

# **Archiware Pure**

## **User Manual**

software version 2.0

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## 1 Preface

#### 1.1 About This Manual

This document describes the installation and configuration procedures for *Archiware Pure*. You will also find examples and case studies for installing, managing and employing *Archiware Pure* in a typical production environment.

## 1.2 Who Should Read This Document?

The information contained in this manual is intended for system administrators who will install and maintain *Archiware Pure* as well as for users who will employ *Archiware Pure* as a data protection system.



## **1.3 Software Description**

Archiware Pure is a software for protecting virtual machines by backing up the content of their virtual disks and allowing their easy recovery. Data is saved to a separate storage, preferably independent of the virtualization system, in order to increase the overall security and level of protection. Archiware Pure can be deployed as a virtual appliance, running within the virtualization system being protected, it can be installed as a standalone software package on one of the supported Linux platforms or it can be installed on one of the supported NAS devices using the corresponding app marketplace. Regardless of the installation type, Archiware Pure is designed to be replaceable at any time. In case of a failure within the virtualization system, a new Archiware Pure instance can simply be downloaded and deployed. After importing the existing backup storage, previously protected virtual machines can easily be restored and work can be seamlessly continued.



## 1.4 Software Licensing

By default, *Archiware Pure* is installed with a fully functional, 30-day trial license. At the end of the trial period, a license needs to be applied.

A free license offers full protection of your vSphere environment, without any limitations to the number of protected virtual machines, ESXi hosts or the total amount of backup data saved. It also grants access to all future *Archiware Pure* updates.

Buying an *Archiware Pure Support Package* will grant you access to our technical support. For details, please visit our webpage.



## 1.5 Registration

You can register your copy of *Archiware Pure* by navigating to the *System Settings > Software* menu, entering your *Archiware Portal* login credentials and applying the corresponding license.

Alternatively, you can register a license on Archiware's web site. Upon correctly completing the form, you will receive an activation code. You have to create a license and enter this activation code to enable the functionality that it provides.

You may find further information regarding licensing in section 5.4.2 Software Settings.



## 1.6 Technical Support

Contact information, software updates, technical documentation and information about the current support programs and options may be found on Archiware's web site.

## 2 Installation

Deployment options

#### 2.1.1. Virtual Appliance

*Archiware Pure* is delivered as a ready to use virtual appliance and does not require software installation beyond the deployment of the virtual machine template in your virtualization environment. For detailed instructions on how to deploy the *Archiware Pure* virtual appliance, please see 2.3 Deploying the Virtual Appliance.

#### 2.1.2. Standalone Application

*Archiware Pure* can also be installed as a standalone application on a virtual or physical server. The officially supported operating system is Ubuntu Linux 18.04 LTS.

To install a standalone version, please download the current software version from Archiware's webpage, unpack it into a folder of your choice and run *start.sh* script from the same folder. If you need to change the default *Archiware Pure* port from 443, you can add the desired port number as argument to the start script. For example, the following commands would download and install *Archiware Pure* version 2.0.0 into a /usr/local/pure/vmsn folder on port 4433:

```
$ sudo mkdir -p /usr/local/pure/vmsn/temp && cd /usr/local/pure/vmsn/
$ sudo wget
https://s3.eu-central-1.amazonaws.com/pure-distribution/release/vmsn.2.0.0.tgz
$ sudo tar xzf temp/vmsn.2.0.0.tgz -C .
```

```
$ sudo ./start.sh 4433
```

#### 2.1.3. Integrated NAS Application

*Archiware Pure* is also available as an integrated application on supported NAS systems, such as Synology, QNAP and NETGEAR. To install *Archiware Pure* on those systems, simply find it in the respective app marketplace and click Install.

Alternatively, the latest version of *Archiware Pure* can always be downloaded from Archiware's web site and manually installed according to the instructions outlined in the respective NAS system user manual. For detailed instructions on how to install Pure on some of the NAS platforms, please see 2.5 Deploying an Integrated NAS Application.

## 2.2 System Requirements

#### 2.2.1. Hardware Specification

- VMware vSphere 6.0 or later, any non-free edition<sup>1</sup>
- VMware ESXi 6.0 Express Patch 4 (build number 3247720, 2015-11-25) or later
- vCenter Server 6.0 or later (optional)
- CPU: x86-64 processor
- Memory: 2 GB RAM
- Disk space (not including separate disk space used for the backup repository):
  - virtual appliance: 6 GB
  - standalone application: 1 GB
  - Integrated NAS application: 1 GB
- Supported NAS versions:
  - Synology DSM 6.0+ (Intel x86 64-bit)
  - QNAP QTS 4.3.0+ (Intel x86 64-bit)
  - NETGEAR ReadyNAS OS 6.9.1+ (Intel x86 64-bit)

The above are the minimum supported system requirements. Provisioning more processor power and memory to the *Archiware Pure's* virtual appliance will help increase performance when performing multiple parallel backups.

#### 2.2.2. Other Deployment Considerations

*Archiware Pure* protects all types and versions of virtual machines supported by VMware. Because backup operations leverage VM snapshots and virtual disk hot-adding, virtual disks not supported by these mechanisms are automatically skipped from backup.<sup>2</sup>

In order for *Archiware Pure* to be able to backup a virtual machine, it needs access to its virtual disks. Disk access can be achieved either directly or over a network connection. Direct access requires that *Archiware Pure* be deployed as a Virtual Appliance and that the ESXi host managing *Archiware Pure* has access to the VMware datastore where the virtual machines to be protected reside.

For the virtual disks that reside on inaccessible datastores or in case that *Archiware Pure* is not deployed as a Virtual Appliance, backups will use network transfer instead.

<sup>1</sup> This limitation is imposed by VMware as necessary vSphere APIs are disabled in free ESXi

<sup>2</sup> VMware does not support snapshots of raw disks, RDM physical mode disks, independent disks, PCI vSphere Direct Path I/O devices, disks configured for bus sharing or disks that use an iSCSI initiator in the guest operating system.

