

Archiware Pure Quick Start Guide

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Document revision 06/17, Pure 1.0.0

1 System Requirements

1.1 Hardware Requirements

- RAM: 4 GB
- Disk space: 50 GB for the Pure virtual appliance, not including disk space used for the backup repository.

Note: During deployment, you will be able to choose between thin provisioned or thick provisioned disk. Thick provisioned disk will occupy 50 GB immediately, while the thin disk will need a much smaller amount.

1.2 Supported Hypervisors

- VMware vSphere 6.0 in any non-free edition
- VMware ESXi 6.0 Express Patch 4 (build number 3247720, 2015-11-25) or later

1.3 Deployment Requirements

The Archiware Pure Virtual Appliance can protect virtual machines managed by different ESXi hosts, either by connecting to a vCenter server or by connecting to several standalone ESXi servers. When a vCenter server is present, it is strongly recommended to configure it as an *Infrastructure Server* for the Archiware Pure Virtual Appliance (see 5.1.4 Infrastructure Server). Managed ESXi hosts can still be added in order to enable direct restore operations should the vCenter server become unavailable.

Note: In order to protect a virtual machine, the *Archiware Pure Virtual Appliance* must be deployed on a host that has access to the data store where the VM resides. Virtual machines residing on inaccessible data stores will not be shown within the *Archiware Pure GUI*.

Note: In order to enable backup of a vCenter virtual appliance, it is necessary to add both the vCenter server as well as its managing ESXi host to the list of configured servers (see 5.1.4 Infrastructure Server).

2 Deploying the Virtual Appliance

The Archiware Pure Virtual Appliance is preconfigured to meet the minimum hardware requirements for CPU and RAM. However, disks to be used for the Backup Repository are not included and need to be configured after deploying the appliance.

To deploy the *Virtual Appliance* using the *VMware vSphere Web Client*, follow the steps illustrated below. For standalone ESXi hosts not managed by a vCenter server, please follow the instructions for deployment using the *vSphere Client* (please note that *VMWare* is phasing out the *vSphere Client* and as a result the latest instructions are for *vSphere 5.0*):

https://pubs.vmware.com/vsphere-50/index.jsp#com.vmware.vsphere.vm_admin.doc_50/ GUID-AFEDC48B-C96F-4088-9C1F-4F0A30E965DE.html



1. Log in to the vSphere Web Client and select Hosts and Clusters.

2. From the Actions menu, select Deploy OVF Template.



3. Select *Local file*, then browse and navigate to the folder where the OVF template is located, select it and click *Next*.

Deploy OVF Template		(?)))
1 Source	Select source Select the source location	
1b Review details 2 Destination 2 a Select name and folder 2 b Select storage 3 Ready to complete	Enter a URL to download and install the OVF package from the Internet, or browse to a location accessible such as a local hard drive, a network share, or a CD/DVD drive. URL • Local file Browse	from your computer,
	Bar	Cancel

4. Verify that the information is correct and click Next.

Deploy OVF Template			? H
1 Source ✓ 1a Selectsource	Review details Verify the OVF tem	plate details	
✓ 1b Review details	Product	com.archiware.vmsn.v1.0.0	
2 Destination	Version	1.0	
2a Select name and folder	Vendor	Archiware GmbH	
2b Select storage	Publisher	No certificate present	
2c Setup networks	Download size	622,9 MB	
3 Ready to complete	Size on disk	1,5 GB (thin provisioned) 8,0 GB (thick provisioned)	
	Description		
		Back Next Finish	Cancel

5. Enter the desired name for the *Appliance* (or leave the default one) and select the location where the template will be deployed.

