



ARKEIA NETWORK BACKUP QUICK START GUIDE

August 2005

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Introduction

Welcome to the Arkeia Network Backup Quick Start Guide! This Guide will walk you through the basic steps needed to:

- install Arkeia Network Backup;
- start the user interface;
- test the installation with a null backup;
- connect Arkeia Network Backup to your hardware; and
- create your first backup.

Thank you for purchasing Arkeia, the leading software for heterogeneous network backup! We are confident that Arkeia Network Backup will answer your needs for fast and reliable backup under many Operating Systems.

Arkeia Network Backup has a broad range of useful features beyond the basic elements, which will make your backup operations easier and more efficient. For this reason we advise you to read the *Arkeia 5 User Manual*, which is supplied in PDF (*Portable Document Format*) with your Arkeia Network Backup distribution, before you move on from the basic backup creation described in this guide.

If you are reading this manual online in the form of the PDF file, the Table of Contents can be displayed as Bookmarks in Adobe Acrobat Reader. If you cannot see the Bookmarks panel, click **Window > Show Bookmarks**. Clicking on a Bookmark item will take you to the relevant page of the manual.

Version

Software: 5.3.x

Manual: edition 7.2

If this documentation appears to be outdated or incomplete, check for a later version by connecting to the Arkeia web site, at the following URL:

<http://www.arkeia.com/support.html>

You will notice that this document contains many links like the one above, as well as references to other chapters of the manual. If you click on a link, your PDF viewer should either take you to the correct section of the manual, or the default web browser of your system should open the correct web page (provided you are connected to the Internet).

Who should read this manual?

This manual is designed for the network and system administrators who have to install, manage and maintain the machines and the networks backed-up by Arkeia, and for users who wish to set up backup functions on client machines.

Administrators

Network administrators will benefit greatly by reading this guide carefully before any installation or configuration of Arkeia. Most problems that occur during the

use of Arkeia can be solved by referring to the relevant chapter of the *Arkeia 5 User Manual*.

Users

Non-administrator users of Arkeia should read the *Arkeia Network Backup User Manual, Chapter 5:Basic concepts* to understand the main concepts of the software, especially the distinction between a server, a client and an interface. Also of interest to users are these explanations found in the *Arkeia 5 User Manual*:

- *Chapter 3:First steps*;
- *Chapter 6:Create objects and users*;
- *Chapter 7:Interactive backup*; and
- *Chapter 9:Data restoration*.

Typographical conventions

The following typographical conventions are used in this manual to help you quickly recognize different types of information.

Important Notes for ALL Users



Paragraphs in this style contain important information for all users of Arkeia. It will be necessary to apply the information to your network, server or client setup in order to successfully perform a backup or restoration.

Important Notes for Some Users



Paragraphs in this style contain information which may be important for your configuration. You should read this information and decide whether it applies to your network, server or client configuration before proceeding.

Code

This style of paragraph indicates either:

1. information you must type on a command line or into a dialogue; or
2. output you should see on your screen as a result of an action.

```
$ ls -Al
drwxr-xr-x  2 root   root       2048 Dec  6 23:03 bin
drwxr-xr-x  3 root   root       1024 Sep  1  1999 boot
drwxr-xr-x  5 root   root      34816 Feb 25 04:02 dev
drwxr-xr-x 31 root   root      3072 Feb 27 17:28 etc
drwxr-xr-x 19 root   root      1024 Feb  7 18:49 home
drwxr-xr-x  4 root   root      3072 Sep  1  1999 lib
drwxr-xr-x  2 root   root     12288 Sep  1  1999 lost+found
drwxr-xr-x  9 root   root      1024 Sep 29 18:26 mnt
dr-xr-xr-x 61 root   root         0 Feb  6 11:51 proc
drwxr-x---  7 root   root      1024 Nov 29 12:29 root
drwxr-xr-x  3 root   root      2048 Aug  9  2000 sbin
drwxrwxrwt 11 root   root      1024 Feb 28 17:01 tmp
drwxr-xr-x 23 root   root      1024 Nov 23  1999 usr
drwxr-xr-x 18 root   root      1024 Sep  1  1999 var
```

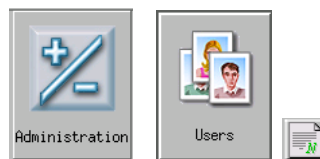
In this example, the command `ls -Al` has been entered in the root directory of a UNIX machine. The lines under the command represent the output, which is displayed on the screen.

Navigation

Navigation through the GUI interface requires the usual series of mouse clicks on:

- icons to select menus,
- menus to select other parts of the interface,
- buttons to start processes and confirm your input.

A series of button and icon clicks is represented in a line, firstly with a picture of the icon or button, later only with the names of the icons or buttons. For example, access to the Users management menu from the Main menu to create a new user, is described as follows:



Main menu: > Administration > Users > New

Obtaining Arkeia Network Backup

Arkeia Network Backup software and documentation can be downloaded via the internet at

<http://www.arkeia.com/download/anb.html>

Arkeia Light, a version of Arkeia Network Backup is available to Linux users at no cost, for personal or commercial use. You can download Arkeia Light at <http://www.arkeia.com/download/light.html>.

To buy a license for the software, fill in your details at <http://www.arkeia.com/prices.html> and an Arkeia sales representative will contact you promptly by email.

Arkeia Network Backup Licenses

Three different types of license are available for the use of Arkeia Network Backup

Free license - Arkeia Light

This license is limited in scope, but is perfect for very small or SOHO class networks. This license allows a single server, connected to a single drive to backup two clients (Linux, BSD or Microsoft Windows machines only).

Note that some functions, such as tape library support and archive backups or backup through NFS mounts are not available with Arkeia Light. This version is not upgradeable to Arkeia Professional. Arkeia does not provide technical support for this free version.

30-day trial license

This license allows Arkeia clients to test Arkeia Network Backup on a larger network (up to 10 clients) on 9 different configurations. A special license can be granted to use this trial version with tape libraries and autoloaders.

Normal license

This is the *commercial* version license. It provides a complete version of Arkeia Network Backup, including all the functions that are required of a corporate, mission-critical backup application. Ordering a normal license is can be done through

<http://www.arkeia.com/prices.html>.



Additional licenses may be necessary for:

- advanced backup hardware such as tape libraries and autoloaders, and
- hot backup plug-ins.

Please contact an Arkeia sales representative for more information.

Software installation

The Arkeia Network Backup software is downloaded via the internet, or delivered on a CD in these formats:

- Linux distros which support RPM package manager:
arkeia-5.3.0-1.i386.rpm
- UNIX and Linux distros which do not support RPM:
arkeia-5.3.0-1.i386.tar.gz
- Windows operating system:
arkeia-5.3.0-1.zip
- Novell:
arkeia-5.3.0-1.zip
- Apple Mac OS X:
arkeia-5.3.0-1.dmg.dz

The version numbers and architecture identifier of your file may vary.

The basic server, client and interface of Arkeia Network Backup is augmented by several specialized plug-ins which add functionality, such as:

- advanced hardware control;
- disaster recovery; and
- hot backup of specific application data, for example DB2 or Lotus Notes.

These are supplied as separate installation packages, and usually require another Arkeia license to run. Please refer to the *Arkeia 5 User Manual*, and the documentation which accompanied the plug-ins for instructions on how to install them, this Quick Start Guide only covers the basic Arkeia functionality.

To begin installation, copy the distribution file to a convenient place accessible from the target computer. You will need to log on to your system with `root` user, or Administrator permissions to install the software.

Linux rpm

Log in as `root`, then run the `rpm` utility.

```
$ su root
Password: <Enter the root password>

# rpm --install arkeia-5.3.0-15.i386.rpm
```

Arkeia Network Backup server name

For the initial start up of Arkeia Network Backup, it is necessary to edit the file `/opt/arkeia/arkeiad/admin.cfg` to add the name of the Arkeia host server. Open this file in an ASCII text editor (for example `vi` or `emacs`), and type in the name of your server, nothing else, then save and close the file.

If you experience problems with the installation, try again using the `-vv` and `--force` options of the `rpm` utility to display more information, which may help you to overcome the problems. Enter `man rpm` for more information about the `rpm` utility.

UNIX tar.gz

Use this procedure also for Linux platforms which do not support `rpm`.

To install, first log in as super user and uncompress the distribution files, then run an installation utility.

```
$ su root
Password: <Enter the root password>

# tar -xvzf arkeia-5.3.0-15.i386.tar.gz
```

The `tar` utility will create a directory named `arkeia-5.3.0-15`, which contains the Arkeia Network Backup software. To complete the installation, enter this directory with the following command:

```
# cd arkeia-5.3.0-15
```



It is a good idea to read the README text file which you will find in this directory to get the latest information on your release.

Run the supplied installation utility with the command:

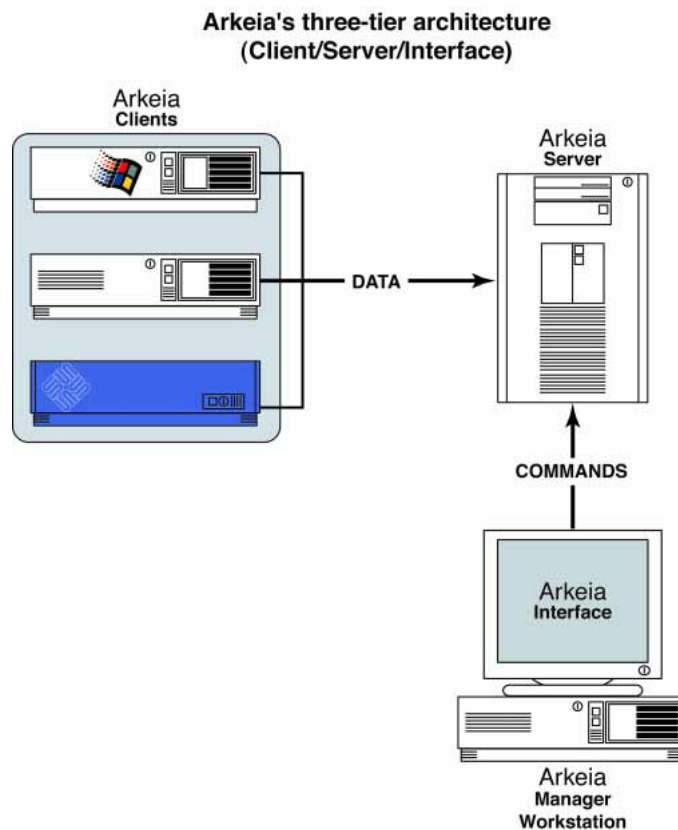
```
#!/install
```

The installation procedure will start and ask some questions before proceeding. If the installation has been completed successfully, you will be able to use Arkeia Network Backup immediately. If not, try to solve the installation issues by running the supplied installation procedure again.