#### 2.3 Deploying the Virtual Appliance

*The Archiware Pure Virtual Appliance* is preconfigured to meet the minimum hardware requirements for the CPU and RAM. However, disks to be used for the Backup Repository are not pre-configured 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 deployment through a vCenter server or on a standalone ESXi version 6.5 host, please follow the official VMware instructions for OVF and OVA Templates<sup>3</sup>. For standalone ESXi version 6.0 hosts, 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*)<sup>4</sup>

1. Log in to the VMware ESXi web GUI, right click on the Host and select the Create/Register VM option from the context menu.

vmware <sup>,</sup> Es	SXi				root@192.168.234.218 -   Help -	Q Search
Bavigator		localhost.a	rchiware.com			
✓ I Host Manage	Host		with vCenter Server	🐏 Create/Register VM   🐻 Shut down	🔥 Reboot   🤁 Refresh   🏠 Actions	
Monitor	<ul> <li>Manage with vC</li> <li>Disconnect from</li> </ul>		Version: 6	chiware.com 5.0 (Build 4564106) ormal (connected to vCenter Server at 192.168.2	CPU USED: 779 MHz	FREE: 13.6 GHz 5% CAPACITY: 14.4 GHz
<ul> <li>Storage</li> <li>Storage</li> <li>Metworking</li> </ul>	<ul> <li>Create/Register</li> <li>Shut down</li> </ul>		Uptime: 4 er a VM on this host	3.77 days	USED: 7.08 GB	FREE: 56.82 GB 11% CAPACITY: 63.9 GB
-	Reboot		-		STORAGE USED: 7.92 TB	FREE: 3.26 TB 71% CAPACITY: 11.18 TB
		ost is being manag stions	ed by vCenter Server. Actions may be perform	ed automatically by vCenter Server without your ki	nowledge. ×	
-	Sermissions		-			
l	Generate suppo	rt bundle	rer	Supermicro		
		Model		X10DRW		
		🕨 🗖 CPU		6 CPUs x Intel(R) Xeon(R) CPU E5-2620	v3 @ 2.40GHz	
		Mem	ory	63.9 GB		
		🕨 🔚 Virtua	l flash	0 B used, 0 B capacity		
		👻 🧕 Netw	orking			
ttps://192.168.234.2	218/host	😨 Recent task	s			

- 3 https://docs.vmware.com/en/VMware-vSphere/6.5/com.vmware.vsphere.vm\_admin.doc/GUID-AFEDC48B-C96F-4088-9C1F-4F0A30E965DE.html
- 4 https://pubs.vmware.com/vsphere-50/index.jsp#com.vmware.vsphere.vm\_admin.doc\_50/GUID-AFEDC48B-C96F-4088-9C1F-4F0A30E965DE.html



3. Enter a name for your Archiware Pure virtual appliance. Click in the central area and select the previously downloaded Archiware Pure template files. If you downloaded the appliance as a single zip archive, please extract the content first. Be sure to select all the included files (ArchiwarePure.x.y.z.ovf, ArchiwarePure.x.y.z.mf, ArchiwarePure.x.y.z-disk1.vmdk). Click Next to continue. Note: the ArchiwarePure.x.y.z.mf file will not be shown in the ESXi web GUI.

vmware <sup>,</sup> ESXi <sup>,,</sup>		root@192.168.234.218 -   Help -   Q Search -
Peee Navigator	localhost.archiware.com	
- 🖩 Host	🔁 New virtual machine - ArchiwarePu	re FREE: 13.6 GHz
Manage Monitor	<ul> <li>1 Select creation type</li> <li>2 Select OVF and VMDK files</li> </ul>	Select OVF and VMDK files
Given Strategy      G	3 Select storage	Select the OVF and VMDK files or OVA for the VM you would like to deploy FREE: 56.82 GB 11%
El Storage     G. Networking	4 License agreements 5 Deployment options	Enter a name for the virtual machine. CAPACITY: 63 9 GB ArchiwarePure FREE: 3.26 TB
Notworking	6 Additional settings 7 Ready to complete	Virtual machine names can contain up to 80 characters and they must be unique within each ESXI instance.
	<b>vm</b> ware <sup>.</sup>	×
		Back Next Finish Cancel 5, 2017, 13:11:08 UTC
	E Recent tasks	

2. Select the Deploy a virtual machine from an OVF or OVA file option and click Next.

4. Select the datastore in which to store the *Archiware Pure* virtual appliance's configuration and disk files and click *Next*.

avigator	Iocalhost.archiware.com							_
Host	🔁 New virtual machine - ArchiwareF	Pure						FREE: 13.6 GH
Manage Monitor >  Virtual Machines >  Storage	<ul> <li>1 Select creation type</li> <li>2 Select OVF and VMDK files</li> <li>3 Select storage</li> <li>4 License agreements</li> <li>5 Deployment options</li> </ul>	Select storage Select the datastore in which to store the The following datastores are accessible for the virtual machine configuration file	le from the destination resource that you selected. Select the destination datastore					CAPACITY: 14.4 GH FREE: 56.82 G 119 CAPACITY: 63.9 G FREE: 32.6 T
Networking	6 Additional settings 7 Ready to complete	Name	~ Capacity	~ Free	~ Туре	Thin pro	Access ~	719 CAPACITY: 11.18 T
	/ Ready to complete	NAS1-Prod	5 TB	450.48 G	B VMFS5	Supported	Single	
		NAS1-Prod2	4 TB	1.47 TB	VMFS5	Supported	Single	×
		SAN1-LUN0	2.18 TB	1.35 TB	VMFS5	Supported	Single	
							3 items	
	<b>vm</b> ware							494585-standard
					Back	Next Fini	ish Cancel	15, 2017, 13:11:08 UTC

5. Choose the VM Network to which the appliance will be assigned as well as the disk provisioning type. The *Archiware Pure* appliance comes with a thin disk with 6GB of provisioned size. Because this disk is not vital for performance, it can be deployed as thin in order to save storage space. Click *Next* to proceed.

vmware <sup>,</sup> ESXi <sup>**</sup>				root@192.168.234.218 👻   Help -	Q Search
Navigator	localhost.archiware.com				
💌 🖥 Host	🔁 New virtual machine - ArchiwarePu	re			FREE: 13.6 GHz
Manage Monitor	<ul> <li>1 Select creation type</li> <li>2 Select OVF and VMDK files</li> <li>3 Select storage</li> <li>4 Deployment options</li> </ul>	Deployment options Select deployment options			CAPACITY: 14.4 GHz FREE: 56.82 GB 11% CAPACITY: 63.9 GB
• 🧕 Networking	5 Ready to complete	Disk provisioning	VM Network VM Network	▼	FREE: 3.26 TB 71% CAPACITY: 11.18 TB
	vmware <sup>.</sup>				494585-standard
	E Recent tasks		Back	Next Finish Cancel	



