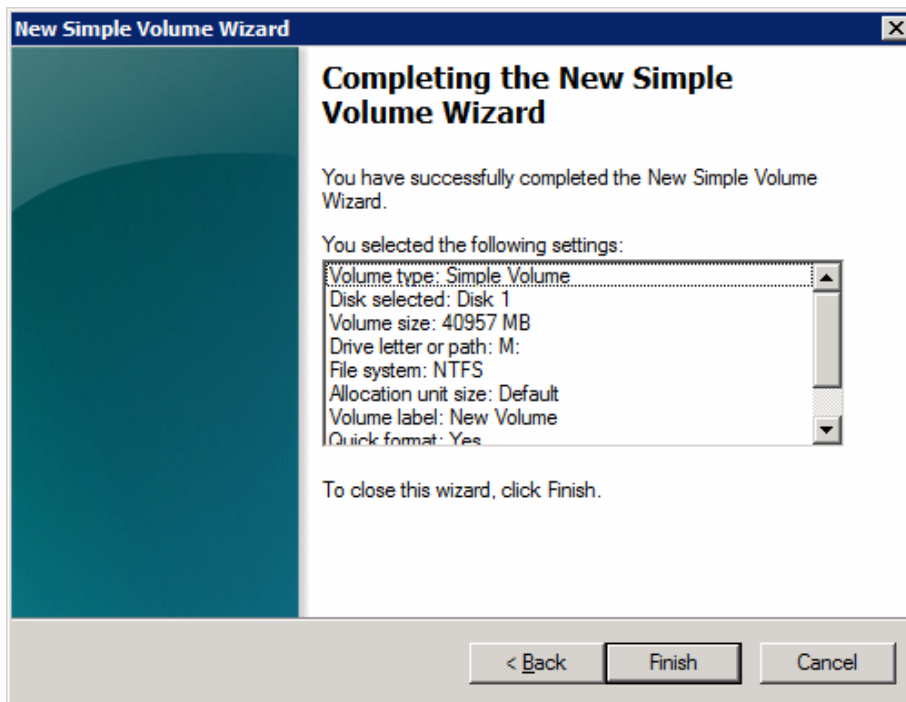
14. Assign a drive letter to the drive, for example, **M:\**. Click **Next**.



- Format the disk volume by selecting **NTFS** as the file system. Click **Next**.



- When you have finished formatting the disk, a dialog box appears summarizing the settings you have selected. Click **Finish**.



## 4.3 Windows Setting

Windows firewall blocks all incoming traffic by default. You need to enable the Windows firewall setting so that external ports **80** and **443** can reach your AhsayCBS server instance.

### 4.3.1 Required Package

Before you can install AhsayPRD, you must install the following Microsoft Visual C++ package in your Windows environment. The AhsayPRD installation will fail if this package is not installed.

[Microsoft Visual C++ 2008 SP1 Redistributable Package \(x86\)](#)

#### Note

If you have previous version(s) of Microsoft Visual C++ redistributable packages installed on your machine, you must un-install them first.

## 4.4 Installing Software

Please follow the steps in this section to install the AhsayPRD, prepare a wild card certificate for the AhsayPRD, prepare the AhsayCBS template for your resellers, setup each dedicated Ahsay instance, and remove an Ahsay instance.

### 4.4.1 Installing the Ahsay Proxy Redirector

To install the Ahsay Proxy Redirector, do the following:

1. Download the Ahsay Proxy Redirector from Ahsay's website.

2. Unzip the Ahsay Proxy Redirector and put it in **D:\Applications**.
3. Modify the **httpd.conf** file in **D:\Applications\Ahsay Proxy Redirector\conf**.

<b>D:\Applications\Ahsay Proxy Redirector\conf\httpd.conf</b>
<pre># Define the top directory of AhsayPRD here Define SRVROOT "DD:/Applications/AHsay Proxy Redirector" Define ADMIN_EMAIL "bsadmin@ahsay.com" ServerRoot "\${SRVROOT}"  # Define the port to listen Listen 80 Listen 443  # Define the admin email ServerAdmin "\${ADMIN_EMAIL}"  # include basic configuration files Include conf/httpd-basic.conf  # Define VirtualHost settings for company1.ahsay.com # Need to add this connector to tomcat server.xml to use mod_jk # &lt;Connector address="127.0.0.1" port="60001" protpcp;="AJP/1.3" redirectPort="443" /&gt; #  # Use VHOST company1.ahsay.com 123.123.123.123 admin@ahsay.com 60001 "D:/Applications/Company1/webapps" conf/wildcard.NOT_SECURE.com.crt.signed-by-ahsayca2 conf/wildcard.NOT_SECURE.com.key.signed-by-ahsayca2 conf/ca.crt</pre>

4. Modify the variables, **SRVROOT** and **ADMIN\_EMAIL**, according to your environment settings.

### Note

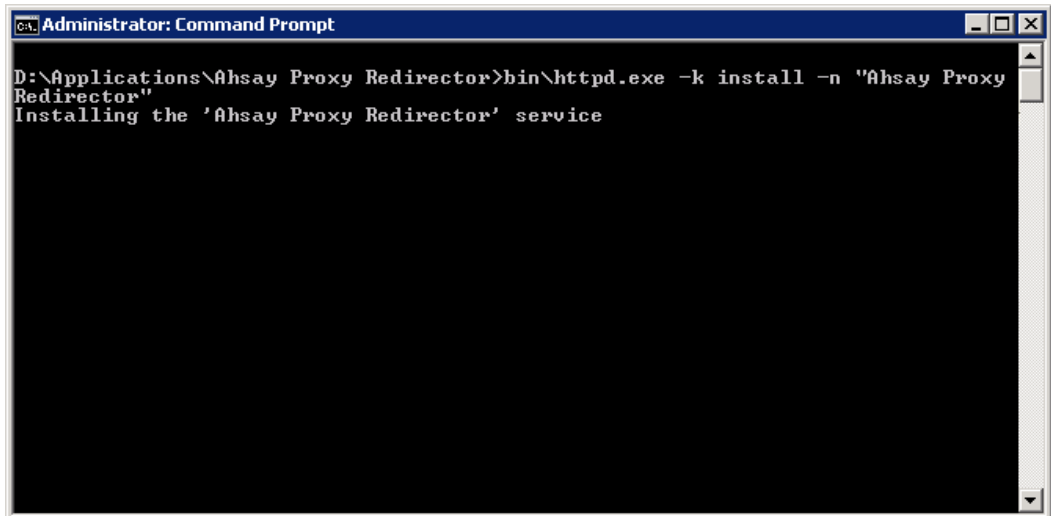
The server root, **SRVROOT**, refers to the path of the Ahsay Proxy Redirector folder. The **ADMIN\_EMAIL** refers to the email address of your administrator.

### Important

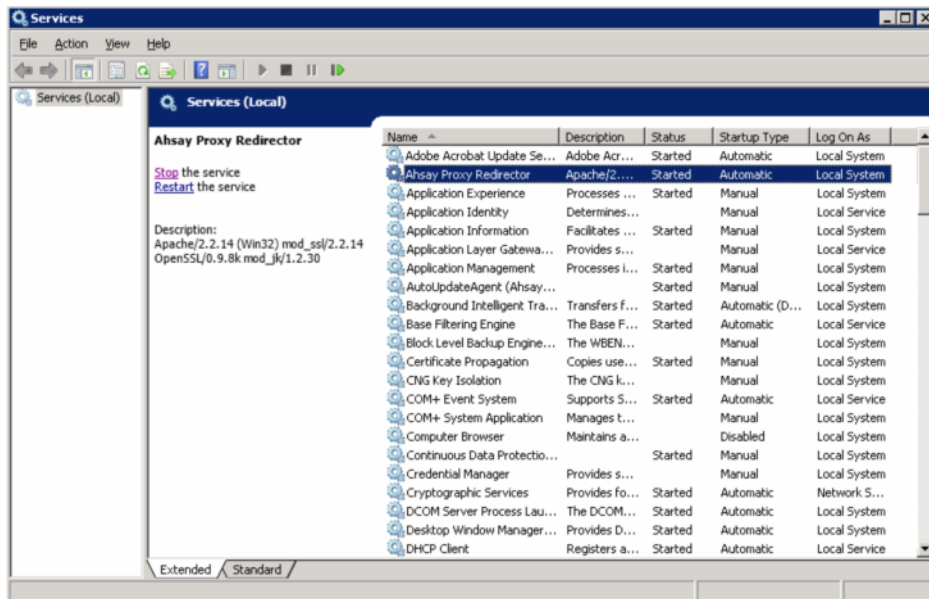
The IP address for **VHOST** settings must be the IP address bind to **NIC** instead of the public IP address.

It is better to use backslash (/) instead of forward slash (\) in Apache configuration.

- Run the install-service.bat batch file under the **D:\Applications\Ahsay Proxy Redirector** folder.



- Click the installed service **Ahsay Proxy Redirector**.



#### 4.4.2 Preparing a Wild Card Certificate for the AhsayPRD

Default installation of AhsayPRD enables SSL (Secure Socket Layer) support using a wild card dummy certificate. For your own security, you are advised to replace the pre-installed dummy SSL cert with a secure SSL certificate from a trusted CA (Certificate Authority). The generation of a wild card cert is required because, all your AhsayCBS instances may share the SSL cert under the same domain name, for example, **cbs1.ahsay.com** and **cbs2.ahsay.com**. If you are hosting different domains with the same AhsayPRD, then you need to have another wild card cert.

##### Requirements

You need to install the third party software OpenSSL first, please refer to the following download link:

<https://www.openssl.org/community/binaries.html>

**Steps**

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

1. Identify the location of the cert files.

The **wildcard.NOT\_SECURE.com.crt**, **wildcard.NOT\_SECURE.com.key**, and **ca.crt** cert files are located in **D:\Applications\Ahsay Proxy Redirector\conf**.

Key	Description
Wild card public key	This is a wild card public key file.
Wild card private key	This is a wild card private key file.
CA root cert	The CA root cert file.

If you use your own wild card certificate, make sure the certificate is chained properly. You can use a text editor such as Notepad in Windows to embed the intermediate/root into the wild card SSL certificate file.

Since the format of the certificate issued by CA may be different, please check with your CA for the correct instruction. Alternatively, you can try with the examples below.

- The length of the certificate is shortened and modified to fit into this section.
- No line feed is required between certificates.
- Make sure there are no invisible characters at the end of each line.