Deploy OVF Template		(?) H
Deploy OVF Template Source	Select name and folder Specify a name and location for the deployed template Niene: com archivare.vmsn.v1.0.0 Select a folder or datacenter Search Datacenter Datacenter The folder you select is where the entity will be located will be used to apply permissions to it. The name of the entity must be unique within each vCe Server VM folder.	, and
	Back Next Finish	Cancel

6. Select a cluster, host, vApp or resource pool in which to run the deployed Virtual Appliance.

Deploy OVF Template		(?)
Deploy OVF Template Source	Select a resource Select where to run the deployed template Select location to run the deployed template	Select a cluster, host, vApp, or resource pool in which to run the deployed template
		Back Next Finish Cancel

7. Select the storage location and the format of the disks to hold the *Virtual Appliance's* data, i.e. its configuration and disk files.

Deploy OVF Template						(?)
1 Source	Select storage Select location to store the	a files for the deployed tem	plate			
 1b Review details 2 Destination 2a Select name and folder 2b Select a resource 	Select virtual disk format: VM Storage Policy: The following datastores a virtual machine configural	Thick Provision Lazy Zer Datastore Default are accessible from the de tion files and all of the virtu	oed	0 at you selected. Select	the destination da	atastore for the
2c Select storage	Name	Capacity	Provisioned	Free	Туре	Storage DRS
2d Setup networks	NAS Delux	5,40 TB	5,25 TB	761,00 GB	VMFS	
3 Keady to complete						
	4					•
				Back	Next Fini	ish Cancel

8. Select the network that the *Virtual Appliance* should use.

Deploy OVF Template					(?)
1 Source 1 Select source	Setup networks Configure the networks the deploy	ed template should use			
 1b Review details 2 Destination 2a Select name and folder 	Source VM Network	VM Network	Destination	•	Configuration
2b Select a resource 2c Select storage					
 2d Setup networks 3 Ready to complete 	IP protocol: IPv4		IP allocation: Static - Manual (0	
	Source: VM Network - Description The VM Network network				
	Destination: VM Network - Protoco No configuration needed for this n	l settings etwork			
			Back	ct Finish	Cancel

9. Review your configuration and finish the deployment of the Virtual Appliance.



3 Configuring storage

After successful deployment, it is necessary to configure at least one storage location for the *Backup Repository*. Archiware Pure supports all storage types supported by VMware. For best performance, we recommend configuring a SAN LUN in *raw device mapping mode*.

Due to VMware limitations, RDM disks must be configured on the SCSI controller 0 so as not to interfere with *Archiware Pure* operations. When adding new virtual disks through the VMware GUI, controller 0 is selected by default. It is possible to configure up to 14 virtual disks as *Backup Repositories*.

Instructions for adding a hard disk to a virtual machine in the *vSphere Client* can be found here:

https://pubs.vmware.com/vsphere-60/index.jsp#com.vmware.vsphere. hostclient.doc/GUID-2CFBCCD5-B53D-42CD-AECD-FBC46AAC4AC5.html



4 Configuring the Virtual Appliance

After successful deployment, open the *Virtual Appliance's* console (from the VMware GUI) and set a new password. This password will be used as the *root* password for the *Virtual Appliance* and also as the login password for the *Archiware Pure* web GUI.

	-
Cancel>	-

After successfully configuring the password, the main menu is shown with options to:

- configure network related settings
- reset the password
- configure date, time and timezone
- start/stop the SSH server and enable/disable SSH access
- import the existing backup repositories
- restart Archiware Pure software
- reboot or shut down the virtual appliance
- exit to the shell



Note: The *Archiware Pure* web GUI can be accessed through the URL shown on the startup screen.

P

5 Using Archiware Pure

The Archiware Pure web GUI can be accessed by navigating to the URL indicated in the Appliance's console ("https://<Appliance IP address>/login").





5.1 Initial Setup Wizard

When starting the GUI for the first time, the *Initial Setup Wizard* will guide you through the initial configuration. The *Wizard* will allow you to review the *End User License Agreement*, enter the license key, configure a backup repository and add an infrastructure server to the configuration.

