

# **Best Practice for Upgrade from AhsayOBS to AhsayCBS and Data Migration Conversion**

Ahsay Systems Corporation Limited

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# 1 System Requirements

Before you upgrade to the AhsayCBS, please pay attention to the following system requirements and make sure that the requirements are met before getting started.

The AhsayCBS should be deployed on a machine supporting 64-bit multiple CPU and multiple cores environment. A 64-bit operating system will allow AhsayCBS to run on a 64-bit Java OpenJDK 1.8 platform, to meet the need of existing customers and to support new AhsayCBS server features.

Please refer to the following articles for the system requirements of AhsayCBS.

[FAQ: Ahsay Software Compatibility List \(SCL\) for version 9.1 or above](#)

[FAQ: Ahsay Hardware Requirement List \(HRL\) for version 9.1 or above](#)

“EOS reached” labeled in the SCL for any specific platform or application, is handled under best-effort support only; as they are no longer supported by the vendor.

**It's recommended to install AhsayCBS on server grade O/S and hardware platform. For evaluation purposes, the installation on Windows 10 or Windows 11 platforms would be fine.**

## AhsayCBS Compatibility

**AhsayCBS is compatible with:**

- the Replication from Backup Server running AhsayOBS 6.29.0.0 or above
- AhsayOBM / AhsayACB v6.29.0.0 or above\*\*

\*\*Older releases of AhsayOBM / AhsayACB clients (example v5.5.8.0, v6.9.4.0, v6.21.2.0, v6.23.2.0, etc) are EOL and are no longer supported and may not guarantee to be fully compatible with AhsayCBS.

\*\*The Auto Upgrade feature is only supported for AhsayOBM / AhsayACB v6.29.0.0 or above. While earlier versions may still operate with AUA, it would be under general effort support.

### Important

Before upgrading AhsayOBM or AhsayACB clients, it is recommended to check on the supported OS and applications to ensure that no backup sets would be affected by the upgrade.

## Ahsay v9 Dependencies

- GNU GLIBC 2.14 Library is required for all Linux and FreeBSD platforms.
- OpenJDK 8 (manual installation required for FreeBSD)

## 2 Overview of AhsayOBS to AhsayCBS Upgrade and Backup Data Migration

The following is an overview of 14 Key Steps for an in-place upgrade from AhsayOBS v6.29.0.x to AhsayCBS, and backup set data migration (the conversion of backup set data from v6 format to AhsayCBS block format):

### Step 1 - Before You Upgrade and Upgrade Sequence

You should review the AhsayCBS Release Notes, AhsayCBS HRL, and AhsayCBS SCL to ensure compatibility with your environment.

Your server and clients should be running v6.29.0.x, as this was the final EOL sunset version.

Your server should be in good health, and without disk issues. If you are experiencing product issues and have not yet consulted with Ahsay Technical Support; it would be advised that you have your issue resolved prior to upgrade.

Prior to upgrading, we recommend you temporarily disable any Antivirus, scanning checks, or system updates. This will ensure no conflicts that could cause the upgrade to fail.

#### Upgrade Sequence

- 1) AhsayRDR (if applicable)
- 2) AhsayOBS Backup Server
- 3) AhsayOBM / AhsayACB
- 4) AhsayRPS Replication Server (if applicable)

#### API Test

As new REST APIs (JSON format) are introduced in the AhsayCBS, if you have written API in previous version using legacy XML format, it is highly recommended you retest and modify your API calls on AhsayCBS in your testing environment first.

Refer to [Details - Step 1](#) for more details.

### Step 2 - Software License Check

Confirm that your software license has sufficient client access licenses (CAL), replication modules, redirection module, and the AhsayCBS licensee fee and rebranding module (if necessary) is purchased. Also a valid support maintenance is needed to upgrade.

The licensing model has changed starting in version 7. Upgrade from AhsayOBS v6 to AhsayCBS v9 requires an AhsayCBS module, plus client access licenses and replication licenses which are priced on a per device basis.

Refer to [Details - Step 2](#) for more details.

### Step 3 - Backup your AhsayOBS and Users Configuration

Backup your AhsayOBS server configuration before the upgrade. The configuration backup will provide you with a fallback plan, if the upgrade does not go according to the plan.

Refer to [Details - Step 3](#) for more details.



## Step 4 - User Profile Check

Check on the user profile of all backup accounts.

Confirm that the user profiles for all backup accounts are valid, to ensure that all accounts will be properly migrated during the upgrade process.

User Home path should only contain folders (and files) of valid users. Any erroneous folders should be removed prior to upgrade of the Backup Server.

Refer to [Details - Step 4](#) for more details.

## Step 5 - Backup Set Index Check

Ensure that all backup set indexes are valid on your AhsayOBS v6 backup server to avoid post-v9 upgrade index related backup/restore and data migration issues (the conversion of backup set data from v6 format to AhsayCBS block format).

Refer to [Details – Step 5](#) for more details.

### Note

From v7.15.0.0 onwards this step does not have to be performed on AhsayOBS v6 for all backup sets prior to upgrade, as AhsayCBS will automatically perform a rebuild of the indexes on each v6 backup set before it proceeds with the migration of v6 indexes files to AhsayCBS block format.

However, if you have previously encountered corrupted index or data issues with specific backup sets, you may want to rule this out by running a Single User Rebuild with the “Verify Checksum” option to “enable”; to perform an additional data integrity check. This should be done while still in v6.

## Step 6 - OS and Application Support Check

Review the new Software Compatibility List for AhsayCBS, under Section 1.

The Software Compatibility List (SCL) has been updated for AhsayCBS, software platform such as Exchange 2003 are no longer supported, and operating system such as Windows XP, Server 2003, are supported on best effort basis (vendor already classified them as End-Of-Support). Review the list to ensure that all changes are taken into consideration (e.g. you may need to inform users that their OS / software platforms are no longer supported, that they will need to remain on version 6, or to upgrade their OS / software to stay up-to-date). Mix-compatibility devices should avoid upgrade.

Refer to [Details - Step 6](#) for more details.



## Step 7 - Build Your AhsayCBS Installation File (If applicable)

If your AhsayOBS is customized with your branding, with AhsayCBS, you no longer use the Ahsay Customization Portal (ACP) to create your branding profile and do a build.

The branding process of Ahsay software has been enhanced in AhsayCBS. Customized CBS (server application) and OBM / ACB (client application) installation files are now built via the AhsayCBS console, instead of the Ahsay v6 Customization Portal (*decommissioned 2018-12-31*).

Refer to [Details - Step 7](#) for more details.

## Step 8 - Upgrade Concept

Read details for an overview of the upgrade process, configuration and settings migration, and user profile settings.

Refer to [Details - Step 8](#) for more details.

## Step 9 - Upgrade AhsayOBS to AhsayCBS

After performing all the checking above, you are ready to upgrade your production AhsayOBS v6.29 server to AhsayCBS.

The upgrade process will migrate server and user settings automatically. However, the process will not convert any existing backup data stored on the backup server, to AhsayCBS block data format (this backupset data migration will be covered in a later step in this overview).

Refer to [Details - Step 9](#) for more details.

### Note

In addition to HTTP and HTTPS ports controlled by “Ahsay Cloud Backup Suite” service, it also has a new service “Ahsay Cloud Backup Suite NFS Service” that is installed upon installation or upgrade of AhsayCBS. Make sure that the following ports are opened:

- 111 - Port mapper
- 1058 - Port required for Run Direct
- 2049 - Port for the NFS service

### Note for Upgrade on Linux and FreeBSD

In order to support AhsayCBS v9.1 or later, your system must run GNU GLIBC v2.14 or later. To check your version, run “*ldd -version*” from shell.

## Step 10 - Post Upgrade

Tasks to perform after you have upgraded to AhsayCBS.

Refer to [Details - Step 10](#) for more details.

## Step 11 - Temporarily Disable the Auto Update (AUA) and Data Migration Settings

Temporarily disable the Auto Update (AUA) and Data Migration settings on the AhsayCBS server.

It is important that the AhsayCBS application is running properly with minimal error, before upgrading your clients to version 9, or migrating data to the new AhsayCBS block data format.

Disabling will reduce complex troubleshooting in the event an issue is found.

Refer to [Details - Step 11](#) for more details.

## Step 12 - Upgrade AhsayOBM / AhsayACB with Auto Update (AUA) in Stages

Enable the Auto Update (AUA) option for backup accounts progressively.

Prioritize and divide all backup accounts into small batches. Phase the upgrade process by enabling Auto Update for batch of users, one batch at a time. Review the process (e.g. check on the client version, check for backup issue after the upgrade), then continue with the next batch of users, until all clients are upgraded.

Refer to [Details - Step 12](#) for more details.

## Step 13 - Storage and Version Requirement Check for Data Migration

Starting with AhsayCBS v7, we introduced a new data block format (16MB/32MB). And with AhsayCBS v9, the data block format is further enhanced (32MB/64MB, 8 threads). This is an improvement over the data file format from version 6 or earlier. You may read more in detail in the AhsayCBS Administrator's Guide.

The backup set data migration requires temporary disk space as it converts your v6 data into the new block format. Check on the User Home; ensure that there are sufficient disk spaces available for the data migration process to take place.

The minimum required storage is 100 GB per User Home disk volume. For each backupset, the temporary disk space requirement for that User Home volume will be 150% each backupset undergoing the conversion process. If your User Home disk is limited on space, you should perform this data migration process with a few backupsets at a time, until it is fully converted, before enabling additional backupsets.

Example:

- User Home: D:\users == 99GB free → Does not meet minimum requirements.
- User Home: E:\users == 200GB free → Backupset conversion can proceed
- User: JohnDoe, User Home: E:\users\JohnDoe, has one BackupSet: 50GB → Data Migration temp space required on E: = 75GB free

Check on the AhsayOBM / ACB client versions of all users. The data migration process is triggered when a backup job is performed; each client software must be on version 9.1+ to start the data migration process.

Refer to [Details - Step 13](#) for more details.

## **Step 14 - Data Migration for all v6 Data Backup Sets**

Once user's device has upgraded to v9 agent, backup set stored in User Home must undergo Backup Data Migration. Backup Data Migration is the conversion of backed up data in v6 data format, into the new CBS Blocks data format.

Blocks are 32MB or 64MB data stored in the backup destination, with a file extension of ".bak", which will combine several small source files during that backup job, into a data block. For source files larger than 64MB, the source file during backup will be split into blocks of 64MB each during upload to the backup destination.

Similar to the client upgrade process, prioritize and divide all backup accounts into small batches. Phase the data migration process, by enabling data migration for batch of users, one batch at a time, to minimize the I/O impact on the User Home volume.

Review the process (e.g. check on the migration process, check for backup issue after the data migration), then continue with the next batch of users, until all data are migrated.

Refer to [Details - Step 14](#) for more details.

## 3 Detailed Procedures

### Details - Step 1 - Before You Upgrade and Upgrade Sequence

Make note that you may need to return to this section after completing one upgrade sequence.

AhsayCBS has been totally re-designed from the ground upwards to provide the best cloud backup solution with changes to core functions, such as file storage system, indexing, backup set features, replication, group policy, system user, and branding.

As upgrading from AhsayOBS v6 to AhsayCBS is a major undertaking, involving migration of settings for AhsayOBS Group Policy, System user, AhsayOBM/AhsayACB, indexes, user profiles, backup set settings, and backup data migration (conversion of v6 data format to AhsayCBS v7 block data format, and again to AhsayCBS v9 deduplication block format). This guide provides an overview of how to upgrade your AhsayOBS v6 installation to AhsayCBS with steps required to ensure a smooth transition and, help you to plan and inform your customers of changes to their backups after an AhsayCBS upgrade.

#### Note

The major change in AhsayCBS is that AhsayOBS v6, AhsayRPS v6 and AhsayRDR v6; are now modules within AhsayCBS. Each previous version 6 element, are now contained within AhsayCBS, therefore requires a valid licensed "AhsayCBS module license".

Further information on the differences between v6 and AhsayCBS can be found in our [website](#).

You should review the [Release Notes](#), [FAQ: Ahsay Software Compatibility List \(SCL\) for version 9.1](#), and [FAQ: Ahsay Hardware Requirement List \(HRL\) for version 9.1](#) to ensure compatibility with your environment, as there have been many changes to the requirements of the newer version.

Your server should be in good health, and without disk issues. If you are experiencing product issues and have not yet consulted with Ahsay Technical Support; it would be advised that you have your issue resolved prior to upgrade.

Prior to upgrading, we recommend you temporarily disable any Antivirus, scanning checks, or system updates. This will ensure no conflicts that could cause the upgrade to fail.

#### Admin of AhsayUBS?

**For AhsayUBS environment, you will find your upgrade procedure in the AhsayUBS Administrator's Guide.**

The upgrade of AhsayCBS on AhsayUBS is to be performed as a pair, upgraded by upgrading the AhsayUBS firmware. You should not attempt to upgrade AhsayOBS or AhsayCBS separately.

## Upgrade Sequence

Before upgrading your AhsayOBS/AhsayRPS/AhsayRDR, please consider the upgrade sequence to avoid possible issues. The following details provide the recommended sequences for AhsayCBS upgrade.

### AhsayRDR (if applicable)

Upgrade of AhsayRDR has a higher precedence than the AhsayOBS and it is recommended to upgrade each AhsayOBS one by one after running AhsayCBS (Redirector Server) for at least a week to ensure the whole production environment is stable.

### AhsayOBS Backup Server

The AhsayOBS server must be running v6.29 before upgrading to AhsayCBS, this is to avoid any outstanding issues from becoming a problem after you upgrade to v9 and to ensure any devices incompatible with v9 are running the latest v6.29 client. You can still proceed with the upgrade if your OBS is lower version, but we do not recommend this approach. **The Backup Server must be upgraded to AhsayCBS before your clients are upgraded.** As AhsayCBS v9 (Backup Server) is backward compatible with v6 and will be able to process both backup clients from v6 and v7/v8/v9.

It is advised to disable any v6 replication (if enabled) before upgrading your AhsayOBS system, to AhsayCBS.

You should document any preexisting Backup Error (i.e. for the past seven days), so that you can exclude them from your post-upgrade checks (check for new errors post-upgrade).

### AhsayOBM / AhsayACB

Before enabling the Auto Update or manual software update for your users, it is strongly recommended to allow your AhsayCBS system to run for a period of time to resolve any new issues first, before upgrading the clients to the latest version.

With Auto Update, it is recommended to perform the upgrade of the clients in small batches e.g.: 5-10 users, to avoid network congestion and to allow you to monitor for Destination disk usages.

Clients running the following two types of backup set must run a manual upgrade of AhsayOBM on each nodes rather than upgrading with AUA. Upgrading with AUA may result in some nodes failing to upgrade in time for the next backup and will cause backup failure.

- Hyper-V 2008 R2 Cluster Backup Set
- Exchange 2013 DAG Backup Set
  - It is highly recommended to manually uninstall the AhsayOBM first and perform a fresh AhsayOBM v7+ installation for the Exchange DAG nodes.
- **Supported Clients running on Linux and FreeBSD must have installed GLIBC v2.14.**

Consult with the [Ahsay Software Compatibility List \(SCL\)](#) to ensure your device is compliant.

AhsayACB v9 is **not** supported running on server platform (ie Windows Server 2016).

## AhsayRPS Replication Server (if applicable)

It is recommended that AhsayRPS is upgraded last to provide a backup of your v6 system's configuration and data. The AhsayRPS v6 receiver(s) should be disabled before AhsayOBS upgrade is carried out.

Please consider only upgrading your AhsayRPS system after AhsayCBS (previously AhsayOBS) has been running stable for a period of time.

Given that AhsayCBS will initiate a Backup Set data conversion to the new Blocks format, it is suggested you retain a copy of the v6 data, until all users have converted to the new Blocks data format. As such, you may want to deactivate the license assigned to your Ahsay RPS, and startup a new AhsayCBS Replication Receiver host to replicate data from the AhsayCBS Backup Server to resume data protection.

### Warning

Upgrading your environment out of order can result in failure of the upgrade and may cause service interruption to your customers.

## Assumptions

**AhsayRDR and AhsayRPS is/are not hosted on the same AhsayOBS machine.**

### Notes:

1. If your AhsayRDR, AhsayOBS and AhsayRPS are still on pre-v6.27 versions, please upgrade your Ahsay products to the latest v6.29 version before upgrade to AhsayCBS.
2. If your AhsayOBS and AhsayRDR are hosted on the same machine, both AhsayOBS and AhsayRDR will be upgraded at the same time. You are required to manually add the HTTP and HTTPS connector definitions for the Redirector in the %CBS\_HOME%/conf/server.xml .

### For example:

If your Redirector was using *HTTP 8080* and *HTTPS 8443* as the connection (substitute your port numbers), you need to add 2 extra connectors by duplicating the two connector definitions (Backup Server) and change to your Redirector ports.

