

Axibase Storage Reporter

Installation Guide

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Conventions

Font	Meaning	Example
<i>Italics</i>	Book or manual titles	Refer to the <i>Axibase Storage Reporter Installation Guide</i>
	For emphasis	You <i>must</i> follow these steps.
	Variable that you must supply when entering a command	At the prompt, enter <i>username</i>
Bold	New terms	The ASR Server performs ...
<u>Underlined</u>	Web Links	http://axibase.com
Courier	Text and other items on the computer screen	Are you sure you want to remove current group?
	Command names	Use the <code>grep</code> command ...
	File and directory names	C:\Program Files
	Process names or service names	Verify that <code>AxibaseApp</code> service is running.
	Window dialog box names	In the <code>ASRInstaller Setup</code> window ...
Courier Bold	Text entered by the user	At the command prompt, type <code>run.bat</code>
[Button]	Buttons in the user interface	Click [OK].
'Link'	Links in the user interface	Click 'Database'.

1. Requirements

1. Hardware (or Virtual Machine)

Environment	< 100 Storage Systems	<500 Storage Systems	>500 Storage Systems
Processor	1 CPU, 2+ GHz	2 CPU, 2+ GHz	2 CPU, 2+ GHz
Memory	1 GB (512MB for JVM)	2 GB (1 GB for JVM)	4 GB (2 GB for JVM)
Disk Space	250 MB for app. files 100 MB for log files 500 MB for report db	250 MB for app. files 100 MB for log files 1 GB for report db	250 MB for app. files 100 MB for log files 2 GB for report db

2. Operating System

- > Windows Server 2003, SP 2+.
- > Windows Server 2008.
- > Red Hat Enterprise Linux, 4+.
- > SUSE Linux Enterprise Server, 9.

3. Applications

- > NetApp Operations Manager (also known as DataFabric Manager, or DFM), v. 3.8+

4. Web Browsers

- > Internet Explorer 7.x, 8.x, 9.x
- > Mozilla Firefox 3.x
- > Google Chrome 3.x+

5. Security

- > Windows: You must login with administrative privileges to install the software.
- > Linux: Installation under the root required for hosting the application on default http port 80.

2. Preparation

- > Enable read-only access to the DFM database

By default the DFM database is not configured for remote access. Follow the steps described in NetApp technical report TR-3690 “Access to DataFabric Manager and Performance Advisor Data Using Database Access and Data Export” available at NOW support site or at http://www.axibase.com/files/netapp_tr_3690.pdf.

The information is also provided in Chapter “Data export in DataFabric Manager” in “Operations Manager Administration Guide, v. 3.8”.

- > Prepare filer property files in CSV format

Axibase Storage Reporter provides a capability to report on storage utilization by location, type of environment (production/staging/development), type of storage (primary/backup) and other properties that are specific to each customer. These properties can be imported into ASR as CSV files using the following format:

Header Row:

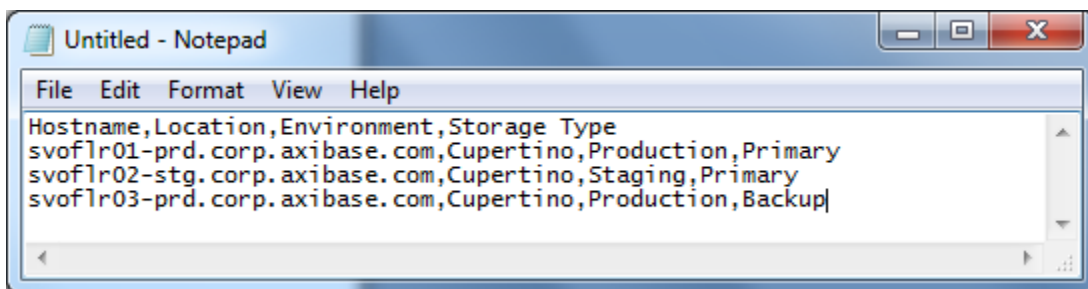
```
FILER HOSTNAME,PROPERTY_NAME_1,PROPERTY_NAME_2, PROPERTY_NAME_3
```

Value Row:

```
file_hostname,property_value_1, property_value_2, property_value_3
```

Example:

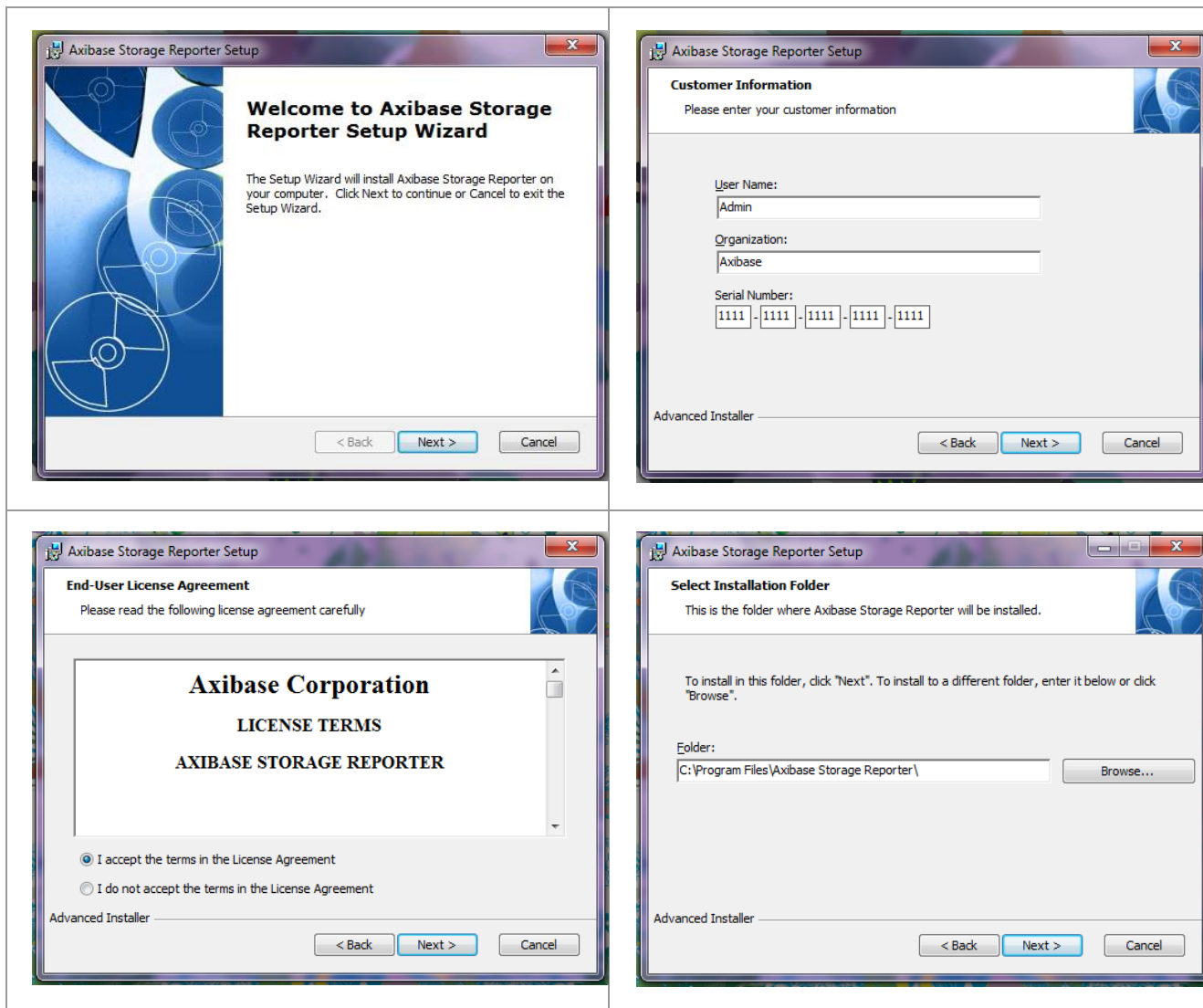
```
Hostname, Location, Environment, Storage Type
svoflr01-prd.corp.axibase.com,Cupertino,Production,Primary
svoflr02-stg.corp.axibase.com,Cupertino,Staging,Primary
svoflr03-prd.corp.axibase.com,Cupertino,Production,Backup
```



3. Installation on Microsoft Windows

- > Unzip and launch MSI installer package `axibase_sr.msi`.
 - > Review and accept the terms of the trial license agreement.
 - > Enter the serial number provided by Axibase.
 - > Specify the installation directory.
- The default value is `C:\Program Files\Axibase Storage Reporter`.

Figure 3-1. Installer dialog menus



4. Installation on Linux

- > Login as root

```
su
```

- > Create an account for installing and maintaining Axibase Storage Reporter. You can install the software as the root user, but you do not have to. You can use any valid name:

```
useradd -gusers -pxxxx -d/home/axibase -m axibase
```

- > Switch to axibase user

```
su axibase
```

- > Change directory to axibase home

```
cd /home/axibase
```

- > Extract files from the installation archive `asr_NNN_linux_x86.tar.gz`

```
tar -xzf asr_NNN_linux_x86.tar
```

- > Change directory to ASR (extracted from archive)

```
cd ASR
```

- > Start the application by executing the following command. Please note that the initial configuration may take several minutes.

```
./start.sh
```

- > Open a web browser and type <http://127.0.0.1:8080> in the address bar.