Example (SSL certificate file)
<pre> -----BEGIN CERTIFICATE----- MIIDxTCCAq2gAwIBAgIBADANBgkqhkiG9w0BAQsFAA1UEBhMCVVMx EDAObgNVBAGTB0FyaXpvbmExEzARBgNVBACTC1NjbGjAYBgNVBAoT EUdvRGFkZHkuY29tLCBJbmMuMTEwLWYyYDZVQDEyHbb290IEN1cnRp : : (A sample root certificate) : : 2GTzLH4U/ALqn83/B2gX2yKQOC16jdFU8WnjXf1855eJ1usV2GDPO LPavTK33sefOT6jEm0pUBsV/fdUID+Ic/n4XuDE32p2u0mYRlynqI 4uJEvlz36hz1 -----END CERTIFICATE----- -----BEGIN CERTIFICATE----- MIIE0DCCA7igAwIBAgIBBzANBgkqhkiG9w0BAQsFADCBgzELMAkGA EDAObgNVBAGTB0FyaXpvbmExEzARBgNVBACTC1Njb3R0c2RhbGUxG EUdvRGFkZHkuY29tLCBJbmMuMTEwLWYyYDZVQDEyHbyBEYWRkeSBSb : </pre>



```

:
(A sample intermediate certificate)
:
:
DsoXiWJYRBuriSUBAA/NxBti21G00w9RKpv0vHP8ds42pM3Z2Czqr
GIo/ikGQI31bS/6kA1ibRrLDYGCD+H1QQc7CoZDDu+8CL9IVVO5EF
LXY2JtwE65/3YR8V3Idv7kaWKK2hJKCavPi8BDAB
-----END CERTIFICATE-----
-----BEGIN CERTIFICATE-----
MIIE9jCCA96gAwIBAgIQMwS6s6pu/WuP4wFEkixiDDANBgkqhkiG9
MQswCQYDVQQGEwJVUzEVMBMGA1UEChMMVGhhd3RlLlCBJmMuMR0wG
b21haW4gVmFsaWRhdGVkIFNNTDEZMBcGA1UEAxMQVGhhd3RlIERWI
GIo/ikGQI31bS/6kA1ibRrLDYGCD+H1QQc7CoZDDu+8CL9IVVO5EF
:
:
(A sample SSL certificate)
:
:
+5E93hMqykOD9Eq6UhA0U13BQ0vAeIINVrmZaKDtTrig/aikLYsxK
yBl50evH8MLjQLpC8GUaVizT+0Z29dqhKwSx3810mQ242QADR6qXl
aGvmAm6p0dQA7aru7ZalUNX8Ebbp6/KQHEIH2pgIinwcxc6hy8JTy
LPEyeRKx02UzxApLkOpO6x9gaFaAjSI=
-----END CERTIFICATE-----

```

2. Generate the Certificate Signing Request. In our example, we assume that your OpenSSL is installed in **C:\OpenSSL**.

Use the following commands to generate a pair of private key and public Certificate Signing Request (CSR) for AhsayPRD:

```

set OPENSSL_CONF=C:\OpenSSL\bin\openssl.cfg

openssl req -new -nodes -keyout myserver.key -out
server.csr -newkey rsa:2048

```

After you replied the questions asked by the OpenSSL. It creates two files. The file **myserver.key** contains a private key; do not disclose this file to anyone. Carefully protect the private key.

You will now be asked to enter details to be entered into your CSR. For some fields, there will be a default value; if you enter '.' the field will be left blank. Use the wild card cert name such as **\*.mycompany.com** as Common Name (CN).

#### Full Example

```

C:\OpenSSL\bin>set
OPENSSL_CONF=C:\OpenSSL\bin\openssl.cfg

C:\OpenSSL\bin>openssl req -new -nodes -keyout
myserver.key -out server.csr -newkey rsa:2048
Loading 'screen' into random state - done
Generating a 2048 bit RSA private key
.....+++
.....+++
writing new private key to 'myserver.key'
-----
You are about to be asked to enter information that will

```

```

be incorporated into your certificate request.
What you are about to enter is what is called a
Distinguished Name or a DN.
There are quite a few fields but you can leave some blank
For some fields there will be a default value,
If you enter '.', the field will be left blank.
-----
Country Name (2 letter code) [AU]:US
State or Province Name (full name) [Some-State]:Texas
Locality Name (eg, city) []:Houston
Organization Name (eg, company) [Internet Widgits Pty
Ltd]:My Company Inc
Organizational Unit Name (eg, section) []:IT Division
Common Name (eg, YOUR name) []:*.mycompany.com
Email Address []:admin@mycompany.com

Please enter the following 'extra' attributes
to be sent with your certificate request
A challenge password []:xxxxxxx
An optional company name []:

C:\OpenSSL\bin>

```

### Note

CA accepts a 2048-bit RSA private key only, as breaking a 1024-bit private key algorithm is now possible.

3. Apply the wild card cert from your CA with the CSR file (**server.csr**) generated in the last step.
4. When your CA signed the wild card SSL cert, you can put the wild card public key, private key and the CA root cert files to the **conf** folder. The CA root cert can be obtained from your CA website.
5. When a new AhsayCBS instance is created, rename the definition in the **httpd.conf** configuration file.

### httpd.conf

```

:
:
:
Use VHOST cbs1.ahsay.com 123.123.123.123 admin@ahsay.com
60001 "D:/Applications/CBS1/webapps"
conf/wildcard.mycompany.crt conf/myserver.key conf/ca.crt
:
:
:

```

6. If a new AhsayCBS instance is setup, you may use the same private key, public key and root CA definition in the **httpd.conf** (for example, **cbs2.ahsay.com**). If a different domain name is setup (for example, **backup.backupvault.com**), you may apply another set of private key, public key and root CA definition in the **httpd.conf** configuration file.

```

httpd.conf

:
:
:
Use VHOST cbs1.ahsay.com 123.123.123.123 admin@ahsay.com
60001 "D:/Applications/CBS1/webapps"
conf/wildcard.mycompany.crt conf/myserver.key
conf/ca.crt

Use VHOST cbs2.hsay.com 123.123.123.123 admin@ahsay.com
60003 "D:/Applications/CBS2/webapps"
conf/wildcard.mycompany.crt conf/myserver.key
conf/ca.crt

Use VHOST backup.backupvault.com 123.123.123.123
admin@ahsay.com 60005 "D:/Applications/backup/webapps"
conf/wildcard.backupvault.crt conf/mybackupserver.key
conf/ca_root.crt
:
:
:

```

### Note

Once you setup the SSL cert in the AhsayPRD, you are not required to install any other SSL cert in the **keystore** file in the AhsayCBS.

### Important

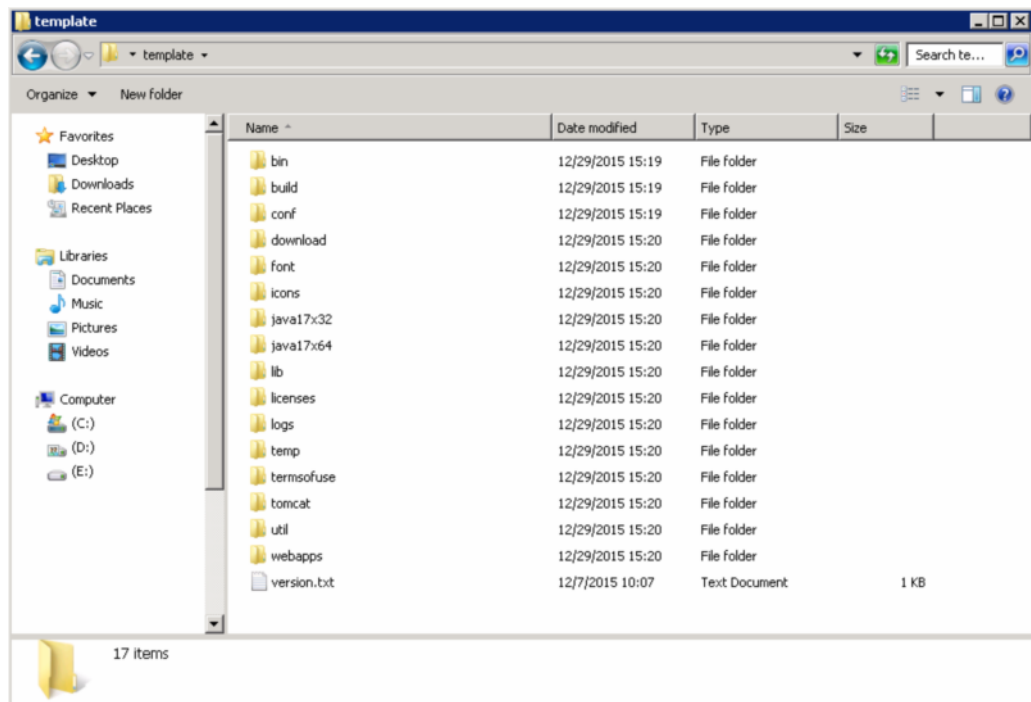
The IP address for **VHOST** settings must be the IP address bind to **NIC** instead of the public IP address.

It is better to use backslash (/) instead of forward slash (\) in Apache configuration.

#### 4.4.3 Preparing the AhsayCBS Template for your Resellers

The following steps show you how to prepare each AhsayCBS from a template. For each reseller's AhsayCBS, you are required to copy the template folder to create a new AhsayCBS instance.

1. Download AhsayCBS for Windows "Upgrade Existing Installation" release (**cbs-win.zip**) from [Ahsay website](#), do not the use "New Installation". This is because AhsayCBS installation is not required.
2. Expand the **cbs-win.zip** to a directory called **template** inside **D:\Applications**.



- Keep necessary directories and files for the template. Some of the expanded folders are not required for the template. Look at the following tables to decide if you need to keep these folders.

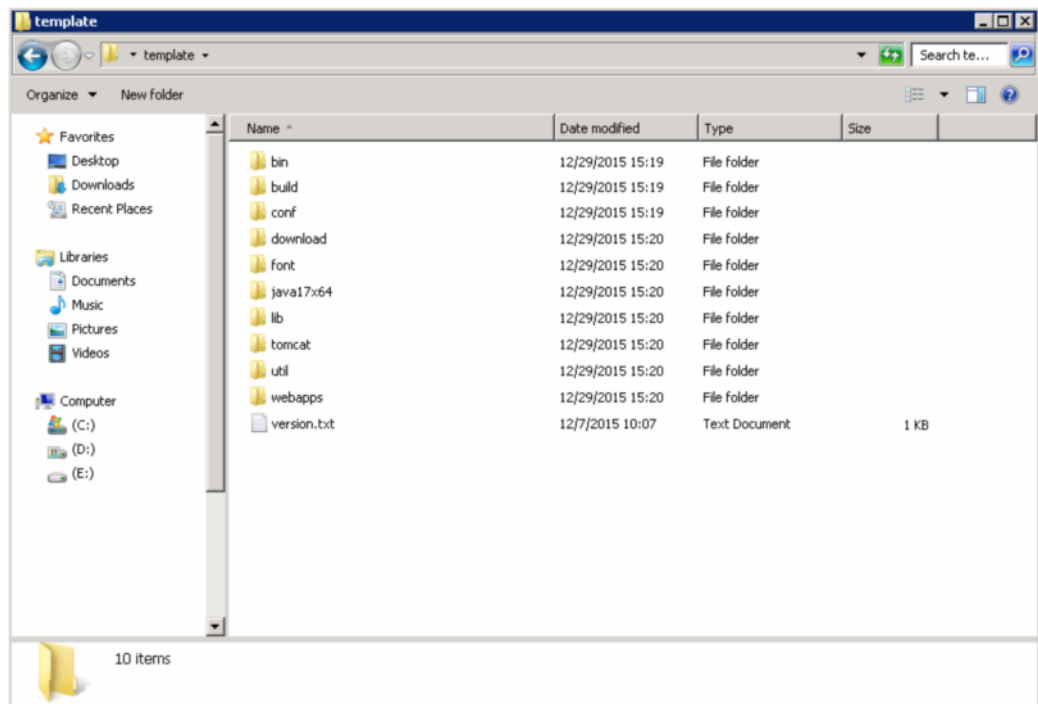
The following table shows the required folders:

Folder	Description
<b>bin</b>	Contains the startup and shutdown binaries of the AhsayCBS service.
<b>build</b>	Contains properties for OBC installer generation.
<b>download</b>	OBC download
<b>font</b>	Font for generating PDF bill.
<b>java17x64</b>	64-bit Java run-time library. It is required for a 64-bit Windows OS.
<b>lib</b>	AhsayCBS program binary files.
<b>tomcat</b>	Tomcat library and setup files.
<b>webapps</b>	It contains properties files, jsp files, application definition files etc.
<b>util</b>	Utility for service installation etc.
<b>version.txt</b>	It contains the version of the AhsayCBS for your reference.