Pure	=	O8.Jun 15:49	🗭 Logout
App Configuration	 Initial SETUP Melcome to the Archiware Pure initial Setup wizard. This wizard will help you to quickly configure the Archiware Pure backup appliance to protect your data. Once completed, you can use this Web Interface for additional configuration and to restore data. This wizard guides you through the following steps: Aeview the end user license agreement Enter the license key Configure a backup repository. Add an infrastructure server 	O8.Jun 15:49	🗭 Logout
	« Previous Next »		

5.1.1. License Agreement

Please carefully read and accept the End User License Agreement.



5.1.2. Licensing

Please enter a valid license key or start your 90-day trial.





5.1.3. Backup Repository

The *Backup Repository* is the central storage location for the saved data and for the backup configuration. It consists of at least one drive and can be extended later on. We highly recommend using only RAID storage to avoid data loss.

Please select the volume where you would like to store the *Backup Repository*.

Note: If no disks appear in the list, please make sure that you have correctly added at least one virtual disk to the *Archiware Pure Virtual Appliance*.

Pure	≡	O8.Jun 16:03	Logout
App Configuration	 Intraction of the properties of the last one drive and can be extended later on. We highly recommend to use only RAID storage to avoid data loss. Intractic to a volume with enough disk space for the default repository. Isdb - 4.88 TB Tote: Additional volumes can be added at a later time using the Repository configuration option. 	08.Jun 16:03	Logout
	« Previous Add Repository »		

5.1.4. Infrastructure Server

Please configure the connection parameter for your virtual infrastructure.

Although *Archiware Pure* can protect multiple vCenter or ESXi servers, please make sure that the vCenter server that manages the *Archiware Pure Virtual Appliance's* ESXi host is included. In case of a standalone ESXi installation, please configure the parameters for the ESXi host managing the *Archiware Pure Virtual Appliance*. For information on configuring additional vCenter or ESXi hosts, please see 5.7 Configuring Additional Infrastructure Servers.

Pure	≡			O8.Jun 16:09	Logout
App Configuration	 INITIAL SETU 4. Infrastructure 	P			
	Prior to creating th configuration. You	e first backup you need to add your virtual infrastructure to can add your VMware vCenter server or standalone ESXi ho	the backup ssts.		
	Please enter the II	address or network name and the login credentials of the s	ystem administrator.		
	Host name:	DNS name or IP address			
	User name:	e.g. root for ESXi			
	Password:	Password			
haller he with the transfe	Description:				
	Protocol & Port:	https 💌 443			
		« Pr	evious Add Server »		

Note: In order to enable backup of a vCenter virtual appliance, it is necessary to add both the vCenter server and its managing ESXi host to the list of configured servers. If the ESXi server is not configured, the vCenter virtual appliance VM will not be shown in the list of virtual machines.

5.1.5. Completing the Initial Setup

After the *Initial Setup Wizard* has finished, please click *Reload* to exit the *Wizard* and reload the configuration.

5.2 Backing Up Virtual Machines

Archiware Pure is designed with simplicity and ease of use in mind. Once properly configured, it will automatically back up and keep all the discovered VMs protected.

	=						2 13.Jun 10:56
nes		🛱 Virtual Machines					
auration 👻			Back	ıp	Backup Di	isk Usage	
	ter	Virtual Machine	Completed	Duration	Actual	History	Backup/Hestore Job Progress
	the	▼ 192.168.234.217					
у	List	O 🖞 APT_freebsd	12.Jun 17:07	0 min 10 s	16.8 GB	0.043 GB	
	of						
	M	U APT_freebsd-cbt_test	12.Jun 17:03	0 min 04 s	14.0 GB	0.002 GB	
	07	O U APT_freebsd-rec	12.Jun 17:03	0 min 03 s	14.0 GB	0.002 GB	
		O O APT_freebsd-recovered	12.Jun 17:01	0 min 10 s	16.0 GB	0.043 GB	
ting		O U APT_solaris	12.Jun 17:01	0 min 03 s	3.4 GB	0.002 GB	
		오 🕛 APT_ubuntu	12.Jun 17:01	0 min 03 s	5.7 GB	0.002 GB	
ances		● ^(J) APT_ubuntu_datastore_test					
		් APT_win7	12.Jun 17:03	0 min 03 s	20.0 GB	0.002 GB	
		Synology P5 Build Machine	12.Jun 17:03	0 min 14 s	19.7 GB	0.184 GB	
-		🕏 🕛 Synology P5 Build Machine-cb	12.Jun 17:03	0 min 04 s	34.1 GB	0.002 GB	
		Synology P5 Build Machine-re	12.Jun 17:02	0 min 32 s	32.2 GB	2.859 GB	
		07 VMc	10 100 17:01	0.0.13.55	496.83 GB	32 42 GB	