Your *server.xml* contains:

```
<Service name="Catalina">

    <Connector port="80" protocol="HTTP/1.1" ..... />

    <Connector port="443" SSLCipherSuite="HIG..... />
```

You will need to duplicate the existing two Connectors, then modify the ports for the Redirector connector as shown in red.

```
<Service name="Catalina">

    <Connector port="80" protocol="HTTP/1.1" ..... />

    <Connector port="443" SSLCipherSuite="HIG..... />

    <Connector port="8080" protocol="HTTP/1.1..... />

    <Connector port="8443" SSLCipherSuite="HI..... />
```

Assuming that you are using wildcard SSL certificate for both Redirector and Backup Server.

If you are using different SSL certificates, you will need to change the values in **SSLCACertificateFile**, **SSLCertificateKeyFile**, and **SSLCertificateFile** in your HTTPS connector definition so they point to the correct files.

## API Tests

As new REST APIs (JSON format) are introduced in the AhsayCBS, if you have written API in previous version using XML format or Ahsay API v1 format, please retest and modify your API calls on AhsayCBS in your testing environment first, so that it will not affect your current CRM, billing systems, etc. when new AhsayCBS is upgraded. Please download the [AhsayCBS API guide](#) from our website for reference.

## Custom Website or other non-Ahsay application

If you have customized website/database or other non-Ahsay application related files stored anywhere in the AhsayOBS installation path, you need to backup and relocate to the new installation path if necessary. The upgrade process will not handle or preserve these.

### Important

The upgrade/migration is a one-way process, it cannot be easily reverted back to v6, e.g. by running a v6 installer. If you downgrade your Backup Server to v6; recover v6 users' profiles and put configurations back to your v6 machine, then all the backup changes made by v9 will not be able to use again in v6. All historical backups are lost and you need to start over the backup again in v6.



## Details - Step 2 - Software License Check

The licensing model has changed starting with AhsayCBS v7, same model applies for AhsayCBS v9.

Additional AhsayCBS license fee is required for running AhsayCBS as a Backup Server, a Replication Server, or a Redirector; this requirement applies to both purchase and meter licenses.

Aside from additional license modules, you must also have a valid support maintenance to ensure that the new version 9 installation will not fail.

Furthermore, AhsayCBS replication module (replication CAL) is required if you are currently using AhsayRPS and would like to continue to replicate your data; this CAL is applied to your Backup Server's license key.

Important to note that, the pricing for AhsayOBM, AhsayACB clients, as well as the Replication and Redirection Module in AhsayCBS are calculated Per Device basis. If you currently have AhsayOBM user accounts that are setup for multiple devices, extra licenses will be required per device.

### Need Assistance from Ahsay Sales?

If you are uncertain about new licensing terms, you may [contact our Sales Team](#) for more information. If you need to purchase extra modules/license CALs and or CBS modules you can purchase it at the [Ahsay Shopping Centre](#), or you may [contact our Sales Team](#).

Please check on the following outlines before you upgrade your Ahsay products:

- ❶ Before upgrading the standalone AhsayRDR to AhsayCBS, please ensure that you have two keys.
  - i. A valid AhsayRDR license key, with RDR CALs assigned.
  - ii. A separate AhsayCBS Server License with an **AhsayCBS module enabled**.

In a standalone AhsayRDR setup where it is not also acting as a Backup Server, under your AhsayCBS Server License key, you will not need any CAL assignment. Only the AhsayCBS module is required on this specific key.
- ❷ Upgrade of standalone AhsayRPS system will require an additional AhsayCBS Backup Server License with AhsayCBS module enabled, you will not need any CAL assigned for this license key.
  - ❶ However, you will need Replication OBM CALs and Replication ACB CALs assigned to your Backup Server's License key, per new licensing requirements.
- ❸ Here is a summary of the license CAL required for the AhsayCBS
  - ❶ AhsayOBM (Per device to back up) – license count based on [unique backupset owner](#)
  - ❶ AhsayACB (Per device to back up) – license count based on [unique backupset owner](#)
  - ❶ AhsayCBS (Per running instance) – anytime you install, you will need to be licensed.
  - ❶ Replication Module (Per device to replicate) for AhsayOBM/AhsayACB devices
    - For most scenarios, you will need 1:1 with your device CAL.
    - For scenarios where you only offer Replication to some users but not all, your Replication Module CAL can be reduced.

• Redirection Module (Per device to redirect)

- For most scenarios, you will need 1:1 with your total device CAL usage.

You can calculate the extra client access license required into *usage.xml* report, by referring to the instruction provided in the following [FAQ: How to determine the number of client licenses required before upgrading from AhsayOBS version 6 to AhsayCBS?](#)

For your convenience you may adopt this worksheet:

Number of OBM CAL: <ObmCountV7>\_\_</ObmCountV7> (values from usage.xml)

Number of ACB CAL: <AcbCountV7>\_\_</AcbCountV7> (values from usage.xml)

Number of Backup Server: \_\_ x 1 CBS module license = \_\_\_\_

Number of Replication Receiver Server: \_\_ x 1 CBS module license = \_\_\_\_

Number of Redirector Server: \_\_ x 1 CBS module license = \_\_\_\_

Number of Replication OBM CAL: 1 x \_\_ OBM CAL = \_\_\_\_ Replication OBM CAL

Number of Replication ACB CAL: 1 x \_\_ ACB CAL = \_\_\_\_ Replication ACB CAL

Number of Redirector OBM CAL: 1 x \_\_ OBM CAL = \_\_\_\_ Redirector OBM CAL

Number of Redirector ACB CAL: 1 x \_\_ ACB CAL = \_\_\_\_ Redirector ACB CAL

Do you want to rebrand CBS? If Yes == Did you already purchase [Rebrand Option](#)? Yes/No

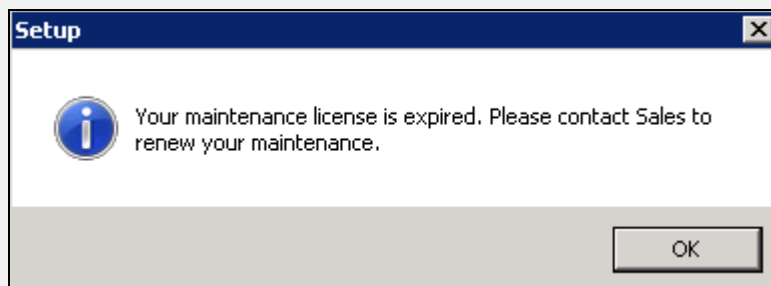
### Important

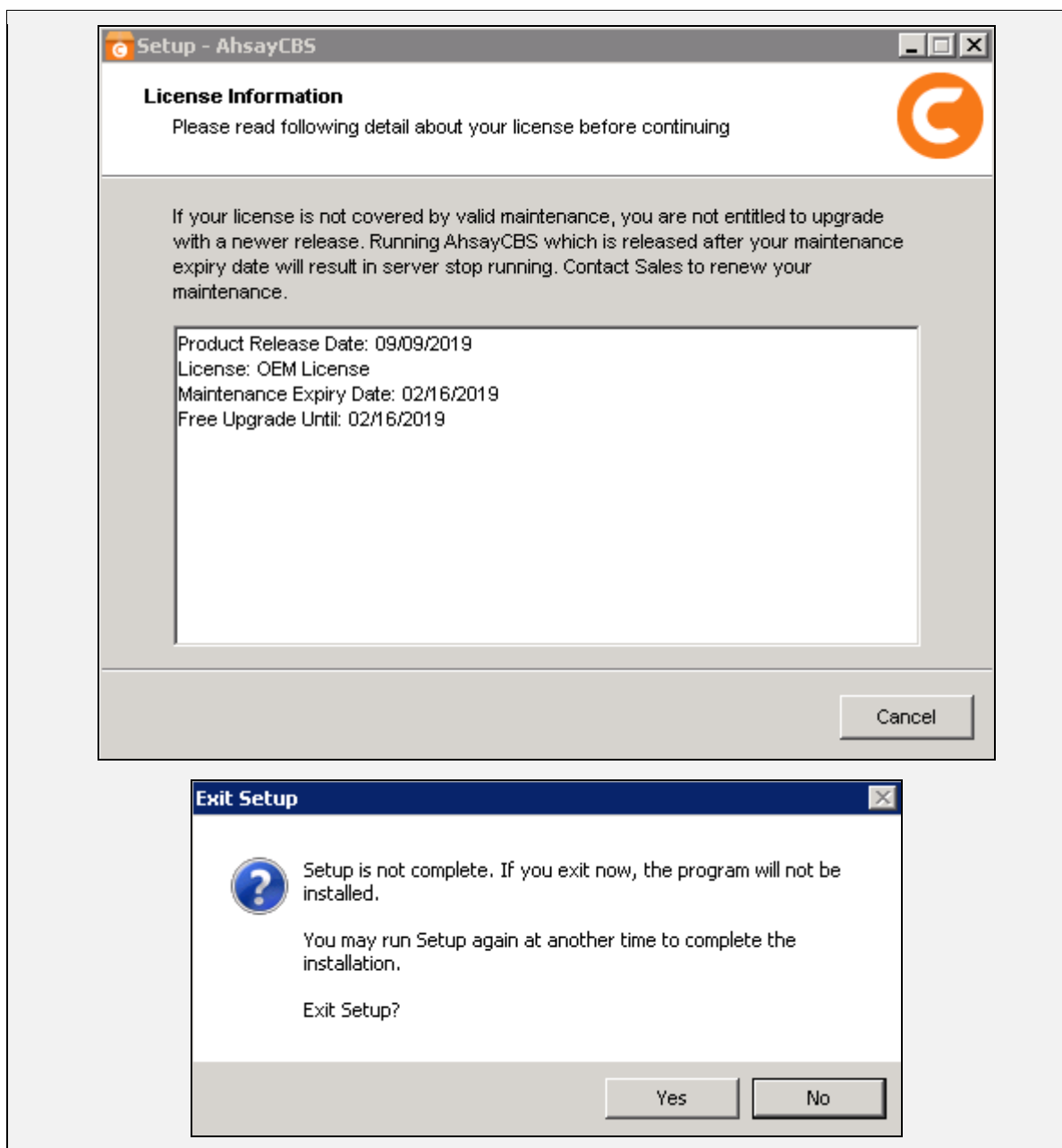
Ensure that all license requirements are met before upgrading your AhsayOBS to AhsayCBS.

- It is recommended to check on the AhsayOBS License page to view your key's Support and Expiry Date to make sure it has not expired before performing the upgrade, so that the license key is eligible to run on the latest version.

Failure to have adequate licenses at time of upgrade, may cause your newly upgraded AhsayCBS server to become 'Stopped'.

Also make sure that your license key has a valid support maintenance otherwise installation will fail. You will receive the following messages if you have an expired maintenance license.





### License Quota Grace Period

If you upgraded AhsayCBS from v6 **without** purchasing AhsayCBS module and the quota **exceeded**, then there will be a grace period of 60-days to allow sufficient time to resolve the license related problems.

If you upgraded AhsayCBS from v6 **with** purchasing AhsayCBS module and the quota **exceeded**, then there will be a grace period of 12-hours for you to manage the quota usage. If quota usage issue was not resolved within the grace period, the server will be *stopped*. After login to AhsayCBS system console, the web console will redirect to [To Do] page and the license error will be shown on the top.

## Details - Step 3 - Backup your AhsayOBS and Users Configuration

Backup your AhsayOBS server configuration.

1. Login to the AhsayOBS web management console.
2. Select [Manage System], [Routine Job].
3. Check if the [Configuration Archival] system routine job is enabled.

The screenshot shows the 'Routine Job' configuration page in the AhsayOBS web management console. The page has a top navigation bar with links: Manage System, Manage Log, Manage User, Manage Group Policy, Manage System User, Administrator's Guide, and Select. Below this is a sub-navigation bar with links: Server Configuration, Routine Job, Software License, Replication Config, Other Options, and System Diagnosis. The main content area is divided into sections for Error Report, Replication Error Report, System Job, and Configuration Archival. The 'Configuration Archival' section shows the job is enabled (radio button selected), scheduled daily at 12:30 (HH:MM). There are 'Update' and 'Reset' buttons at the bottom of this section, which are circled in red.

### • [Configuration Archival] is enabled

Then you can restore a copy of your server configuration files and all user profiles on the AhsayOBS web management console at [Manage System], [Server Configuration], [Configuration Recovery].

Select the latest date from the [Date] dropdown menu, and then enter the corresponding directory path in the [Path] field. Click [Restore] to restore the files (in a zipped file) to the corresponding path on the AhsayOBS server.

The screenshot shows the 'Configuration Recovery' page in the AhsayOBS web management console. The page has a top navigation bar with links: Manage System, Manage Log, Manage User, Manage Group Policy, Manage System User, Administrator's Guide, and Select. Below this is a sub-navigation bar with links: Server Configuration, Routine Job, Software License, Replication Config, Other Options, and System Diagnosis. The main content area is divided into sections for Remove User and Configuration Recovery. The 'Configuration Recovery' section shows a 'Date' dropdown menu with a list of dates from 2015-10-27 to 2015-11-25. The '2015-11-25' date is highlighted. There is a 'Path' field and a 'Mode' dropdown menu. There are 'Update' and 'Reset' buttons at the bottom of this section, which are circled in red.

Keep this file at a safe location, outside of the AhsayOBS installation path.

### • [Configuration Archival] is disabled

Then you need to Enable the [Configuration Archival] system routine job. Do this today. On the AhsayOBS web management console at [Manage System], [Routine Job], enable the [Configuration Archival] routine job. Adjust the time to start the job immediately, then click [Update].

Once the job is completed, refer to the steps provided in **[Configuration Archival] is enabled** just above, to restore a copy of your server configuration files and all user profiles. Store this in a location separate from your AhsayOBS Installation path.

Backup your AhsayOBM and AhsayACB client installers.

- We recommend you retain copies of your v6 client installers, in case in the future you need to install Ahsay onto unsupported v9 devices, or need to reinstall v6 client onto the same machine.

If you prefer added precaution, you may archive (ZIP) your entire AhsayOBS Installation folder (except User Home, as this would be huge), just before you run the AhsayCBS installer upgrade.

## Details - Step 4 - User Profile Check

Check on the user profile of all backup accounts.

Confirm on the number of backup accounts display on the AhsayOBS web management console under [Manage User], [List User] (select [All] to show all users), compare the number of users listed, to the number of user folders (e.g. folder names with username) found in all User Home(s):

%USER\_HOME%\%username1%

%USER\_HOME%\%username2%

%USER\_HOME%\%username3%

...

### Example 1:

Four backup accounts are listed on the AhsayOBS web management console:

username

username3

username4

username5

but there are **Five** user folders within the User Home.

D:\AhsayUserHome\username

D:\AhsayUserHome\username3

D:\AhsayUserHome\username4

D:\AhsayUserHome\username5

**D:\AhsayUserHome\username2**

The backup account **username2** is not displayed on the AhsayOBS web management console, but appears as a folder in the file system.

The screenshot shows the AhsayOBS web management console. At the top, there are navigation links: Manage System, Manage Log, Manage User, Manage Group Policy, and Manage System User. Below these are links for Add User, List User, Run Backup, and Auto Update. The main area displays a table of users with columns: No., User Add-on Modules, Login Name (Alias), Registration Date, Trial Expiry Date, and Used. The table lists four users: username, username3, username4, and username5. To the right of the table, a file explorer window titled 'User\_Home' is open, showing the contents of the D:\User\_Home directory. The file explorer lists five folders: username, username2, username3, username4, and username5. The folder 'username2' is highlighted, indicating it is the folder that is not displayed in the AhsayOBS console but exists in the file system.

For any missing backup accounts (e.g. accounts that have a user folder within the User Home, but are not displayed on the AhsayOBS web management console), check if the user profile of the affected account is corrupted. It must be dealt with, before upgrading to AhsayCBS.

### Example 2:

Any corrupted user profiles will also be recorded in the AhsayOBS system log.

For example, the profile for user 't1' is corrupted.