The following table shows the folders that are not required:

Folder	Description
<b>icons</b>	Contains the AhsayCBS installation icons, such as desktop icons files, which is not required in this setup.
<b>java17x32</b>	Contains the Java 32-bit library which is not required.
<b>licenses</b>	Java, Tomcat, Apache terms of use, after you read them, you can remove this folder.
<b>logs</b>	Folder for your AhsayCBS log files, such as access logs, Catalina logs, etc.
<b>temp</b>	A temporary folder.
<b>termsofuse</b>	Terms of use of the AhsayCBS.

After you have removed the folders, the directory should look like the following:



- Rename the folder **java17x64** to **java**.
- The **bin\startup.bat** defined the home location of Tomcat and CBS when AhsayCBS startup. In a standard installation, the home location of the Tomcat and CBS are located in the same directory. In case you want Tomcat to write logs in another drive, for example, **E:\** drive, you need to modify the **bin\startup.bat** and **bin\shutdown.bat** batch files.

**Modifying bin\startup.bat**

- i. Define the **TC\_HOME** at the top of the **bin\startup.bat**. Since this is a template, the actual location will be defined when you set up a new AhsayCBS instance.

<b>startup.bat</b>
<pre>@echo off  SET "TC_HOME="  @REM ***** Please leave JAVA_HOME empty as it is SET "JAVA_HOME="  : :</pre>

- ii. In **bin\startup.bat**, remark the line **IF "%TC\_HOME%"==" SET "TC\_HOME=%CBS\_HOME%"** so that the value of the **CBS\_HOME** value is not the same as the value of the **TC\_HOME**.

<b>startup.bat</b>
<pre>: :  @REM IF "%TC_HOME%"==" SET "TC_HOME=%CBS_HOME%"  : :</pre>

- iii. Locate the following path definitions in **bin\startup.bat**.

<b>startup.bat</b>
<pre>: :  SET "TC_OBS_CONF_PATH=%TC_HOME%\conf" SET "TC_RPS_CONF_PATH=%TC_HOME%\conf" SET "TC_RDR_CONF_PATH=%TC_HOME%\conf"  : :</pre>

- iv. Change the path definitions in **bin\startup.bat** as follows:

<b>startup.bat</b>
<pre>:</pre>

```

:
SET "TC_OBS_CONF_PATH=%CBS_HOME%\conf"
SET "TC_RPS_CONF_PATH=%CBS_HOME%\conf"
SET "TC_RDR_CONF_PATH=%CBS_HOME%\conf"
:
:

```

Since the **CBS\_HOME** was defined in the current directory of the AhsayCBS application, when you define a new path for **TC\_HOME**, the log files, temp files, and the work files will all be stored in a new path.

### Modifying bin\shutdown.bat

- v. You need to modify the **bin\shutdown.bat** file in the same way that you modified the **bin\startup.bat** file.

shutdown.bat
<pre> @echo off  SET "TC_HOME="  @REM ***** Please leave JAVA_HOME empty as it is SET "JAVA_HOME="  : :  @REM IF "%TC_HOME%"==" " SET "TC_HOME=%CBS_HOME%"  : :  SET "TC_OBS_CONF_PATH=%CBS_HOME%\conf" SET "TC_RPS_CONF_PATH=%CBS_HOME%\conf" SET "TC_RDR_CONF_PATH=%CBS_HOME%\conf"  : : </pre>

- vi. Rename the **bin\startup.bat.bak** to **startup.bat**; **shutdown.bat.bak** to **shutdown.bat**, respectively. This is to avoid starting the service automatically when you setup the AhsayCBS service.

**Note**

In our example, we put the template folder in the **D:\Applications\Template**, you can change the location if you like.

- vii. Copy the below xml definition and replace the file in the **D:\Applications\Template\conf\server.xml** folder.

<b>server.xml</b>
<pre> &lt;Server port="60002" shutdown="SHUTDOWN"&gt;  &lt;Listener className="org.apache.catalina.core.AprLifecycleListener" SSLEngine="on" /&gt;  &lt;Listener className="org.apache.catalina.core.JasperListener" /&gt;  &lt;Listener className="org.apache.catalina.core.JreMemoryLeakPrevention Listener" /&gt;  &lt;Listener className="org.apache.catalina.mbeans.GlobalResourcesLifecy cleListener" /&gt;  &lt;Listener className="org.apache.catalina.core.ThreadLocalLeakPreventi onListener" /&gt;  &lt;Service name="Catalina"&gt;  &lt;Connector address="0.0.0.0" port="60001" protocol="AJP/1.3" maxHttpHeaderSize="8192" socketBuffer="16384" maxThreads="2000" minSpareThreads="50" maxKeepAliveRequests="1000" enableLookups="false" redirectPort="443" acceptCount="200" connectionTimeout="120000" disableUploadTimeout="true" URIEncoding="utf-8"/&gt;  &lt;Engine name="Catalina" defaultHost="localhost"&gt;  &lt;Host className="com.ahsay.OrderedContextHost" name="localhost" appBase="webapps" autoDeploy="false" copyXML="false" workDir="{tc.work.path}" &gt;  &lt;Context privileged="true" path="" </pre>



```

        cookies="true"
        reloadable="true"
        crossContext="false"
        workDir="${tc.work.path}/ROOT">
<Valve
className="org.apache.catalina.valves.AccessLogValve"
directory="${tc.log.path}"
prefix="ROOT_access_"
suffix=".log"
pattern="common"/>
</Context>
<Context privileged="true"
path="/obs"
cookies="true"
reloadable="false"
crossContext="false"
workDir="${tc.work.path}/obs">
<Valve
className="org.apache.catalina.valves.AccessLogValve"
directory="${tc.log.path}"
prefix="obs_access_"
suffix=".log" pattern="common"/>
</Context>
<Context privileged="true"
path="/rps"
cookies="true"
reloadable="false"
crossContext="false"
workDir="${tc.work.path}/rps">
<Valve
className="org.apache.catalina.valves.AccessLogValve"
directory="${tc.log.path}"
prefix="rps_access_"
suffix=".log"
pattern="common"/>
</Context>
<Context privileged="true"
path="/rdr"
cookies="true"
reloadable="false"
crossContext="false"
workDir="${tc.work.path}/rdr">
<Valve
className="org.apache.catalina.valves.AccessLogValve"
directory="${tc.log.path}"
prefix="rdr_access_"
suffix=".log" pattern="common"/>
</Context>
<Context privileged="true"
path="/cbs"
cookies="true"

```

```

        reloadable="false"
        crossContext="true"
        workDir="${tc.work.path}/cbs">

<Valve
className="org.apache.catalina.valves.AccessLogValve"
directory="${tc.log.path}"
prefix="cbs_access_"
suffix=".log"
pattern="common"/>

</Context>

</Host>

</Engine>

</Service>

</Server>

```

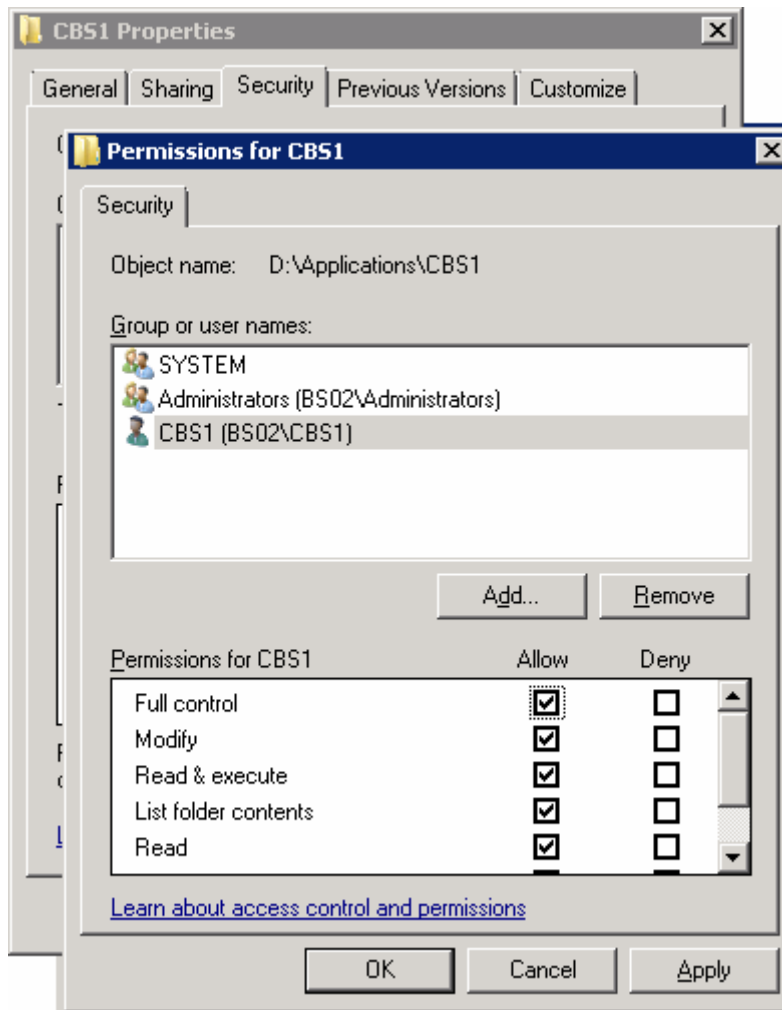
#### 4.4.4 Setting up Dedicated AhsayCBS Instance

1. Create a local Windows user <Standard User> for this AhsayCBS and assign a password for this user. In our example, the local user created is called CBS1.

#### Note

It is not compulsory to setup a local Windows user to run this service, but it is highly recommended that you should create a separate local Windows account for each AhsayCBS instance for maintenance purposes. Please also create a password for this Windows user.

2. Make a copy of **D:\Applications\Template** as **D:\Applications\CBS1**. It is recommended that you give full folder permission for **D:\Applications\CBS1** to the Windows user **CBS1** for administration purpose.

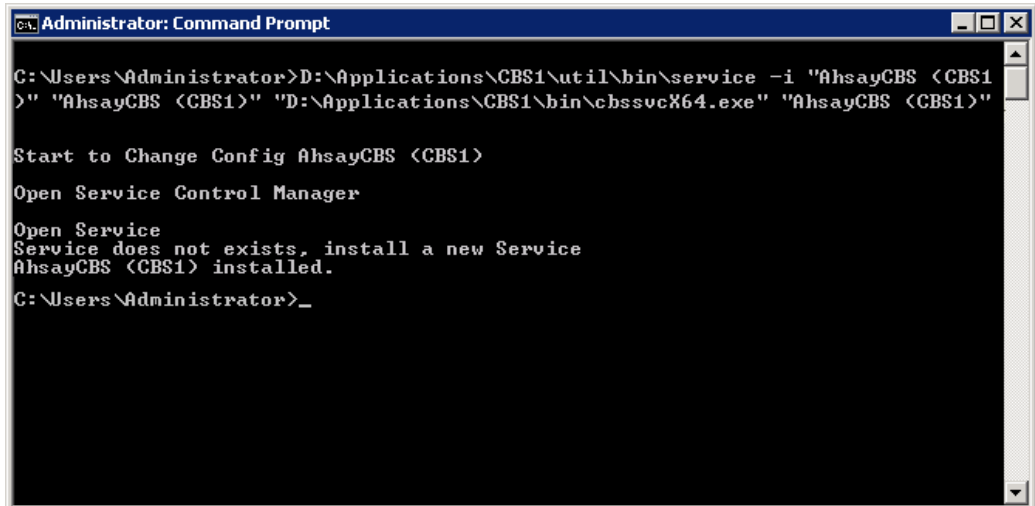


### Note

If you are going to assign a dedicated drive (for example, drive E:) for the user home of CBS1, please also assign the same permission to the drive.