5.2.1. Automatic Backups

Each VM is assigned one or more backup windows - i.e. time slots when the automatic backup is allowed to be executed, typically during hours of lower demand on the resources. Each VM will enter the backup queue at the beginning of its backup window. Depending on various parameters including when the last backup of the VM was done, how many VMs may be concurrently backed up and how much load may be imposed on the storage, the VM may stay in the gueue until its turn to actually be backed up arrives or until the backup window closes. No backup or verify operation will start outside of the backup window, even if the particular VM does not get backed up on that occasion. In a properly configured system with a sufficiently large backup window, all the VMs configured to be backed up will be backed up or will alternate, rotate, and be backed up on consecutive occasions. Once a backup is started for a specific VM, it will be run to completion, even if the operation extends outside the allocated window.



Archiware Pure comes preconfigured with two default backup windows: one set to last for 6 hours, starting every midnight Monday to Friday, and the other lasting the whole weekend (48 hours

duration, starting on Saturday 00:00).

Note: Because the very first backup for each VM needs to transfer the entire content of all its virtual disks, it is possible that not all the VMs will fit inside the default backup window. Subsequent backups will use *Changed Block Tracking* information, which significantly decreases the backup time.

Additional backup windows may be configured by clicking on the "+" icon and selecting the desired start time and duration. Note that backup windows cannot overlap.

Warning: A *Backup* operation will automatically consolidate and remove all existing snapshots of the *Virtual Machine* that is being backed up. If you temporarily need to keep snapshots of a VM, please make sure to disable automatic backups in the *Backup Configuration* side panel.

5.2.2. Verify

Backup consistency is ensured through an automatic *Verify* process, where the backed up content is compared, byte by byte, with the actual virtual disk content of the VM. Verifications of the machines that are queued for backup are automatically queued to be run after all the backups are completed. The VM that has not been verified longest will be verified first. In the course of a verification, mismatches are corrected to render a consistent backup snapshot.

Note: Please ensure a sufficiently large backup window to enable verify to run for all the VMs scheduled in that window.

5.2.3. Manual Backup and Verify

Backup and verify operations can also be run on demand by clicking on the icon left of the desired VM and selecting the *Start Backup Now*.

5.3 Main GUI Window

The main GUI window shows a list of all the discovered virtual machines, their statuses and information on their backup/verification times and disk usage.

In addition to the central area showing the VM list, other points of interest are:

- 1. Filter the List of VMs to filter the list of VMs shown in the main section
- 2. Backup Configuration to configure backup parameters for VMs and assign or remove tags
- 3. Restore to initiate a restore operation
- 4. Details to toggle the level of details shown in the main section
- 5. Refresh to manually force a refresh of the VM list
- 6. Sidebar collapses and extends the sidebar

Virtual Machines	1					5
	A Virtual Machines				4 (
App Configuration	Tie Virtual Machine	Bac	kup	Backup	Disk Usage	Backup/Bestore Job Progress
ter	er t	Completed	Duration	Actual	History	Duckup/ficstore 000 Frogress
	v 192.168.234.218					
System Settings	🕰 😑 🕛 wrongName-1disk					
	9 🕒 PureVA					
	• () wrongName3					
	• () ZoranThirdRestore					
	• • wrongName2					
	O JDWindows 8.1ProX64-rec	ov				
	😑 😃 JDTest					
	😑 🕛 Test_Ubuntu					
	U JDWindows 8.1ProX64					
	OtestOnly					
	Josef2					
	Image:					
	32 VMs		01:14:14	192.78 G	В	

5.4 Restoring Virtual Machines

A restore operation can be started from the *Restore* sub-panel. After selecting the desired virtual machine, a list of all the existing backup snapshots will be populated, allowing to restore the VM to any of those points in time.