Manage System   Manage Log   Manage User   Manage Group Policy   Manage System User					Administrator's Guide   Select Language
System Log   Backup Job   Restored File   Backup Error   Replication Log   Advertisement Log					Logout
Date (YYYY-MM-DD) : 2017-01-24					Rows/Page: 50
<< 1 .. 3 4 5 6 7 8 >>					
No.	Timestamp	Login Name	Owner	Message	
351	04:05:19 PM	t1	--	[UserCacheManager.login] Profile corrupted 't1'.	
352	04:05:19 PM	--	--	[info][system] User Module Job starting.	
353	04:05:19 PM	t1	--	[error][system] [UsrModuleCheck.checkUser] main	
354	04:05:19 PM	t1	--	[UserCacheManager.login] Profile corrupted 't1'.	
355	04:05:19 PM	--	--	[info][system] User Module Job ending.	
356	04:05:19 PM	--	--	[info][system] OBS is started up. The product version is 6.27.0.2	
357	04:05:32 PM	--	--	[info][www][System][Login] admin "system" logged on successfully. IP=127.0.0.1 session=635839166789082EA8ABA143CEA35AA3	
358	04:06:00 PM	--	--	[info][system][Thread][Job][SystemCleanup]Starting system cleanup	
359	04:06:00 PM	--	--	[info][system][Thread][Job][SystemCleanup]Start: System Cleanup	
360	04:06:00 PM	--	--	[info][system][Thread][Job][SystemCleanup][PendingEmailCacheCleaning]Start: System Cleanup: Removing obsolete pending backup job report	
361	04:06:00 PM	--	--	[info][system][Thread][Job][SystemCleanup][PendingEmailCacheCleaning]End: System Cleanup: Removing obsolete pending backup job report	
362	04:06:00 PM	--	--	[info][system][Thread][Job][SystemCleanup]End: System Cleanup	

Recover the corrupted user profile with the instruction provided [here](#).

### Example 3:

Another common user profile issue, is duplicated folders/profiles which may occur after relocating or moving user accounts to different User Homes, when the original user account folders are not cleaned up properly.

The following messages will be recorded in the AhsayOBS system log if there are duplicated folders.

375	04:18:29 PM	t1	--	[info][system]User 't1' is duplicated in directory 'C:\user\t1'.	
376	04:18:29 PM	--	--	[info][system] User Module Job starting.	
377	04:18:29 PM	--	--	[info][system] User Module Job ending.	
378	04:18:31 PM	t1	--	[info][system]User 't1' is duplicated in directory 'C:\user\t1'.	
379	04:18:31 PM	--	--	[info][system] User Module Job starting.	
380	04:18:31 PM	--	--	[info][system] User Module Job ending.	
381	04:18:31 PM	t1	--	[info][system]User 't1' is duplicated in directory 'C:\user\t1'.	
382	04:18:31 PM	--	--	[info][system] User Module Job starting.	
383	04:18:31 PM	--	--	[info][system] User Module Job ending.	
384	04:18:32 PM	t1	--	[info][system]User 't1' is duplicated in directory 'C:\user\t1'.	
385	04:18:32 PM	--	--	[info][system] User Module Job starting.	
386	04:18:32 PM	--	--	[info][system] User Module Job ending.	
387	04:18:32 PM	t1	--	[info][system]User 't1' is duplicated in directory 'C:\user\t1'.	
388	04:18:32 PM	--	--	[info][system] User Module Job starting.	
389	04:18:32 PM	--	--	[info][system] User Module Job ending.	

If there are duplicated folders on your User Home, please stop your AhsayOBS server and remove the duplicate folders. Identical User's foldername must not be found in more than one User Home path.

### Example 4:

Another common User Home issue, is extra files or folders which exist in the User Home path. These extra files or folders must be removed before upgrade to AhsayCBS.

User Home path should only contain folders of users, and not contain any extra folders (example %USER\_HOME%\ArchiveFolder, or %USER\_HOME%\notes.txt, or %USER\_HOME%\thumbnail)



## Details - Step 5 - Backup Set Index Check

The backup set index checks need to be done to ensure that immediately after upgrading your Backup Server from v6 to AhsayCBS, your backup and restore jobs will run without errors caused by pre-existing problematic indexes. Also, indexes issue could affect data migration conversion of v6 data to AhsayCBS block format.

1. The weekly rebuild job on AhsayOBS v6 already performs a check of all index files and automatically fixes any problematic index files.

System Job		Time to run
Inactive User Removal	: <input checked="" type="radio"/> Enable <input type="radio"/> Disable	Daily at 09 : 35 (HH:MM)
Retention Policy Job	: <input checked="" type="radio"/> Enable <input type="radio"/> Disable	Daily at 09 : 40 (HH:MM)
Rebuild User Storage	: <input checked="" type="radio"/> Enable <input type="radio"/> Disable	Every Sun at 09 : 30 (HH:MM)
System Log Removal	: <input checked="" type="radio"/> Enable <input type="radio"/> Disable	Daily at 09 : 45 (HH:MM) Keep Logs for 365 Days
Debug Log Removal	: <input checked="" type="radio"/> Enable <input type="radio"/> Disable	Daily at 09 : 10 (HH:MM) Keep Logs for 60 Days
Cyclic Redundancy Check (CRC) Checking	: <input checked="" type="radio"/> Enable <input type="radio"/> Disable	Monthly at 00 : 00 (HH:MM) At the 2nd and 4th Saturdays of every month <input type="checkbox"/> Force to check all backup files
Configuration Archival	: <input checked="" type="radio"/> Enable <input type="radio"/> Disable	Daily at 12 : 30 (HH:MM)

If the Rebuild User Storage job is Disabled, please make sure it is enabled and **runs to completion before you schedule an upgrade.**

2. You can check for index related issues in between the weekly rebuild jobs for specific backup user accounts. By quickly scanning the AhsayOBS system logs to check for corrupted index related errors.

For example, indexes for user account “t1” are corrupted.

420	04:46:27 PM	--	--	[info][www][System][Logon] admin "system" logged on successfully. IP=127.0.0.1 session=2C192EE0A2DB92777B36B7BD77B3C30D
421	04:46:53 PM	t1	--	[error][www][error][www][BackupSetIndex.init]@230278c5 Index corrupted 'E:\AhsayOBS and AhsayRPS\user\t1\files\1485074309343'
422	04:46:53 PM	t1	--	[BackupSetIndex.init]@230278c5 Index corrupted 'E:\AhsayOBS and AhsayRPS\user\t1\files\1485074309343'
423	04:46:53 PM	t1	--	[BackupSetIndex.getBfsBdd] Unable to open index file@230278c5 Index corrupted 'E:\AhsayOBS and AhsayRPS\user\t1\files\1485074309343'
424	04:46:53 PM	t1	--	[BlockDB.init] Error initializing bptree
425	04:46:53 PM	t1	--	[Bptree.init] Failed to open 'E:\AhsayOBS and AhsayRPS\user\t1\files\1485074309343\index.bdb'. Error=[BlockFile.init] Failed to use 'E:\AhsayOBS and AhsayRPS\user\t1\files\1485074309343\index.bdb' as BlockFile
426	04:46:53 PM	t1	--	[BlockFile.init] Failed to use 'E:\AhsayOBS and AhsayRPS\user\t1\files\1485074309343\index.bdb' as BlockFile
427	04:46:53 PM	t1	--	[FileHeader.parseFirst] FILE_HEADER_PREFIX is not incorrect
428	04:46:57 PM	t1	--	[info][system][BackupSetIndex.loadBackupFileHeader]4ab4faeb Iterating all backup file headers in 'E:\AhsayOBS and AhsayRPS\user\t1\files\1485074309343\Current\root' (ClientPath=)

3. You can perform a Single User Rebuild of indexes on each affected backup set from AhsayOBS v6 web console.

[Manage System](#) | [Manage Log](#) | [Manage User](#) | [Manage Group Policy](#) | [Manage System User](#) **[t2]** [Select Language](#)

[Add User](#) | [List User](#) | [Run Backup](#) | [Auto Update](#) | [User Profile](#) | [Backup Set](#) | [File Explorer](#) | [Report](#) | [Statistics](#) | [User Log](#) [Logout](#)

### User Summary

No.	Backup Set	Data Area**	Retention Area**	Total Upload*	Total Restore*
1.	b1	341.36M / 338.87M [ 0% ] [ 1826 ]	0 / 0 [ 0% ] [ 0 ]	341.35M [ 1816 ]	0 [ 0 ]
Total		341.36M / 338.87M [ 0% ] [ 1826 ]	0 / 0 [ 0% ] [ 0 ]	341.36M [ 1826 ]	0 [ 0 ]

### File Validation Option

Last Check	Verify Checksum	Backup Set	
2017-01-24 09:30:09	<input type="radio"/> Enable <input checked="" type="radio"/> Disable	All All b1	<input type="button" value="Check"/>

\* Unit : Compressed Size [Total No. of Files]  
 \*\* Unit : Compressed Size / Uncompressed Size [Ratio] [Total No. of Files]

**User Profile** : t2  
**Home Directory** : E:\AhsayOBS and AhsayRPS\user\t2

**Note:** You can set the “Verify Checksum” option to “enable” to perform an additional data integrity check on the data, to rule out any possible data corruption. But with this option enabled

the Single User Rebuild process will take longer to complete as each individual file/folder is checked. The actual time taken increases in proportion to the number of files/folders in each backup set.

REMINDER: Please remember to check the User Log, to monitor the Single User Rebuild status and after the job is completed, to verify if the issue has been resolved or if further follow up action is required.

Manage System   Manage Log   <b>Manage User</b>   Manage Group Policy   Manage System User [t2]			Select Language
Add User   List User   Run Backup   Auto Update   User Profile   Backup Set   File Explorer   Report   Statistics   <b>User Log</b>			Logout
Date (YYYY-MM-DD) : 2017-01-24		Rows/Page: 50	
No.	Timestamp	Message	
1	09:30:09 AM	Thread-19Starting single user rebuild	
2	09:30:09 AM	Thread-19 [SingleUserRebuild] User='t2' Home='E:\AhsayOBS and AhsayRPS\user\t2'	
3	09:30:10 AM	[BackupSetBFS.rebuildBFS] Rebuilding User='t2' BSet='1485077931529' Job='2017-01-22-17-40-28'	
4	09:30:10 AM	[BackupSetBFS.rebuildBFS] Rebuilding User='t2' BSet='1485077931529' Job='Current'	
5	09:30:10 AM	[BackupSetBFS.rebuildIndexDir] Rebuilding User='t2' BSet='1485077931529' Job='Current' Directory='E:\AhsayOBS and AhsayRPS\user\t2\files\1485077931529\Current\0x00\0x19\0x3d\0x7f'	
6	09:30:16 AM	Thread-19 [SingleUserRebuild] Finished single user rebuild. User='t2' Owner="" DataSize(compressed)=341.36M DataSize=338.87M DataFileNo=1,826 RetentionSize(compressed)=0 RetentionSize=0 RetentionFileNo=0	
7	09:40:02 AM	[Thread][Job][RetentionPolicy] Cleaning retention area for 't2'	
8	09:40:02 AM	[Thread][Job][RetentionPolicy] Cleaning retention area for 't2'	
9	09:40:02 AM	[Thread][Job][RetentionPolicy] Cleaning retention area for 't2' BackupSet='b1(1485077931529)'	

### Note

From v7.15.0.0 onwards this step does not have to be performed on AhsayOBS v6 for all backup sets prior to upgrade, as AhsayCBS will automatically perform a rebuild of the indexes on each v6 backup set before it proceeds with the migration of v6 indexes files to AhsayCBS block format.

However, if you have previously encountered corrupted index or data issues with specific backup sets, you may want to rule this out by running a Single User Rebuild with the "Verify Checksum" option to "enable"; to perform an additional data integrity check. This should be done while still in v6.

## Details - Step 6 - OS and Application Support Check

The list of supported Operating System and software platforms for Ahsay software has been updated. Review the software compatibility list in the

[FAQ: Ahsay Software Compatibility List \(SCL\) for version 9.1 or above](#)

Some important changes include:

- MS Exchange 2003 is not supported.
- MS SQL 2000 is not supported.
- Windows XP, Server 2003 supports are on best effort basis.
- AhsayACB can only be installed on non-server grade Windows platforms.
- Support for: Oracle Database, IBM Lotus Domino / Notes, and StorageCraft ShadowProtect modules are discontinued in version 8.
- In version 9, GLIBC v2.14 is required for all supported Linux and FreeBSD platforms.
- In version 9, OpenJDK v8 is required for all supported FreeBSD platform.

Review the list to ensure that all changes are taken into consideration (e.g. you may need to inform users that their OS / software platform is no longer supported, they will need to upgrade the OS / software to stay up-to-date with AhsayOBM / ACB, or they can remain on version 6).

For **unsupported applications** running **supported OS**, your user must remain using v6 client. For example, Windows 2003 is OBM v7+ supported, however, Windows 2003 System State backup is not supported in AhsayCBS; therefore, device must remain using v6 client to continue Windows 2003 System State backup. Furthermore, User should not have AUA enabled, even if some devices are v7/v8/v9 compatible, otherwise device may inadvertently upgrade to latest release when they should have remained running v6.

AhsayACB v7+ does not support running on server grade OS. To allow user to run v9 client and unlock new features, for existing AhsayACB installation on server grade Windows platforms, switch the backup account type to an AhsayOBM account, then re-install AhsayOBM version on the affected computer. Otherwise, the client can remain on version 6 with v6 features.

### Important

For replication between AhsayCBS to AhsayCBS where the Backup Server was upgraded from AhsayOBS v6, to allow for v6-data replication, you can enable AhsayCBS with v6-compatible replication for v6 data format (Receiver listen on default port 9444).

Before they can be replicated in the new block format, you are still required to undergo the data migration process to convert all v6 backup sets (on the Backup Server) to AhsayCBS block data format, to the AhsayCBS Replication Server.

## Details - Step 7 - Build Your AhsayCBS Installation File

**This step only applies to existing custom branded AhsayOBS** who have previously purchased Branding Option (*Ahsay Customization Portal*), and will continue branding in AhsayCBS.

The branding process of Ahsay software has been enhanced in AhsayCBS over the previous Ahsay Customization Portal used in version 6. Customized CBS installation files are built via the AhsayCBS web console, instead of the Ahsay Customization Portal (decommissioned 2018-12-31).

There are two methods to upgrade your branded AhsayOBS:

### **Overview: Method 1**

#### **Brand after you upgrade to AhsayCBS**

- 1 This method is compatible with AhsayCBS
- 2 Upgrade your AhsayOBS to AhsayCBS by standard AhsayCBS installer downloaded from Ahsay website.
- 3 Your production server will display the Ahsay logo and text, and any backup jobs run will contain such details, until you have the chance to brand your server.
- 4 Upload your custom branding assets using the new AhsayCBS interface.
- 5 Generate new branded AhsayOBM and AhsayACB installers using the AhsayCBS interface.

#### **Pros**

- Straight forward with minimal setup resource.
- Perform the branding on a single machine.

#### **Cons**

- Before the branding applied to the AhsayCBS interface, client may see the "Ahsay" name on the AhsayCBS management console, reports, and client installer download page.
- The Service name and the Desktop icons in Windows platform, will continue to display the standard Ahsay brand.

### **Overview: Method 2**

#### **Build branded CBS and Client Installers, before upgrade**

- 1 Install fresh AhsayCBS on a second machine that will be used for installer generation.
- 2 Upload your custom branding assets using the new AhsayCBS interface.
- 3 Apply temporarily your production license to the AhsayCBS
- 4 Generate branded AhsayCBS installers.
- 5 Run the branded AhsayCBS installer on the AhsayOBS machine (production platform) to perform the upgrade.

#### **Pros**

- Smooth transition, clients will not be able to see Ahsay related materials on the AhsayCBS interface after you upgrade.
- The upgrade scenarios can be tested and approved before deploying the new version to the production.
- Branded installer can be used by your resellers who want to set up their own AhsayCBS server.

#### **Cons**

- Your production AhsayOBS Backup Server may be stopped due to license violation.
- The need to contact Ahsay Support to relax your license.
- Require to setup extra machine for working AhsayCBS installer generation.