How Arkeia Network Backup Works

Arkeia uses a variation of the standard *Client/Server* architecture by adding an *Interface* layer. This layer is particularly important for large and complex networks, with several backup servers.

The *Interface* layer allows you to install the management interface on any machine of the network. From this machine you can then configure and control the different backup servers present on the network.



Server

An Arkeia Network Backup server is a machine which communicates on the network with client machines, and with the backup media (usually tape drives), and controls the flow of backup data. The Arkeia Network Backup complete suite of software is installed on servers, allowing them to be clients so that their own data can be backed up.

Client

An Arkeia Network Backup client is a machine which contains data to be backed up. The Arkeia client software is installed on client machines to allow communication with the backup server.

Interface

The Arkeia Network Backup interface can be installed on any machine on your network which can connect with the backup server. You create, configure and run backup and restore operations through the Arkeia Network Backup interface. There are two interfaces available:

- the GUI graphical user interface, and
- the command line interface.

The Arkeia Network Backup server, client and interface modules can be installed to work under a wide range of machines and operating systems. For example, the client module can be installed under most distributions of Linux, UNIX and Mac OS X, on most machines. However, not all platforms can run the server, GUI or command line interface modules. The list of supported platforms is quite long, and new platforms are being added regularly. You can check the most recent list of platforms supported by each module at this URL:

<http://www.arkeia.com/platforms.html>

This guide refers specifically to the GUI in explaining the basic functionality of Arkeia Network Backup.

User interface

The GUI is supported on several UNIX and Linux platforms. Any machine which is on the same network as the Arkeia Network Backup server and has the GUI installed, can be used to communicate with the server to configure and run back-ups.

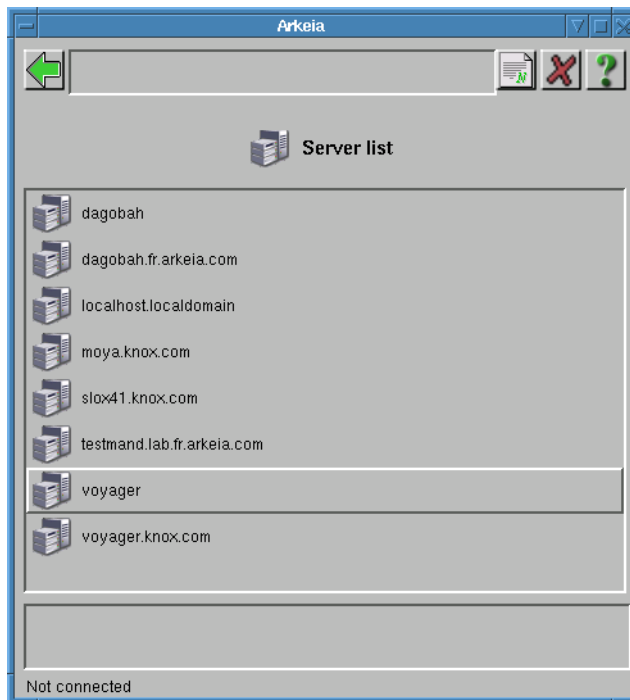
Start the GUI

To start the GUI, at a command line prompt:

```
enter           # /opt/arkeia/bin/arkboot start
system responds arkeiad is starting ...
then enter      # /opt/arkeia/bin/xarkeia &
```

The `arkboot` command starts the Arkeia daemon. This will normally start automatically each time you reboot from now on.

After a splash screen, you will see something similar to this:



with your logon name and the name of your server in the list.

Window controls

The window control buttons are:



New. In this context, creates a second interface.

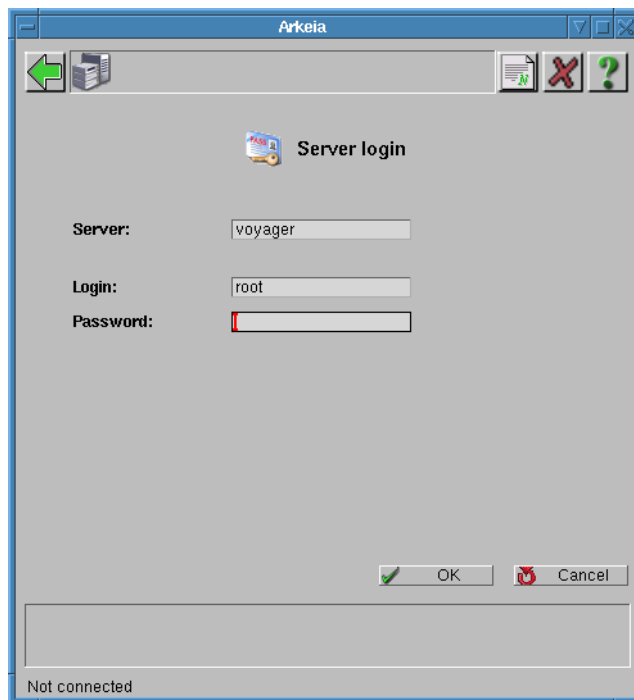


Quit. Click on this button to close the interface. Arkeia processes running at the time you close the interface will continue to run.



Help. Context-sensitive help.

Click on your server name to get the Server login screen:

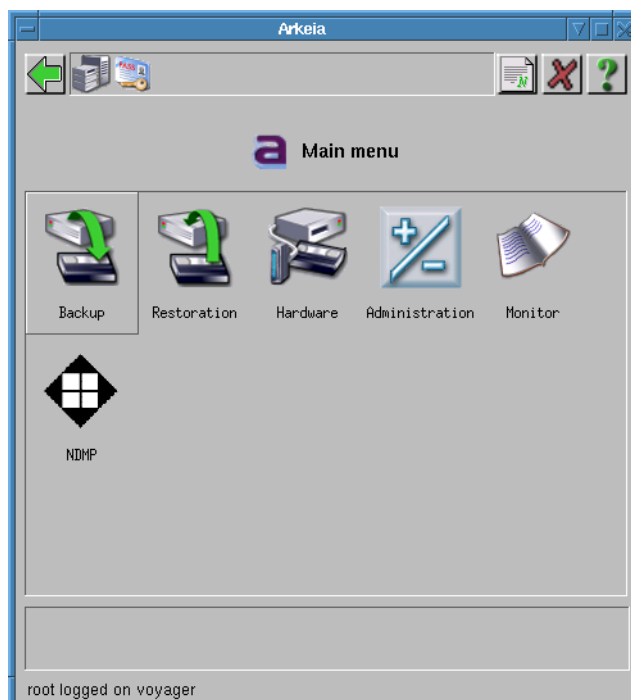


For the moment, enter this information into the fields on this screen:

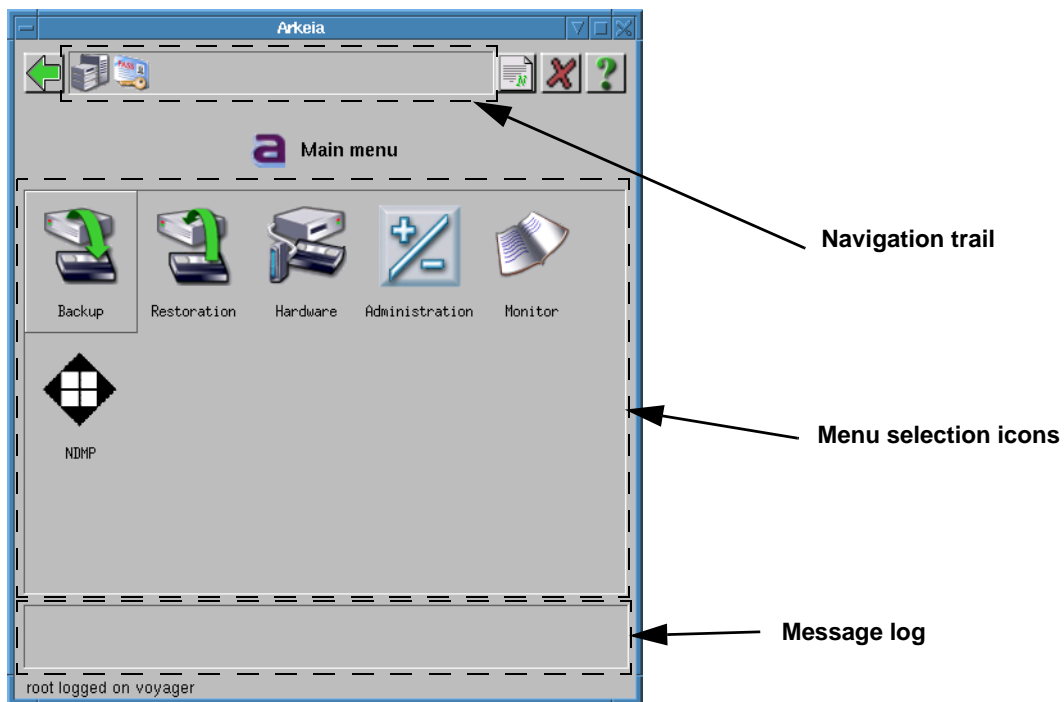
Server: <Your server name>
Login: root

Leave the Password field blank, and click on the Ok button at the bottom right of the window.