- Run the following command from the command prompt to install the AhsayCBS service as a startup service for your reseller.

```
D:\Applications\CBS1\util\bin\service -i
"AhsayCBS (CBS1) "
"AhsayCBS (CBS1) "
"D:\Applications\CBS1\bin\cbssvcX64.exe"
"AhsayCBS (CBS1) "
```



```

Administrator: Command Prompt

C:\Users\Administrator>D:\Applications\CBS1\util\bin\service -i "AhsayCBS <CBS1
>" "AhsayCBS <CBS1>" "D:\Applications\CBS1\bin\chssvcX64.exe" "AhsayCBS <CBS1>"

Start to Change Config AhsayCBS <CBS1>

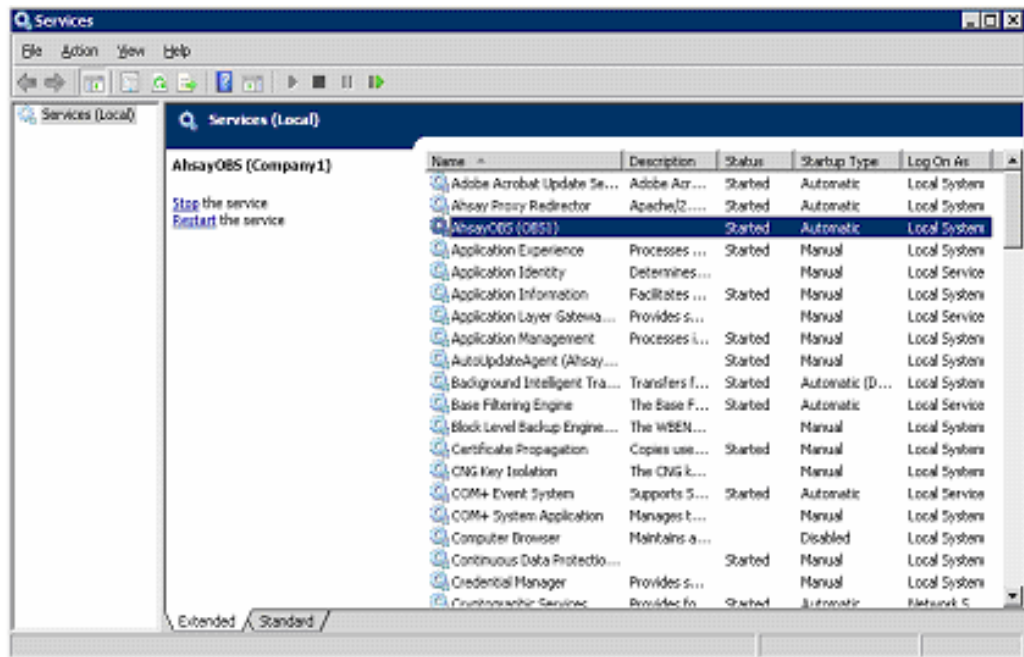
Open Service Control Manager

Open Service
Service does not exists, install a new Service
AhsayCBS <CBS1> installed.

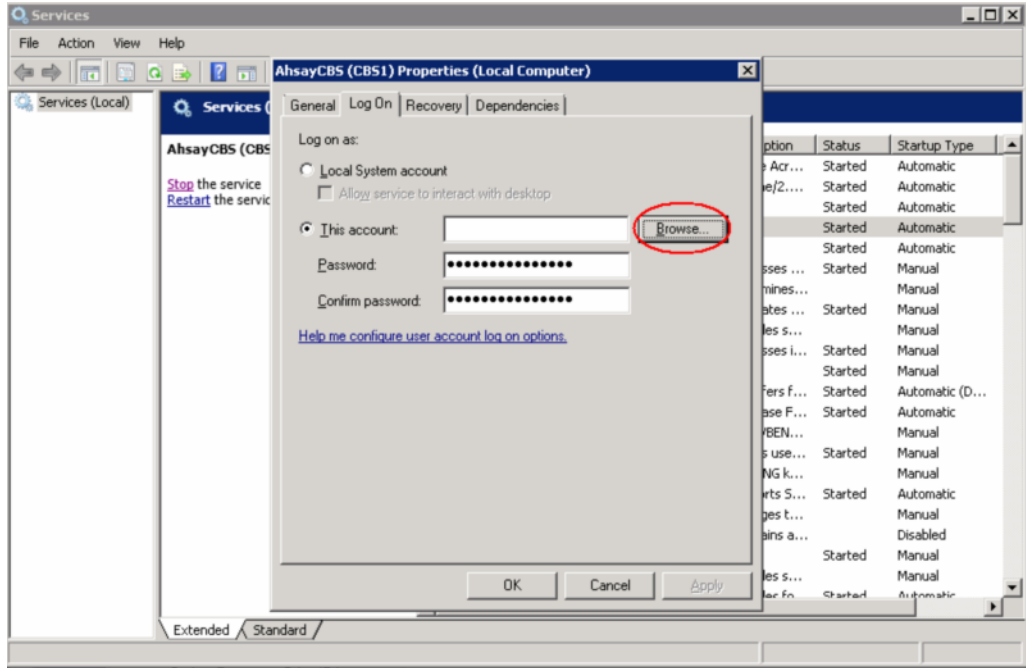
C:\Users\Administrator>_

```

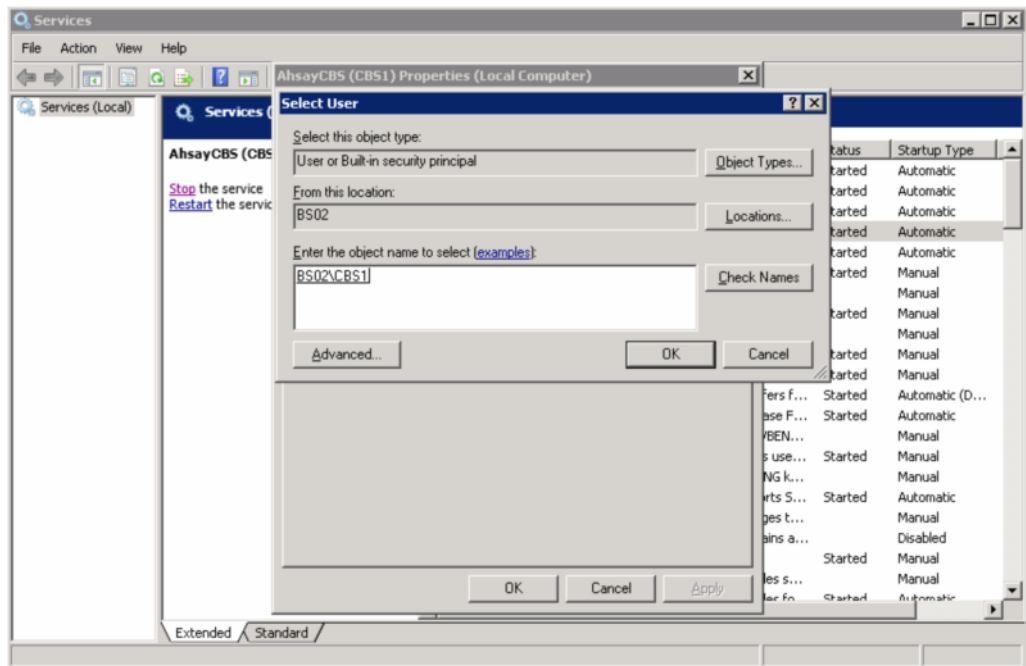
- After you installed the AhsayCBS service, the service is started by default. You can stop the service under **Control Panel > Administrative Tools > Services**.



- Right click the properties of the created service, click the **Log On** tab. Change the logon of the service in the **This account** textbox by clicking **Browse**.



6. Change the logon to **CBS1**. You need to apply a password after you click **OK**.



7. Open **D:\Applications\CBS1\bin\startup.bat.bak** and change the **TC\_HOME** environment variable to **E:\CBS1** where E is the drive letter of drive to be used exclusively for this AhsayCBS instance.

startup.bat.bak
<pre>@echo off  SET "TC_HOME=E:\CBS1 "  @REM ***** Please leave JAVA_HOME empty as it is</pre>

```

SET "JAVA_HOME="

@REM ***** Please set the correct values for
CBS_HOME,

:
:
:

```

- Open **D:\Applications\CBS1\bin\shutdown.bat.bak** and change the **TC\_HOME** environment variable to **E:\CBS1** where E is the drive letter of drive to be used exclusively for this AhsayCBS instance.

<b>shutdown.bat.bak</b>
<pre> @echo off  SET "TC_HOME=E:\CBS1 "  @REM ***** Please leave JAVA_HOME empty as it is SET JAVA_HOME=  @REM ***** Please set the correct values for CBS_HOME,  : : : </pre>

- Open **D:\Applications\CBS1\conf\server.xml** and change the Tomcat management interface port to a free TCP port (for example, **60008**) and the AhsayCBS server port to a free TCP port (for example, **60007**) which is used for this AhsayCBS instance exclusively.

<b>server.xml</b>
<pre> &lt;Server port="60008" shutdown="SHUTDOWN"&gt;  &lt;Listener className="org.apache.catalina.core.AprLifecycleListener" SSLEngine="on" /&gt;  &lt;Listener className="org.apache.catalina.core.JasperListener" /&gt;  &lt;Listener className="org.apache.catalina.core.JreMemoryLeakPreventionLi stener" /&gt;  &lt;Listener className="org.apache.catalina.mbeans.GlobalResourcesLifecycl eListener" /&gt;  &lt;Listener className="org.apache.catalina.core.ThreadLocalLeakPrevention Listener" /&gt; </pre>

```

<Service name="Catalina">
<Connector address="0.0.0.0"
  port="60007"
  protocol="AJP/1.3"
  maxHttpHeaderSize="8192"
  socketBuffer="16384"
  maxThreads="2000"
  minSpareThreads="50"
  maxKeepAliveRequests="1000"
  enableLookups="false"
  redirectPort="443"
  acceptCount="200"
  connectionTimeout="120000"
  disableUploadTimeout="true"
  URIEncoding="utf-8"/>
:
:
:

```

### Note

For easy management, please assign a pair of free ports for each AhsayCBS instance. For example, "60007 and 60008", "60009 and 60010", etc.

- Open **D:\Applications\CBS1\conf\autoDiscovery.xml** and change the Auto Discovery server port to a free TCP port (for example, **10011**) and the client port to a free TCP port (for example, **10012**).

### autoDiscovery.xml

```

<Root><AutoDiscovery server-port="10011" client-port="10012"
/></Root>

```

### Note

For easy management, please assign a pair of free ports for each AhsayCBS instance. For example, "10011 and 10012", "10013 and 10014", etc.

- Open **D:\Applications\Ahsay Proxy Redirector\conf\httpd.conf** and change the VHOST settings.

