

# USER MANUAL FOR ZMANDA LINUX CLIENTS



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## Zmanda Client for Linux Manual

Amanda Enterprise Edition Linux Client is a certified Amanda network backup software, tested and supported by Zmanda. This document has been prepared in conjunction with the Amanda Enterprise Edition Linux client 3.6 release.

Amanda Enterprise Edition Linux client packages are available for the following distributions from the [Zmanda network](#):

- Red Hat Enterprise
- CentOS
- Fedora
- Oracle Enterprise Linux
- Debian
- Ubuntu
- SLES
- Open Suse

Please see [supported platforms matrix](#) for exact versions of above distributions that are supported by 3.6 release.

This document confers about the Amanda Enterprise Edition Linux client installation, configuration and verification procedures.

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## Installation

Amanda Enterprise Edition Linux client packages are available from the [Zmanda network](#) download page.

There are two packages – Amanda Enterprise Backup Client package and Amanda Enterprise Extensions Client package. Both packages are necessary.

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## Pre-Installation Checklist

- Following packages should be installed on the client
  - GNU tar (version 1.15.1 or greater, except Red Hat/CentOS/Oracle Enterprise Linux), which supports version 1.14 or greater)
  - xinetd
  - ssh server
  - perl (version 5.8.0 or greater) – required only on the client
  - Schily tar (star 1.5a74 or greater) if extended attributes for file svsystems are being backed up. For selective restoration of files, star 1.5a85 or greater is required.
- Libraries (32bit libraries for 32bit Amanda client packages and 64bit libraries for 64bit packages) that are required are:
  - libcurl3
  - readline
  - glib2
  - termcap

These packages are installed by default on most Linux distributions. If you need to add them, you can use **yum**, **apt-get**, or **yast**. Packages can be obtained from the distribution media or from a distribution repository (run either as root):

```
#yum install package_name
```

or

```
#apt-get install package_name
```

or

```
#yast -i package_name
```

In the case of yast on SLES, you can also use the YaST Online Update (YOU) to install the new package and to keep the SLES distribution updated (which is recommended).

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## Client Installation

- Amanda client installation must be performed as super user (in other words, the root user).
- Download the Amanda Enterprise Edition 3.6 Linux client package from the Zmanda network download page. There are two packages - **amanda-enterprise-backup-client** and **amanda-enterprise-extensions-client**. Both packages are required.
- Install the packages (amanda-enterprise-backup-client followed by amanda-enterprise-extensions-client)
  - Use *rpm* or *dpkg* command if you are installing client binaries for Ubuntu1204, Ubuntu1210, Ubuntu1304, Ubuntu1404, Ubuntu1604, CentOS5, CentOS6, Fedora20, Fedora21, Debian6, Debian7, SUSELinux11, SUSELinux12, Solaris10, Solaris11

```
rpm -ivh <package name>
```

```
--or--
```

```
dpkg -i <package name>
```

- Use *yum* or *apt-get* command if you are installing client binaries for CentOS7, CentOS8, Fedora28, Fedora29, Fedora30, Fedora31, Ubuntu1604, Ubuntu1804, Ubuntu1810, Ubuntu1904, Debian 8.11, Debian9.9, Debian10.0

```
yum install -y ./<package name>
```

```
--or--
```

```
apt-get install -y ./<package name>
```

- Amanda client configuration files are created during Amanda client package installation. The list of files that are modified during installation can be seen in the above installation command output.
- The logs for Amanda client package installation can be found in `/var/log/amanda/install.log`. If there are installation errors, messages are logged to the `/var/log/amanda/install.err` file.
- During the install, the **amandabackup** user is created, if it does not exist. Please assign a password for the **amandabackup** user.

## Post-Installation Checklist

Note: These tasks must be performed as super user (the root user).

- Check installation log files  
The Amanda installation log can be found in `/var/log/amanda/install.log` and errors (if any) in `/var/log/amanda/install.err`.
- Perform [the post installation steps](#) common to all Amanda clients. These steps are required for backup and recovery operations.

## Adding Client File Systems in ZMC

You can add the Linux file systems/folders to the backup set using Zmanda Management Console. Use the [Backup What](#) page in the Zmanda management console, to add folders from the Linux client (Select **File systems** from the drop-down menu). You will need to specify the **Client Name**, **Host Name** and the **Directory** to back up.

Amanda does not cross file system boundaries and thus each file system/partition should be entered as its own entry (separate DLE object).

**Edit Object Linux/UNIX (File Systems) in list: newset** Licensing: 19 of 20 left

Host Name\*:  Encryption:

Directory/Path\*:  Compression:

Exclude Files:

**Advanced Options**

Estimate:  Reliably Accurate  Usually Accurate  Historical Average

Alias:

Client Max Backups:  maximum permitted simultaneous DLE backups for this Amanda client

Strategy\*:

Disable Staging:  (not recommended)

**Amanda Backup Client Application**

Extended Attributes:

Recommended:

Override:

You can exclude files, specify encryption and compression to be used for the directory. Special files such as device files, named pipes, sockets, etc. can cause errors from the native backup and restore tools and they should be excluded from the backup.

Linux file systems can be backed up using different Amanda methods (**Amanda Backup Client Application**). The default method is using **gtar** (GNU tar). Another method that is available is Schily tar (**star**).

**Schily tar** allows the backup of extended POSIX attributes (such as SE Linux MAC labels). This application can be selected by checking **Extended Attributes** under **Amanda Backup Client Application**. In order to select this application requires starcommand to be installed on the Amanda client.

You can specify different estimate algorithms and number of client backups that can happen in parallel (**Client Max Backups**). You can specify if you want only full or incremental or skip the backups of a Linux directory using **Strategy** field.