### **Steps for Method 1 (Brand after you upgrade to AhsayCBS):**

1. Prepare the branding graphics according to the Appendix Image Specification (*Appendix E*) of the [AhsayCBS Administrator's Guide](#).
2. Upgrade AhsayOBS by the standard AhsayCBS installer.
  - ⦿ Before proceeding, you should to jump down to the [STEP-9](#) to continue with directions to upgrade your server.
  - ⦿ For Windows, refer to the steps in [Windows Upgrade Procedure](#).
  - ⦿ For Linux, refer to the steps in [Linux \(CentOS, RHE, Ubuntu\) Upgrade Procedure](#).
  - ⦿ For FreeBSD, refer to the steps in [FreeBSD Upgrade Procedure](#).
  - ⦿ AFTER YOU UPGRADE, RETURN HERE TO CONTINUE YOUR BRANDING ....
3. Globally Disable the client auto update prevent inadvertent client upgrades. Rename the "index.xml" file in "%CBS\_HOME%/download/liveUpdate/" to "index.xml.disable"
4. For detailed information on how to brand the AhsayCBS interface, reseller interface or AhsayOBM/AhsayACB installers, please refer to **Branding the AhsayCBS** section in the [AhsayCBS Administrator's Guide](#).
5. Under [Rebrand Clients] page, click on [Build Installers] tab, click on the [Build Branded Client] button to generate branded client installers (allow ~15-30 minutes).
6. The branding is now applied to the AhsayCBS server. You can download branded AhsayOBM and AhsayACB client installers from the download page for testing.
7. When testing completes, you can reenable the client auto update by renaming the "index.xml.disable" file in "%CBS\_HOME%/download/liveUpdate/" to "index.xml"

## **Steps for Method 2 (Build branded CBS and Client Installers, before upgrade):**

1. Prepare the branding graphics according to the Appendix Image Specification (*Appendix E*) of the [AhsayCBS Administrator's Guide](#).
2. Download the standard version of AhsayCBS from our website [https://www.ahsay.com/jsp/en/home/index.jsp?pageContentKey=ahsay\\_downloads\\_latest-software\\_ahsaycbs](https://www.ahsay.com/jsp/en/home/index.jsp?pageContentKey=ahsay_downloads_latest-software_ahsaycbs).
3. Then install and setup AhsayCBS on a new machine. This new machine will strictly be used to perform your branding text customization and upload customized images, and finally build your branded CBS Installer binary, for use later with your AhsayOBS upgrade.
  - ⦿ AhsayCBS Installation instructions may be found in our [AhsayCBS v9 Quick Start Guide](#)
  - ⦿ Note: You do not need to go through a full AhsayCBS configuration setup on this new machine. After you install, you basically need to access the AhsayCBS management console URL, login, and browse to the Branding menu pages, to begin.
4. Login to AhsayCBS management console.
5. This new AhsayCBS install, which had no prior installation of Ahsay, you will be permitted to temporarily use the 60-day evaluation license. You should make use of this time to begin branding customization. If you encounter an expired Evaluation license, it is likely that you had previously installed Ahsay onto that server, and time has elapsed.

### **Note**

*Evaluation Only* license key is not permitted to Build; however, you can still create your custom branding properties and export as a JSON file.

6. For detailed information on how to brand the AhsayCBS interface, Reseller (Sub-Admin) interface, or AhsayOBM/AhsayACB installers; refer to the **Branding the AhsayCBS** section in the [AhsayCBS Administrator's Guide](#).
7. The Evaluation key is not permitted to perform the *Build Installers*. When you have completed your customization and are ready to build your installers, you can temporarily use your production license key on this new machine.

Record the *Evaluation Only* key, as you may need to reapply it later.
8. Apply your production license key that you use in AhsayOBS into the AhsayCBS interface in the [System Settings] > [License] page.

NOTE: Your production license key must have assigned and enabled the CBS Module, prior to applying to the AhsayCBS server.

IMPORTANT: It is a violation to run a single license keys on two servers. However, if you do not have a spare AhsayCBS license key, then this is your alternative to build the branded installers. You will encounter the license error 1011/1012 error message on either the production server or this demo AhsayCBS. You have limited grace period to use this license on this machine. Excess violation may render both servers inoperable [*"Stopped"* status]. Contact Ahsay Support for further assistance.



9. Under [Rebrand Web Console] page, click on [Build Installers] page, select the correct installer type, Save changes (this is important procedure). After properties are saved, then return and click on the [Build Installer] button to generate new branded AhsayCBS installers.

Please be patient as the generation time would take around 15-30 minutes for each installer to build and download to your server. The generation time would depend on the traffic condition on the Ahsay build engine. If you have slow bandwidth, process may take longer (e.g. ~60 minutes).

10. Click [OK] and [Save] the setting.
11. Reapply the “*Evaluation Only*” license key onto the new machine. This will prevent your production AhsayOBS server from Stopping due to license violation.
12. Optional: For validation testing, download branded AhsayCBS installer from the AhsayCBS Download page; test install on another server, and then test the client customization.

You can simulate the upgrade scenario with the branded CBS installer by installing it on a third machine (testing platform) with AhsayOBS installed. The testing platform could be cloned from your existing AhsayOBS machine, or an old installation with few user+data.

13. Repeat branding steps if you need to make any changes; then re-test. Continue if you are satisfied with results.
14. Once satisfied with the branding, you may proceed to perform the in-place upgrade.

#### Note

In order to customize the AhsayCBS web console, client user interface, server and client installation files, the Rebranding Option feature must be enabled for your existing license account AND the support maintenance plan for the license must be valid.

Contact Ahsay sales representatives if you need to purchase the Rebranding Option, or if you need to renew the support maintenance plan for your license.

#### Ahsay Professional Services

For customers who prefer Ahsay to create your custom images and/or custom CBS Installer, Ahsay Professional Services offers various branding services to assist you with your project:

- ◉ [Build my Branded CBS Installer](#)
  - If you have a graphics designer, but do not have the time to build the branding profile and build the custom installer, our team can assist you with this project.
- ◉ [Total Rebranding Service](#)
  - If you do not have a graphics designer, Ahsay can design all the required images and build your custom installer.



## Details - Step 8 - Upgrade Concept

Before performing the upgrade, this is what the upgrade will do.

During the upgrade of AhsayCBS, the process will be performing a migration of your current setup. While this process is running, you may see a pause. The delay can vary depending on the files and setup.

As the upgrade runs, the upgrade and migration will process the following items:

- Copy all the required XML files such as *obs.xml*, *rps.xml*, *license.xml*, *sysUser.xml*, etc to the */conf* folder in AhsayCBS. The XML data will be converted into the file *obs.json* and *cbs.json*.
- Convert the *server.xml* in v6 to *server.xml* in AhsayCBS format.
- Copy the option file *obsr.opt* and *afc.opt*, and convert it into the *obs.json* and *cbs.json* file.
- Move the *system log* folder to *system/obs*.
- Extract the *keystore* file and convert it into three certificate files: *conf/ssl.crt*, *conf/ssl.key*, and *conf/ca.crt*
- Startup AhsayCBS service.
- Perform User Profile migration by reading the *%USER\_HOME%/USER%/db/Profile.xml* and convert it in to *%CBS\_HOME%/conf/users.xml*, for unsupported languages in the User Profile, reset them to the default language settings. User Home path will not change.
- Perform User Group Policy migration.

After the upgrade/migration, you should be able to find the following in the AhsayCBS installation home.

1. Previous settings will be migrated into the file *obs.json* and *cbs.json*, such as System Home path, Hostname, System Admin login, SMTP settings, etc.
2. The System Home path in AhsayCBS should be referring to the *%OBS\_HOME%/system/* folder, which contains */cbs*, */obs*, */rdr*. and */rps* subdirectories.
3. Three certificate files, i.e. **ssl.crt**, **ssl.key** and **ca.crt** can be found in the *%CBS\_HOME%/conf* folder. You can check the HTTPS connection with a browser if the SSL certificate has been migrated successfully. Future SSL Certificate updates should be handled via the AhsayCBS Web Management GUI, using the SSL Import feature.
4. In the *%CBS\_HOME%/bin/Migrate.log*, you will be able to see the entry “*Migration is Completed*” at the end of the log file.
5. In the *%CBS\_HOME%/logs/obs\_context\_yyyy-mm-dd.log* (*yyyy-mm-dd* refers to the upgrade/migration date), you will be able to see information such as

```
"INFO: [UserConverter.migrateProfile] Migrated user 'my_user' successfully"
```

**and**

```
"INFO: [UserConverter.migrateProfile] Write 'C:\Program Files\AhsayCBS\conf\users.xml' successfully after migration".
```

6. In `%CBS_HOME%/conf/users.xml` , you will be able to see the entry such as `<value name="name" inheritParentAttribute="Y" type="string" data="my_user" />` , where Username `"my_user"` was imported into the AhsayCBS during the migration progress.

#### Note

By default, the backup set will be converted to the AhsayCBS block data format automatically when the device has upgraded to v9 client and continues to perform backup jobs per backup set.

If a backup set is dormant, then it will not be able to perform the Data Migration processes (Stages), and it will remain in v6 format. You should retain copies of v6 client, for future restore purposes, as v7+ client cannot restore v6 format data.

If your User Home disk volume is low on space, you should plan to extend the storage well before upgrading to AhsayCBS. You will need 150% in temporary free space to migrate from v6 data format, to CBS v7 Blocks format. You may need up to 2x in additional temporary space to convert from CBS v7 Blocks, to CBS v9 Deduplication optimized Blocks afterwards.

Alternatively, you disable Backup Schedule to the v6 Backup Sets, and create new Backup Sets that will run natively in V9 Blocks. This will eliminate the needed time to process through the required Data Migration conversions. The legacy Backup Sets can be archived or removed once enough Retention covers V9 Backup Sets.

## Details - Step 9 - Upgrade AhsayOBS to AhsayCBS

After performing all the above pre-upgrade steps, now upgrade your production AhsayOBS v6.29 server.

### Note

Since AhsayOBS v6 is EOL since 2018 Dec 31, upgrade to AhsayCBS is only compatible with AhsayOBS v6.29 (v6.Sunset) and client v6.29.

Any earlier version pre-v6.29, should first perform an intermediate upgrade and enable AUA v6, so that server and clients run v6.29.

[FAQ: How to upgrade AhsayOBS to the latest version \(upgrade path to the latest version\)? \(2288\)](#) .

### Note for Upgrade on Linux and FreeBSD

In order to support AhsayCBS v9.1 or later, your system must run GNU GLIBC v2.14 or later. To check your version, run “`ldd -version`” from shell. For FreeBSD only, the version of your OpenJDK must be v8.

1. Before you do the upgrade, make sure you have the following two items prepared:
  - a. A recent set of the latest v6 configuration files.
  - b. A copy of your existing v6 binaries/system home and client installers (AhsayOBC).
2. On the AhsayOBS server slated for upgrade:
  - For default AhsayOBS with no branding, download the latest public release AhsayCBS installer at:  
[https://www.ahsay.com/jsp/en/home/index.jsp?pageContentKey=ahsay\\_downloads\\_latest-software\\_ahsaycbs](https://www.ahsay.com/jsp/en/home/index.jsp?pageContentKey=ahsay_downloads_latest-software_ahsaycbs)
  - For customized / branded AhsayOBS, download your branded AhsayCBS installer that you built from the previous step (e.g. from the stand-alone server with AhsayCBS installed).
3. **For continuity with the flow of this guide, for platform-specific upgrade instructions, JUMP TO [Upgrade Procedure Steps](#) for your Operating System.** Follow those instructions, before continuing here.
4. After you have completed upgrade of your server, return here and continue with the next section.

## Details - Step 10 - Post-Upgrade

Here are some general guidelines and tasks, soon after your upgrade.

1. Login to the AhsayCBS web console; review the server settings after the upgrade is completed.
  - a. Navigate through each sub-page (and tabs) and review settings.
  - b. Review License page, verify no negative usages. Note your *Maintenance Exp Date*.
  - c. Verify [System Settings], [Basic], [General], *Host Name* is your server's FQDN
  - d. Review *Default Settings* policy, modify according to your needs.
  - e. Download Client download and verify branding and test connectivity.
  - f. Connect from any AhsayOBM/AhsayACB to AhsayCBS to verify clients can connect.
2. Check HTTPS connection to AhsayCBS from different browsers (Internet Explorer, Firefox and Chrome).

Check your server's SSL Certificate validity. You can use your web browser to load your AhsayCBS web console URL (example, [HTTPS://hostname.domain.com/cbs/Logon.do](https://hostname.domain.com/cbs/Logon.do)), to view the SSL Certificate Details using your browser.

[FAQ: When are the default Ahsay dummy / self-sign certificate acceptable for business?](#)

3. Here is a list of suggested items to check after you started up your AhsayCBS.
  - Login to the AhsayCBS web console with an admin account.
  - Review License page, verify no negative usages. Note your *Maintenance Exp Date*.
  - Check all users' profile, backup and policy group settings in AhsayCBS web console > [Backup/Restore] > [Users, Groups & Policies].
  - Navigate through each sub-page (and tabs), familiarize and review settings.
  - Check "Host Name" valid represents your Fully Qualified Domain Name (FQDN) of your AhsayCBS server for which this installation was installed onto. You may find it in AhsayCBS web console > [System Settings] > [Basic] > [General] > Host
  - Confirm SMTP settings are accurate, in AhsayCBS web console > [System Settings] > [Basic] > [Email].
  - Review *Default Settings* policy, modify according to your needs.
  - Test connect AhsayOBM/AhsayACB (v6) to AhsayCBS with both HTTP and HTTPS connection.

4. Monitor your AhsayCBS status via the AhsayCBS web console at [Monitoring], [Dashboard]. Pay attention to the [Memory] and [Storage] charts.
5. Check for any error displayed under [To Dos] > [System Errors].  
  
Resolve any new system error that may be displayed, not seen when previously running OBS. Contact Ahsay support representatives if you require any assistance on resolving system error that is displayed.
6. Allow your v6 clients to perform Backup jobs, to validate if any new errors appear, before upgrading them to the new client version.
7. Allow the AhsayCBS server to run for a few days, to reduce troubleshooting efforts from making many changes in a single sitting. Staggering your changes can pinpoint issues easily.

### Important

1. Please be known that two active paths, as mentioned in the table below, remain in the AhsayOBS installation path after you finish upgrading to AhsayCBS. **DO NOT** remove them as they are symbolic links used by some of the new AhsayCBS installation paths. Removal of the original v6 installation folder may cause AhsayCBS fail to operate.

You can consult with your System Administrator, if you prefer to change or remove the symbolic link.

Corresponding new paths in AhsayCBS	Original paths in v6.x AhsayOBS ( <b>DO NOT REMOVE THEM</b> )
C:\Program Files\AhsayCBS\system\obs	C:\Program Files\AhsayOBS and AhsayRPS\system
C:\Program File\AhsayCBS\system\rps	C:\Program Files\AhsayOBS and AhsayRPS\rps-system
/usr/local/cbs/system/obs	/usr/local/obs/system
/usr/local/cbs/system/rps	/usr/local/obs/rps-system

*\* Substitute the standard path above, with your custom path.*

2. For replication from AhsayCBS to AhsayCBS where the backup server is upgraded from v6, starting from AhsayCBS v7.11.0.0 or above the replication of v6 backup sets is supported. If the "**Replicate v6 backup sets to v7 server**" feature is enabled on backup server under [Sending Data] and the "**Enable V6 Backup Sets Replication**" feature is enabled on the replication receiver under [Accepting Data]. Default port 9444. Consult with the AhsayCBS Administrator's Guide for further details.

## For AhsayCBS with Reseller Settings

If you have dedicated connector for your sub-admin in version 6, after you upgraded to AhsayCBS. You need to set the corresponding connector in your sub-admin.

### Example:

After the upgrade, you may have found the following connectors settings in the [AhsayCBS management console] > [System Settings] > [Basic] > [General] > [Connectors].

AhsayCBS

General | Email | Predefined Destinations | Administrative Access | Languages | Multi-Factor Authentication (MFA)

Configure the basic settings for this server below.

**Host** ?

Host Name  
10.90.10.14

**System Home** ?

System home directory  
C:\Program Files\AhsayCBS\system

**Connectors** ?

+ -

<input type="checkbox"/>	IP	Port	Protocol	Max Connection	Connection Timeout	Max Keep Alive Request	Socket Receive Buffer Size	Socket Send Buffer Size	SSL Certificate
<input type="checkbox"/>	0.0.0.0	80	HTTP - NIO	2000	12000	1000	25188	43800	--
<input type="checkbox"/>	0.0.0.0	443	HTTPS - NIO	2000	12000	1000	25188	43800	--
<input type="checkbox"/>	0.0.0.0	8443	HTTPS - NIO	2000	12000	1000	25188	43800	--
<input type="checkbox"/>	0.0.0.0	60443	HTTPS - NIO	2000	12000	1000	25188	43800	--

**SSL Certificate** ?

+ -

<input type="checkbox"/>	Name	Common Name	Organization Unit	Organization Name	Location	State	Country	Expiry Date	Status
--------------------------	------	-------------	-------------------	-------------------	----------	-------	---------	-------------	--------

In order to make the connector, for example 8443 (highlighted in red), so that it can be used for the corresponding reseller account, you must edit the reseller profile setting in the [AhsayCBS management console] > [System Settings] > [Basic] > [Administrative Access], then click on the corresponding reseller account.

In the Profile page, select 8443, for example, from the dropdown list of the connector. Save the changes after the modification.

**Profile** **Security Settings**

**Profile**

Name  
sub

Password  
.....

Re-type Password  
.....