### httpd.conf

```

# Define the top directory of AhsayPRD here
Define SRVROOT "D:/Applications/Ahsay Proxy Redirector"
Define ADMIN_EMAIL "bsadmin@ahsay.com"
ServerRoot "${SRVROOT}"

```

```

# Define the port to listen
Listen 80
Listen 443

# Define the admin email
ServerAdmin "${ADMIN_EMAIL}"

# include basic configuration files
Include conf/httpd-basic.conf

# Define VirtualHost settings for company1.ahsay.com
# Need to add this connector to tomcat server.xml to use
mod_jk
# <Connector address="127.0.0.1" port="60001"
protocol="AJP/1.3" redirectPort="443" />
#

#Use VHOST company1.ahsay.com 123.123.123.123 admin@ahsay.com
60001 "D:/Applications/Company1/webapps"
conf/wildcard.NOT_SECURE.com.crt.signed-by-ahsayca2
conf/wildcard.NOT_SECURE.com.key.signed-by-ahsayca2
conf/ca.crt

Use VHOST cbs1.ahsay.com 123.123.123.123 admin@ahsay.com
60007 "D:/Applications/CBS1/webapps"
conf/wildcard.NOT_SECURE.com.crt.signed-by-ahsayca2
conf/wildcard.NOT_SECURE.com.key.signed-by-ahsayca2
conf/ca.crt

```

### Syntax of the VHOST setting

The following is the syntax of VHOST setting:

```

Use VHOST <Hostname> <IP address> <Admin email> <AhsayCBS
port number> <Path to AhsayCBS webapps folder><Wild card
public key> <Wild card private key> <CA Root cert>

```

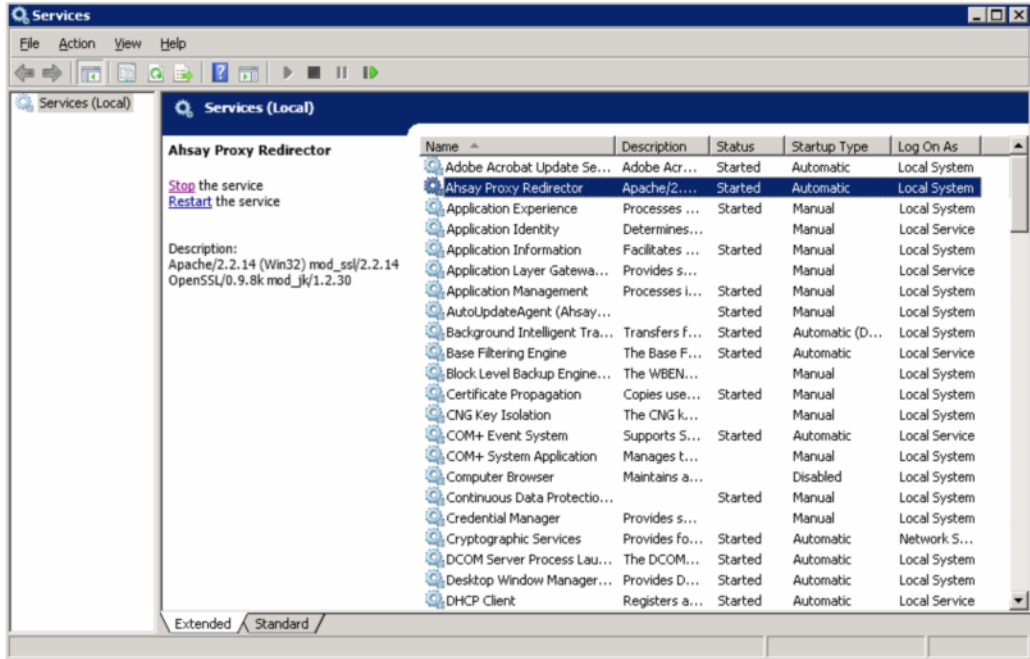
The following table describes each argument of VHOST setting in more detail:

Key	Description
Hostname	This is the host name registered with your ISP for the AhsayCBS instance.
IP address	This is the IP address used for the hosting. It is the IP address bind to NIC.
Admin email	Email contact of your administrator.
AhsayCBS port number	This is the AhsayCBS connector port defined in step 9.
Path to AhsayCBS webapps folder	This is the path to your AhsayCBS webapps folder. For example, <b>D:\Applications\CBS1\webapps</b>
Wild card public key	This is a wild card public key file. For example, <b>conf/ wildcard.NOT_SECURE.com.crt.signed-by-ahsayca</b>



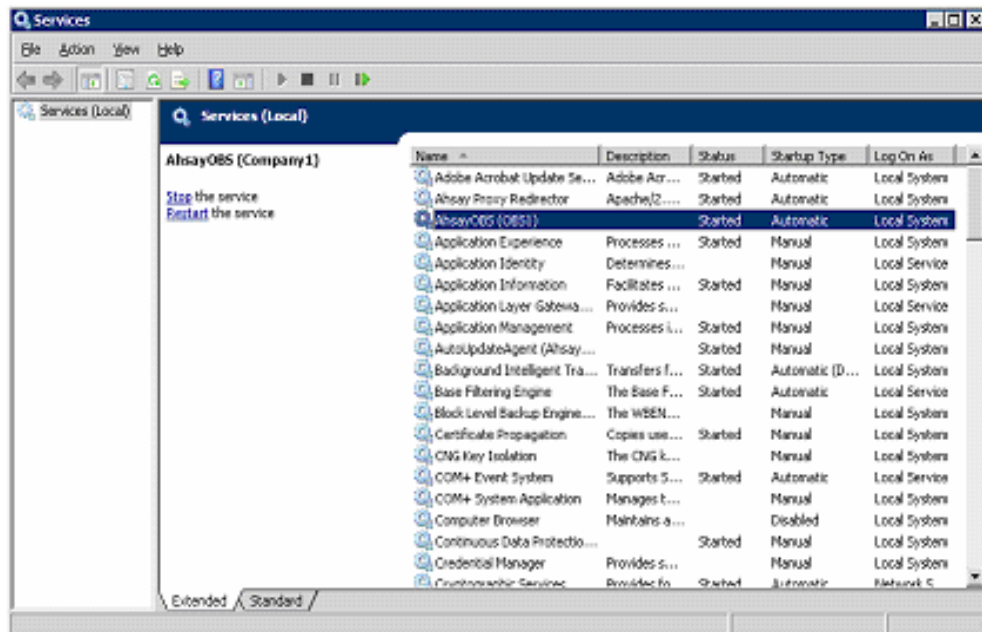
Wild card private key	This is a wild card private key file. For example, <b>conf/wildcard.NOT_SECURE.com.key.signed-by-ahsayca2</b>
CA root cert	The CA root cert file. For example, <b>conf/ca.crt</b>

- Restart **Ahsay Proxy Redirector** service in **Control Panel > Administrative Tools > Services**.



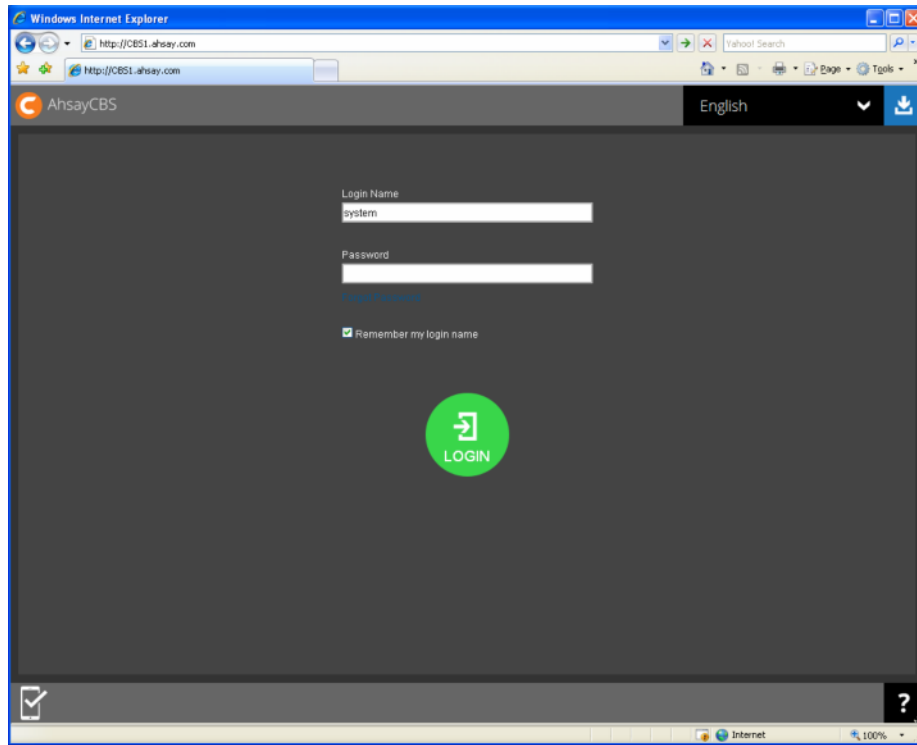
- When your ISP notifies you that the domain name **CBS1.ahsay.com** is ready, you can then rename the **bin\startup.bat.bak** to **startup.bat**; **shutdown.bat.bak** to **shutdown.bat**, respectively.

- Startup the AhsayCBS service, i.e., **CBS1**.

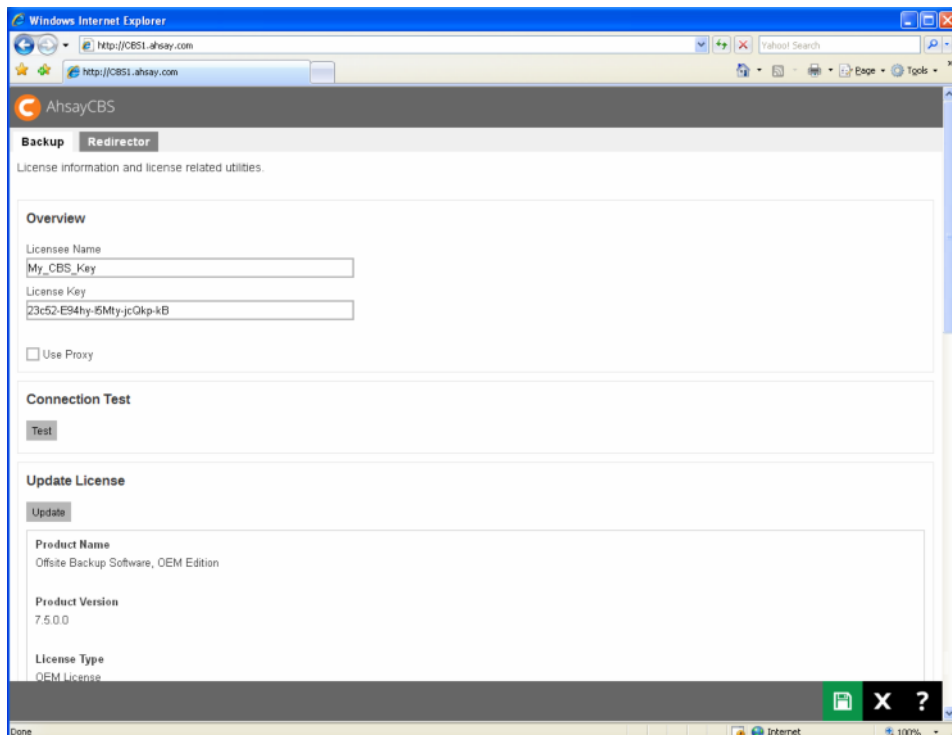


- Open the browser on your desktop and type in <http://CBS1.ahsay.com> , you should be able to see a new AhsayCBS instance. Login with the default username and password, as follows:

Username: system  
 Password: system



- Apply your license key to the **AhsayCBS management console > System Settings > License > Backup page** to activate the license.

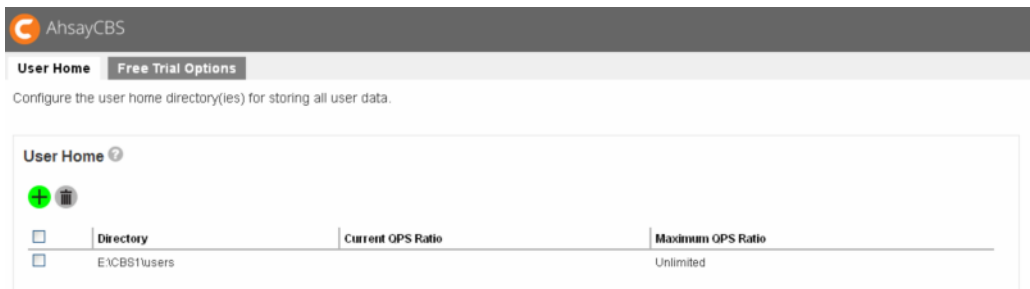


**Note**

The best way to handle the license for your resellers should be purchasing a poolable license from us. You can logon to our Ahsay License Management Portal to re-distribute the license CAL into a pool of license key for your resellers. You can manage the number of CALs easily with the Ahsay License Management Portal.