The restore operation creates a new virtual machine on the chosen target host, with the same configuration and virtual disk content as that of the backed up VM.

⁵ Restore			~
Restore VM Restore File			
The following steps guide you throug	n the process of restoring a virtual machine to a	a selected point in time:	
1. Choose a virtual machine to be re	ostored: OS X 10.9	▼	
2. Select a point in time to restore:	12-Jun-2017 12:34		
3. Select the disk(s) to restore:	All disk(s)		
		~	
4. Choose the destination host:	192.168.234.208	~	
5. Choose the destination resource	pool: /Resources	▼	
6. Select the target datastore:	NAS1-Prod	▼	
7. Change the virtual machine's nan	os X 10.9-recovered		
		Star	rt Restore

Ŧ

5.5 Restoring Single File

Restore of a single file is straightforward operation: First you need to select VM that has file needed for download and then select wanted backup time/point in time. List of available hard disks (and its partitions) is shown. Those file systems that are supported are browsable. When the file is selected and download button clicked file is downloaded to location set by your web browser.

D Restore

Restore VM Restore File			
The following steps guide you through the process	3. Select a file to download 1	Modification Date	Size
point in time and downloading it to your computer:	▼ 🖨 Hard disk 1		40.61 GB
1. Choose a virtual machine:	Apple boot		619.89 MB
OS X 10 9	Apple HFS/HFS+		39.68 GB
	Applications		
2. Select a point in time:	▼ 🗅 bin		
12-Jun-2017 12:34	💽 🖿 bash	24-Sep-2014 11:24	
	🗆 🖿 cat	24-Sep-2014 11:24	
	C 📄 chmod	24-Sep-2014 11:24	
	C b cp	24-Sep-2014 11:24	
	C 🖿 csh	24-Sep-2014 11:32	
	🗆 🖿 date	24-Sep-2014 11:24	
	🗋 🖿 dd	24-Sep-2014 11:24	
	🗋 🖿 df	24-Sep-2014 11:24	
	🛃 Do	wnload	

5.6 Configuring Additional Backup Repositories

Additional backup repositories can be configured by selecting the *Repository* tab in the left side menu. Simply adding one of the available drives to the *Used Drives* list and clicking *Apply* will configure that drive as a *Backup Repository*.

Pure	≡	 12.Jun 13:33 Logout
🚠 Virtual Machines	BACKUP REPOSITORY	
App Configuration	The Archiware Pure backup repository i backup configuration. It consists of at le recommend using only RAID storage in The primary disk is the default torget for	s the central storage location for the saved data and the east one drive and can be extended later on. We highly order to avoid backup failure.
🖨 Repository	virtual machines remain stored on the e The repository consists of one or more backup jobs can be set.	drives. For each disk, a limit on the number of simultaneous
📰 Servers	Used Drives Total Size Free	Size
i Reporting	sdb 992.00 GB 462.70	GB Number of simultaneous backup jobs:
差 Preferences	992.00 GB 462.70	6 GB
System Settings	C +	Add

Note: Newly discovered *Virtual Machines* will automatically be assigned to the primary backup repository. You can change the primary repository by toggling the corresponding checkbox in the *Used Drives* list.

Note: For a drive to appear in the *Available Drives* list, it must first be added to the *Archiware Pure Virtual Appliance* through the VMware GUI.

5.7 Configuring Additional Infrastructure Servers

Archiware Pure can be configured to protect virtual machines managed by multiple vCenter or ESXi servers. The only pre-requisite is that the server managing the *Archiware Pure Virtual Appliance* has access to the data-stores where the VMs to be protected reside.