Type  
Sub Admin ▼

☒ Email me Consolidated Report

☒ Show the rebranding pages

Delegate setting and user management to Sub Admin

☐ Name

Host Name  
mysubadmin.com

Connector  
0.0.0.0:80 (HTTP - NIO) ▼  
0.0.0.0:80 (HTTP - NIO)  
0.0.0.0:443 (HTTPS - NIO)  
**0.0.0.0:8443 (HTTPS - NIO)**  
0.0.0.0:80443 (HTTPS - NIO)



## Details - Step 11 - Temporarily Disable the Auto Update (AUA) and Data Migration Settings



Temporarily disable the Auto Update (AUA) settings on the AhsayCBS server to reduce unintentional changes or consuming all User Home disk space due to the Backup Set Data Block conversion.

Ensure that the server is running with minimal new error after upgrade, before upgrading the AhsayOBM / AhsayACB clients to new version, and before migrating the user data to the block data format.

1. Login to the AhsayCBS web console.
2. **Disable the Auto Update (AUA) option**, under [Backup / Restore], click [Users, Groups & Policies], tab [Backup User].

### Note

By default, after upgrade, AUA is enabled automatically for all users.

- a. Select all users, then click [Auto Update]  .
- b. Select all users, then click [Cancel Auto Update]  .

## Details - Step 12 - Upgrade AhsayOBM / AhsayACB with Auto Update (AUA)

Upgrade the client applications for all backup accounts in phases. This will reduce high system resource. AhsayCBS simplifies the client upgrade with the Auto Update Agent (AUA) to push out the newer version to user's devices. This will reduce impact to your User Home storage, as once your user's device upgrades to v9 AhsayOBM / AhsayACB and perform backups, the CBS server-side will undergo background Backup Set Data Migration (consisting of four total stages and up to 150% of disk usage per v6 backup set).

ALTERNATIVE: You may manually upgrade clients at will. From the device, open web browser to your AhsayCBS URL (FQDN) (example, <https://hostname.domain.com>), then in the upper-right of the login page, press the Blue download button. Select appropriate client-type, and then select which OS Platform to download the client software, then proceed with upgrade installation.

Please refer to our AhsayOBM / AhsayACB Quick Start Guide in the [User Guide webpage](#) for more information.

The AUA feature, when enabled, will auto upgrade any connected devices for that backup user. For example, if user *Johnny* has five devices, then when AUA is enabled, all five devices will auto update. It is not configurable to select which devices participate in AUA.


Prioritize and divide all backup accounts into small batches.

Consider upgrading clients with existing software issue that are resolved in new version, or clients who require new features introduced in newer version; with higher priority (e.g. support for MS Exchange 2019, Run Direct feature for virtual machine backup). Divide all users into small batches (e.g. 10 users per batch).

Note that, Auto Update for AhsayOBM / AhsayACB installation Windows XP and 2003 are only supported by AhsayCBS version 7.15.0.20 or above. However, if these OS have backupsets which are not compatible with AhsayCBS (double-check [SCL](#)), then DO NOT ENABLE AUA for this user.

### How to Enable AUA

After you upgraded your AhsayCBS and the upgrade is stable for your environment, you can enable the auto update feature for your clients.

1. Stagger the upgrade process; to avoid network congestion.
2. Login to your AhsayCBS management console.
3. Enter the [Backup/Restore] > [Users, Groups & Policies]
4. Click on the check box in front of the users that you want their backup client version to be updated.
5. Click on the  icon.
6. On the next screen, you can mark which user to enable, then press on AutoUpdate button.

7. For every 720-minutes or whenever the v6 backup client Auto Update Agent service restarts, AhsayOBM/AhsayACB will check with your AhsayCBS for any updates. If any auto update instructions were found on the AhsayCBS, the update progress will be started.

8. Review the upgrade process after user has performed a job. The client application should be upgraded automatically within 12 hours.

Check on the client version via the Auto Update page. Note: The version is refreshed after client has connected to the Backup Server during job run.

Check for any backup issue after the upgrade. In the AhsayCBS web console at [Monitoring] > [Dashboard] > [To Dos]. All failed backup jobs are displayed under [Failed Backups].

Resolve all backup errors, contact Ahsay support should you require any assistance to resolve a backup error.

9. Repeat the same process for the next batches of users, until all client applications are upgraded.

NOTE: For clients upgraded to v9 OBM/ACB agent, until the Data Migration has fully completed your User Home storage may see considerable free space reduced. If your User Home storage is low on free disk space, you may want to limit the number of users who upgrade from v6, to v9 OBM/ACB, and waiting after several days so that those who upgraded and run scheduled backups can complete the v6 to Blocks data conversion; before continuing with enabling AUA for more users.

10. Make sure that at least one backup job is completed successfully for each backup set.

TIP: For branded environments, before you enable AUA, you should manually test your branded clients to validate correct branding and theme. And for future CBS upgrades, you repeat this test. You wouldn't want to push out an untested branded client, only for those end-users to find mistakes.

#### Notes:

- AUA is not supported for server OS running ACB, due to AhsayCBS licensing terms.
- Each individual user's AUA setting (Enabled/Disabled) is retained even after future AhsayCBS upgrade installation.
- AhsayCBS AUA supports auto update of AhsayOBM / AhsayACB installation on Windows XP and 2003. However, please note that support for Windows XP and 2003 platforms are on best effort basis. These OS may run incompatible applications not supported in v7+, therefore those devices should remain running v6 client.

Example, for AhsayOBM installation on Windows 2003 with MS Exchange 2003 database or mail level backup sets, upgrading from OBM 6 to OBM 7 will stop these backup set from working properly, as Exchange 2003 is not supported by AhsayOBM version 7+.

If you have any users with mix-compatible devices, you should avoid enabling AUA, as this may cause issues to the user and failed backup.

## Auto Update Limitation

Auto Update Agent does not support a full AhsayOBM installation on the following operating system platforms:

- QNAP
- Synology

For these platforms, you must manually upgrade each time you upgrade your AhsayCBS.

Auto Update Agent may not support a full AhsayOBM / AhsayACB installation on the following operating system platforms:

- FreeBSD
- Linux

Since the use of OpenJDK 8, and requirement for GLIBC 2.14 (or later). The AUA will not deploy installation or upgrade of GLIBC and OpenJDK during the auto update. Please update them manually on these platforms. You should reference the respective platform [AhsayOBM Quick Start Guide](#) for further details.

The following packages must be present on the machine in order for AhsayOBM version 8 to be installed.

Package	Linux	FreeBSD
<b>curl</b> <a href="https://curl.haxx.se">https://curl.haxx.se</a> The 'curl' command is used by both the AhsayOBM sh script and rpm installer to download components from AhsayCBS server during the installation process.	YES	YES
<b>tar</b> <a href="https://www.gnu.org/software/tar">https://www.gnu.org/software/tar</a> The 'tar' command is used by both the AhsayOBM sh script, gz, and rpm installer to uncompress and extract installation files or components downloaded from the AhsayCBS backup server onto the Linux machine.	YES	YES
<b>psmisc</b> <a href="http://psmisc.sourceforge.net/">http://psmisc.sourceforge.net/</a> The 'psmisc' package which contains the 'fuser' components must be installed for AhsayOBM, for the auto update agent (AUA) process to work properly.	YES	YES
<b>OpenJDK Version 1.8</b> <a href="https://www.freebsd.org/java/">https://www.freebsd.org/java/</a> ; and the installed Java Development Kit version must be 8.	NO	YES
<b>GNU LIBC 2.14</b> <a href="https://www.gnu.org/software/libc/">https://www.gnu.org/software/libc/</a> The installed 'GNU LIBC' version must at least be 2.14.	YES	YES

Windows 10 and Windows 2016 or later, may experience difficulties with Auto Update, if Digital Signature is not enabled when building branded client installers. You may elect to manually upgrade client.

## Troubleshooting AUA

The Client Version shown under Manage Backup User page, is not real-time. The version is listed after a backup job runs or whenever client agent communicates with AhsayCBS server, so there could be delay in version shown between client and AhsayCBS. Furthermore, if a user has more than one device, only the recent job's client version is shown; there is no individual client version list view.

If you need to determine if the process is running or if an update was performed successfully, you may find the AUA logs by reading the applicable section **Auto Update Agent Log (aua.log)**, in the following link:

- [FAQ: Where are the backup client application logs stored at?](#)

For the issue where AUA did not update the client, please note that AUA cannot proceed in any of the following instance:

- Client machine offline
- Client machine is not connected to the internet
- The AhsayOBM/AhsayACB user account status is not Enabled. (Auto Update will not work if the user account is suspended or locked)
- Client has the AhsayOBM/AhsayACB application window open or minimized (System Tray icon is ok)
- Client upgrade interrupted by machine shutdown
- If AUA recently enabled, the v6 client will poll the server every 720-minutes, then it can take another hour for the upgrade process to complete (time varies depending on bandwidth to download client binaries, and other routines)
- Antivirus or firewall preventing the binaries from completing the download
- Poor network connection between client and AhsayCBS server
- AhsayOBM/AhsayACB scheduler service is not running
- AhsayACB v6 is installed on a server grade Windows operating system, i.e. Windows 2008 R2/Windows 2012 R2
- Device is not supported by version 6 (i.e. Windows 2016/Windows 2019), and therefore unhandled by AUA
- For Linux/FreeBSD machines, the GNU C or GLIBC library version installed is not 2.14 or above
- For Linux/FreeBSD machines, the 'psmisc' package which contains the 'fuser' components is not installed
- For FreeBSD machines, OpenJDK version installed is not 8 or above

## Manual Upgrade AhsayOBM / AhsayACB

If you need to manually upgrade your AhsayOBM /AhsayACB, the instruction will be the same as a brand new installation. Please refer to our AhsayOBM / AhsayACB Quick Start Guide in the [User Guide webpage](#) for more information.

## Details - Step 13 - Data Migration's Storage and Version Requirement Check

The backup set data migration requires temporary disk space as it converts your v6 data into the pre-v9 block format. Check on the User Home; ensure that there are sufficient disk spaces available for the data migration process to take place.

Starting with AhsayCBS v9.1, it is not possible to have granular selection of which user's Backup Sets perform the Backup Data Migration conversion to CBS Block format. For AhsayCBS v9, any v6 backupsets, upon client upgrade to OBM or ACB v9.x, will initiate the process automatically. You should be aware this process requires free disk space on the CBS User Home path(s), and without the ability to pause or stop the conversion process after the client upgrades to v9 OBM/ACB, you must ensure you have adequate storage for the User Home path prior to upgrade.

1. Ensure there are no disk related issues on your server (by checking the OS logs).
2. Ensure that there are sufficient disk spaces available on your User Home drives for the data migration conversion process, and clients are upgraded to v9.1.0.0 or above
3. If know your User Home disk is limited on space, you should limit and stage your client upgrades. The conversion is automatically processed on the CBS server, in the background. There is no ability in AhsayCBS v9 to pause or skip this feature. If you find disk space hardship you may need to relocate backup users to another User Home drive or add more physical storage before you decide to schedule an upgrade of your Backup Server.

During the data migration process, storage capacity of the corresponding backup set will be doubled, as data in version 6 and AhsayCBS pre-v9 block formats will co-exist temporarily, until the migration process is complete for the backup set. After the backup set has been successfully migrated to AhsayCBS block format, the original v6 data will be automatically removed at the start of next hour by a system job.

Check on the User Home; ensure that there are sufficient disk spaces available. The absolute minimum requirement of free storage is 100 GB; the migration process will not start unless there is 100 GB of free space available per User Home volume.

The free space requirement will be 150% per backup set running v9 agent. Manually check on the size of each and all backup set folders in the User Home, in the following path:

**%USER\_HOME%\username\files\%BACKUPSET\_ID%**

Make note that you do not exceed your free disk space. If the calculation yields an estimated size greater than your User Home available free disk space, you should first make plans to increase disk space BEFORE continuing with client upgrade.

Examples:

- User Home: D:\users == 99GB free → Does not meet minimum requirements.
- User Home: E:\users == 200GB free → Backupset conversion can proceed
- User: JohnDoe, User Home: E:\users\JohnDoe, has one BackupSet: 50GB → Data Migration temp space required on E: = 75GB free

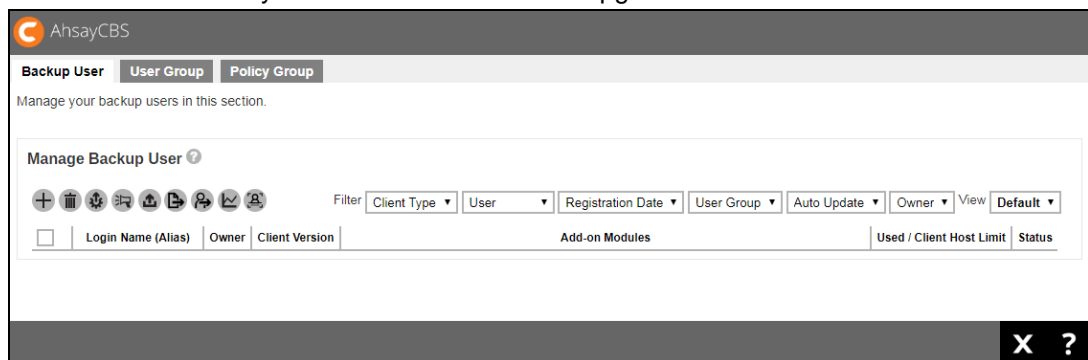


- User: JaneDoe, User Home: E:\users\JaneDoe, has one BackupSet: 150GB → Data Migration temp space required on E: = 225GB free → Conversion will fail (stop) due to lack of disk space.

If at any time you fall below disk space requirements, the conversion process will stop. It will automatically resume when free space is achieved.

4. Next, check on the client version of all backup accounts. The data migration process is triggered when a backup job is started; User device's client agent must be on minimum version 9.1 to start the migration process:

- a. Login to the AhsayCBS admin web console.
- b. Under [Backup / Restore]; select [Users, Groups & Policies].
- c. Under [Backup User] tab, you will see your list of users, look at the "Client Version" column to identify which user has upgraded and which have not.:



\* Client Version values refreshed for last device check-in.

5. After client upgraded, make sure that at least one backup job had been performed for each backup sets. If backup sets are inactive, then they cannot participate in the conversion.

## Details - Step 14 - Data Migration for all v6 Data Backup Sets

Starting with AhsayCBS v7, we introduced a new data block format. This is an improvement over the data file format from version 6 or earlier.

Details of the new index and new data format of AhsayCBS can be found in the following [FAQ: Frequently Asked Questions about Ahsay Cloud Backup Suite 7 \(5005\)](#)

AhsayCBS v9.1 has changed the behavior of the Backup Set Data Migration process. In previous version, ie AhsayCBS v8 and AhsayCBS v7, it was possible to skip certain backup sets or not run the conversion at all (leaving a hybrid of v6 data and v7/v8 data blocks). However, starting with AhsayCBS v9.1 and the introduction of Deduplication and the enhanced 32MB/64MB block format, skipping the data block conversion is no longer permitted; all devices running v9 client must undergo the data block conversion process (from v6 data, to pre-v9 Blocks format). Also, v9 allows the running of Data Integrity Check (DIC) for v6 data. After the data has converted to pre-v9 Blocks format, each Backup Set will need "Migrate Data" feature option enabled, which will then make the data compatible with Deduplication.

To convert data from version 6 data format to the redesigned block format of AhsayCBS. There are several steps to get going, and four stages to fully convert any one backup set for data stored on the CBS User Home storage destination, details below.

1. Verify User Home free disk space is within range of your backup set 150% estimation.
2. Prioritize and divide all backup accounts into small batches.  
  