The Main menu window will appear:



The different information regions of the standard Arkeia window are labeled in this image:



Arkeia usually divides its menus into two separate lists:

- the object list, and
- the function list.

Objects are the Arkeia entities that are going to be created, modified, deleted, or configured through the list of functions. As an example, see the image below of the Tapes management menu:







The menu is divided into two main zones:

- The zone on the left is the object list. In this instance, it contains 8 tapes, named test01 to test08.
- The zone on the right is the function list. The functions listed here will affect whichever objects in the objects list are selected.

Objects are selected by clicking on the grey box to their left. For example, to write a label to the tape object `test03`, you would click on the checkbox to the left of `test03` in the objects list, then click on `Write label` in the functions list.

The zone on the right of the menu is the function list. All the functions that are listed there can affect all the objects in the object list, or just the objects that have been selected by clicking on the grey check box next to their names. In the example above, it is possible to recycle a tape by first selecting it, then clicking on the `Recycle` function. Or, it is possible to recycle all the tapes by clicking on all the grey check boxes, then on the `Recycle` function.

Above the object list (the list of tapes of our example above), there are four basic functions that are very useful for quick operations. These functions are, from left to right:

- | | | |
|---------|---|--|
| Back |  | Click on this button to take Arkeia back to the previous menu. |
| Refresh |  | Click on this button to redraw the entire list. |
| New |  | Click on this button to start the creation process of a particular object. In our example above, this would start the tape creation process. |
| Delete |  | Click on this button to delete the objects that have been selected in the list of objects. In the example above, this would delete one or several tapes, depending on which checkboxes have been selected. |

Simply leaving the mouse pointer on these buttons for an instant will display a short help balloon, which contains a definition of each button function.

Password security

One very important post-installation configuration that **must** be done to ensure the security of the Arkeia server is to change the default password for the `root` user.

By default, there is only one user created on a newly-installed Arkeia server: `root`, and the password used by this user is blank. For instance, once the installation of the server has been completed, simply hitting the `Enter` key on the server login screen allows any user to connect to the Arkeia server.

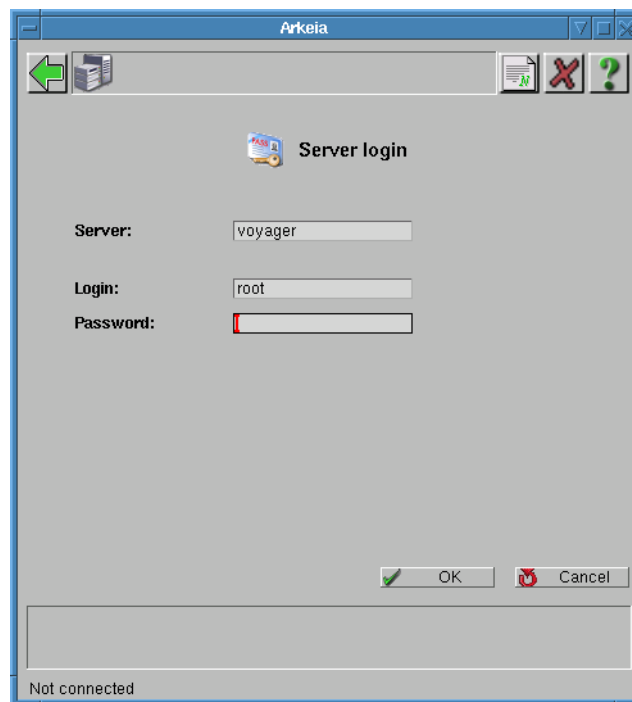


Changing the default `root` password of a complex system such as Arkeia is the most basic security measure that can be applied, and should be considered mandatory in a production environment.

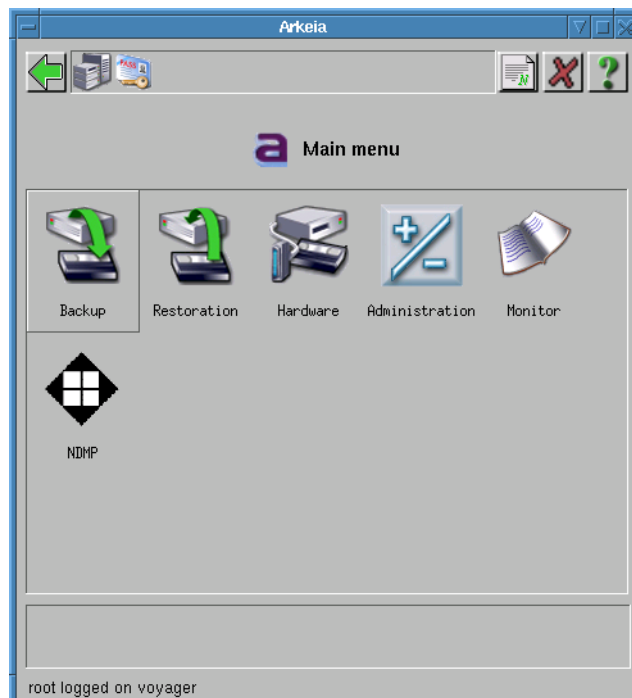
Follow these steps to create a password for the `root` user.

Step 1: Start the GUI.

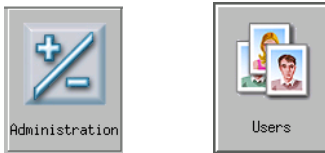
Step 2: Click on the name of your server.
The Server login window will appear:



Step 3: Leave the password field blank and click on Ok.
The Main menu window will appear:

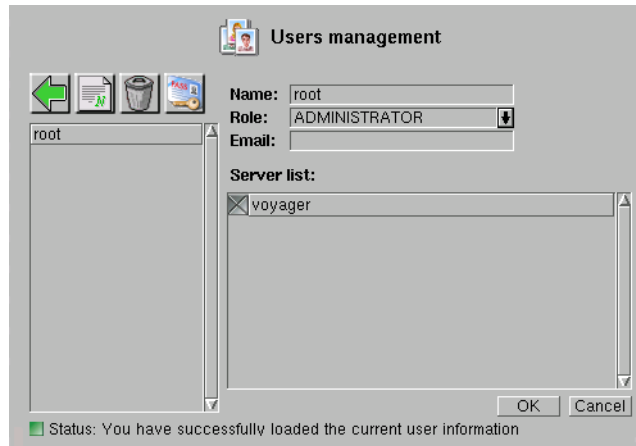


Step 4: Click on



Administration > Users

The Users management window will appear:



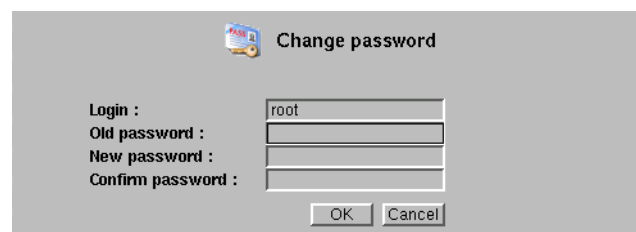
The root user will be highlighted in the objects list, and your server name will be highlighted in the servers list. These will be the only entries if you are doing the first installation of Arkeia.

Step 5: Click on



Change password

The Change password screen will appear:



Step 6: Type in the password. Leave the Old password field blank, type and confirm the password you want to use into the other fields.

Step 7: Click on Ok.

Test the Arkeia Network Backup installation

The quickest and easiest way to test the installation of Arkeia Network Backup is to do a basic backup to a NULL device. While this does not test the backup hardware, it allows you to test the network connection between the Arkeia server and its clients.

Basic backup

The steps to create a basic Interactive backup on a simple single tape drive system with no tape libraries or autochangers are:

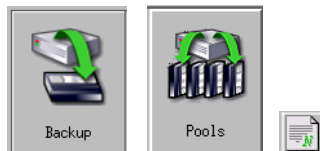
1. Create a tape pool.
2. Create tapes.
3. Create a tape drive.
4. Create a Drivepack.
5. Create a Savepack.
6. Add disks, directories and files as required to the Savepack.
7. Launch the backup

We will make a basic backup using NULL tapes and devices. Null tapes and devices do not exist physically, they exist only in software, which allows you to test the application without setting up the hardware.

Null backup

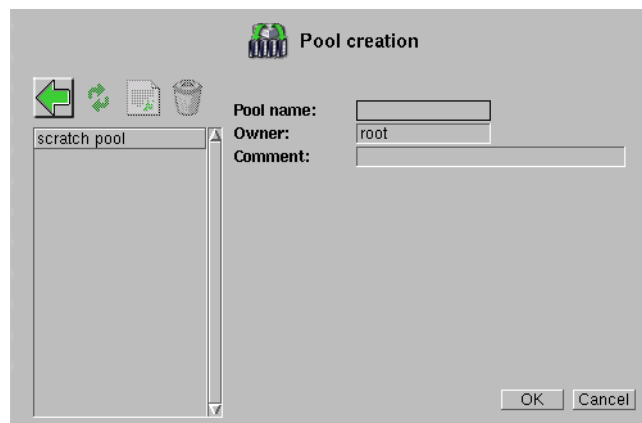
The directions which follow assume that you are logged in as root.

Step 1: Create a null tape pool. Click on:



Backup > Pools > New

The Pool creation screen will appear:



Step 2: Enter the following information in this screen:

Pool name: NullPool or some other descriptive name.

Owner: Accept the default, which will be your login name for this session.

Comment: Enter a descriptive comment (optional).

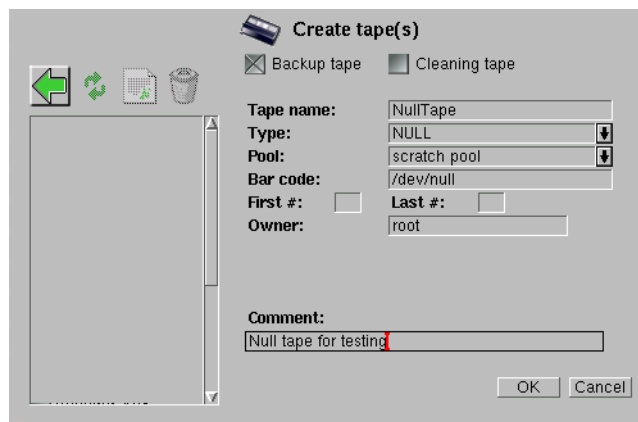
Click on **Ok** to confirm and create the tape pool.