## Restoring Linux files

Linux file systems can be restored using [Zmanda Management Console Restore](#) pages or using [amrecover](#) command.

The restoration process begins at [ZMC Restore What](#) page. You can select the Backup Date entering the value or you can click the date stamp from [ZMC Report Summary](#) page.

The screenshot displays two panels from the Zmanda Management Console Restore interface. The top-left panel, titled "What would you like to restore from: newset", contains fields for "Backup Date" (with a "Today" checkbox and an "OR" option), "Host Name" (set to "localhost"), and "Alias/Directory/Path" (set to "/var"). It includes "Explore & Select", "Clear", and "Express Restore" buttons. The top-right panel, titled "Directories / Files to be Restored from: newset", shows a file browser for the "/var" directory with a "Select: All | None | Invert" menu and a list of directories: amanda/, cache/, db/, and empty/, all of which are checked. The bottom-left panel, titled "Select Directories / Files to Restore from: newset", shows a file browser for the "/var" directory with a "Select: All | None | Invert" menu and a list of directories: account/, amanda/, cache/, db/, empty/, ftp/, games/, local/, lock/, log/, mail, named/, and nis/. It includes ">>", "<<", and "Reset" buttons.

You can select the backup image's **Host Name** and Directory to be restored. If the Amanda indexes are available on the server, ZMC can provide the possible values (click the Edit button). You can either **Explore & Select** specific files to be restored as shown above or perform **Express Restore** to restore all files from the image.

You can select specific directories and files to be restored. If the number of files is too large, the **Explore & Select** might take too long to complete. You are recommended to use **Express Restore**.

Next step is specifying the conflict resolution policies and selecting where to restore to - **Restore What** page.

### Conflict Resolution Settings

Action taken when destination has existing file of the same name:

Keep Existing files/directories  
 **safest**

Rename Restored files/directories

Rename Existing files/directories

**Overwrite Existing files/directories**  
 **riskiest**

### Where would you like to restore to?

DLE/Object Type: **Linux/UNIX**

Destination Host Name\*: localhost

Source Host Type: Linux/UNIX

Destination Host Type: **Linux/UNIX/Mac/Solaris**

Destination User Name: root i

Destination Directory: /var/restore

Temporary Directory: /tmp i

There are four possible Conflict Resolution Settings as shown above. If the **Destination Directory** is empty, you select **Overwrite Existing files/directories** as conflict resolution. You should specify the **Destination Host Name**, where backups will be restored to the **Destination Directory**. The **Destination Directory** and **Temporary Directory** must be writable by **amandabackup** user and must have sufficient space to hold the whole backup image. Please note that the default value of **/tmp** for the **Temporary Directory** is not recommended for production.

If the **Destination Host** is not running Amanda client, **ssh** will be used for restoration. The ssh user and password will be required. The **Destination User Name** is used as the **ssh** user.

After verifying the entered information, use the navigation to go to ZMC **Restore Restore** page.

### Restore From

Backup made before: **May 17, 2010, 6:48 am**

DLE/Object Type: **Linux/UNIX**

Initial Host: localhost

Initial Directory/Path: /var

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### Restore To

Destination Host: localhost

Destination Directory: /tmp

Conflict Resolution: **Overwrite Existing**

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### Tapes Needed

Date	Time	Label
2010-05-17	06:42:22	newset-001

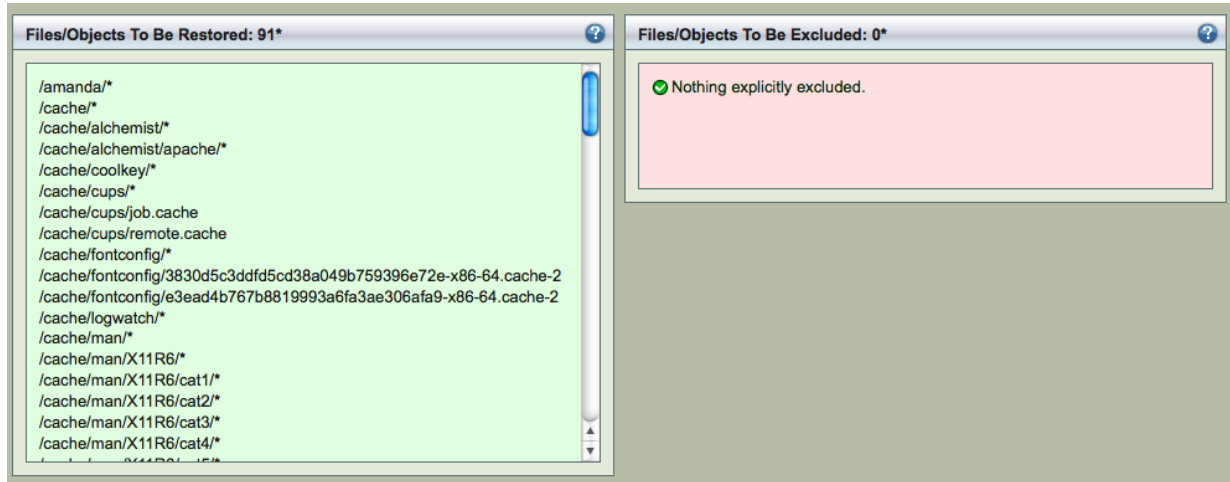
### Restore Summary for: newset

**Status of Restore:**

No Task Launched

[Restore](#)

Start the Restore process by clicking **Restore** button. It shows the list of tapes or virtual tapes (in case of Disk and Amazon S3 backup) that will be used for restoration. It is important to have these tapes available in the tape changer. The list of files to be restored and count will also be displayed as shown below. Any files that are excluded are also displayed (**Express Restore**).



The restore process will involve transferring the data to the **Destination Host** and extracting the specific files.