Consider migrating data for users with backup or restore performance issues with higher priority. Divide all users into small batches (e.g. 10 - 20 users per batch).
3. Phase the client upgrade in stages. Either by enabling Auto Update (AUA) or having the user manually download and upgrade their client software.
4. Upon running v9 client and performing the first backup with the new version, there will be an Index migration (conversion). [Stage 1]
5. Once that job completes, on the backend, the CBS server-side will initiate the v6 backup data conversion. This conversion is single threaded, so the first backup set ready, will start to convert. Other backup sets will queue when their stage reaches the requirements. [Stage 2]
6. After the CBS server-side conversion completes for that backup set, upon the completion of the backup's next backup job, another stage will validate the converted data with the original v6 data. If no errors, the final stage is queued. [Stage 3]
7. The final stage will purge the v6 data, reclaiming storage on the User Home path, thus freeing up space. Other client-side Utilities such as Data Integrity Check is available. [Stage 4]

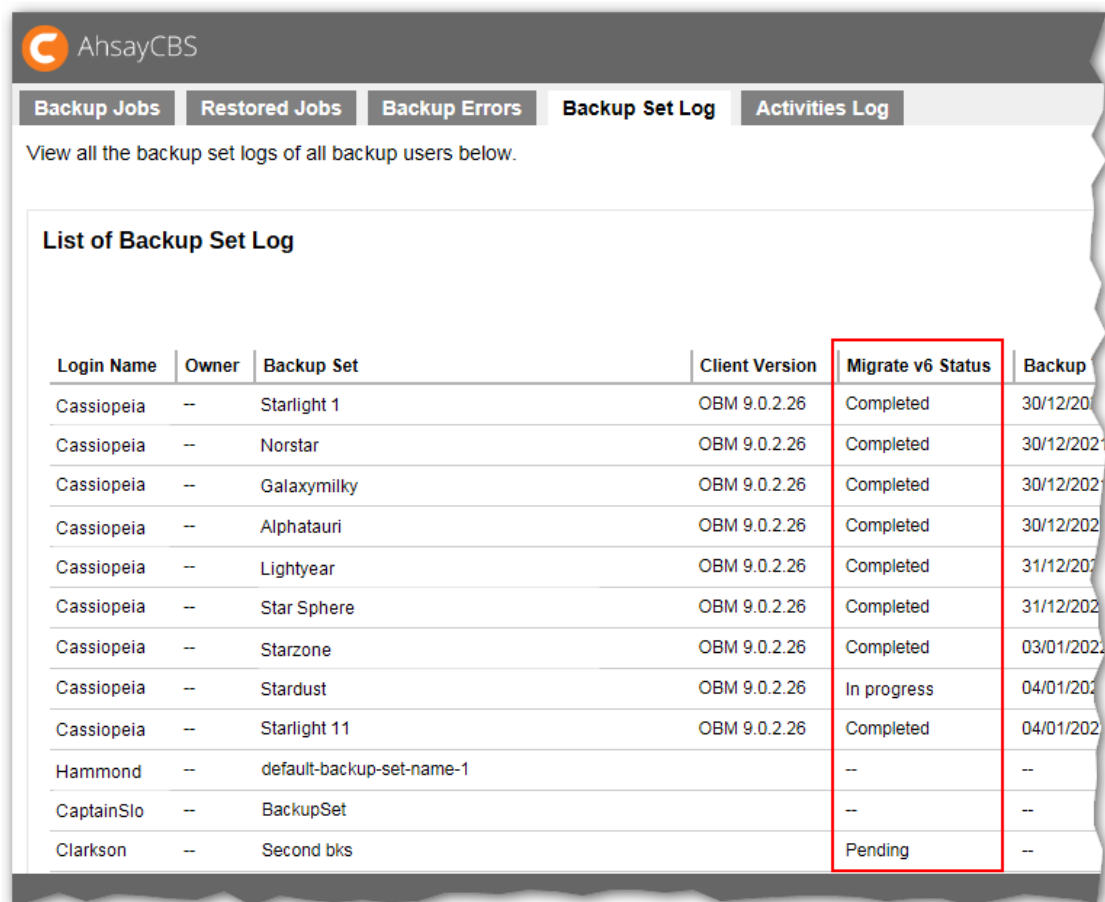
### Important

For backup set with Data Migration enabled, the migration process may cause a slight delay to the backup operation with the extra I/O operation on the User Home volume.

8. At any time, you can view the overall migration status.

**Method 1** – On the AhsayCBS web console at [Monitoring], select [Backup / Restore Log], and then [Backup Set Log], locate the “Migrate v6 Status” column.

You will see “Pending”, “In Progress”, or “Completed”.



Login Name	Owner	Backup Set	Client Version	Migrate v6 Status	Backup
Cassiopeia	--	Starlight 1	OBM 9.0.2.26	Completed	30/12/2021
Cassiopeia	--	Norstar	OBM 9.0.2.26	Completed	30/12/2021
Cassiopeia	--	Galaxymilky	OBM 9.0.2.26	Completed	30/12/2021
Cassiopeia	--	Alphatauri	OBM 9.0.2.26	Completed	30/12/2021
Cassiopeia	--	Lightyear	OBM 9.0.2.26	Completed	31/12/2021
Cassiopeia	--	Star Sphere	OBM 9.0.2.26	Completed	31/12/2021
Cassiopeia	--	Starzone	OBM 9.0.2.26	Completed	03/01/2022
Cassiopeia	--	Stardust	OBM 9.0.2.26	In progress	04/01/2022
Cassiopeia	--	Starlight 11	OBM 9.0.2.26	Completed	04/01/2022
Hammond	--	default-backup-set-name-1		--	--
CaptainSlo	--	BackupSet		--	--
Clarkson	--	Second bks		Pending	--

**Pending** – No conversion has started. Probably the device is not yet running v9 agent or maybe it has not yet run a backup job since upgrading.

**In progress** – Migration is underway. Specific stage are not shown here. If after several backup jobs, and this has not yet moved to Completed, you may want to further troubleshoot by checking the log status.

**Completed** – Backup Set has fully converted to blocks data format. Backup Set's v6 data removed, User Home space freed.

Method 2 – On the AhsayCBS web console at [Monitoring], select [Administration Logs], and then [Activities Log]. Change the [Filter] type to [Migrate V6 Data Info] to check on the migration process.

#### Note

The following log entry can be found when a migration process is started for a backup set:

```
[Thread][Job][MigrateV6File]Start Migrating v6 data of user  
'username', backup set 'backupset_name'
```

The following log entries can be found when the server-side migration is complete:

```
[Thread][Job][MigrateV6File]Finish migrating v6 data of user '  
username ', backup set ' backupset_name '
```

```
[Thread][Job][MigrateV6File]End Migrating v6 data of user ' username  
, backup set ' backupset_name '
```

Check for any backup issue after the data migration. In the AhsayCBS web console at [Monitoring] > [Dashboard] > [To Dos]. All failed backup jobs are displayed under [Failed Backups].

9. Review User's migration status.

From the AhsayCBS admin web console, under [Backup / Restore Log] > [Activities Log], change the [Filter] type to [User Change Log], and [View] [This Week].

There are four stages to each backup set's conversion.

**Stage-1:** First backup job run using v9 client (manually or schedule),

Backup Report will log:

*Migrating index entry Job="Current" Path="xxxxxxxxxx" Type="xxxxx" from v6 to v7*

**Stage-2:** Enable server-side conversion from CBS. *data-migration-status = Running*  
When processing server-side conversion, you can search for the "**data-migration-status**" value to determine progress of stages-2.

**Stage-2:** Completed stage; *data-migration-status = Finished*

**Stage-3:** After previous stage is *Finished*, upon next backup job run, start of Data Validation to compare v6 data and converted data.

**If errors detected, it will repeat from stage-2 (Running).** If you encounter it repeats Stage-2 for the same backupset multiple times (*Finished->Running->Finished->Running*; or *Running->NotStarted->Running->NotStarted*), verify that you have adequate free disk space and check the logs ([*Migrate V6 Data Error*]); open an Ahsay Support ticket if need further assistance.

**If no faults, then it automatically continues to stage-4.**

**Stage-4:** *data-migration-status = Verified*. Indicate the conversion completion for this backup set.

Each backup set will need to undergo each of the four stages independent of another backup set's stage progress. If a backup set *Finished* stage-2, another backup set can start stage-2, so-forth.

10. Resolve all backup errors; contact Ahsay support should you require any assistance to resolve the backup error.

Once you have enough Completed, then you repeat for the next group of users to upgrade and process their data migration.

After the user's Backup Set data has converted to pre-v9 Blocks format, each Backup Set will need "Migrate Data" feature option enabled, which will then make the data compatible with Deduplication. More details about "Migrate Data" are found in [Ahsay v9 New Features and Datasheet](#), or [AhsayCBS Administrator's Guide](#).

## 4 Upgrade Procedure Steps

Contents of Chapter 4 describe how to proceed with upgrading to AhsayCBS. Once you upgrade the Ahsay server, you'll need to upgrade user device's Client agents, perform Backup Set Data Migration, and enable Migrate Data option for Deduplication compatibility.

### AhsayUBS Upgrade Procedure

For upgrade procedures for AhsayUBS, please consult the AhsayUBS Guide

### AhsayPRD Instance Upgrade Procedure

For upgrade procedures for AhsayPRD OBS instance, please consult the [AhsayPRD Guide](#) and this guide's [Windows Upgrade Procedure \(cbs-win.zip\)](#) section.

### Windows Upgrade Procedure (*cbs-win.exe*)

Jump to [section](#)

### Windows Upgrade Procedure by Zip File (*cbs-win.zip*)

Jump to [section](#)

### Linux (CentOS, Red Hat Enterprise, Ubuntu) Upgrade Procedure

Jump to [section](#)

### FreeBSD Upgrade Procedure

Jump to [section](#)

## Windows Upgrade Procedure (*cbs-win.exe*)

Detailed steps for **in-place upgrade** of Windows running: AhsayRDR / AhsayOBS / AhsayRPS. If your Windows server runs multiple OBS instances (AhsayPRD), the *cbs-win.exe* is not for you.

The following steps refer to Ahsay product with standard installation. If you are using OEM version (branded installation), please substitute the default [www.ahsay.com](http://www.ahsay.com) download *cbs-win.exe* with your branded installer.

1. Download the AhsayCBS executable (*cbs-win.exe*) from our website.
2. Logon as administrator to Windows.
3. Stop the AhsayOBS service from the Services management console, this can be reached from [Control Panel] > [Administrative Tools] > [Services] > Ahsay Offsite Backup Server and Replication Server.
4. Double-click the downloaded *cbs-win.exe* to start the AhsayCBS setup wizard.
5. Select the language to use during the installation from the dropdown box and click on [OK].
6. **Note: Upgrade from AhsayOBS v6, to AhsayCBS will not prompt or display that it has detected an earlier installation. As part of the installer process, it will briefly display during the installation progress that it will uninstall OBSR, before it unpacks the AhsayCBS binaries for installation.**

Note: Starting from AhsayCBS v8.3.0.0 or above, the installer will detect there is already an AhsayCBS installed, click on **[Yes] to migrate the settings** from your existing installation to the new installation.

7. A Welcome screen will be shown, please click [Next] button to go to the next step.
8. On the next screen, it will prompt the License Agreement window. After you have read the Terms and Conditions, choose [I accept the agreement] and click the [Next] button to proceed.
9. The system will check the validity of your maintenance license before proceeding with the installation. Click [Next] to continue.

**Note: Before installing AhsayCBS make sure that your license key has a valid support maintenance otherwise installation will fail.**

10. The installation wizard will ask for the installation path. If you want to change the default installation path, click on the [Browse] button to change the location. Click [Next] to continue.

**Note:** It is not supported to upgrade into a nested folder of an existing v6 installation path. If the upgrade process is done on the same AhsayOBS/AhsayRPS/AhsayRDR path, the upgrade process would fail.

11. Select/Unselect the shown Options according to your preferences and click the [Next] button.
12. 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.



13. Wait until the upgrade process is completed. The installer will expand the installation files to the AhsayCBS installation folder and it should take a while when the import 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 this information, many user profiles could result in longer import process.

**Note:** Upon installation, both the “Ahsay Cloud Backup Suite” service and the “NFS Service (AhsayCBS)” are installed. Make sure that the following ports are opened:

- 111 - Port mapper
- 1058 - Port required for Run Direct
- 2049 - Port for the NFS service

14. After installation, you may manually open the **%CBS\_HOME%/logs/obs\_context\_yyyy-mm-dd.log** to check the progress of the upgrade and if there are any errors during the startup (yyyy-mm-dd refers to the upgrade/migration date).

**Example:**

```
Nov 18, 2018 4:13:13 PM org.apache.catalina.core.ApplicationContext log
INFO: [UserConverter.migrateProfile] Migrated user 'my_user' successfully
```

15. Click [Finish] button and AhsayCBS should be started automatically. You can verify this by checking the **%CBS\_HOME%/bin/Migrate.log**.

**Migrate.log example:**

```
CBS Application Home='C:\Program Files\AhsayCBS', RDR
Application Home= '', V6 OBS Application Home='C:\Program
Files\AhsayOBS and AhsayRPS', V55 OBSR Application Home
= '', RPS Application Home=''

Starting the migration process

Starting to migrate v6 OBS to v8 CBS

v6 to v8 obs migration is completed

Migration is Completed
```

16. If your AhsayOBS and AhsayRDR are hosted on the same machine, both AhsayOBS and AhsayRDR will be upgraded at the same time. You are required to manually add the HTTP and HTTPS connector definitions for the Redirector in the **%CBS\_HOME%/conf/server.xml**.

First, shutdown the CBS Service.

Second, modify the *server.xml* as shown in example below.

**Example:**

If your Redirector was using *HTTP 8080* and *HTTPS 8443* as the connection (substitute your port numbers), you need to add 2 extra connectors by duplicating the two connector definitions (Backup Server) and change to your Redirector ports.

Your *server.xml* contains:

```
<Service name="Catalina">

    <Connector port="80" protocol="HTTP/1.1" ..... />

    <Connector port="443" SSLCipherSuite="HIG....." />
```

You will need to duplicate the existing two Connectors, then modify the ports for the Redirector connector as shown in red.

```
<Service name="Catalina">

    <Connector port="80" protocol="HTTP/1.1" ..... />

    <Connector port="443" SSLCipherSuite="HIG....." />

    <Connector port="8080" protocol="HTTP/1.1....." />

    <Connector port="8443" SSLCipherSuite="HI....." />
```

Assuming that you are using wildcard SSL certificate for both Redirector and Backup Server.

If you are using different SSL certificates, you will need to change the values in **SSLCACertificateFile**, **SSLCertificateKeyFile**, and **SSLCertificateFile** in your HTTPS connector definition so they point to the correct files.

Restart the AhsayCBS service after you made the changes.

17. Logon to the AhsayCBS web management console to check on your upgrade.
18. Continue with the [Post-Upgrade Section](#) in this guide.

## Windows Upgrade Procedure by Zip File (*cbs-win.zip*)

To be used by advanced Ahsay Admins, Windows running AhsayRDR / AhsayOBS / AhsayRPS

For customers who still require installation or upgrade via ZIP file (*cbs-win.zip*), for example the installation/upgrade of multiple AhsayCBS instances on a single AhsayPRD server, please contact [Technical Support](#) for further assistance and to request the download link.

The following steps refer to Ahsay product with standard installation.

NOTE: If you are using OEM version (branded installation), you are unable to use (or request-for) custom branded *cbs-win.zip* file for your AhsayOBS upgrade.

By using this method to perform the upgrade, admins will have full control on the files added to the upgrade software. This method is recommended for admins who run multiple Ahsay instances installed on a single Windows server, or who are advanced users with experience with Ahsay product.

The following steps are the instructions on how to upgrade AhsayRDR/AhsayOBS/AhsayRPS with *cbs-win.zip* file on Windows platform.

1. Download the AhsayCBS Zip file (*cbs-win.zip*) from the link provided by Ahsay Support.
2. Logon as a Windows administrator account.
3. Expand the zip file into your template directory

**e.g.:** "D:\Applications\AhsayCBS.template\CBS9.1.0.13"

**Note:** It is not supported to upgrade into a nested folder of an existing v6 installation path. If the upgrade process is done on the same AhsayOBS/AhsayRPS/AhsayRDR path, the upgrade process would fail.

4. Modify the name of the Java folder in the installation path:
  - for 64-bit machine, change the folder "java17x64" to "java"
5. Stop the corresponding Ahsay service from the Windows Services management console, this can be reached from [Control Panel] > [Administrative Tools] > [Services]. Press the [Stop] button to stop the related service.

Here are the service names for the Ahsay products:

**AhsayRDR** - [Ahsay Redirector]

**AhsayOBS/AhsayRPS** - [Ahsay Offsite Backup Server and Replication Server]

6. Once the service has been stopped, make a backup of your existing Ahsay installation %AHSAYOBS\_SYSTEM\_HOME% directories and User Home directories if possible.
7. Open command prompt to remove the v6 service. Change the working directory to:

**AhsayRDR** `cd "%AhsayRDR_HOME%\util\bin"`

**AhsayOBS/AhsayRPS** `cd "%AhsayOBSR_HOME%\util\bin"`

8. Run the following command within the command prompt would remove the service.

```
service.exe -r <Service Name>
```

where:

- Parameter “-r” means removing the service and parameter.
- <Service name> is the name of the service.

For example, we should run the following command:

#### AhsayRDR

```
service -r RDRServer
```

#### AhsayOBS/AhsayRPS

```
service -r OBSRServer
```

**NOTE:** If you run AhsayPRD with multiple Ahsay instances, the <Service Name> is unique for each instance. Before executing removal command, verify the name.

You will see service stopped and service removed message in the command prompt.