					✓ I Q Search
Ceee Navigator	localhost.archiware.com				
🔻 🚪 Host	🔁 New virtual machine - ArchiwarePut	re			FREE: 13.6 GHz
Manage Monitor	<ul> <li>1 Select creation type</li> <li>2 Select OVF and VMDK files</li> <li>3 Select storage</li> </ul>	Ready to complete Review your settings selection before fin	ishing the wizard		5% CAPACITY: 14.4 GHz FREE: 56.82 GB
Storage	<ul> <li>✓ 4 Deployment options</li> <li>✓ 5 Ready to complete</li> </ul>	Product	PureSourceOfRelease		CAPACITY: 63.9 GB FREE: 3.26 TB
Networking		VM Name	ArchiwarePure		CAPACITY: 11.18 TB
		Disks	ArchiwarePure.0.9.14-disk1.vmdk		
		Datastore	NAS1-Prod		
		Provisioning type	Thin	×	
		Network mappings			
		Guest OS Name			
		Do not refresh your brow	494585-standard		
	<b>vm</b> ware <sup>*</sup>				, 11:16:26 UTC
			Back	Vext Finish Cancel	15, 2017, 13:11:08 UTC
	Recent tasks				



Before *Archiware Pure* can be used for virtual machine backups, it is necessary to configure at least one storage location as the *Backup Repository* where the backup data of the protected virtual machines will be saved. *Archiware Pure* supports any storage option as long as the corresponding mount point is accessible from Virtual Appliance's OS, is formatted with one of the file systems supported by *Ubuntu* Linux and *Archiware Pure* has write access to it.

Although *Archiware Pure* supports all storage options supported by VMware, even configuring storage as a virtual disk residing on the same datastore where the VMs to be protected are deployed, we strongly suggest using a dedicated external storage for the added security. For best performance, we recommend configuring a SAN LUN in *raw device mapping mode*.

Due to VMware limitations, if the *Backup* Repository is configured as a VMware virtual disk attached to *Archiware Pure's* Virtual Appliance, 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*.

Please consult the official VMware instructions on adding hard disks to a virtual machine.<sup>5</sup>

5 https://docs.vmware.com/en/VMware-vSphere/6.5/com.vmware.vsphere.vm\_admin.doc/GUID-79116E5D-22B3-4E84-86DF-49A8D16E7AF2.html

#### 2.3.2. Configuring the Virtual Appliance

#### **Configuring the Access Password**

For security reasons, the *Archiware Pure* appliance does not have a preconfigured default password and does not accept external SSH connections until manually enabled.

After a successful deployment (and powering on the VM) it is necessary to configure the *Archiware Pure* appliance using its console menu, accessing it through the VMware GUI<sup>6</sup>. On first access, a new password configuration prompt is shown. 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. Please enter the desired password and confirm it by re-typing it again when prompted.

Please e	nter the	new	password:	
0				
<0	ko		<cancel></cancel>	

<sup>6</sup> Right-click the *Archiware Pure* VM in the VMware inventory and select *Open Console* option from the on-screen menu.

Using the Console Menu

After successfully configuring the password, the console menu is shown. It presents basic information about the appliance's version as well as the web address through which the *Archiware Pure* GUI can be accessed.

**Note:** When accessing the *Archiware Pure* GUI, make sure to enter the complete URL, including the *https://* part. Http access is disabled for security reasons.

Welcome to ARCHIWARE PURE Server Appliance
PURE Version: 2.0.0 OS Appliance: GNU/Linux 4.15.0–47–generic
To manage your appliance please browse to: https://192.168.234.137:443
PURE Console Menu
<ol> <li>Reset Password</li> <li>Configure Network</li> <li>Date and Time Properties</li> <li>Start SSH Server</li> <li>Stop SSH Server</li> </ol>
p) Restart Archiware Pure r) Reboot Pure VM s) Shut down Pure VM x) Exit to shell Enter a number: _

Through the console menu, you can perform the following actions:

1) Reset Password – Sets the new password for the appliance and for the GUI.

**2)** Configure Network – This option opens the Linux NetworkManager tool to allow configuring the appliance's network settings.

3) Date and Time Properties – Allows changing Date, Time and Timezone.

**4) Start SSH Server** – For security reasons, SSH access to the appliance is disabled by default. This option temporarily enables SSH access to the appliance and is automatically switched off when the appliance is rebooted.

5) Stop SSH Server – Immediately disable SSH access to the appliance.

p) Restart Archiware Pure - Restarts Archiware Pure without rebooting the appliance.

r) Reboot Pure VM – Restarts the whole Archiware Pure virtual machine.

s) Shut down Pure VM – Powers off the Archiware Pure virtual machine.

**x)** Exit to shell – Exits the console menu into a Linux shell. To open the console menu again, run the console script again by executing the following command:

/usr/local/pure/vmsn/vmsn\_console.sh

## $\bigcirc$

## 2.4 Deploying a Standalone Application

*Archiware Pure* can also be installed as a standalone application on a virtual or physical server. The officially supported operating system is Ubuntu Linux 18.04 LTS.

To install a standalone version, please download the current software version from Archiware's webpage, unpack it into a folder of your choice and run the *start.sh* script from the same folder. If you need to change the default *Archiware Pure* port from 443, you can add the desired port number as argument to the start script. For example, the following commands would download and install *Archiware Pure* version 2.0.0 into the /usr/local/pure/vmsn folder on port 4433:

```
$ sudo mkdir -p /usr/local/pure/vmsn/temp && cd /usr/local/pure/vmsn/
$ sudo wget
https://s3.eu-central-1.amazonaws.com/pure-distribution/release/vmsn.2.0.0.tgz
$ sudo tar xzf temp/vmsn.2.0.0.tgz -C .
$ sudo ./start.sh 4433
```

## 2.5 Deploying an Integrated NAS Application

The easiest way to deploy *Archiware Pure* on one of the supported NAS hardware devices is to install it directly from each vendor's respective app marketplace. However, if the latest *Archiware Pure* version is not available or if you prefer a manual installation, you can always download the latest software package for your NAS platform from *Archiware's* website and follow the manual installation steps.

**Note:** *Archiware Pure* requires a 64-bit x86 compatible processor. Devices not meeting these requirements are not supported.

#### 2.5.1. Deploying on Synology Devices



1. Log on to your *Synology* NAS system web interface and open the *Package Center* 

2. Select the *Manual Install* option, press *Browse* and navigate to the folder containing the downloaded *Archiware Pure* Synology package file. Select the .spk file and start the installation process by pressing *Next*.