For more information about the poolable license or pool key, you can visit our [FAQ: Ahsay License Management Portal Overview \(2305\)](#) for reference.

17. If you are using a dedicated drive for the user home of the **CBS1** service, you can assign the user home in your **CBS management console > Backup / Restore > Basic > User Home**. Please remove any default user home settings on the page.



18. If you are adding a new AhsayCBS instance in the future, you can simply follow the above steps to create a new AhsayCBS instance.

**Note**

The In the future, if you define any resellers or subadmin in your AhsayCBS, please make sure to add the VHOST definition in **D:\Applications\Ahsay Proxy Redirector\conf\httpd.conf**.

The following table shows the VHOST setting in the httpd.conf configuration file:

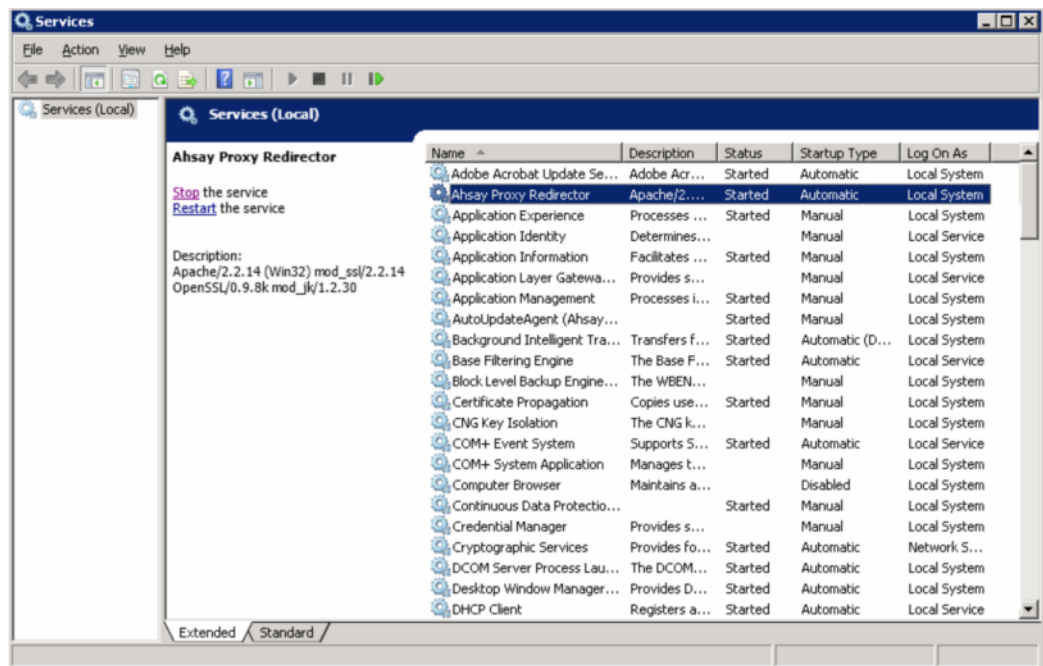
httpd.conf
<pre> : : :  Use VHOST reseller.backup.com 123.123.123.123 reseller@backup.com 60009 "D:/Applications/Reseller/webapps" conf/backup.com.crt conf/backup.com.key conf/ca1.crt </pre>

#### 4.4.5 Removing an AhsayCBS Instance

1. Open **D:\Applications\Ahsay Proxy Redirector\conf\httpd.conf** and remove the VHOST settings.

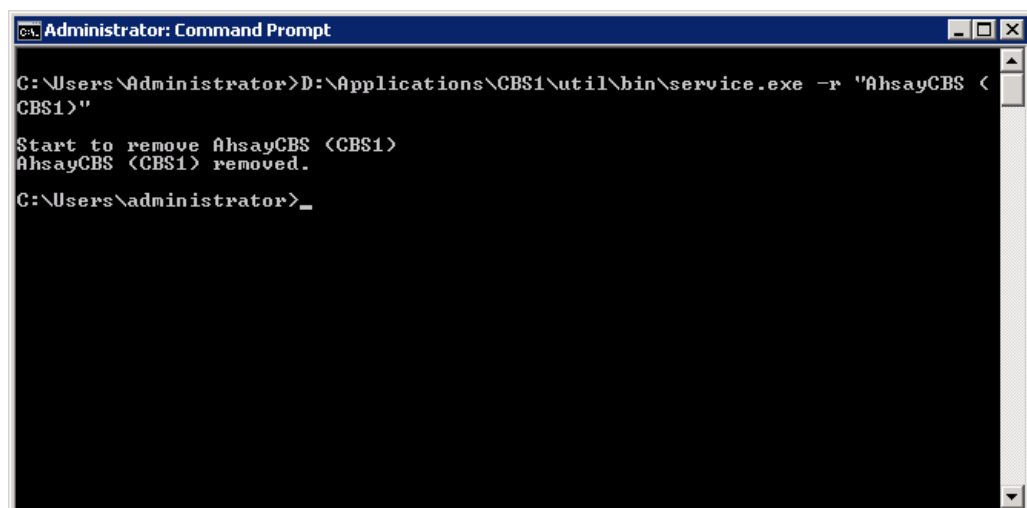
httpd.conf
<pre> # Define the top directory of AhsayPRD here Define SRVROOT "D:/Applications/Ahsay Proxy Redirector" Define ADMIN_EMAIL "bsadmin@ahsay.com" ServerRoot "\${SRVROOT}"  # Define the port to listen Listen 80 Listen 443  # Define the admin email ServerAdmin "\${ADMIN_EMAIL}"  # include basic configuration files Include conf/httpd-basic.conf  # Define VirtualHost settings for company1.ahsay.com # Need to add this connector to tomcat server.xml to use mod_jk # &lt;Connector address="127.0.0.1" port="60001" protocol="AJP/1.3" redirectPort="443" /&gt; #  #Use VHOST company1.ahsay.com 123.123.123.123 admin@ahsay.com 60001 "D:/Applications/Company1/webapps" conf/wildcard.NOT_SECURE.com.crt.signed-by-ahsayca2 conf/wildcard.NOT_SECURE.com.key.signed-by-ahsayca2 conf/ca.crt  Use VHOST cbs1.ahsay.com 123.123.123.123 admin@ahsay.com 60007 "D:/Applications/CBS1/webapps" conf/wildcard.NOT_SECURE.com.crt.signed-by-ahsayca2 conf/wildcard.NOT_SECURE.com.key.signed-by-ahsayca2 conf/ca.crt </pre>

- Restart **Ahsay Proxy Redirector** service in **Control Panel > Administrative Tools > Services**.



- Run the following command from the command prompt to remove the AhsayCBS instance from startup service.

```
D:\Applications\CBS1\util\bin\service.exe -r "AhsayCBS (CBS1)"
```



- Remove the AhsayCBS instance directory, for example, **D:\Application\CBS1\**.
- If you have created a storage in the previous steps, you need to check if you need to remove the storage, the Windows user account, or the DNS entry.

## 4.5 Uninstalling Software

If you need to uninstall the Ahsay proxy redirector, you need to first ensure that all the AhsayCBS instances are migrated to other platforms or machines properly. When you uninstall the Ahsay proxy redirector, all your AhsayCBS instances hosted on this machine will not be functioning.

If you need to uninstall the AhsayCBS instances on this machine, refer to 4.4.5 Removing an AhsayCBS instance.

To remove the Ahsay proxy redirector, do the following:

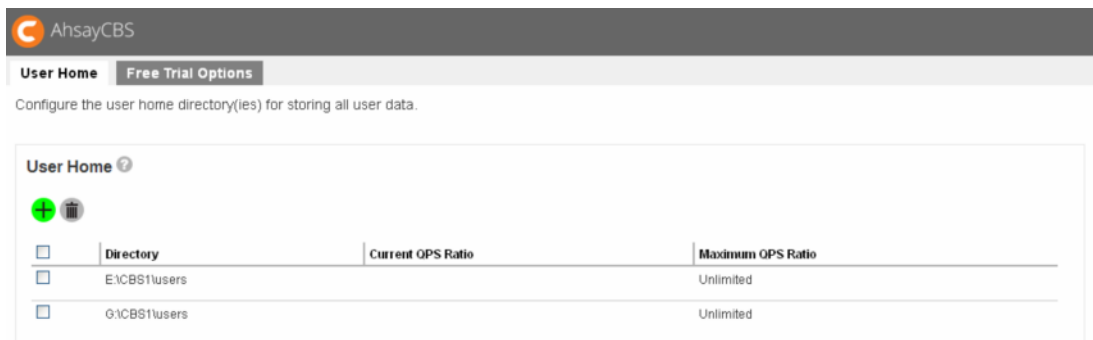
1. Run **uninstall-service.bat** inside your installation folder, for example, **D:\Applications\Ahsay Proxy Redirector**.
2. Check that the **Ahsay Proxy Redirector** service is removed from the local Windows services.
3. Remove the installation folder if necessary.

## 4.6 Managing your AhsayCBS Instance for Future Expansion

### 4.6.1 Adding New Storage for your Resellers

If new storage requires adding to your AhsayCBS instance. You can assign a pair of hard disks formatted as RAID 1 for your reseller. For the hard disk setup, refer to [4.2 Setting up the Hard Disk](#).

After you have assigned a drive letter to your newly created RAID disk (for example, **G:\** drive) and assigned the correct permission to the disk for this user, you can go to **AhsayCBS management console > Backup/Restore > Basic > User Home** to add a new user home entry such as **G:\CBS1\users**.

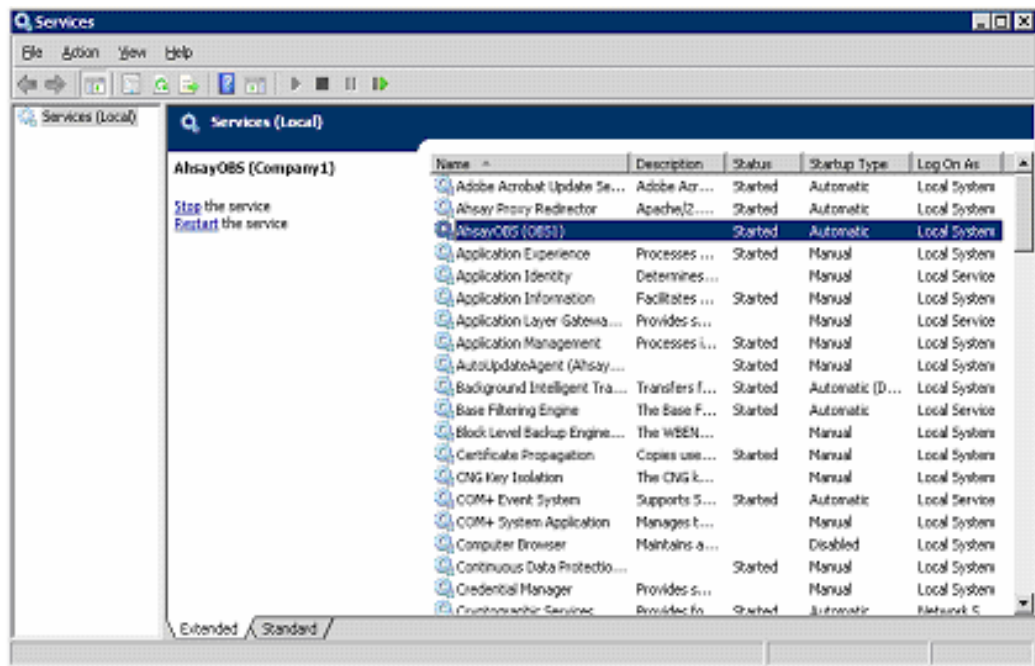


You will have 2 user homes on this AhsayCBS instance. You may relocate your users in **Backup /Restore > Users, Groups & Policies > Export users** section, or add new users to this user home.