#### AhsayRDR

```
C:\Program Files\AhsayRDR\util\bin>service -r RDRServer  
  
Start to remove RDRServer  
  
Stopping RDRServer.  
  
RDRServer stopped.  
  
RDRServer removed.
```

#### AhsayOBS/AhsayRPS

```
C:\Program Files\AhsayOBS and AhsayRPS\util\bin>service -r  
OBSRServer  
  
Start to remove OBSRServer  
  
Stopping OBSRServer.  
  
OBSRServer stopped.  
  
OBSRServer removed.
```

9. Migrate the current Ahsay Product to AhsayCBS by running the migrate script, **Migratev6.bat** in %CBS\_HOME%\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, where <RDR\_HOME>, <obsoleted\_variable> and <RPS\_HOME> are **null**.

```
cd C:\Program Files\AhsayCBS\bin  
  
MigrateV6.bat "C:\Program Files\AhsayCBS" "" "C:\Program  
Files\AhsayOBS and AhsayRPS" "" ""
```

10. If your AhsayOBS and AhsayRDR are hosted on the same machine, both AhsayOBS and AhsayRDR will be upgraded at the same time. You are required to manually add the HTTP and HTTPS connector definitions for the Redirector in the %CBS\_HOME%\conf\server.xml. First, shutdown the CBS Service.

Second, modify the server.xml as shown in example below.

**For example:**

If your Redirector was using *HTTP 8080* and *HTTPS 8443* as the connection (substitute your port numbers), you need to add 2 extra connectors by duplicating the two connector definitions (Backup Server) and change to your Redirector ports.

Your *server.xml* contains:

```
<Service name="Catalina">  
  
    <Connector port="80" protocol="HTTP/1.1" ..... />  
  
    <Connector port="443" SSLCipherSuite="HIG..... />
```

You will need to duplicate the existing two Connectors, then modify the ports for the Redirector connector as shown in red.

```
<Service name="Catalina">

  <Connector port="80" protocol="HTTP/1.1" ..... />

  <Connector port="443" SSLCipherSuite="HIG..... />

  <Connector port="8080" protocol="HTTP/1.1..... />

  <Connector port="8443" SSLCipherSuite="HI..... />
```

Assuming that you are using wildcard SSL certificate for both Redirector and Backup Server.

If you are using different SSL certificates, you will need to change the values in **SSLCACertificateFile**, **SSLCertificateKeyFile**, and **SSLCertificateFile** in your HTTPS connector definition so they point to the correct files.

Restart the AhsayCBS service after you made the changes.

11. Run the following command to install AhsayCBS service with the command prompt:

```
service.exe -i <Service Name> <Service Display Name> <exe path> <Service Description>
```

where:

- ⦿ Parameter “-i” stand for install service.
- ⦿ <Service Name> is the name of the service.
- ⦿ <Service Display Name> is the display name of the service.
- ⦿ <exe path> is the file path to executable  
  
cbssvcX64.exe (for 64bit OS),  
It is located at %CBS\_HOME%\bin .
- ⦿ <Service Description> is the description of the service.

For example, we should run the following command on a 64 bit platform:

```
cd "C:\Program Files\AhsayCBS\util\bin"

service -i "AhsayCBS" "AhsayCBS" "C:\Program Files\AhsayCBS\bin\cbssvcX64.exe" "This is the CBS service."
```

**NOTE:** If you run AhsayPRD with multiple Ahsay instances, the <Service Name> must be unique for each instance.

Here is a sample of the output.

```
C:\Program Files\AhsayCBS\util\bin>service -i "AhsayCBS"
"AhsayCBS" "C:\Program Files\AhsayCBS\bin\cbssvcX64.exe"
"This is the CBS service."

Start to Change Config AhsayCBS

Open Service Control Manager

Open Service

Service does not exists, install a new Service

AhsayCBS installed.

C:\Program Files\AhsayCBS\util\bin>
```

12. The service is now starting up, it should take a few minutes while 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, many users could result in longer user migration process.

**Note:** AhsayCBS has a service "NFS Service (AhsayCBS)" (along with *Ahsay Cloud Backup Suite Service*) will automatically be installed when a Run Direct restore is triggered on the backup server (whereas, upgrading with the executable .exe file will install the AhsayCBS NFS service during the upgrade).

Make sure that the following ports are opened:

- **111** - Port mapper
  - **1058** - Port required for Run Direct
  - **2049** - Port for the NFS service
13. After installation, you may manually open the **%CBS\_HOME%\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).
  14. Logon to the AhsayCBS web management console to check on your upgrade.
  15. Continue with the [Post-Upgrade Section](#) in this guide.



## Linux (CentOS, Red Hat Enterprise, Ubuntu) Upgrade Procedure

The following steps refer to upgrade for Linux (CentOS, Red Hat Enterprise, Ubuntu).  
(For FreeBSD, see next section.)

To operate the below steps, you need to have superuser privilege (ie root), experience with \*nix commands, and you need to have some experience on installing/upgrading our products before.

### NEW for Ahsay v8+: OpenJDK and GLIBC Requirement

AhsayCBS uses OpenJDK 8 and GLIBC 2.14+.

OpenJDK 8 is bundled with installation of AhsayCBS for Linux.

In order to support AhsayCBS v8 NFS Service, your system must run GLIBC 2.14 or later.

To check your version, run `"ldd --version"` from shell.

If you have question, contact [Ahsay Technical Support](#), before proceeding with upgrade.

### Assumption:

- AhsayOBS is installed in `/usr/local/obs`
- AhsayRDR is installed in `/usr/local/rdr`
- You are going to install AhsayCBS in the path `/usr/local/cbs`
  - Install into any mount is permitted if it is not nested within an existing Ahsay installation.
- Substitute our default path with your true installation path.

**Note:** It is not supported to upgrade into a nested directory of an existing v6 installation path. If the upgrade process is done to the same AhsayOBS/AhsayRPS/AhsayRDR path, the upgrade process would fail.

Example-1, you cannot currently have `"/usr/local/ahsay"` for your AhsayOBS v6 Backup Server, and wish to upgrade to AhsayCBS into the same `"/usr/local/ahsay/"` directory; this is not supported.

Example-2, you cannot upgrade to subdirectory within AhsayOBS installation (`"/usr/local/ahsay/"`) path where AhsayCBS installed into `"/usr/local/ahsay/cbs/"`.

1. Download the AhsayCBS zipped tar file (`cbs-nix.tar.gz`) from our [website](#).

If you are using OEM version (branded installation), please substitute the `cbs-nix.tar.gz` with your branded installer.

2. Logon as `root` user in the command prompt in your machine.

3. Copy the installation file, *cbs-nix.tar.gz* to */usr/local/cbs* , and then untar it.

```
# mkdir /usr/local/cbs
# cp cbs-nix-tar.gz /usr/local/cbs
# cd /usr/local/cbs
# gunzip cbs-nix.tar.gz
# tar -xf cbs-nix.tar
```

4. Stop the AhsayOBS service

```
# cd /usr/local/obs/bin
# sh shutdown.sh
```

or stop the AhsayRDR service

```
# cd /usr/local/rdr/bin
# sh shutdown.sh
```

5. Run the *install.sh* from the following directory */usr/local/cbs/bin/install.sh*

**Example:**

```
# cd /usr/local/cbs/bin
# sh install.sh
```

This command should migrate the configuration (AhsayRDR/AhsayOBS /AhsayRPS) and User Profiles (AhsayOBS), to AhsayCBS.

6. 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, many users could result in longer user migration process.

**Note:** AhsayCBS has a new *NFS Service* (along with the *CBS service*) is installed upon installation / upgrade of AhsayCBS. Make sure that the following ports are opened:

- **111** - Port mapper
- **1058** - Port required for Run Direct
- **2049** - Port for the NFS service

7. After installation, restart the AhsayCBS service once by running the following commands:

```
# cd /usr/local/cbs/bin
# sh shutdown.sh
# sh startup.sh
```

8. After installation, you may open the */usr/local/cbs/logs/obs\_context\_yyyy-mm-dd.log* to check if there are any errors during the startup,

**Note:** *yyyy-mm-dd* refers to the upgrade/migration date.

9. If your AhsayOBS and AhsayRDR are hosted on the same machine, both AhsayOBS and AhsayRDR will be upgraded at the same time. You are required to manually add the HTTP and HTTPS connector definitions for the Redirector in the `/usr/local/cbs/conf/server.xml`.

First, shutdown the CBS Service.

Second, modify the `server.xml` as shown in example below.

**Example:**

If your Redirector was using `HTTP 8080` and `HTTPS 8443` as the connection (substitute your port numbers), you need to add 2 extra connectors by duplicating the two connector definitions (Backup Server) and change to your Redirector ports.

Your `server.xml` contains:

```
<Service name="Catalina">

    <Connector port="80" protocol="HTTP/1.1" ..... />

    <Connector port="443" SSLCipherSuite="HIG....." />
```

You will need to duplicate the existing two Connectors, then modify the ports for the Redirector connector as shown in red.

```
<Service name="Catalina">

    <Connector port="80" protocol="HTTP/1.1" ..... />

    <Connector port="443" SSLCipherSuite="HIG....." />

    <Connector port="8080" protocol="HTTP/1.1....." />

    <Connector port="8443" SSLCipherSuite="HI....." />
```

Assuming that you are using wildcard SSL certificate for both Redirector and Backup Server.

If you are using different SSL certificates, you will need to change the values in **SSLCACertificateFile**, **SSLCertificateKeyFile**, and **SSLCertificateFile** in your HTTPS connector definition so they point to the correct files.

Restart the AhsayCBS service by the following 3 commands after you made the changes.

```
cd /usr/local/cbs/bin

sh shutdown.sh

sh startup.sh
```

10. Logon to the AhsayCBS web management console to check on your upgrade.
11. Continue with the [Post-Upgrade Section](#) in this guide.

## FreeBSD Upgrade Procedure

The following steps refer to upgrade for FreeBSD.

(For Linux (CentOS, Red Hat Enterprise, Ubuntu) refer to previous section.)

To operate the below steps, you need to have superuser privilege (ie root), experience with FreeBSD, and you need to have some experience on installing/upgrading our products before.

### NEW for Ahsay v8+: OpenJDK and GLIBC Requirement

AhsayCBS uses OpenJDK 8 and GLIBC 2.14+.

1. For upgrade or installation on FreeBSD, your system administrator must manually install OpenJDK 8. (Reference: <https://www.freebsd.org/java/>)

Note: AhsayCBS v8/v9 only supports OpenJDK 8.

2. In order to support AhsayCBS v8 NFS Service, your system must run GLIBC 2.14 or later.

To check your version, run “`ldd --version`” from shell.

3. To install the GLIBC port:

```
# cd /usr/ports/misc/compat9x
# make install distclean
```

If you install the port, the source will be downloaded, patched if necessary, compiled and installed. If the port is dependent upon another port, that port will also be installed. After installing, ports are identical to packages.

If you have question, contact [Ahsay Technical Support](#)., before proceeding with upgrade.

### Assumption:

- ▶ AhsayOBS is installed in `/usr/local/obs`
- ▶ AhsayRDR is installed in `/usr/local/rdr`
- ▶ You are going to install AhsayCBS in the path `/usr/local/cbs`
  - Install into any mount is permitted if it is not nested within an existing Ahsay installation.
- ▶ OpenJDK8 is located in `/usr/local/openjdk8`
- ▶ Substitute our default path with your true installation path.

**Note:** It is not supported to upgrade into a nested directory of an existing v6 installation path. If the upgrade process is done to the same AhsayOBS/AhsayRPS/AhsayRDR path, the upgrade process would fail.

Example-1, you cannot currently have “`/usr/local/ahsay`” for your AhsayOBS v6 Backup Server, and wish to upgrade to AhsayCBS into the same “`/usr/local/ahsay`” directory; this is not supported.

Example-2, you cannot upgrade to subdirectory within AhsayOBS installation (“`/usr/local/ahsay`”) path where AhsayCBS installed into “`/usr/local/ahsay/cbs`”.

1. Download the AhsayCBS zipped tar file (*cbs-nix.tar.gz*) from our [website](#).  
If you are using OEM version (branded installation), please substitute the *cbs-nix.tar.gz* with your branded installer.
2. Logon as *root* user in the command prompt in your machine.
3. Copy the installation file, *cbs-nix.tar.gz* to */usr/local/cbs* , and then untar it.

```
# mkdir /usr/local/cbs
# cp cbs-nix.tar.gz /usr/local/cbs
# cd /usr/local/cbs
# gunzip cbs-nix.tar.gz
# tar -xf cbs-nix.tar
```

4. Stop the AhsayOBS service

```
# cd /usr/local/obs/bin
# sh shutdown.sh
```

or stop the AhsayRDR service

```
# cd /usr/local/rdr/bin
# sh shutdown.sh
```

5. For FreeBSD installation, *install* or *upgrade* your Java to **OpenJDK8**.

Consult with your System Administrator for further information.

6. Remove the AhsayCBS bundled Java with the following commands:

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

Create a symbolic link from AhsayCBS to the Java home using the following command:

```
# ln -s /usr/local/openjdk8 /usr/local/cbs/java
```

**Note:** Assuming the JDK is located in */usr/local/openjdk8*

From the command line, run the following command:

```
# setenv JAVA_HOME /usr/local/openjdk8
```

7. Run the *install.sh* from the following directory */usr/local/cbs/bin/install.sh*

**Example:**

```
# cd /usr/local/cbs/bin
# sh install.sh
```

This command should migrate the configuration (AhsayRDR/AhsayOBS /AhsayRPS) and User Profiles (AhsayOBS), to AhsayCBS.

8. 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, many users could result in longer user migration process.

**Note:** AhsayCBS has a new *NFS Service* (along with the *CBS service*) is installed upon installation / upgrade of AhsayCBS. Make sure that the following ports are opened:

- **111** - Port mapper
- **1058** - Port required for Run Direct
- **2049** - Port for the NFS service

9. After installation, restart the AhsayCBS service once by running the following commands:

```
# cd /usr/local/cbs/bin  
  
# sh shutdown.sh  
  
# sh startup.sh
```

10. After installation, you may open the */usr/local/cbs/logs/obs\_context\_yyyy-mm-dd.log* to check if there are any errors during the startup,

**Note:** *yyyy-mm-dd* refers to the upgrade/migration date.

11. If your AhsayOBS and AhsayRDR are hosted on the same machine, both AhsayOBS and AhsayRDR will be upgraded at the same time. You are required to manually add the HTTP and HTTPS connector definitions for the Redirector in the */usr/local/cbs/conf/server.xml*.

First, shutdown the CBS Service.

Second, modify the *server.xml* as shown in example below.

**Example:**

If your Redirector was using *HTTP 8080* and *HTTPS 8443* as the connection (substitute your port numbers), you need to add 2 extra connectors by duplicating the two connector definitions (Backup Server) and change to your Redirector ports.

Your *server.xml* contains:

```
<Service name="Catalina">  
  
    <Connector port="80" protocol="HTTP/1.1" ..... />  
  
    <Connector port="443" SSLCipherSuite="HIG....." />
```

You will need to duplicate the existing two Connectors, then modify the ports for the Redirector connector as shown in red.

```
<Service name="Catalina">

    <Connector port="80" protocol="HTTP/1.1" ..... />

    <Connector port="443" SSLCipherSuite="HIG..... />

    <Connector port="8080" protocol="HTTP/1.1..... />

    <Connector port="8443" SSLCipherSuite="HI..... />
```

Assuming that you are using wildcard SSL certificate for both Redirector and Backup Server.

If you are using different SSL certificates, you will need to change the values in **SSLCACertificateFile**, **SSLCertificateKeyFile**, and **SSLCertificateFile** in your HTTPS connector definition so they point to the correct files.

Restart the AhsayCBS service by the following 3 commands after you made the changes.

```
cd /usr/local/cbs/bin

sh shutdown.sh

sh startup.sh
```

12. Logon to the AhsayCBS web management console to check on your upgrade.
13. Continue with the [Post-Upgrade Section](#) in this guide.



## 5 Downgrade from AhsayCBS to AhsayOBSR v6

### Important

Since the changes made by AhsayCBS/AhsayOBM/AhsayACB are not backward compatible with v6, all historical backup are lost and you need to start over the backup again in v6. Please communicate with your clients and check if they are comfortable with this.

The only acceptable time when you can successfully downgrade to v6, is if you just upgraded to AhsayCBS and have not yet upgrade any client devices, and now found issues with the upgrade preventing you from further troubleshooting to resolve the upgrade problem. If several days or longer has passed, we do not advise downgrade as there would have been many changes to both the User Profile and configuration, which could corrupt your environment if you downgrade. If any client devices have upgraded, you should not downgrade unless your user can afford to redo their backup set from scratch.

If you still have a valid copy of v6 replicated data, you may recover your v6 Backup Server with the AhsayRPS, returning back to the day of last replication. Please follow our [article](#) instruction.

If you still have a copy of your v6 OBS installation directory and a copy of the User Home from just before you upgraded to CBS, then may be able to rollback to that day.

If you don't have a valid copy of v6 replicated data, please check if you still have the following 2 items that was prepared in the [Upgrade from v6](#) section.