#### 3. Carefully read and accept the license agreement by clicking Next.

	161.53.64.42	
11 🔯		🧙 👤 🔎 🗉
	Package Center P - 🗖	I X
Q 5 < >	Archiware Pure - Update ×	igs
Installed	License Agreement	
All Packages	Please read the following license agreement before continuing.	
	LICENSE AGREEMENT	
	Object: Archiware Pure - hereinafter called "SOFTWARE PRODUCT"	
	Between:	
	Archiware GmbH, Sonnenstr. 27, 80331 Munich, hereinafter called "ARCHIWARE"	
	and:	
	Licensee (end-user, either individual or a single entity)	
	✓ I accept the terms of the license agreement.	
	Back Next Cancel tive Backup for fice 365	
	Install Install Install	



4. Confirm the application settings and start the installation by clicking Apply.



5. After the installation is finished, Archiware Pure is shown in the list of installed apps.



6. Selecting *Archiware Pure* in the list of the installed apps in *Package Center* gives you an overview of the app's status and its description. Here you can find options to start and stop *Archiware Pure*.

**Note:** If *Archiware Pure* is stopped before the *Synology* device is restarted, *Archiware Pure* will not be configured to automatically start on system boot.



#### 2.5.2. Deploying on QNAP Devices

1. Log on to your *QNAP* NAS device web interface and open *AppCenter*. Select the *Install Manually* option in the top right-hand-sides corner.



2. Select *Browse* and navigate to the folder containing the downloaded *Archiware Pure* QNAP package file. Select the .qpkg file and start the installation process by pressing *Install*.



3. Select *Ok* to proceed with the installation.

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	= 🛄	App Center 🗙			Q í	<b>9</b> (	📴 🛛 🛛 admin 🗸	: 🙆
	App Center							- + ×
	A 🖽	AppCenter					Q. 🖸 🏭	¢:
	r∰ 4	My Apps 4	III - 1↓ -   ■ Volume Info			×	Install Update	
	QNAP Store	All Apps	Install Manually				instail Opdate	
	HD HybridDesk Station	QTS Essentials Recommended	To install a package, please follo	w the steps below: upp add-ons including those newly d	eveloped ones from the Beta	a lab. You		
		Beta Lab Partners	can download and unzin the a App Developn sample codes 2. Browse to th	ddons to your computer you sure you want to install this s		ation, and		
		Backup/ Sync Business		kage?	ten	osite. n, cause a or harm		$\geq$
		Content Management Communications Coeveloper Tools	caused by una ArchiwarePure_2.0.0_x86_64.c	ipkg Browse	Install			^
•		Download Entertainment				Close		
		🖸 Surveillance 🔧 Utilities	5.6.3 Station Backup/ Sync Utilitie		Virtual Switch Utilities	Center Utilities	Qboost 1.2.0 Utilities	þ
		<ul> <li>Home Automation</li> <li>Security</li> </ul>	O Open 🗸	Open V Open V	O Open 🗸	O Open 🗸	O Open 🗸	×

4. Select *Ok* to finish the installation process.

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= 💷	App Center 🛛 😹				Q	é 9	() <sup>100</sup>   B	admin 🔻	: 🙆	
Archiware Pu Menu.	ure has been added to the Main								- + ×	
A 🖽 🖌	AppCenter						Q	C 🌐	¢ :	
<b>É</b> 4	My Apps 4	₩ • 11/ •   🛢 Volu					×	Install Lindator		
CRAAP Store	All Apps QTS Essentials Recommended Beta Lab Partners Backup/ Sync Business Content Management Communications Communications Developer Tools Download Commonications	Install Manual To install a package, ple 1. Click here to browse can download and unz App Developr sample codes 2. Browse to th Note: QNAP re Applications d data loss, or le caused by una	ase follow the steps be more App add-ons ir ip the add-ons to you	ncluding those newly de	eveloped ones from the dy to use. OK Install	Beta lab. You ntation, and rebsite. tem, cause iss or harm	×	Install Updates	C AII	
	<ul> <li>☑ Entertainment</li> <li>☑ Surveillance</li> <li>☑ Utilities</li> <li>ⓓ Home Automation</li> <li>☑ Security</li> </ul>	5.6.3 Backup/ Sync O Open	2.0.0 Backup/ Sync	Station Utilities	1.00	Virtual S Utilities	witch Cento Utilitie		)	×

5. Archiware Pure is shown in the list of installed applications. From there it can be opened, started, stopped or uninstalled.

**Note:** If *Archiware Pure* is stopped before the *QNAP* device is restarted, *Archiware Pure* will not be configured to automatically start on system boot.





1. Log on to your *ReadyNAS* device's web interface and open the *Apps* menu. Select *Upload* in the top right-hand-side corner.



2. Select *Browse* and navigate to the folder containing the downloaded *Archiware Pure* ReadyNAS package. Choose the .deb file and start the installation process by pressing *Upload*.



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3. Wait for the installation to finish.



*4. Archiware Pure* is shown in the list of installed applications. From there it can be opened, started, stopped or uninstalled.

**Note:** If *Archiware Pure* is stopped before the *ReadyNAS* device is restarted, *Archiware Pure* will not be configured to automatically start on system boot.

		161.53.64.44	Ċ		1 D +
<b>NETGEAR</b> <sup>•</sup> Admin Page	ReadyNAS <sup>®</sup>			Welcome adm	in 💄 • 🕛 •
System Shares	iSCSI Accounts Network Apps	Cloud Backup			٩
Application archiware	-pure is installed successfully.			Show	Clear All
Filter by name	Q.	$\checkmark$	Je Apps	<b>t</b> Reverse	Upload Refresh
Launch	Archiware P5 Developer: Archiware Gmbh. Version Installed: 5.6.3-1 N M Archiwares P5 Software Suite is a platform- agnostic data management software for archiving, backup and cloning. The browser- More Info Remove	Launch	Archiware Pure Developer: Archiware Version Installed: 2.0.0-1		
3	Automatic for Bittorrent Developer: Poussin Version Installed: 1.1.1		Logitech Media Server NT Developer: NAStools Version Installed: 7.9.0.b7dfc80-nt1		



The Archiware Pure web GUI can be accessed by navigating to the URL indicated in the *Appliance's* console ("https://<*Appliance IP address>:<port>*"). For standalone installations, this URL corresponds to the IP address assigned to the host machine, followed by the port number configured when starting *Archiware Pure*.

Please find the default port numbers in the following table.

Deployment type	Port number				
Virtual Appliance	443				
Standalone Linux application	443				
Synology	20500				
QNAP	8060				
ReadyNAS	8250				

Please make sure to include the "https://" part of the address.