Step 3: Create a null tape. Click on:



Hardware > Tapes > New

The Create tape(s) screen will appear:



Click on the **Backup tape** checkbox, then enter the following into the fields on this screen:

Tape name: NullTape
Type/ NULL (choose this from the drop list)
Pool: NullPool (choose this from the drop list)
Bar code: /dev/null
First #: leave blank
Last #: leave blank
Owner: root
Comment: Type in a useful comment (optional)

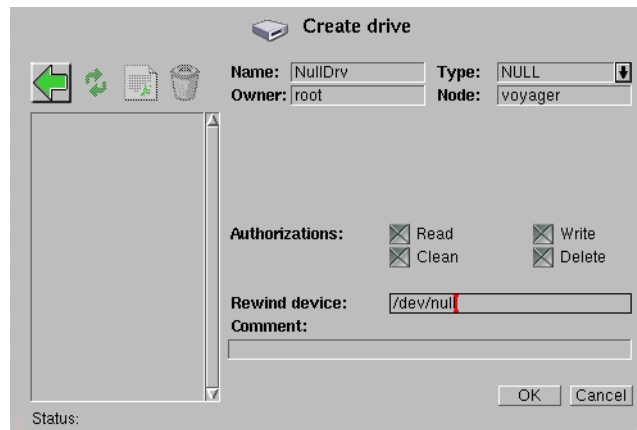
Click on **Ok** to finish.

Step 4: Create a null drive. Click on:



Hardware > Drives > New

The Create drive screen will appear:



Type the following into the fields indicated, leave the other fields as they are:

- Name: Enter a descriptive name.
- Type: Select NULL from the drop list.
- Rewind device: /dev/null
- Comment: Choose a useful comment (optional).

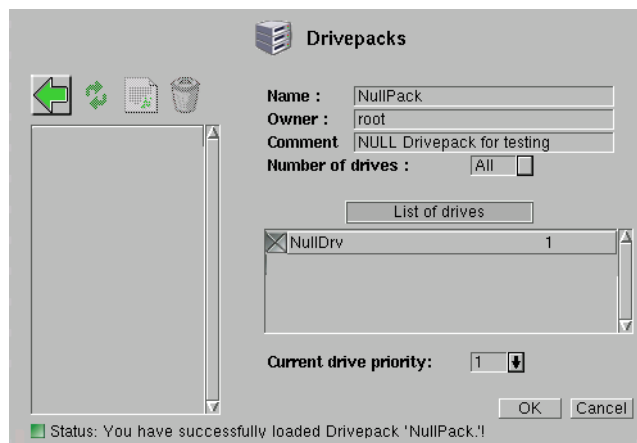
Click on Ok to finish.

Step 5: Create a null Drive Pack. Click on:
Every drive must belong to a Drivepack, even if there is only one drive. Click on:



Backup > Drivepacks > New

The Drivepacks screen will appear:



Type the following into the fields indicated, leave the other fields as they are:

- Name: Enter a descriptive name.
- Comment: Choose a useful comment (optional)
- Type: Select NULL from the drop list.
- List of drives: Select the NullDrv drive created in the last step.

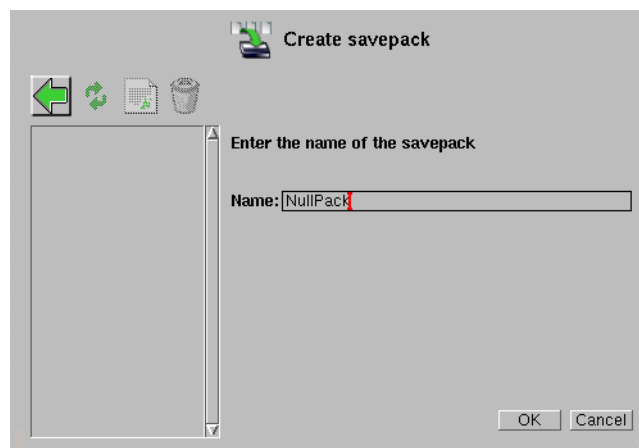
Click on Ok to finish.

Step 6: Create a Savepack. Click on:



Backup > Savepacks > New

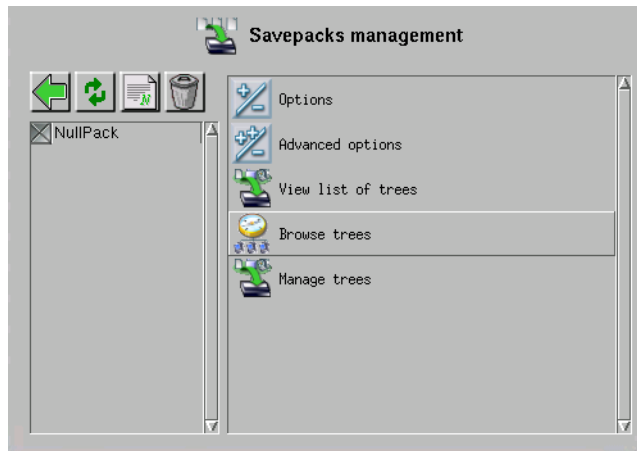
A Savepack is an Arkeia object which contains data paths to the files, directories and disks present on clients' machines that need to be saved in a single backup session. The Savepacks screen will appear:



Enter a descriptive name in the Name: field and click on Ok to create the Savepack and return to the Savepacks management screen.

Step 7: Add files to the Savepack

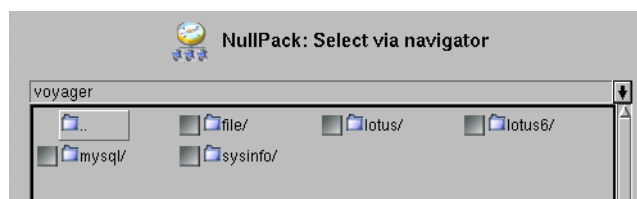
The next step is to add objects to the Savepack that was just created. To do this, select the new Savepack by clicking on the grey checkbox next to its name, then click on the `Browse trees` option in the functions list, shown below:



In this example above, the new Savepack is named `NullPack`. Clicking on the `Browse trees` option displays a `Navigator` screen like this in the main window of Arkeia Network Backup:



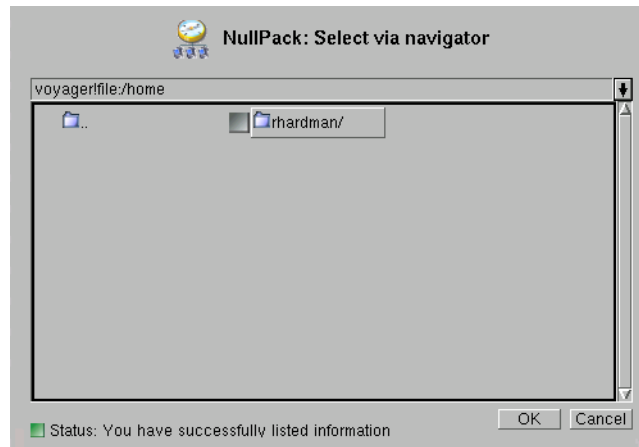
All the clients currently managed by your Arkeia server appear in the first `Navigator` screen (pictured above). Your list will contain the clients you have installed on your network. To select a client, double-click on its name. The menu shown below should then appear in the main Arkeia window:



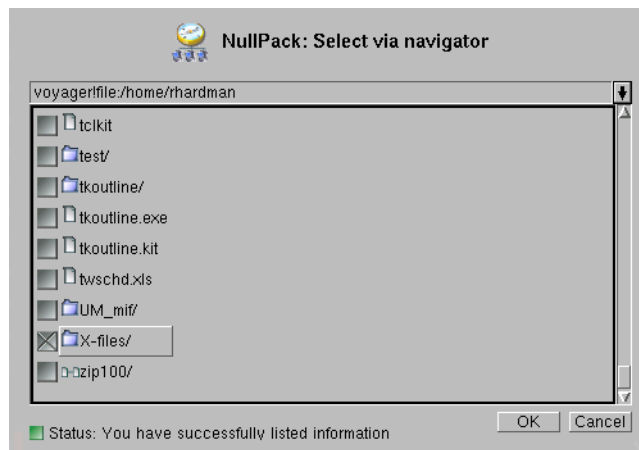
Note that if you click the checkbox next to the client name, you will select the *whole client* for backup. In `Navigator` screens, when you click on the checkbox associated with the entity's client, disk drive or directory, you have selected everything contained in the client, disk drive or directory.

This menu allows you to choose the type of plug-in that should be used for the backup. The two default plug-ins of Arkeia Network Backup are `file` (to select the hard disks and file systems of the client) and `sysinfo` (to save the system information for the Arkeia Disaster Recovery). As above, double click on the name of the plug-in to select some elements. Choose the `file` plug-in for this test, and double-

click on it to display the something similar to the following, depending on the configuration and contents of your system:



As can be seen in the screen pictured above, the `voyager` machine is a UNIX or Linux workstation. The `file` plug-in, by default, displays the content of the root (`/`) file system. By moving within the tree structure, you can select any item (directory or file) that should be backed-up by the Arkeia server. To select an item, click on the grey check box next to its name, as is shown in the screen below:

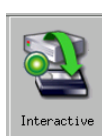


In the case shown above, the sub-directory `X-files/` has been selected in the directory `/home/rhardman`, on the machine named `voyager`. Click on `Ok` to complete the selection and return to the main `Savepacks` management screen.