1. A set of the latest v6 configuration files.
2. A copy of your existing v6 binaries/system home and client installers.

If you don't have a valid copy of v6 replicated data, or don't have the latest v6 configuration, binaries/system files. You won't be able to restore your backup server to v6.

Any new users created while running AhsayCBS, cannot be used in v6 and must be recreated, along with any backups they may have run will need to start over, after successful downgrade.

**Assumption:** Your backup copy of v6 binaries and System Home are located in:

#### Windows

*C:\Program Files\AhsayOBS and AhsayRPS\_62900*

#### Linux/Solaris/FreeBSD

*/usr/local/obs\_62900*

## Follow the steps below to downgrade:

### Windows:

1. Open command prompt and change the working directory to %CBS\_HOME%\util\bin

```
cd "c:\Program Files\AhsayCBS\util\bin"
```

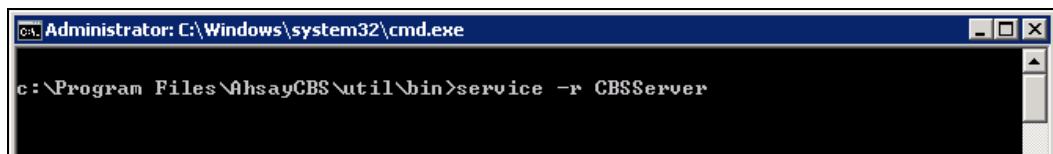
2. Run the following command within the command prompt would remove the service for AhsayCBS:

```
service.exe -r <Service Name>
```

where:

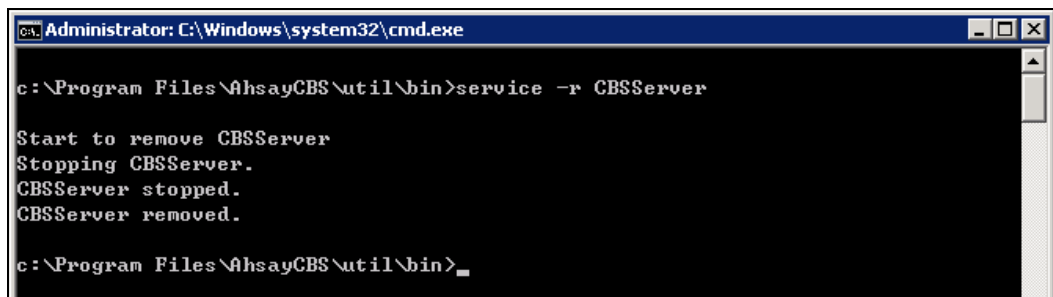
- Parameter “-r” means removing the service and parameter.
- <Service Name> - is the name of the service.

For example, in our case, we should run the following command:



```
Administrator: C:\Windows\system32\cmd.exe
c:\Program Files\AhsayCBS\util\bin>service -r CBSServer
```

A message of “CBSServer removed” as shown below will be displayed on the screen to advise that uninstallation of the service has been successful.



```
Administrator: C:\Windows\system32\cmd.exe
c:\Program Files\AhsayCBS\util\bin>service -r CBSServer

Start to remove CBSServer
Stopping CBSServer.
CBSServer stopped.
CBSServer removed.

c:\Program Files\AhsayCBS\util\bin>
```

Rename the folder of your v6 copy from

**C:\Program Files\AhsayOBS and AhsayRPS\_62900**

to

**C:\Program Files\AhsayOBS and AhsayRPS**

3. Change the working directory to C:\Program Files\AhsayOBS and AhsayRPS\util\bin

```
cd "c:\Program Files\AhsayOBS and AhsayRPS\util\bin"
```

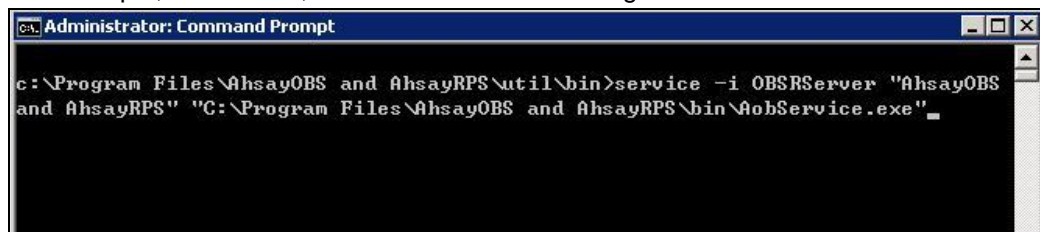
4. Run the following command within the command prompt to install the service:

```
service.exe -i <Service Name> <Service Display Name> <exe path>
```

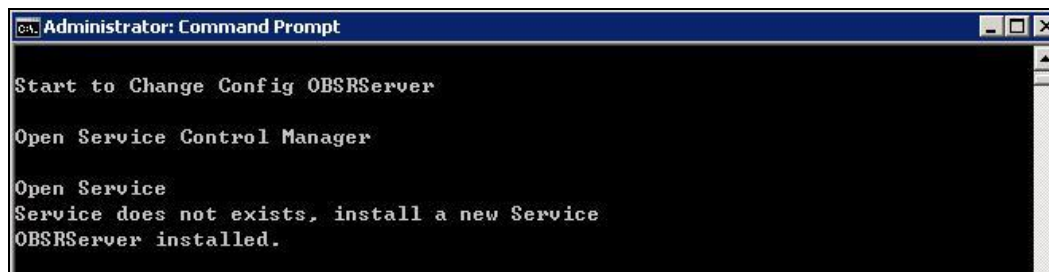
where:

- ▶ Parameter “-i” stand for install service and parameter “-r” stands for remove service.
- ▶ <Service Name> - is the name of the service.
- ▶ <Service Display Name> – is the display name of the service.
- ▶ <exe path> - is the path to AobService.exe. By default, it is located at  
%OBSR\_HOME%\bin

For example, in our case, we should run the following command:



A message of “OBSRServer installed” as shown below will be displayed on the screen to advise that the service has been installed successfully.



5. Please start AhsayOBS service via the Service management console.

This can be reached from [Control Panel] -> [Administrative Tools] -> [Services]. Press the [Start] button to start the [AhsayOBS and AhsayRPS] service.

Check availability of your Backup Server. Please point the web browser to <http://your-backup-server.domain.com/> .

Please also contact your client to run the v6 AhsayOBM/AhsayACB installer again if they have upgraded the client to v7/v8/v9.

## Follow the steps below to downgrade:

### Linux/Solaris/FreeBSD:

1. Logon with *root* access to the Linux/Solaris/FreeBSD machine.
2. Change to the *\$CBS\_HOME* directory and run the *uninstall* script using the command shown below.

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

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

```
[root@cos6x cbs]# sh ./bin/uninstall.sh  
Log Time: Wed May 13 14:39:48 HKT 2015  
  
Verifying current user privilege ...  
Current user has enough privilege to "uninstall".  
  
Using CBS_HOME: /usr/local/cbs  
Using JAVA_HOME: /usr/local/cbs/java  
Try to shutdown [ Ahsay Cloud Backup Suite ]  
  
-----  
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 CBS_HOME        : /usr/local/cbs  
Using JAVA_HOME       : /usr/local/cbs/java  
Using CATALINA_HOME   : /usr/local/cbs/tomcat  
Using CATALINA_OUT    : /usr/local/cbs/logs/catalina.out  
Using JAVA_OPTS       : -Djava.net.preferIPv4Stack=true -Djava.library.path=/usr/local/cbs/lib -Dtc.log.path=/usr/local/cbs/logs -Dtc.work.path=/usr/local/cbs/work -Dtc.obs.conf.path=/usr/local/cbs/conf -Dtc.rps.conf.path=/usr/local/cbs/conf -Dtc.rdr.conf.path=/usr/local/cbs/conf -Dcluster.server.name=inst1  
Using CATALINA_OPTS   : -Djavax.servlet.context.tempdir=/usr/local/cbs/work  
-----  
Stopping CBS service  
Wait 5 seconds before [ Ahsay Cloud Backup Suite ] is down  
Remove [ Ahsay Cloud Backup Suite ] (cbs) 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 obsr from /etc/init.d  
[ Ahsay Cloud Backup Suite ] uninstall service is complete!  
It is now safe to remove files from /usr/local/cbs  
[root@cos6x cbs]#
```

4. Move the current working directory of the AhsayOBS folder */usr/local/obs* to a backup folder. This **obs** folder should contain outdated information.

### Example:

```
mv /usr/local/obs /usr/local/obs_7500
```

5. Move the previous backup copy of the v6 AhsayOBS folder back to the original location.

```
mv /usr/local/obs_62700 /usr/local/obs
```

6. For FreeBSD environment-only, since you have upgraded the Java to OpenJDK8, to run AhsayCBS v8. In order to downgrade and run AhsayOBS v6, you need to have the native Java version 1.6 and set the environment variable of Java home pointing to the native Java version 1.6.

From the command line, run the following command:

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

(Above command applies only to FreeBSD)

7. Install and startup the OBS service by the following command:

```
# /usr/local/obs/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 OBSR_HOME /usr/local/obs
"JAVA_HOME" variable is set.
Current Directory: "/usr/local/obs".
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 Offsite Backup Server and Replication Server ]
[ Ahsay Offsite Backup Server and Replication Server ] Service Script created at /usr/local/obs/bin/obsr
Install Service for BSD type OS
Copying script obsr to /usr/local/etc/rc.d
You may start this service by:

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

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

[ Ahsay Offsite Backup Server and Replication Server ] setup completed!
Startup [ Ahsay Offsite Backup Server and Replication Server ]
Started [ Ahsay Offsite Backup Server and Replication Server ]
FreeBSD# -----
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 OBSR_HOME        : /usr/local/obs
Using JAVA_HOME         : /usr/local/obs/java
Using CATALINA_HOME     : /usr/local/obs/tomcat
Using CATALINA_OUT      : /usr/local/obs/logs/catalina.out
Using JAVA_OPTS         : -Xss256k -Xms754m -Xmx754m -Xrs -XX:+UseConcMarkSweepGC -XX:+UseParNewGC -X
X:NewRatio=4 -XX:SurvivorRatio=6 -XX:PermSize=128m -Dsun.net.inetaddr.ttl=3600 -Dnetworkaddress.c
ache.ttl=3600 -Dsun.net.inetaddr.negative.ttl=300 -Dnetworkaddress.cache.negative.ttl=300 -Djava.
net.preferIPv4Stack=true -Djava.library.path=/usr/local/obs/tomcat/lib
Using CATALINA_OPTS     : -Dtc.log.path=/usr/local/obs/logs -Dtc.work.path=/usr/local/obs/work -Dtc.o
bs.conf.path=/usr/local/obs/conf -Dcluster.server.name=inst1 -Djavax.servlet.context.tempdir=/usr
/local/obs/work
-----
Starting OBSR service
```

Check the backup server. Please point the web browser to <http://your-backup-server/>.

Please also contact your client to run the v6 AhsayOBM/AhsayACB installer again if they have upgraded the client to v7/v8.

## 6 Contacting Ahsay

### Technical Assistance

To contact Ahsay support representatives for technical assistance, visit the Partner Portal:

<https://www.ahsay.com/partners>

Also use the Ahsay Wikipedia for resources such as Hardware Compatibility List, Software Compatibility List, and other product information:

<http://wiki.ahsay.com/>

### 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/partners>

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

### Ahsay Professional Services

For customer requesting assistance from Ahsay to upgrade your AhsayOBS v6, to AhsayCBS, our Ahsay Professional Services team is ready to help.

- ◉ [AhsayUp Service](#)

For customers who prefer Ahsay to generate your custom images and/or custom CBS Installer, Ahsay Professional Services offers various branding services to assist you with your project:

- ◉ [Build my Branded CBS Installer](#)
  - If you have a graphics designer, but do not have the time to build the branding profile and build the custom installer, our team can assist you with this project.
- ◉ [Total Rebranding Service](#)
  - If you do not have a graphics designer, Ahsay can design all the required images and build your custom installer.

# Appendix

## Appendix A Hotfix Installation

### Hotfix Release Program

Ahsay Hotfix Release Program is part of our continuing efforts to provide our partners with quick resolutions for reported software issues. You may actively review the changelog and download the latest hotfix via [Ahsay Partner Portal](#).

In order to improve the turnaround time, the hotfixes have been thoroughly tested by our developers, but has not yet passed QA acceptance testing cycles.

Although our developers have made every effort to ensure the stability of the hotfix releases, as a best practice we recommend partners:

1. Conduct some basic testing before rolling out hotfixes to any production systems.
2. Retain a rollback copy of installation prior to deploying hotfix.
3. Deploy hotfixes to only the affected production systems.

If you elect not to install hotfixes, then you may wait for the next public release version which will roll-up earlier hotfix into latest release.

### Installation of Hotfix for AhsayCBS

- [FAQ: How to install the latest v9 release for AhsayCBS?](#)

### Installation of Hotfix for AhsayOBM / AhsayACB

- [FAQ: How to force another Auto Update on AhsayOBM / ACB clients](#)
- [FAQ: How to install the latest v9 release for AhsayOBM / AhsayACB?](#)

## Appendix B Supported Upgrade Paths

Here is a loose outline list of various supported upgrade paths.

### • In-place Upgrade

- This is the standard upgrade path outlined in Step 7.

### • Migrate to new replacement server (new OS, on-premises, non-cloud)

- New OS should be like-for-like (LFL). Example: Windows 2008, to Windows 2012
- [FAQ: How to migrate AhsayOBS onto a new server? \(2526\)](#)
- (optional) [FAQ: How to migrate AhsayOBS installation to another volume? \(2544\)](#)
- [FAQ: How do I move backup account between different User Homes \(on the same server or a different server\)? \(2709\)](#)
- Verify clients connect and no new issues
- Then proceed with in-place upgrade path

### • Migrate to cloud server (new OS, cloud VM)

- You will need storage data disks configured and natively accessible by the Operating System
  - Storage will be used by User Home path
    - Example: `E:\UserHome`
    - Example: `/mnt/diskvol1/userhome`
  - Not recommend to configure User Home under OS disk volume
- Proceed with “*Migrate to new replacement server*” path

### • Moving AhsayRPS v6 to new replacement server,

- Simply install AhsayCBS on the new server, and configure as new
- Input your AhsayCBS license
- On this server, configure “*Accepting Data*” first
- On the Backup Server, configure “*Sending Data*”

### • Moving AhsayRDR v6 to new replacement server

- Simply install AhsayCBS on the new server, and configure as new
- Input your AhsayCBS license
- Input your AhsayRDR license
- On this server, configure “*Hosting a Redirector*” for each Target
- For each Backup Server, configure “*Joining Redirectors*”



## Appendix C Help Topics

### Version 6

- [FAQ: Ahsay Hardware Requirement List \(HRL\) for version 6 \(3124\)](#)
- [FAQ: Ahsay Software Compatibility List \(SCL\) for version 6 \(2323\)](#)
- [Differences Between v6 & v7](#)
- [FAQ: How to determine the number of client licenses required before upgrading from AhsayOBS version 6 to AhsayCBS version 7?](#)
- [FAQ: How do I change the Backup Client type between AhsayACB and AhsayOBM? \(2539\)](#)

### Version 9

- [AhsayCBS v9 New Features DataSheet](#)
- [FAQ: Ahsay Software Compatibility List \(SCL\) for version 9.1 or above](#)
- [FAQ: Ahsay Hardware Requirement List \(HRL\) for version 9.1 or above](#)
- [FAQ: How to provision a Pool Key for AhsayCBS backup server?](#)
- [FAQ: How to modify the Java heap size of AhsayCBS?](#)
- [FAQ: Where are the backup client application logs stored at?](#)
- [FAQ: Frequently Asked Questions on Backup Destination](#)
- [FAQ: How to move a backup user to a different AhsayCBS server](#)
- [FAQ: When are the default Ahsay dummy / self-sign certificate acceptable for business?](#)
- [ISSUE: Access denied \(cannot login to the AhsayCBS console via the host name\)](#)

## Appendix D Supported Language Code

Language Code	Language
Ar	Arabic
Ca	Catalan
Cs	Czech
Da	Danish
de	German
el	Greek Modern
en	English
es	Spanish
eu	Euskara/Basque
fi	Finnish
fr	French
iw	Hebrew
hu	Hungarian
id	Indonesian
it	Italian
ja	Japanese
ko	Korean
lt	Lithuanian
nl	Dutch
no	Norwegian
pl	Polish
pt_BR	Portuguese (Brazil)
pt_PT	Portuguese (Portugal)
ro	Russian
sl	Slovenian
sv	Swedish
th	Thai
tr	Turkish
Vi	Vietnamese
zh_CN	Chinese (Simplified)
zh_TW	Chinese (Traditional)