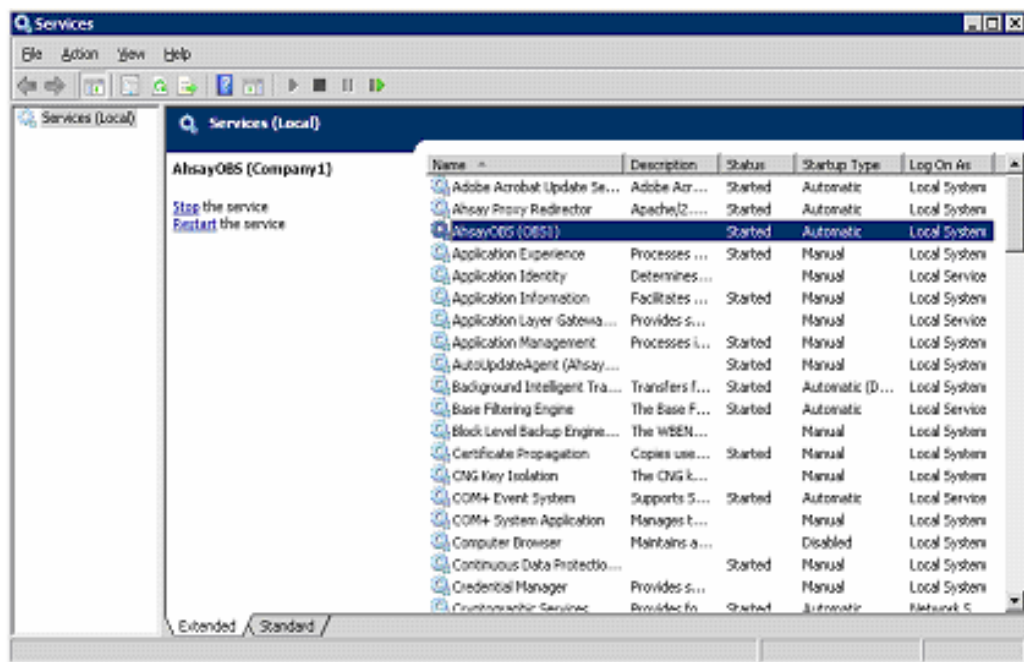
### 4.6.2 Updating your Existing AhsayCBS Instance

If you need to update your existing AhsayCBS instance, you will need to have a new version of the template ready. Refer to [4.4.3 Preparing the AhsayCBS Template for your Resellers](#).

1. Stop your AhsayCBS service in **Control Panel > Administrative Tools > Services**.



2. Rename your existing folder in **D:\Applications**. For example, **CBS1** to **CBS1\_7500**.
3. Copy the new template folder to **CBS1**.
4. Copy the **conf** folder in the **CBS1\_7500** and replace the **conf** folder in **CBS1**. Unless you want to make a copy of the original configuration, you can overwrite all the **xml** files in the **conf** folder.
5. Start your AhsayCBS service in **Control Panel > Administrative Tools > Services**.



6. Run your new AhsayCBS from your browser.



## 4.7 Upgrading AhsayPRD

The following are steps for upgrading AhsayPRD from its previous version.

1. Run the **uninstall-service.bat** inside your installation folder. For example, **D:\Applications\Ahsay Proxy Redirector**.
2. Rename the folder **D:\Applications\Ahsay Proxy Redirector** to, for example, **D:\Applications\Ahsay Proxy Redirector 1030**. The naming method is based on the version number of your previous AhsayPRD.
3. Download the Ahsay Proxy Redirector from [here](#).
4. Unzip the Ahsay Proxy Redirector and put it in **D:\Applications**.
5. Modify the **httpd.conf** file in **D:\Applications\Ahsay Proxy Redirector\conf**.

httpd.conf
<pre># Define the top directory of AhsayPRD here Define SRVROOT "D:/Applications/Ahsay Proxy Redirector" Define ADMIN_EMAIL "bsadmin@ahsay.com" ServerRoot "\${SRVROOT}"  # Define the port to listen Listen 80 Listen 443  # Define the admin email ServerAdmin "\${ADMIN_EMAIL}"  # include basic configuration files Include conf/httpd-basic.conf  # Define VirtualHost settings for company1.ahsay.com # Need to add this connector to tomcat server.xml to use mod_jk # &lt;Connector address="127.0.0.1" port="60001" protocol="AJP/1.3" redirectPort="443" /&gt; #  #Use VHOST company1.ahsay.com 123.123.123.123 admin@ahsay.com 60001 "D:/Applications/Company1/webapps" conf/wildcard.NOT_SECURE.com.crt.signed-by-ahsayca2 conf/wildcard.NOT_SECURE.com.key.signed-by-ahsayca2 conf/ca.crt</pre>

6. Modify the variables, **SRVROOT** and **ADMIN\_EMAIL**, according to your environment settings.

### Note

The server root **SRVROOT** refers to the path of the Ahsay Proxy Redirector folder.

The **ADMIN\_EMAIL** refers to the email address of your administrator.

7. Open the **httpd.conf** file in **D:\Applications\Ahsay Proxy Redirector 1030\conf\httpd.conf** and locate the **VHOST** definitions.

httpd.conf in the backup folder
<pre> : : : Use VHOST cbs1.ahsay.com 123.123.123.123 admin@ahsay.com 60007 "D:/Applications/CBS1/webapps" conf/wildcard.NOT_SECURE.com.crt.signed-by-ahsayca2 conf/wildcard.NOT_SECURE.com.key.signed-by-ahsayca2 conf/ca.crt 2048000  Use VHOST cbs2.ahsay.com 123.123.123.123 admin@ahsay.com 60009 "D:/Applications/CBS2/webapps" conf/wildcard.NOT_SECURE.com.crt.signed-by-ahsayca2 conf/wildcard.NOT_SECURE.com.key.signed-by-ahsayca2 conf/ca.crt 2048000  Use VHOST cbs3.ahsay.com 123.123.123.123 admin@ahsay.com 60011 "D:/Applications/CBS3/webapps" conf/wildcard.NOT_SECURE.com.crt.signed-by-ahsayca2 conf/wildcard.NOT_SECURE.com.key.signed-by-ahsayca2 conf/ca.crt 2048000 </pre>

8. Copy the **VHOST** settings in the previous **httpd.conf**, and paste it to the **httpd.conf** file in the new installation.

httpd.conf
<pre> # Define the top directory of AhsayPRD here Define SRVROOT "D:/Applications/Ahsay Proxy Redirector" Define ADMIN_EMAIL "bsadmin@ahsay.com" ServerRoot "\${SRVROOT}"  # Define the port to listen Listen 80 Listen 443  # Define the admin email ServerAdmin "\${ADMIN_EMAIL}"  # include basic configuration files Include conf/httpd-basic.conf  # Define VirtualHost settings for company1.ahsay.com # Need to add this connector to tomcat server.xml to use mod_jk # &lt;Connector address="127.0.0.1" port="60001" protocol="AJP/1.3" redirectPort="443" /&gt; #  #Use VHOST company1.ahsay.com 123.123.123.123 admin@ahsay.com 60001 "D:/Applications/Company1/webapps" conf/wildcard.NOT_SECURE.com.crt.signed-by-ahsayca2 conf/wildcard.NOT_SECURE.com.key.signed-by-ahsayca2 conf/ca.crt </pre>

```

Use VHOST cbs1.ahsay.com 123.123.123.123 admin@ahsay.com 60007
"D:/Applications/CBS1/webapps"
conf/wildcard.NOT_SECURE.com.crt.signed-by-ahsayca2
conf/wildcard.NOT_SECURE.com.key.signed-by-ahsayca2 conf/ca.crt
2048000

Use VHOST cbs2.ahsay.com 123.123.123.123 admin@ahsay.com 60009
"D:/Applications/CBS2/webapps"
conf/wildcard.NOT_SECURE.com.crt.signed-by-ahsayca2
conf/wildcard.NOT_SECURE.com.key.signed-by-ahsayca2 conf/ca.crt
2048000

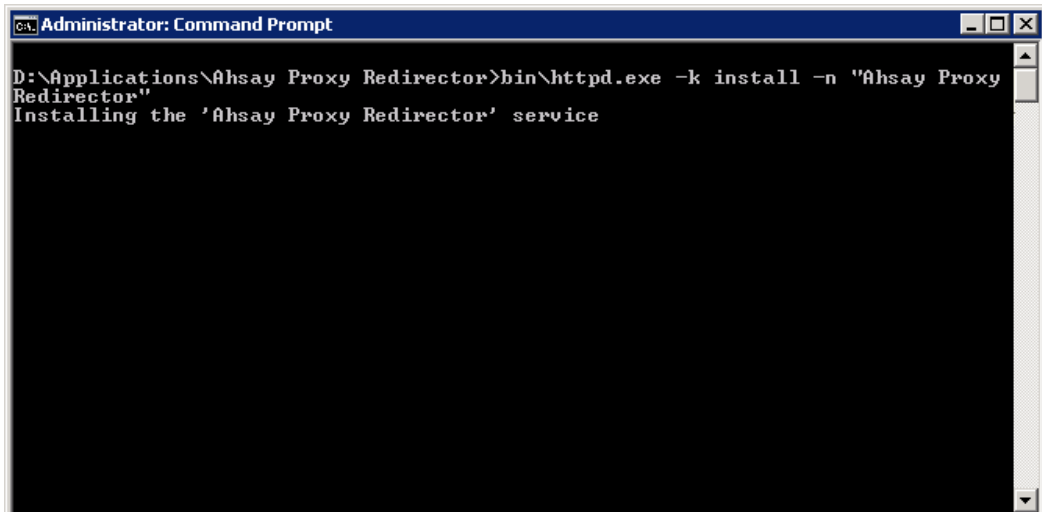
Use VHOST cbs3.ahsay.com 123.123.123.123 admin@ahsay.com 60011
"D:/Applications/CBS3/webapps"
conf/wildcard.NOT_SECURE.com.crt.signed-by-ahsayca2
conf/wildcard.NOT_SECURE.com.key.signed-by-ahsayca2 conf/ca.crt
2048000

```

9. If there are any bandwidth definitions in the **VHOST**, please remove them as they are no longer available in the latest release.

<b>httpd.conf</b>
<pre> : : : Use VHOST cbs1.ahsay.com 123.123.123.123 admin@ahsay.com 60007 "D:/Applications/CBS1/webapps" conf/wildcard.NOT_SECURE.com.crt.signed-by-ahsayca2 conf/wildcard.NOT_SECURE.com.key.signed-by-ahsayca2 conf/ca.crt 2048000  Use VHOST cbs2.ahsay.com 123.123.123.123 admin@ahsay.com 60009 "D:/Applications/CBS2/webapps" conf/wildcard.NOT_SECURE.com.crt.signed-by-ahsayca2 conf/wildcard.NOT_SECURE.com.key.signed-by-ahsayca2 conf/ca.crt 2048000  Use VHOST cbs3.ahsay.com 123.123.123.123 admin@ahsay.com 60011 "D:/Applications/CBS3/webapps" conf/wildcard.NOT_SECURE.com.crt.signed-by-ahsayca2 conf/wildcard.NOT_SECURE.com.key.signed-by-ahsayca2 conf/ca.crt 2048000 </pre>

10. Save the **httpd.conf** file.
11. Copy all the private keys, public keys and the CA certificate files from the old AhsayPRD folder to the new AhsayPRD folder.
12. Run the install-service.bat inside **D:\Applications\Ahsay Proxy Redirector** folder.