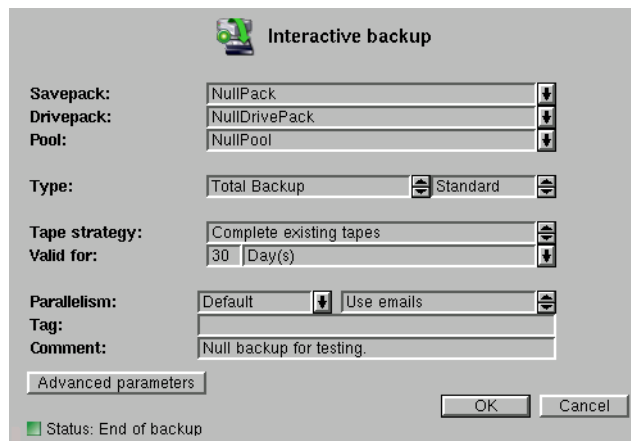
You should select large amounts of data for this test, and select this data on an Arkeia client, not on the server itself. Once the Savepack has been created, it can be re-used in a real backup, using real tape drives or libraries connected to the Arkeia server.

Step 8: *Launch the null backup. Click on:*



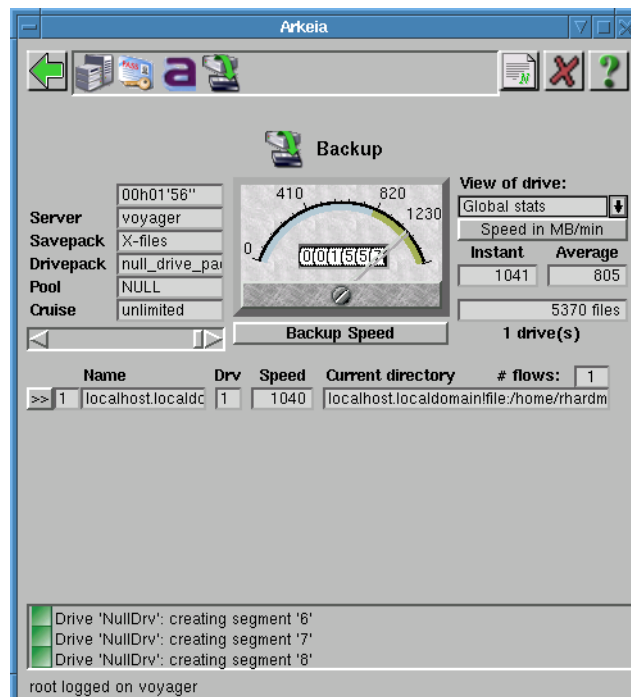
Backup > Interactive

The Interactive backup screen will appear:



In this screen, make sure the Savepack, Drivepack and Pool fields contain the null entities created in the steps above, and the Type: field is set to Total backup. Enter a useful comment in the Comment: field, if you want to. The remaining fields can be left at their default values.

Click on Ok to start the backup. The Backup screen will appear:



At this point, you can be sure that Arkeia Network Backup has been installed properly, and you can proceed with your hardware installation to build a fully functional backup system. Should you receive any error messages, contact Arkeia technical support for help in resolving them.

Hardware installation

Arkeia Network Backup supports a broad range of backup devices:

- tape drives
- tape libraries
- autoloaders

however, IDE devices and devices with interfaces other than SCSI, are not able to support the very high rate of data transfer between the server and the backup device required by Arkeia Network Backup to perform at maximal efficiency, so they are not supported.



Arkeia Network Backup supports *only* SCSI and hard drive backup devices. All other devices, using any other type of interface (USB, Firewire, IDE, parallel port, etc.) are unsupported at this time. Using these devices with Arkeia will cause backups to either fail or will severely limit their performance and stability.

SCSI configuration

The UNIX and Linux device files used by Arkeia are:

- `/dev/sgX`: Under Linux, a device with a name such as `/dev/sgX` (where X is the device number) is a standard SCSI device. This type of device can be used by Arkeia Network Backup to manage the autoloader of a SCSI tape library.
- `/dev/stX`: Under Linux, a device with a name such as `/dev/stX` (where X is the device number), is a *rewindable* SCSI device. This type of device is used by Arkeia Network Backup to read and write to the tapes present in drives.

Vendor-supplied device drivers

Many companies supply their own device drivers for their backup hardware. These drivers may have different names, and may even be just symbolic links to existing devices. For instance, IBM supplies `/dev/IBMtapeX` for rewindable devices, where X is the device number with its LTO library.

For more information on such drivers, refer to the documentation supplied with your backup hardware.

Hardware checks

- Make sure all devices are properly connected. If necessary, check the connecting cable on another, correctly working SCSI device, and replace the cable if it is found to be defective.
- Make sure that all SCSI devices connected to the same adapter are of the same type! Mixing SCSI II and SCSI III devices will either block all communications between the devices and the adapter, or slow down the transfer of data from the devices to the server.
- Make sure that all devices are correctly configured within the SCSI chain, especially their device numbers.
- Do not use other SCSI devices, such as a hard disk or a CD-ROM, on the same SCSI adapter as the backup device.

Software troubleshooting

There are several programs and utilities available, under Linux and most UNIX operating systems, that can help with the configuration and troubleshooting of a SCSI chain. If you experience difficulties, follow these steps to detect the causes:

Step 1: *Correct SCSI peripherals ID*

The first step in a troubleshooting procedure is to make sure that the SCSI peripherals have been correctly identified and detected during the bootstrapping procedure of your machine. To do this, display the messages returned by the system by using the `dmesg` procedure or display the content of the `/var/log/boot.msg` file (or the equivalent on your system). Printed below is a short section of these messages, showing the detection of the SCSI adapters.

```
(scsi0) <Adaptec AIC-7892 Ultra 160/m SCSI host adapter> found at PCI 0/9/0
(sc0) Wide Channel, SCSI ID=7, 32/255 SCBs
(sc0) Downloading sequencer code... 392 instructions downloaded
(sc1) <Adaptec AHA-294X Ultra SCSI host adapter> found at PCI 0/11/0
(sc1) Wide Channel, SCSI ID=7, 16/255 SCBs
(sc1) Cables present (Int-50 NO, Int-68 NO, Ext-68 YES)
(sc1) Downloading sequencer code... 422 instructions downloaded
scsi0: Adaptec AHA274x/284x/294x (EISA/VLB/PCI-Fast SCSI) 5.1.31/3.2.4
<Adaptec AIC-7892 Ultra 160/m SCSI host adapter>
scsi1: Adaptec AHA274x/284x/294x (EISA/VLB/PCI-Fast SCSI) 5.1.31/3.2.4
<Adaptec AHA-294X Ultra SCSI host adapter>
scsi: 2 hosts.
```

```
(scsi0:0:4:0) Synchronous at 160.0 Mbyte/sec., offset 63.
Vendor: IBM      Model: DDYS-T09170N    Rev: S80D
Type:   Direct-Access          ANSI SCSI revision: 03
Detected scsi disk sda at scsi0, channel 0, id 4, lun 0
```

```
Vendor: QUALSTAR Model: TLS-4210      Rev: 2.09
Type:   Medium Changer         ANSI SCSI revision: 02
(scsi1:0:2:0) Synchronous at 20.0 Mbyte/sec., offset 14.
```

```
Vendor: ECRIX    Model: VXA-1          Rev: 2524
Type:   Sequential-Access      ANSI SCSI revision: 02
Detected scsi tape st0 at scsi1, channel 0, id 2, lun 0
(scsi1:0:3:0) Synchronous at 20.0 Mbyte/sec., offset 14.
```

```
Vendor: ECRIX    Model: VXA-1          Rev: 2524
Type:   Sequential-Access      ANSI SCSI revision: 02
Detected scsi tape st1 at scsi1, channel 0, id 3, lun 0
```

```
SCSI device sda: hdwr sector= 512 bytes. Sectors= 17916240 [8748 MB] [8.7 GB]
sda: sda1
```

Step 2: *Detect installed adapters*

Launch `lspci`, the utility which reports all the adapters found installed in a machine. If the utility `lspci` is not installed on your machine, it can be downloaded (and compiled) from the URL:

<http://atrey.karlin.mff.cuni.cz/~mj/pciutils.html>

Below is an example of a normal output from `lspci` (Note the two SCSI adapters detected in the machine):

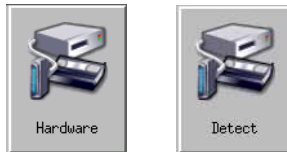
```
00:00.0 Host bridge: VIA Technologies, Inc. VT8363/8365 [KT133/KM133] (rev 03)
00:01.0 PCI bridge: VIA Technologies, Inc. VT8363/8365 [KT133/KM133 AGP]
00:07.0 ISA bridge: VIA Technologies, Inc. VT82C686 [Apollo Super South] (rev 40)
00:07.1 IDE interface: VIA Technologies, Inc. Bus Master IDE (rev 06)
```

00:07.4 Host bridge: VIA Technologies, Inc. VT82C686 [Apollo Super ACPI] (rev 40)
00:09.0 SCSI storage controller: Adaptec 7892A (rev 02)
00:0b.0 SCSI storage controller: Adaptec AIC-7881U (rev 01)
00:0d.0 Ethernet controller: VIA Technologies, Inc. Ethernet Controller (rev 42)
01:00.0 VGA compatible controller: ATI Technologies Inc. 3D Rage P/M Mobility AGP 2x (rev 64)

Step 3: *Arkeia auto-detection*
Check the configuration of the server with the auto-detection feature of Arkeia Network Backup.