5. Adapter Configuration

- > Enter <http://127.0.0.1> (<http://127.0.0.1:8080> on Linux) in the browser address bar.
- > Login as Administrator using password a3293215
- > Follow the 'Click here' link
- > Click [Add Adapter]
- > Enter adapter name (the default is 'dfm')
- > Select database type and enter database connection properties as outlined below:

Add Adapter

Name

Host	DFM Database Settings
Host <input type="text" value="dfm_hostname"/>	Database Type <input type="text" value="Sybase"/>
Port <input type="text" value="8443"/>	Host <input type="text" value="dfm_db_hostname"/>
Cache TTL (min) <input type="text" value="720"/>	Port <input type="text" value="2638"/>
	Database Name <input type="text" value="monitordb"/>
	User <input type="text" value="export_user"/>
	Password <input type="password" value="*****"/>

Advanced Settings

- > Increase Cache TTL from 60 (default) to 720 minutes if you have more than 100 filers in your environment
- > Click [Validate] and correct errors, if any.
- > Click [Save]

6. Import Properties Files

- > Click the [Admin] tab in the top menu, and proceed to 'Configuration' page.
- > Click the Resource Properties [Load] link.
- > Specify CSV column names in the 'Property Name' field.
- > Enter comma (,) in the 'Token' field.
- > Paste CSV text into the 'Key/Value Pairs' text area field.

Import Resource Properties

Property Name

Token

Key/Value Pairs

- > Ensure that the first row in CSV text contains data rather than column names (specify column names in the 'Property Name' field).
 - o **Note:** The first column must include hostnames that can be specified either in FQDN or short format.
- > Ensure that the number of column names specified in the 'Property Name' fields is the same as the number of columns in CSV text.
- > Click [Submit]

7. Import Storage Report Files

Sample storage report files can be downloaded from the following directory:
http://www.axibase.com/files/storage_report_definitions.zip

To import the samples:

- > Click the [Admin] tab in the top menu.
- > Click the 'Storage Reports' link.
- > Click on [Import] button, attach the XML file.
- > Set [Auto-enable] option to true.
- > Ensure that each report file is enabled.

Figure 7-1. Storage Reports List

Storage Reports					
[Add] [Enable] [Disable] [Export] [Import]					
ID	Name	Type	Category	Grouping	
13	Total Capacity by Space Type: {usableDiskSize_kb}	Disk	Capacity		
14	Total Capacity by Location: {usableDiskSize_kb}	Disk	Capacity	Location	
15	Total Capacity by Environment: {usableDiskSize_kb}	Disk	Capacity	Environment	
16	Production Capacity by Location: {usableDiskSize_kb}	Disk	Capacity	Location	
17	Available Capacity by Location: {available_kb}	Disk	Capacity	Location	
18	Available Capacity by Environment: {available_kb}	Disk	Capacity	Environment	
20	Aggregate Utilization by Location. Avg: {aggSizeUsedPct_pct}	Disk	Utilization	Location	
21	Volume Utilization by Location. Avg: {volumeSizeUsedPct_pct}	Disk	Utilization	Location	

Figure 7-2. Setting status to [Enabled] in the Storage Report Editor

Storage Report Editor	
Overview	Grouping
	Filters
	Properties
Name	<input type="text" value="Total Capacity by Space Type: {usableDiskSize_kb}"/>
Status	Enabled ▼
Type	Disk ▼

8. Optional Steps

1. Apply patches and upgrades
 - > Click the [Admin] tab in the top menu.
 - > Click the 'Updates' link.
 - > Follow the prompts.
2. Configure the built-in email client
 - > Click the [Admin] tab in the top menu.
 - > Click the 'Mail Client' link
 - > Change email properties accordingly
 - > Click [Update] and verify that the mail client is operational.
3. Add user accounts
 - > Click the [Admin] tab in the top menu.
 - > Click the 'Users' link, then click on the [Add User] button.
 - > Enter the username, email, and password and click [Submit] for each account.
 - > Assign selected resources to non-administrative users using access control lists.

9. Problem Resolution

Guidelines:

- > Review log files located in %ASR_INSTALL_DIR%/logs (also accessible at [Admin] → 'Error Logs').
- > Submit support requests to <http://axibase.helpserve.com/> or support@axibase.com

1. AxibaseApp service fails to start or ASR home page is not accessible at <http://127.0.0.1>

- > Resolution 1: Terminate conflicting services.

Execute the following command at the prompt:

```
netstat -nao > temp & find ":80" temp & del temp (Windows)
netstat -naop | grep "8080\|:80" (Linux)
```

Use Process ID (PID) to locate a conflicting service in the Task Manager (Windows) or `top` output (Linux). Terminate the process.

- > Resolution 2: Reconfigure the server to listen on a non-default port.

- Open file %ASR_INSTALL_DIR%/AxibaseServer/app/conf/server.xml
- Modify the Connector port value.

```
<Connector className="org.apache.catalina.connector.http.HttpConnector"
  port="8080" minProcessors="3" maxProcessors="128"
  enableLookups="true" redirectPort="8443"
  acceptCount="50" debug="0" connectionTimeout="60000"/>
```

- Restart AxibaseApp service.

- > Resolution 3: Replace an expired evaluation key.

- Open file %ASR_INSTALL_DIR%/logs/axibase_NNN.log and verify that the license key is valid. Obtain a permanent license key if necessary.

2. MSI installer generates error messages during the installation process

- > Review the Windows Event Log for any installation errors.
- > Retry installation in debugging mode by entering `msiexec /i axibase_sr.msi /l*v sr_install.log`.
- > Submit `sr_install.log` to <http://axibase.helpserve.com/>.