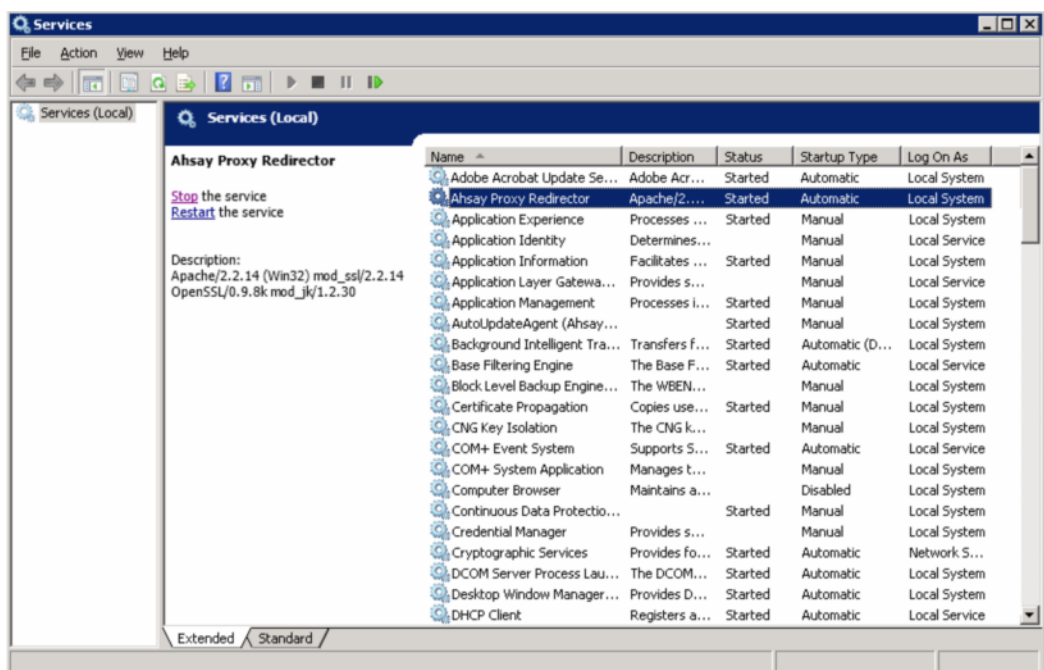


```

Administrator: Command Prompt
D:\Applications\Ahsay Proxy Redirector>bin\httpd.exe -k install -n "Ahsay Proxy Redirector"
Installing the 'Ahsay Proxy Redirector' service

```

13. Check the installed service.



14. Check all your previous backup server instances on your browser with both **http** and **https** connection.
15. Check all the client connections to the backup server instances with both **http** and **https** connection.

## 4.8 Update existing AhsayOBS v6 instance to AhsayCBS v7 instance

To upgrade your existing v6 instances to v7, make sure you read through chapter 2 and 3 in the [AhsayCBS v7 upgrade guide](#), prepare the license, API changes, user storage rebuild and CRC check, and the AhsayCBS compatibility. If you need to update your existing AhsayOBS v6 instance to AhsayCBS v7, you will need to have a new version of template ready. Please refer to [chapter 4.4.3](#) to prepare a new template of AhsayCBS v7 and update your AhsayPRD to the latest version according to the information in [previous chapter](#).

### Limitation

The bandwidth setting is not available in the latest version of AhsayPRD.

### Assumption

In the following example, we are going to upgrade the reseller called "MyReseller" from their v6 instance to v7.

### Steps

In the following example, we are going to upgrade the reseller called "MyReseller" from their v6 instance to v7.

1. Run the following command from the command prompt to remove the previous v6 instance from startup service.

```
D:\Applications\MyReseller\bin\Aobservice -r "AhsayOBS
(MyReseller)"
```

2. Rename the v6 instance directory to for example **D:\Applications\MyReseller\_62700**. The naming is based on the version of the v6 instance.
3. Make a copy of **D:\Applications\Template** as **D:\Applications\MyReseller**, you are suggested to apply a full folder permission of **D:\Applications\MyReseller**. The permission settings should be the same as your previous folder settings which is now named as **MyReseller\_62700** in previous step.
4. Run the following command from the command prompt to install the AhsayCBS service as a startup service for your reseller.

```
D:\Applications\MyReseller\util\bin\service -I "AhsayCBS
(MyReseller)" "AhsayCBS (MyReseller)"
"D:\Applications\MyReseller\bin\cbssvcX64.exe" "AhsayCBS
(MyReseller)"
```

After you installed the AhsayCBS service, the service is started by default, you can stop the service in **Control Panel > Administrative Tools > Services**.

5. Right click the properties of the created service. Click the **Log On** tab, change the logon of the service to **This account**, then click **Browse**.

Change the log on to the original owner, for example, **MyReseller**.

**Note**

You need to apply a password after you click **OK**.

- Open **D:\Applications\MyReseller\bin\startup.bat.bak** and change the **TC\_HOME** environment variable to **E:\MyReseller** where **E:\** is the drive letter of drive to be used exclusively for this AhsayCBS instance.

**startup.bat.bak**

```
@echo off

SET "TC_HOME=E:\MyReseller "

@REM ***** Please leave JAVA_HOME empty as it is
SET "JAVA_HOME="

@REM ***** Please set the correct values for
CBS_HOME,

:
:
:
```

- Open **D:\Applications\CBS1\bin\shutdown.bat.bak** and change the **TC\_HOME** as in the previous step.

**shutdown.bat.bak**

```
@echo off

SET "TC_HOME=E:\MyReseller "

@REM ***** Please leave JAVA_HOME empty as it is
SET JAVA_HOME=

@REM ***** Please set the correct values for
CBS_HOME,

:
:
:
```

- Open **D:\Applications\MyReseller\confserver.xml** and change the Tomcat management interface port to the original defined TCP port, for example, **60008** and the AhsayCBS server port to the original TCP port, for example, **60007** which is used for this AhsayCBS instance exclusively.

**server.xml**

```
<Server port="60008" shutdown="SHUTDOWN">

<Listener
className="org.apache.catalina.core.AprLifecycleListener"
```

```

SSLEngine="on" />

<Listener
className="org.apache.catalina.core.JasperListener" />

<Listener
className="org.apache.catalina.core.JreMemoryLeakPrevention
Listener" />

<Listener
className="org.apache.catalina.mbeans.GlobalResourcesLifecy
cleListener" />

<Listener
className="org.apache.catalina.core.ThreadLocalLeakPreventi
onListener" />

<Service name="Catalina">

<Connector address="0.0.0.0"
port="60007"
protocol="AJP/1.3"
maxHttpHeaderSize="8192"
socketBuffer="16384"
maxThreads="2000"
minSpareThreads="50"
maxKeepAliveRequests="1000"
enableLookups="false"
redirectPort="443"
acceptCount="200"
connectionTimeout="120000"
disableUploadTimeout="true"
URIEncoding="utf-8"/>

:
:
:

```

9. Open **D:\Applications\MyReseller\conf\autoDiscovery.xml** and change the Auto Discovery server port to the original TCP port, for example, **10011** and the client port to the original TCP port, for example, **10012**.

autoDiscovery.xml
<pre> &lt;Root&gt;&lt;AutoDiscovery server-port="10011" client- port="10012" /&gt;&lt;/Root&gt; </pre>

10. Open **D:\Applications\Ahsay Proxy Redirector\conf\httpd.conf** and check on the **VHOST** settings.

httpd.conf
<pre> : : : Use VHOST myreseller.ahsay.com 123.123.123.123 reseller@ahsay.com 60007 </pre>

```
"D:/Applications/MyReseller/webapps"
conf/wildcard.NOT_SECURE.com.crt.signed-by-ahsayca2
conf/wildcard.NOT_SECURE.com.key.signed-by-ahsayca2
conf/ca.crt 2048000
```

Make sure the bandwidth setting is removed. This should be handled when you upgrade the AhsayPRD.

11. Restart **Ahsay Proxy Redirector** service in **Control Panel > Administrative Tools > Services**.
12. Rename the **bin\startup.bat.bak** to **startup.bat**; **shutdown.bat.bak** to **shutdown.bat**, respectively.
13. Migrate the v6 instance to the new AhsayCBS by the migrate script, **Migratev6.bat** in **D:\Applications\MyReseller\bin**.

```
MigrateV6.bat <CBS_HOME> <RDR_HOME> <OBS_HOME> <obsoleted
variable> <RPS_HOME>
```

Where:

- <CBS\_HOME> is the directory of the AhsayCBS.
- <RDR\_HOME> is the directory of the AhsayRDR.
- <OBS\_HOME> is the directory of the AhsayOBS.
- <Obsoleted variable> is obsoleted, please enter a null value "".
- <RPS\_HOME>, is the directory of the AhsayRPS.

For example, we should run the following command for migrating the configuration and the user backup files of AhsayOBS to AhsayCBS, where <RDR\_HOME>, <Obsoleted variable> and <RPS\_HOME> are null.

```
cd D:\Applications\MyReseller\bin

MigrateV6.bat "D:\Applications\MyReseller" ""
"D:\Applications\MyReseller_62700" "" ""
```

14. Startup the **AhsayCBS (MyReseller)** service.
15. The service is now starting up, it should take a while when the migration starts to migrate user's profile and user group policies to the AhsayCBS. Since it is required to scan through each user profile to extract these information, more users could result in longer the migration process.
16. You may open the **E:\MyReseller\logs\obs\_context\_YYYY-MM-DD.log** to check if there are any errors during the startup, **YYYY-MM-DD** refers to the upgrade/migration date.
17. Logon to the AhsayCBS web management console to check on your upgrade.



18. Here is a list of suggested items to check after you started up your AhsayCBS.

- Check SMTP settings in **AhsayCBS web console > System Settings > Basic > Email**.
- Check all users' profile, backup and policy group settings in **AhsayCBS web console > Backup/Restore > Users, Groups & Policies**.
- Check https connection to the AhsayCBS on different browsers (IE, Firefox and Chrome).
- Connect AhsayOBM/AhsayACB (v6) to AhsayCBS with both **http** and **https** connection.
- You can also check on the differences between v6 and v7 in our appendix section, so that you can be more familiar with the new version.

### Note

In the future, if you define any resellers or subadmin in your AhsayCBS, please make sure to add the VHOST definition in **D:\Applications\Ahsay Proxy Redirector\conf\httpd.conf**.

### httpd.conf

```

:
:
:

Use VHOST reseller.backup.com 123.123.123.123
reseller@backup.com 60009
"D:/Applications/Reseller/webapps" conf/backup.com.crt
conf/backup.com.key conf/ca1.crt

```

## 5 Technical Assistance

To contact Ahsay support representatives for technical assistance, visit the following website:

<https://www.ahsay.com/jsp/en/contact/kbQuestion.jsp>

Also use the Ahsay Knowledge Base for resource such as Hardware Compatibility List, Software Compatibility List, and other product information:

<https://forum.ahsay.com>

## 6 Documentation

Documentations for all Ahsay products are available at:

[https://www.ahsay.com/jsp/en/home/index.jsp?pageContentKey=ahsay\\_downloads\\_documentation\\_guides](https://www.ahsay.com/jsp/en/home/index.jsp?pageContentKey=ahsay_downloads_documentation_guides)

You can send us suggestions for improvements or report on issues in the documentation, by contacting us at:

https: [www.ahsay.com/jsp/en/contact/kbQuestion.jsp](https://www.ahsay.com/jsp/en/contact/kbQuestion.jsp)

Please specify the specific document title as well as the change required/suggestion when contacting us.