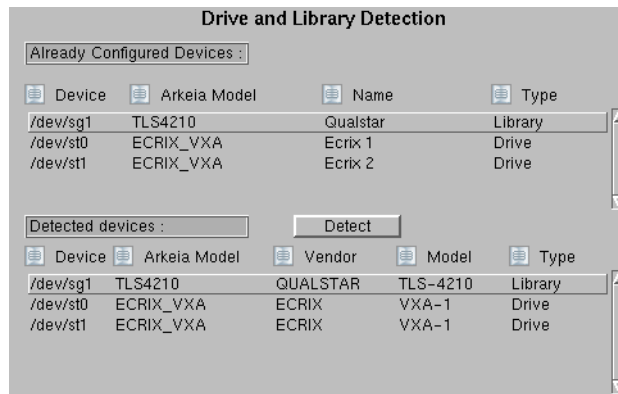
Arkeia auto-detection

From the Main menu click on:



Hardware > Detect

After some processing time, the Drive and Library Detection screen will appear with the results of the search:



If no information appears in the Detected devices fields, click on the Detect button in this screen to restart the process. A further step that can be taken to check the configuration of an Arkeia Network Backup server is the `arkdetect` utility. For more information on this utility, refer to *Automatic hardware detection: `arkdetect`* on page 216 of the *Arkeia 5 User Manual*.

UNIX and Linux systems have a utility called `mt` (Magnetic Tape) which may be helpful as it allows you to send commands to the tape drive from the command line. Enter the following on a command line to learn more about how it is used:

- UNIX: `man mt`
- Linux: `info mt`

Tape library

If you have a tape library (also known as a *jukebox* or *autoloader*), detailed instructions for configuring and using it with Arkeia can be found in *Tape Libraries* on page 197 of the *Arkeia 5 User Manual*. For this quick start, we will use one library drive, in manual mode.

Install a drive

The best starting point for a successful installation is the auto-detection function, referred to in [Arkeia auto-detection](#) on page 31. The information supplied by the auto detection function will be helpful in the next steps of the installation.

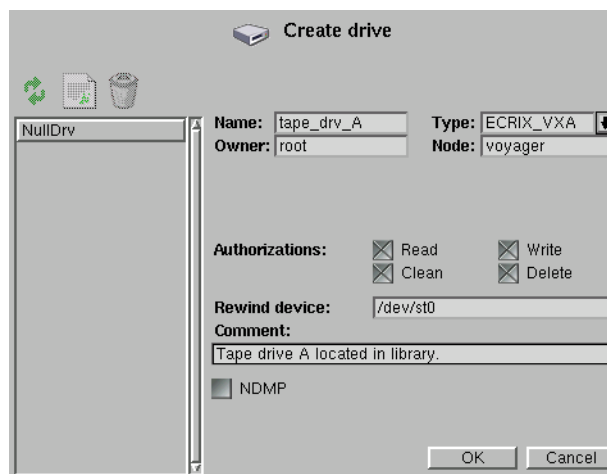
To create a drive in Arkeia Network Backup follow these steps:

Step 1: *Click on:*



Hardware > Drives > New

The Create drive screen will appear:



If you have already created a null drive, it will be listed on the right in this screen.

Step 2: *Fill in the data required.*

Name: Type in a descriptive name.

Type: Select the type of drive from the drop-down list.

Owner:, Node: These fields are filled in automatically, based on the owner and machine which has launched the creation process.

Authorizations: Set the authorizations that will be applied by Arkeia Network Backup during every operation that will be performed on the drive.

Rewind device: The UNIX device that will be used to write/read data to the tapes in the drive. This information may be available from the Hardware detect screen.

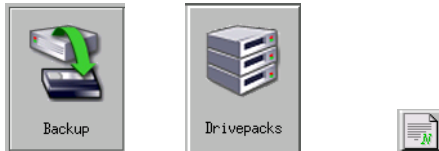
Comment: This field can contain an optional comment, to describe the drive or to supply more information on its location, type, supplier and so on.

Step 3: Click on *Ok* to save the drive.
You will be returned to the Drives management screen.

Create a drivepack

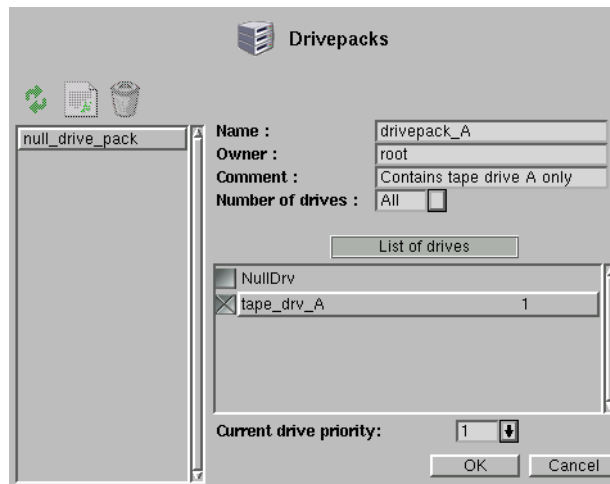
Drivepacks combine drives into a single unit for management by Arkeia Network Backup, and allow parallel data flows with the Arkeia plug-in. To create a drivepack, follow these steps:

Step 1: Create a null Drive Pack. Click on:



Backup > Drivepacks > New

The Drivepacks screen will appear:



You may have a null drivepack in the list of objects on the right.

Step 2: Define the drivepack
Type the following into the fields on this screen:

- Name: Enter a descriptive name.
- Owner: This will be your log in name, supplied by Arkeia.
- Comment: Choose a useful comment (optional)
- Number of drives: This determines how many drives can be used at one time by this drivepack. The default All will always work.

Step 3: Add drives to the drivepack
In this Quick Start procedure, we have created only one drive.

List of drives: Select the drive created in the last step by clicking on the grey checkbox next to its name.



If you add more than one drive to your drivepack, we recommend that all the drives you add to a single drivepack be of the same type, for smooth operation.

Step 4: Click on *Ok to finish*.
Click on *Ok* again, and you will be returned to the *Hardware* menu.

Interactive backup

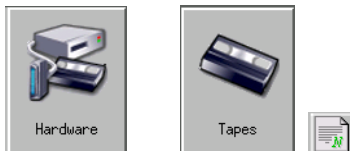
If drives and drivepacks exist, creating a new backup requires these steps:

- Create tapes to hold the backup.
- Create a tape pool.
- Create the savepack, which is the list of disks, directories and files to be backed up.

Create tapes

Tape creation involves informing Arkeia Network Backup of what tapes are physically available for use. Once informed, Arkeia will manage the tapes for the remainder of their life. The first step any user of Arkeia Network Backup should take is to declare tapes to Arkeia to be used to backup data.

Step 1: Create a tape. From the *Main menu*, click on:



Hardware > Tapes > New

The Create tape(s) screen will appear:

You may see the null tape created under the *Null backup* above in the list of objects on the right. Enter the following into the fields in this screen:

Backup/Cleaning tape: Click on the checkbox for Backup tape.

Tape name: Enter a descriptive name.

Type: Click on the drop-down menu to select the type of tape you will use.

Pool: Leave this at the default `Scratch pool`, for the moment.

Bar code: Leave this blank.

First # and Last #:

If it is necessary to create several tapes in one operation, enter the first number and the last in the corresponding fields. For instance, to create 5 tapes, enter 1 in the `First number` field and 5 in the `Last number` field. A digit will be appended to the name of the tape, to enable the creation of several tapes at the same time.

Owner: Leave this field as is.

Comment: This field can contain a short descriptive comment about the tape (optional).

Click on `Ok` to complete the process.

Create a tape pool

The tape pool is a logical entity, which can be associated exclusively with:

- a particular backup,
- a particular server,
- a particular client, or
- any other association which is meaningful in your system.

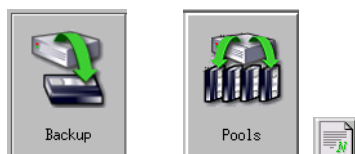
For example, you could create one tape pool for every server you have to manage:

- Tape pool: `FTP` (for the `FTP` server backups and restorations).
- Tape pool: `WWW` (for the `Web` server),

Or a tape pool can span several servers of the same type, and so on...

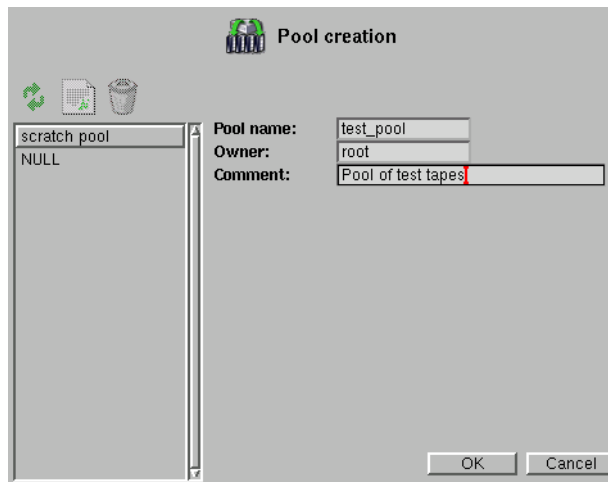
Tapes can be moved between pools whenever you want to, and a default `Scratch pool` exists to provide tapes to other pools whenever the data backed up to those pools exceeds the capacity of the tapes they currently hold.

Step 1: Create a new tape pool. From the `Main` menu, click on:



Backup > Pools > New

The Pool creation screen will appear:



Notice that the default Scratch pool exists already, and if you created the NULL pool, it will be there too.

Step 2: *Enter the following information in this screen:*

Pool name: Enter a descriptive name.

Owner: Accept the default, which will be your log in name for this session.

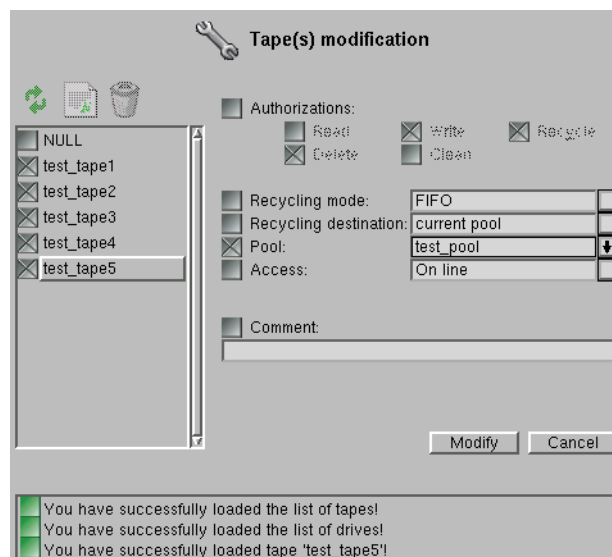
Comment: Enter a descriptive comment (optional).