## 3.1 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.

	<b>≜</b> 192.168.234.137 Č	Ů ₽ +
Pure	Ξ	<ul> <li>O9.May 11:52  Logout</li> </ul>
App Configuration	€ INITIAL SETUP	
₽ Initial Setup	<ul> <li>Welcome to the Archiware Pure initial Setup wizard.</li> <li>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.</li> <li>This wizard guides you through the following steps: <ol> <li>Read and accept the End User License Agreement</li> <li>Configure a backup repository</li> </ol> </li> <li>Add an infrastructure server</li> </ul>	
	« Previous Next »	

#### 3.1.1. License Agreement

Please carefully read and accept the End User License Agreement.



#### 3.1.2. Licensing

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





#### 3.1.3. 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 mount point and can be extended later on. We highly recommend using only RAID storage to avoid data loss.

*Archiware Pure* supports all filesystem types supported by the host OS and accessible from the host machine, including network shares.

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

	<b>192.168.234.137</b> Č	
Pure	Ξ	② 09.Apr 11:09  Logout
🖨 App Configuration 🚽	₽ INITIAL SETUP	
	3. Backup Repository	
📌 Initial Setup	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 to use only RAID storage to avoid data loss.	
	Please enter an absolute directory path to a volume with enough space for the default repository.	
	/vol1/backup	
	Note: Additional volumes can be added at a later time using the Repository configuration option.	
	« Previous Add Repository »	



#### 3.1.4. Infrastructure Server

Please configure the connection parameters for your virtual infrastructure.

*Archiware Pure* can protect a single vCenter environment with multiple ESXi servers. Adding a vCenter server as an Infrastructure server will allow *Archiware* Pure to protect all the VMs it manages. For information on configuring additional vCenter or ESXi hosts, please see 5.3.2 Configuring Infrastructure Servers.

		<b>■ 192.168.234.137</b> C		
Pure	Ξ		④ 09.Apr 11:09	🕒 Logout
🖨 App Configuration 🗸	📕 INITIAL SE	TUP		
	4. Infrastructu	re server		
🗲 Initial Setup		g the first backup you need to add your virtual infrastructure to the backup 'ou can add your VMware vCenter server or standalone ESXi hosts.		
	Please enter th	e IP address or network name and the login credentials of the system administrator.		
	Host name:	DNS name or IP address		
	User name:	e.g. root for ESXi		
	Password:	Password		
	Description:			
	Protocol & Port	: https 💌 443		
		« Previous Add Server »		

**Note:** When deployed as a virtual appliance, *Archiware Pure* is able to use a faster transport method for backing up virtual machines residing on datastores accessible by the ESXi server managing the *Archiware Pure Virtual Appliance*. In order to make use of this advantage, please make sure to configure the vCenter or ESXi server managing *Archiware Pure Virtual Appliance* as one of the *Infrastructure servers*.

**Note:** In order to enable the 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. Please see 5.3.2 Configuring Infrastructure Servers on how to add additional infrastructure servers.



#### 3.1.5. Completing the Initial Setup

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

	■ 192.168.234.137	Ô () +
Pure	Ξ	<ul> <li>09.Apr 11:09  Logout</li> </ul>
App Configuration 🗸	✗ INITIAL SETUP	
🔎 Initial Setup	The wizard has completed the configuration. By default, all the virtual machines from a vCenter or ESXi server are automatically added to the default backup window. This behavior is designed to ensure that all the virtual machines get backed up.	
	Note: If after reloading the browser your inventory is empty, please verify that the network parameter and the user credentials specified for the vCenter or ESXi server are correct.	
	Click "Reload" to exit the wizard and to reload the browser configuration.	
	« Previous Reload »	

P

## **4** Backing Up Virtual Machines

*Archiware Pure* is designed with simplicity and ease of use in mind. It can be configured to automatically back up and keep all the discovered VMs protected.

•••	$\langle \rangle$				€ 192.168.2	234.137	Ċ			٥	P -
7	=	e							<ul> <li>10.Apr 11:01</li> </ul>	Logo	ut
*	+	🚓 Virtual Machines						с _	Backup Administration	n	Þ
			Backup/	Verify	Backup D	isk Usage		B	asic Advanced Overview		
≡	Filter the List of VMs	Virtual Machine	Completed	Duration	Total	Last i	Backup/Restore Job Progress	V	M: OS X 10.11		
	the	<del>-</del> 192.168.234.208									
~	List	🜑 🙂 OS X 10.11						_	Automatic backup is enable	d	
<b>A</b>	of	🜑 😃 Kerio-Control	10.Apr 00:36	36 min 45 s	6.1 GB	6.1 GB		В	ackup Windows:		
	M	💠 🙂 OS X 10.9					Backing Up: 6.98 GB of 40.61 GB	6	Frequency	Start	Period
00	07	🜑 🖞 OS X 10.6 234.26						6	Run weekly on Sat	00:00	48h
		- 192.168.234.217						6	Run weekly on Mon, Tue, Wed,	00:00	6h
		🜑 😃 Tiny Linux VM	10.Apr 00:37	0 min 39 s	0.0 GB	0.0 GB			Thu, Fri		
		ා 🕛 com.archiware.pure.builder									
		O U APT_ubuntu									
		① <sup>(1)</sup> Tiny Linux VM-1_1_7									
		① <sup>①</sup> Tiny Linux VM-2							+ /		
		① Unitrends_test									
		⑦ <sup>①</sup> Ubuntu15						Та	igs:		
		⑦ <sup>(1)</sup> ₩2016								•	Apply
		O U APT_solaris	09.Apr 13:44	1 min 31 s	3.6 GB	3.6 GB					
		🜑 🖞 Synology Play	10.Apr 01:14	36 min 59 s	27.7 GB	27.7 GB			Note: Create ne	w label	on enter
		ை ம் Tiny Linux VM-3 51 VMs	🔿 09 Apr 13:41	0 min 08 s	0.0 GB	0.0.GB 37.38 GB	37.38 GB				
		C Restore						•			

## 4.1 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 concurrently be backed up, and how much load may be imposed on the storage, the VM may stay in the queue 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 of 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.

se .	Backup Administratio	on	Þ			
Basio	Advanced Overview					
VM: Windows10x64						
Back	up Windows:					
	Frequency Run weekly on Sat	Start 00:00	48h			
	Run weekly on Mon, Tue, We d, Thu, Fri	00:00	6h			
	Run weekly on Mon, Tue, Thu, Fri, Sun	18:00	8h			
+	- 1					
Tags	:					
		•	Apply			
	Note: Create ne	w labe	l on enter			

*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 VMWare 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.

## 4.2 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 for the longest will be verified first. In the course of a verification, detected 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.