A new Infrastructure server can be added by clicking the "+" button and entering the corresponding connection parameters.



Note: For vSphere installations managed by a vCenter server, it is strongly recommended that *Archiware Pure* be configured to connect to this vCenter server. Additional connections to managed ESXi hosts can also be configured, but they will not be used for backups as long as the vCenter connection is available. The exception is the ESXi host managing the vCenter virtual appliance, which has to be configured in order to enable backups of the vCenter virtual machine itself.

Note: When configuring an *Infrastructure Server* with a user belonging to a role other than *Administrators*, please ensure that the corresponding user has sufficient vSphere privileges to execute all operations required for backup.

Note: In order to enable normal operation in environments with vSphere lockdown mode enabled, user names configured for access to ESXi servers will automatically be added to the *Exception Users List*.

5.8 Reporting

Archiware Pure can be configured to automatically send a detailed daily backup report by email. If you wish to receive daily reports, please configure email recipients and the required report generation time. In case of the multiple recipients, please separate the individual email addresses with commas and without spaces.



Note: In order for *Archiware Pure* to be able to send daily reports, *Email server* settings need to be configured. Please see 5.9 Email settings.

5.9 General Preferences

The *General Preferences* tab contains fundamental settings that affect the overall behavior of *Archiware Pure*. Each of these settings can be individually overridden for selected VMs or backup repositories, allowing you to fine tune your configuration.

The settings you can adjust are:

Automatic backup of newly discovered VMs

This setting determines whether Archiware Pure should automatically schedule newly

discovered virtual machines for backup. Each new VM will be assigned to the primary backup repository and scheduled using the default backup window.

Backup retention time

This settings determines the number of days the backup data is being kept in the repository before being overwritten by the new backups.

· Number of simultaneously running backup jobs

With this setting you can control how many backup jobs will be run simultaneously for each backup repository. If there are multiple virtual machines that have to be backed up at any moment, only this number of backups will be allowed to run. All other jobs will wait in queue for a slot to become free. Note that this setting is applied to newly added backup repositories only. To change this setting for an existing repository, please see 5.5 Configuring Backup Repositories.



5.10 Email settings

In order to enable *Archiware Pure* to send daily email reports, an outgoing email server needs to be configured first. Please enter the desired email sender, outgoing mail server address, protocol and port, add a valid login credentials and click *Apply* to save the configuration.

7	Pure	≡ ⊘	12.Jun 13:30 🕞 Logout
*	Virtual Machines	EMAIL SERVER	
		Sender (Reply To) email:	ic@archiware.com
A	App Configuration	Outgoing mail server:	archiware.com
o ë	System Settings	Use SMTP Authentication:	TLS 💌
- - -2		Port to connect to:	587
	🖂 Email	For the authentication optional	username and password:
	C Softwara	Username:	ic
		Password:	•••••
			Send Test Mail ✔ Apply

5.11 Software settings

Software settings tab allows you to configure licensing and registration, software updates and download the support data.

Licensing

You may freely use Archiware Pure for 90 days for testing before a software license is

required. Once you have purchased the license, click on the *License Registration* button to start the *License Registration Wizard* and register your copy of the software.

Update

The *Update* section displays the information about the currently installed *Archiware Pure* version and allows you to check for new updates online. If a newer version of *Archiware Pure* is found, the update process can be started. It consists of these steps:

- 1. Click the Download button to initiate the update package download to the appliance
- 2. Click the Update and restart button to perform the update and restart Archiware Pure.

Note: During the update process, *Archiware Pure* will be restarted and all active backup or restore tasks will be interrupted. Make sure there are no active jobs at the time of update.

Support

In order to help with the customer support, *Archiware Pure* can prepare the support data package, which you can send to the support staff if asked. Support package contains *Archiware Pure* log files, *Archiware Pure* configuration, selected OS logs and vSphere inventory configuration.