Click on Ok to confirm and create the tape pool.

Step 3: *Add tapes to the new tape pool. Click on:*



Hardware > Tapes > Modify 1



Now select the tapes just created for this backup in the object list on the left. Click on the `Pool`: checkbox, and select the tape pool created for this backup from the drop list. Lastly, click on `Modify` to confirm.

Create a savepack

If you have been following the procedures described so far, the only thing left to do is to define some data to backup, and start the backup.

Data resides in physical and logical structures:

- disk drives
- directories
- files

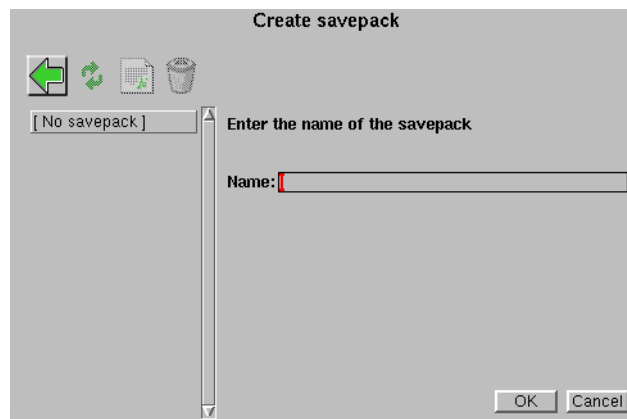
The data paths of these logical entities, or sub-elements of them, are combined into Savepacks in Arkeia Network Backup. The backup then consists of selecting the Savepack, associating it with a tape pool and the tape pool with a Drivepack, then starting the backup. To create a savepack, follow these steps, starting from the `Main` menu:

Step 1: Create an empty Savepack. Click on:

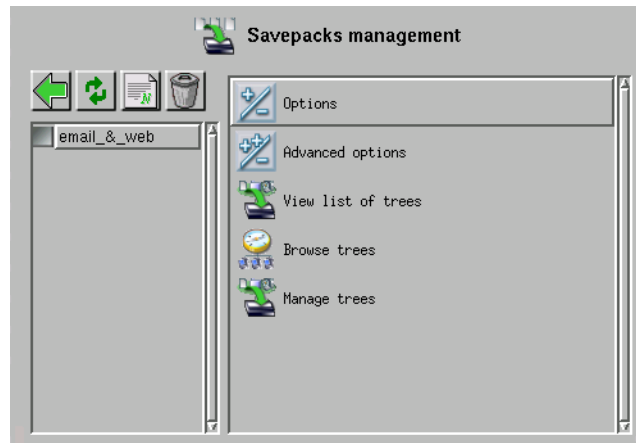


Backup > Savepacks > New

The `Create savepack` screen will appear:

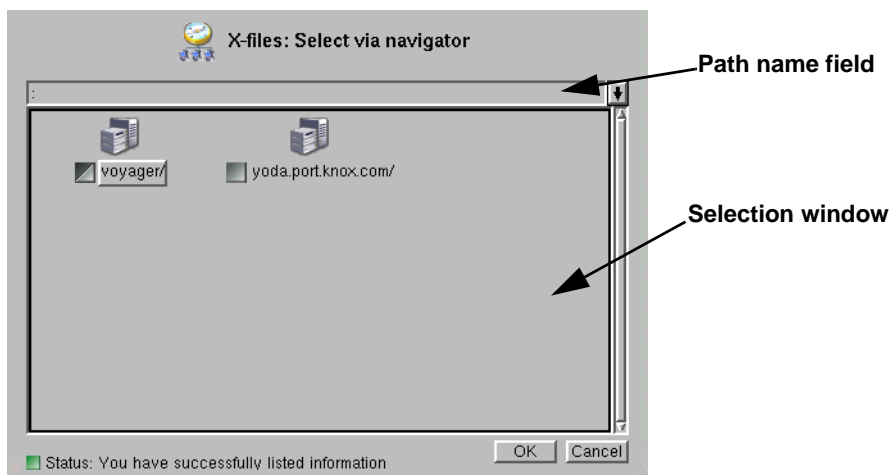


Enter a descriptive name for this Savepack, click on **Ok** to continue and you will see the Savepacks management screen:



Step 2: *Add data to the Savepack*

The Savepack just created, and any others already created, can be seen in the object list on the left. We created a Savepack called *X-files*. Click on the checkbox next to the Savepack you created, then click on **Browse trees** in the Savepacks management menu. The **Select via navigator** screen will appear:



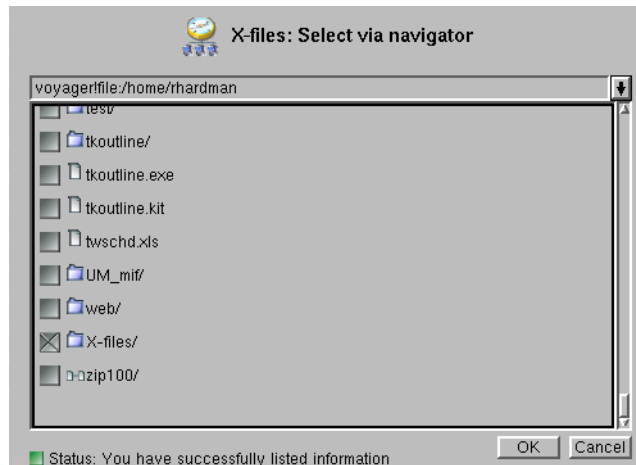
Data paths can be selected for the Savepack in two ways:

1. enter the path (and file name) in the field above the selection window, or
2. clicking through the directories in the selection window.

In this Quick Start Guide, we will only describe how to add data entities to the Savepack using the selection window.

The Arkeia clients connected to your network are represented in the selection window by icons, checkboxes and buttons. If you intend to backup the whole client, click on the checkbox to select it. ALL the files and data it contains will be included in the Savepack. This may represent too much data, or data which is not

to be included in this backup, so double-click on the client or server to view the next level down the tree.



Continue clicking on directory names until you reach the level in the structure which contains data you want to backup. Click in the checkbox next to the disks, directories or filenames you wish to include in this Savepack. In the screen above, you can see that two directories have been selected: `web/` and `X-files/`.

Other directories or files may have been selected in other branches of the tree, or even on other clients, for inclusion in this backup. For example, the email directories on all the client machines could be selected in one Savepack.

Step 3: *Click on **Ok** to save the data paths in the Savepack.*

You have now established a set of related data to be backed up. To make backups of the files represented in the data paths, you need only select the Savepack.

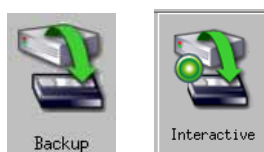
Launch the backup

Two methods of launching a backup are possible in Arkeia:

- Periodic. A schedule is created to start this backup, unattended, at some time in the future. The backup can be repeated at regular intervals.
- Interactive. The backup is launched manually.

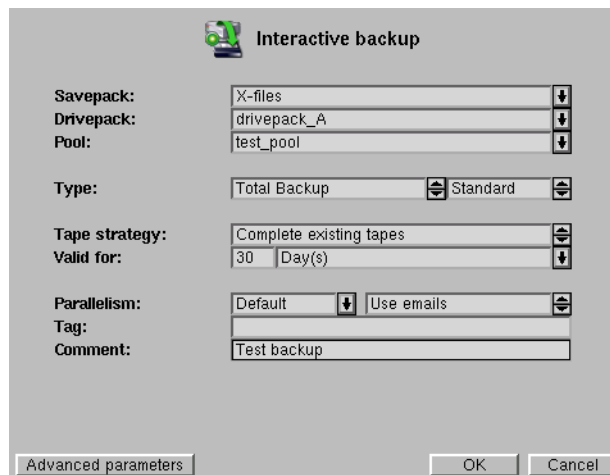
In this Quick Start Guide, we will only describe the Interactive backup. To launch an interactive backup of the data in the Savepack created above, with the drive pack and tape pack defined above, follow these steps, starting from the `Main` menu:

Step 1: *Click on:*



Backup > Interactive

The Interactive backup screen will appear:



Step 2: *Enter the following data into this screen.*

Savepack: Click on this drop-down list to select the Savepack you created.

Drivepack: Click on this drop-down list to select the Drivepack you created.

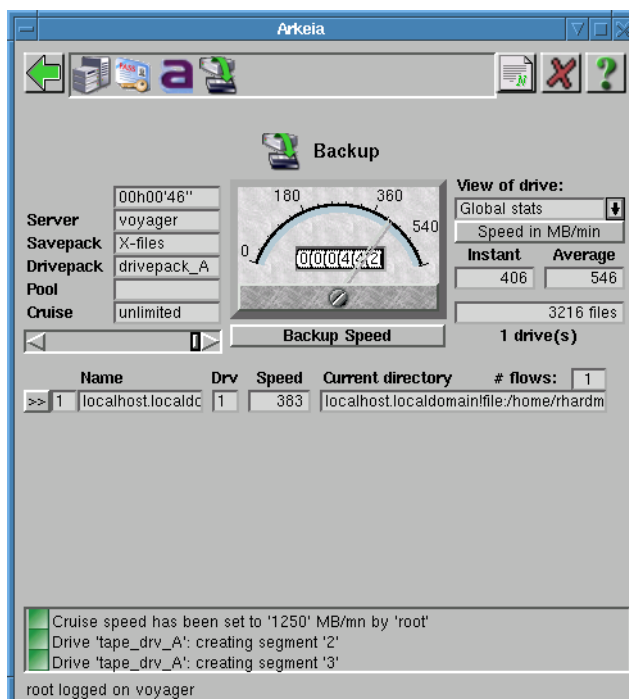
Pool: Click on this drop-down list to select the Tape pool you created.

Type: Choose Total Backup and Standard from the drop-down lists in this field.