## 4.3 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*.




			<b>192.168</b> .	.20-1.10/		Ċ		
Pure	=						④ 09.Apr 11:35	🕩 Logo
		📥 Virtual Machine	es					G
				up/Verify	Backup I	Disk Usage		
Event Log		Virtual Machine	e Completed	Duration	Total	Last i	Backup/Restore Job Progress	
		- • 192.168.234.208						
App Configuration		◯ Ů OS X 10.11						
App Configuration		⑦ Ů OS X 10.9						
	VIVI	ා 🙂 Kerio-Contro	bl					
	• °	ා 🙂 OS X 10.6 23	34.26					
		- 192.168.234.217						
		ා ් Tiny Linux VM	M-2					
		ා ් Tiny Linux VM	M					
		ා එ Synology Pla	ay					
		O Unitrends_tes	est					
		ා 🖱 🖉 APT_solaris						
		ා ් Tiny Linux VM	M-3					
		ා 🙂 com.archiwa	are.pure.builder					
		① U APT_freebsd	1					
		ා එ Ubuntu15						
		⑦ <sup>(1)</sup> ₩2016						
		46 VMs						

The *Archiware Pure* web GUI consists of four main views, accessible through a menu located at the left hand side:

**Virtual Machines** – this is the central area of interest as it handles backup and restore administration, shows the list of all discovered VMs with their current statuses and states of the backup/verify/restore operations

Event Log – this view shows the historical overview of all backup, verify and restore operations.

**App Configuration** – this section contains settings that manage the most important aspects of *Archiware Pure* operation, such as configuration of Backup repositories, Infrastructure servers, Daily reports and General backup preferences

**System Settings** – this section contains settings not directly related to backup and restore operations, such as the configuration of the email server, software updates and licensing.

Another point of interest is the top area, common for all four views, that contains the collapse/expand sidebar button, the current date and time information and the logout button.

# 5.1 Virtual Machines View

The Virtual Machines view shows a list of all the discovered virtual machines, their statuses and information on their backup/verification times and disk usage.

It consists of:

- 1. The Central area
- 2. A collapsible Backup Administration panel (right)
- 3. A collapsible Filter the List of VMs panel (left)
- 4. A collapsible Restore panel (bottom)

=								0	• 10.Apr 11:24	4 🕞 Logo
+	🖧 Virtual Machines								Q	C
•		Backup	Verify	Veri	ify	Back	up Disk Usa	ge	Next Backup Starts Between	
Filter 1	Virtual Machine	Completed	Duration	Completed	Duration	Repository	Total	Last i	Start	End
the	🖸 🖞 OS X 10.11					/vol1/backup			11.Apr 00:00	11.Apr 06:00
List	🜑 也 Kerio-Control	10.Apr 00:36	36 min 45 s			/vol1/backup	6.1 GB	6.1 GE	3 11.Apr 00:00	11.Apr 06:00
of VMs	🜑 也 OS X 10.9	10.Apr 11:20	24 min 09 s			/vol1/backup	33.2 GB	33.2 GE	3 11.Apr 00:00	11.Apr 06:00
M	🜑 也 OS X 10.6 234.26					/vol1/backup			11.Apr 00:00	11.Apr 06:00
07	- 192.168.234.217									
	🜑 🕛 Tiny Linux VM	10.Apr 00:37	0 min 39 s			/vol1/backup	0.0 GB	0.0 GE	3 11.Apr 00:00	11.Apr 06:00
	ා එ com.archiware.pure.builder					/vol1/backup			11.Apr 00:00	11.Apr 06:00
	ා ් APT_ubuntu					/vol1/backup			11.Apr 00:00	11.Apr 06:00
	ා ් Tiny Linux VM-1_1_7					/vol1/backup			11.Apr 00:00	11.Apr 06:00
	ා ් Tiny Linux VM-2					/vol1/backup			11.Apr 00:00	11.Apr 06:00
	ා එ Unitrends_test					/vol1/backup			11.Apr 00:00	11.Apr 06:00
	ා එ Ubuntu15					/vol1/backup			11.Apr 00:00	11.Apr 06:00
	ා එ W2016					/vol1/backup			11.Apr 00:00	11.Apr 06:00
	ා එ APT_solaris	09.Apr 13:44	1 min 31 s			/vol1/backup	3.6 GB	3.6 GE	3 11.Apr 00:00	11.Apr 06:00
	🜑 也 Synology Play	10.Apr 01:14	36 min 59 s			/vol1/backup	27.7 GB	27.7 GE	3 11.Apr 00:00	11.Apr 06:00
	ා ් Tiny Linux VM-3	🗢 09.Apr 13:41	0 min 08 s	09.Apr 13:41	0 min 08	s /vol1/backup	0.0 GB	0.0 GE	3 11.Apr 00:00	11.Apr 06:00
	つ 小 APT_freehsd 51 VMs					/vol1/backup		70.56 GB	11 Apr 00.00	11 Apr 06:00 70.56 GB

## 5.1.1. The Central Area

The Central view lists all the discovered VMs per host and their status. The list is collapsible per host and can be searched by VM name (top right corner).

Clicking on *More details* and *Less details* buttons toggles between a detailed and a simplified information view. Detailed information displays backup and verify completion time and duration, backup disk usage, next backup window information and the progress of the current backup/verify/restore operation. The simplified information view omits the verify completion time and duration and the next backup window details.

The refresh button can be found in top right-hand-side corner, it is used to manually force a refresh of the VM list and information.

The status of each of the VMs is indicated by three icons – automatic backup enabled/disabled, VM powered on/off and the result of the latest backup or verify operation.

When a VM is selected, a button (...) appears immediately to the left of the VM status icons. When clicked, it opens a pop-up menu with the following options:

- Start backup now: to immediately execute backup or verify operation for this VM
- Enable automatic backup: to toggle the automatic backup setting for this VM
- **Delete from repository**: to delete all of the backup data for this VM from *Archiware Pure* repository

## 5.1.2. Filter the List of VMs

This panel allows narrowing down the displayed list of the VMs using these categories:

т	▼ Filter the List of VMs										
Backup Results											
	Backup completed										
	<ul> <li>Backup &amp; verify completed</li> </ul>										
	Last backup failed										
	<ul> <li>Backup completed with warning</li> </ul>										
C	C Backup Status										
	Backup is enabled										
	② Backup disabled										
	Backup running										
	Sestore running										
	Job pending										
	VM is offline										
۲	Tags										
⇔	Backup Volumes										
	/vol1/backup										
Ħ	Backup Windows										
	Run weekly on Sat 00:00 48h										
	Run weekly on Mon, Tue, 00:00 6h										

- Backup Results: the result of the latest backup or verify operation
- Backup Status: based on backup settings and state of the backup or restore
- Tags: can be manually set (one or more) for each VM (see 5.1.3 Backup Administration for more info); selecting one or more tags lists only the VMs that have at least one matching tag assigned
- Backup Volumes: filters VMs based on their backup storage location
- Backup Windows: contains a list of all the defined Backup Windows (see 5.1.3 Backup Administration for more info)

### 5.1.3. Backup Administration

This panel allows configuring the parameters related to the VM backup. It consists of three tabs - Basic, Advanced and Job Logs.

#### Basic Tab

Enables/disables automatic backup for this and all the selected VMs

Shows a list of all the available backup windows with a checkbox to enable each for the selected VMs. New backup windows can be created by clicking the + button, deleted by clicking the - button and the existing backup windows can be modified by clicking the pen button. The backup window creation and modification screen also controls whether the verify is executed or not.

**Note:** newly created or modified backup windows will also become available for all the other VMs. If after deselecting a backup window, no VM is left using that particular window, it is automatically removed when Pure gets restarted.

**Note:** for Pure to optimally function, backup windows need to be sufficiently large to allow verify to be started for at least one of the VMs.

<mark>⊮</mark> B	ackup Administratio	on	►					
Basic	Advanced Overview							
VM: Wi	ndows10x64							
🗌 Aut	tomatic backup is enable	ed						
Backup	Windows:							
Fr	equency	Start						
O Ru	n weekly on Sat	00:00	48h					
	in weekly on Mon, Tue, We Thu, Fri	00:00	6h					
	n weekly on Mon, Tue, Thu, , Sun	18:00	8h					
+	-							
Tags:								
		•	Apply					
	Note: Create ne	w labe	el on enter					

**Note:** The initial backup of a VM will take significantly more time since it needs to back up the whole VM data. Subsequent backups will be significantly faster, leaving more time for verify.

**Note:** When a backup window is modified or deleted, the changes are automatically applied to all VMs that are assigned to it, modifying their schedules accordingly.

Shows the tags assigned to this VM. Tags are an optional field and each VM can have an arbitrary number of custom tags to enable easier grouping and displaying of similar VMs. To create a new tag, simply enter the desired text and press Enter to finish. Click on the Apply button to save and assign defined tags. Tags are deleted by pressing 'x' icon on the right of each tag.

#### Advanced Tab

Shows the list of disks that are available for backup and allows including or excluding of particular disks from backup. Excluding a non crucial disk from backup will save storage space and backup time, both for the automatic and for the manual backups. However, keep in mind that disks that were not included for backup will not be available for restore.

**Note:** The list of virtual disks will show only those disks that are available for backup. Because backup operations leverage VM snapshots, virtual disks not supported by this mechanism will be omitted from the list.<sup>7</sup>

Shows the currently configured value and allows changing of the backup retention time. This settings determines the number of backup snapshots that will be retained in the repository before the space is reused for new backups.

Note: To change the default backup retention time

automatically applied to newly discovered virtual machines, see 5.3.4 Preferences.

#### Overview

Allows selecting a backup job from a drop-down menu and viewing its detailed log information. Job logs contain a step by step rundown of the backup process and will display such info as job statistics and possible backup errors. ь

Size

25.2 GB

18.4 GB

20.5 GB

18.8 GB



Backup Administration

Duration

161 min 55 s

99 min 59 s

98 min 45 s

99 min 03 s

92 min 42 s

94 min 36 s

105 min 47 s

8.8 GB

09.AP1 ... AP

18.3 ( 5 GB

Basic Advanced Overview

Started

10.Apr 00:00

09.Apr 00:00

08.Apr 00:00

06.Apr 00:00

05.Apr 00:00

04.Apr 14:30

04.Apr 00:00

44.4

0<sup>4.</sup> AQ<sup>4</sup>

Last 7 Backups

04-API .....API



## 5.1.4. Restore

All the restore operations are accessible through the *Restore* panel. Depending on the desired operation, choose one of the available tabs:

- Restore VM to restore an entire virtual machine from the backed up data
- Restore File to select a single file from one of the backed up virtual disks and download it directly to your workstation

#### **Restore VM**

• •				<b>≙</b> 192	.168.234.137	Ċ			đ	1+
7	Pure	≡						(2) 09.Apr 13:52	🗭 Log	out
#		+	🎄 Virtual Machines					Q	Q	√ ×
≡	Event Log	Filter the	46 VMs	VMs Backup/Verify Backup Disk Usage 3.58 GB						Backup
	App Configuration	ie List of VMs	<ul> <li>D Restore</li> <li>Restore VM Restore File</li> </ul>						-	Backup Administration
¢°	System Settings	VMs	The following steps guide you the	rough the proc	ess of restoring a virtua	I machine to a selected poir	nt in time:			tration
			1. Choose a virtual machine to	be restored:	APT_solaris		-			
			2. Select a point in time to rest	ore:	09-Apr-2019 13:42		-			
			3. Select the disk(s) to restore:		S All disk(s)					
							T			
			4. Choose the destination host:	:	192.168.234.217		-			
			5. Choose the destination reso	urce pool:	/Resources		-			
			6. Select the target datastore:		NAS1-Prod2		-			
			7. Change the virtual machine's	s name:	APT_solaris-recover	red				
								St	art Restore	

The *Restore VM* operation creates a new virtual machine on the chosen target host, with the same configuration and virtual disk content as that of the selected backed up VM at the selected point in time. In order to avoid possible configuration collisions, such as IP configuration, the newly restored virtual machine is not automatically powered on upon completion.

A restore VM operation can be started from the *Restore* tab. It consists of 7 steps:

- 1. Choose a virtual machine to be restored: the VM can be chosen from a drop-down menu or by selecting the desired VM in the main window.
- 2. Select a point in time to restore: after a VM is selected, this drop-down menu shows all the available points in time, i.e. backups from which the VM can be restored.
- 3. Select the disks to restore: by default, all the disks available at the point in time selected in step 2 will be restored. If some disks are not required to be restored, the The *All disks* checkbox has to be deselected and the desired disks selected from the drop-down menu. Please note that that menu shows only the disks that were backed-up in step 2 at the



particular point in time selected. If the desired disk does not appear in the list, a different point in time must be selected in step 2.