Comment: This field can be used to enter a longer, more detailed description of the backup.

Step 3: *Click on Ok to start the backup.*

The Backup progress screen will appear:



This screen indicates that the backup is in progress, and does not require any user input. For more information about the Backup progress meter, see [Monitor a backup through the main screen](#) on page 111 of the *Arkeia 5 User Manual*.

Restore data

Extracting data from a backup is generally a process of:

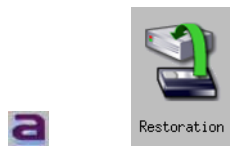
1. finding the backup which contains the data you want;
2. finding the tape which contains this backup; and
3. telling Arkeia where the recovered data should be put.

Step 3 is not necessary if you want to restore data to its original location, but please note the following:

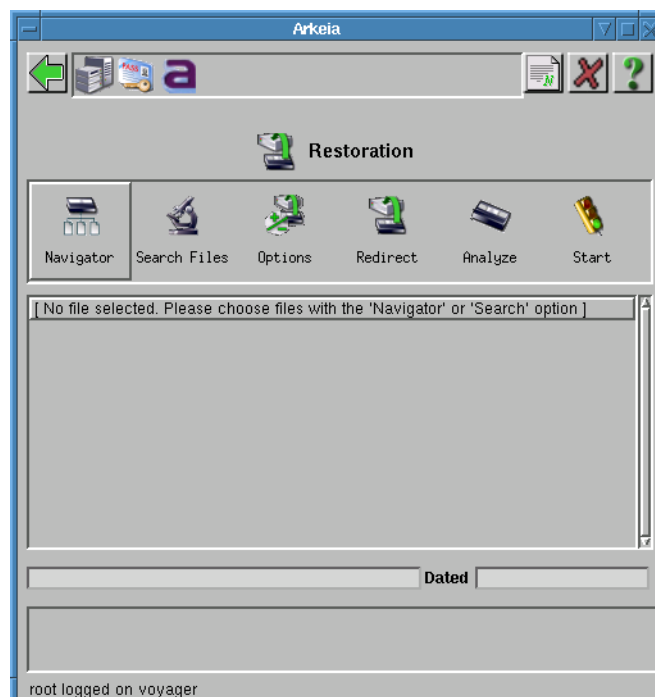


If you chose live data for the test backup above, it may not be a good idea to restore it to the original location. The files you restore will over-write the existing files, which may now be a later version. Data added since you made the backup will then be lost.

For this reason, we will use *redirection* when we restore the data to put it in another location. Naturally, the client, directory and file names of the data you backed up will be different to ours, so you will see or substitute your names in the following screenshots and menus. Start the restoration by clicking on:



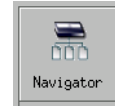
Main menu > Restoration:



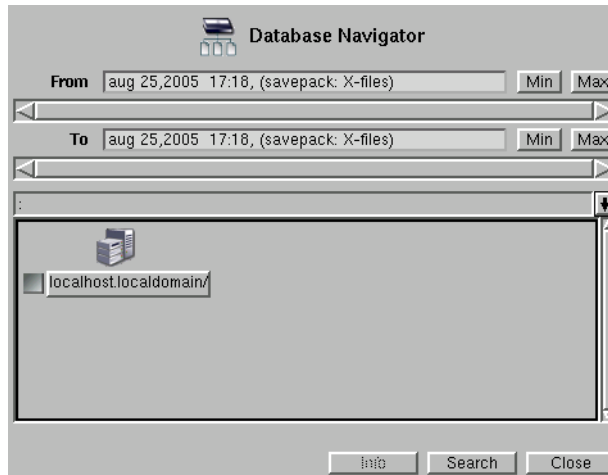
We are going to choose one directory of files from the backup we made earlier:

```
localhost.localdomain!file:/home/rhardman/Arkeia_Sports_Centre/Gymnasium
```

Step 1: *Choose the data for restoration*



For this exercise, we will use the Navigator to locate the file. Click on **Navigator** to reach the Database navigator:

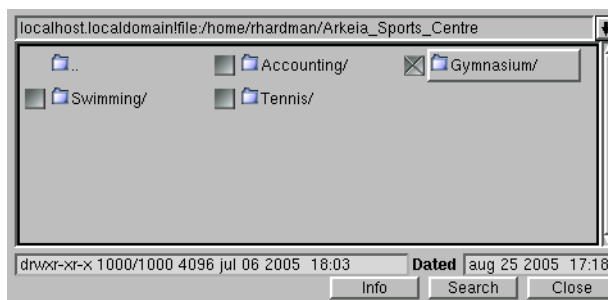


The *Database* referred to here is Arkeia's database of all the files in backups currently available for restoration. First, we choose the backup from which we want to restore data, by the backup date. For this Quick Start exercise, there is only one backup, so we need not use the *From* and *To* sliders to locate it. You can find out how to use this part of the navigator in the User Manual, [How to select files with the Database Navigator](#) on page 132.

We drill down to reach the data we want by double-clicking the data entity names in the lower panel.

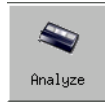


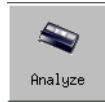
Note: Click on the name of the data entity, NOT the grey checkbox. When you click on the checkbox, you have selected all the data contained in its associated entity.



Here, we have drilled down to the *Gymnasium/* sub-directory, and selected it for restoration by clicking on the checkbox. Click on **Close** to return to the Restoration screen.

Step 2: Find the tapes containing the data



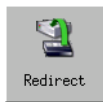
Click on , and Arkeia will find the tapes containing the data chosen for restoration:



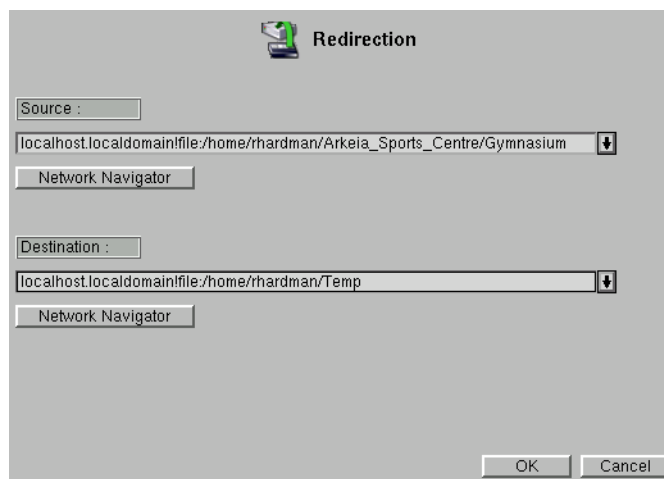
In our case, test_tapes-01 and -02 are required, and having carefully labeled them, they are easy to locate and have ready for the restoration.

Step 3: Redirect the restoration

Since this is just an exercise, we do not want to clobber the existing `Gymnasium/` sub-directory with the older backed up copy, so in the Restoration screen, we click on



to designate a different location to put the restored copy:




Set up the redirection:

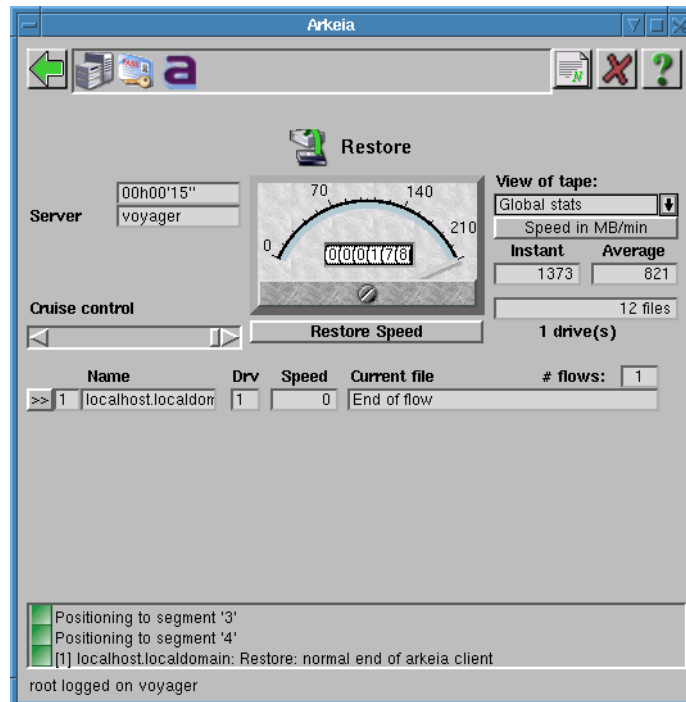
Source The *original location* of the data being restored.

Destination The different location for the stored data.

The entries for these fields can be made manually, or you can use the Network navigator to find the locations. Click on Ok to confirm, and return to the Redirection screen.

Step 4: *Launch the restoration.*

Click on  to start the restoration. You will be asked to insert the first tape, and the monitor screen will appear as the restoration starts:



If more than one tape is needed, Arkeia will prompt for the next tape.

More

Congratulations, you have successfully:

- Installed Arkeia Network Backup.
- Tested the installation with a null backup.
- Made a basic backup, which required you to:
 - a. create tapes;
 - b. create a tape pool;
 - c. create a drive;
 - d. create a Drivepack;
 - e. create a Savepack;
 - f. add data paths to the Savepack, which defined the data to be backed up;
 - g. launch a backup.
- Restore data from a backup.

That is quite a lot to achieve, but it has only used a small part of what Arkeia Network Backup is capable of doing. There are many more features avail-

able to make the job of safe-guarding your data against loss or destruction easier. Please take the time to read through the other documentation supplied with your distribution of Arkeia Network Backup.

Arkeia Technical Support is available to provide advice and help solve any problems you have. You can contact them through the Arkeia website at <http://www.arkeia.com/support.html>. Check this website for the latest updates to our software.

Finally, we would like to hear from you! If you have any remarks, corrections or ideas about the documentation, please email them to doc@arkeia.com. Note that this email address is only for documentation matters. Tech support and sales matters are handled through the website <http://www.arkeia.com>.