- 4. Choose the destination host: by default this is automatically set to the original host, but can be changed to any available host by selecting it from the drop-down menu.
- 5. Choose the destination resource pool: by default this is automatically set to the original resource pool, but can be changed to any available resource pool by selecting it from the drop-down menu.
- 6. Select the target datastore: by default this is automatically set to the original datastore, but can be changed to any available datastore by selecting it from the drop-down menu.
- 7. Change the virtual machine's name: by default this is automatically set to the original name with an added '-recovered' suffix, but can be changed to any desired name provided that a VM with the same name does not already exist on the selected host.

After following all these steps, click *Start Restore* to begin the restore operation. The progress of the restore can be tracked in the central view (depending on the browser window size, you may need to colapse the Restore panel first).



			€ 192.16	3.234.137	Č		<b>D</b>	<u>ہ</u>
Pure	≡					④ 09.Apr 13:52	2 🕩 Logou	ıt
🚠 Virtual Machines	+	🚠 Virtual Machines		kup/Verify	Backup Disk Usage		Q	↓
🗮 Event Log	Filter th	46 VMs				3.58 GB		Backup
App Configuration	Filter the List of VMs	<sup>*</sup> D Restore Restore VM Restore File					*	Backup Administration
😂 System Settings 🔹 🕨	VMs	The following steps guide you throug of selecting a single file from a virtual		3. Select a file to	download 1	Modification Date	Size	stration
		point in time and downloading it to yo	our computer:	▼	1		1.00 GB	
		1. Choose a virtual machine:		▼ Sext4			1019.72 MB	
		Tiny Linux VM-3	-	<ul> <li>▶ □ los</li> <li>▼ □ tce</li> </ul>				
		2. Select a point in time:		<ul> <li>↓ Co</li> </ul>				
		09-Apr-2019 13:40	-		ondemand			
					optional			
				0	) 皆 firstrun	27-Jan-2013 13:58		
					mydata.tgz	27-Jan-2013 14:01	2.54 KB	
				0		17-May-2018 12:40	57 bytes	
					上 xwbar.Ist	27-Jan-2013 11:29		
					🕹 Dov	vnload		

*Restore File* operation allows browsing the content of backed up virtual disks and downloading a single file directly to your workstation.

Restoring a single file is a straightforward operation: First select the VM that has the required file and then choose the desired point in time to browse for files.

Only the disks that were part of the backup at that point in time are shown. Expanding each disk shows its partitions and their sizes. Supported partitions can then be further expanded and browsed for the desired file to download. When the file is located, mark it and press download to initiate the download process. The file will be downloaded to the download location determined by your web browser.

**Note:** *Archiware Pure* supports the following file systems for *Restore File* operations: HFS+, NTFS, FAT32, ExFAT, UFS2, ext2, ext3, ext4, Btrfs.

**Note:** LVM managed partitions are supported only if their Volume groups consist of a single Physical volume. Multi disk volumes are currently not supported.

**Note:** When *Archiware Pure* is not deployed from the official Virtual Appliance template, file system support may be limited by the host operating system. Please consult your OS or NAS device documentation on how to enable support for the additional file systems.

# 5.2 Event Log

		€ 19	2.168.234.137		Č		₫ <u></u> +
Pure	=						🕗 09.Apr 13:46 🕩 Logout
•	I Event Log Query	Name	Туре	Start ↓	End	Size	Summary
📥 Virtual Machines		APT_solaris	Backup	09.Apr 13:42	09.Apr 13:44	8.0 GB	Operation completed successfully
	Period: Today Yesterday Past week	Tiny Linux VM-3	Verify	09.Apr 13:41	09.Apr 13:41		Operation completed successfully
📰 Event Log		Tiny Linux VM-3	Backup	09.Apr 13:40	09.Apr 13:40	0.0 GB	Operation completed successfully
		• Tiny Linux VM-3	Verify	09.Apr 13:39	09.Apr 13:39		Verify not possible because no backup snapshots exist yet.
App Configuration	O Past month O Overall						
System Settings •	Result: Any Completed Warning Error Type: Any Backup Verify Restore	« <   Page 1	of 1   >	»   C   5	0 v Page siz	e	

The Event Log shows the historical overview of all the backup, verify and restore operations. Entries can be filtered according to their start time, result and type.

Clicking on the icon that appears immediately to the left of the status icon for each entry will bring up the detailed view window listing all the steps performed during the selected operation.

# 5.3 App Configuration

## 5.3.1. Configuring the Backup Repository

$\bullet \bullet \bullet \checkmark \bullet$		■ 192.168.234.137					Ç		<u> </u>		
Pure	≡							() 09.Apr 13:47	🕩 Logout		
👬 Virtual Machines	BACKUP REPOS	A BACKUP REPOSITORY									
🔳 Event Log	backup configuration. It co recommend using only RA	The Archiware Pure backup repository is the central storage location for the saved data and the backup configuration. It consists of at least one volume and can be extended later on. We highly recommend using only RAID storage in order to avoid backup failure. The primary volume is the default target for storing newly discovered virtual machines. Already saved									
🖨 App Configuration 🝷	virtual machines remain stored on the volume disk.										
🖨 Repository	Volume	Path	Total Size	Free Size	Parallelism	Primary					
Servers	vol-20190409113157		97.93 GB								
			97.93 GB	96.87 GB							
Freferences	+ -										
₩\$ System Settings ►	Directory path	<ul> <li>/vol1/backup</li> <li>1 ▼ Number of sim</li> <li>✓ Primary backup disk</li> </ul>	nultaneous t	packup jobs:							
					~	Apply					

Additional backup volumes can be configured by selecting the *Repository* tab in the left side menu. By adding additional mount paths to the *Volumes* list and clicking *Apply*, that path will be configured as part of a *Backup Repository*.

**Note:** Newly discovered *Virtual Machines* will automatically be assigned to the primary backup volume. You can change the primary volume by toggling the corresponding checkbox in the *Volumes* list. Already discovered *Virtual Machines* will always be backed up to their assigned backup volume.

**Note**: The number of simultaneous backup jobs can be separately configured for each volume. This overrides the default number of simultaneous backup jobs that is defined in 5.3.4 Preferences.

# 5.3.2. Configuring Infrastructure Servers

•••			€ 192.168.234.137	Č	1		
Ð	Pure	Ξ		O9.Apr 13:48	🕒 Logout		
#	Virtual Machines	■ INFRASTRUCTURE SE	RVER				
	Event Log	configuration. You can add your V	ou need to add your virtual infrastructure to the backup Wware vCenter server or standalone ESXi hosts. to be backed up, the hosting ESXi must also be added.				
A	App Configuration 🗸	Server Type					
	Repository     Servers	Ige         Ige           192.168.234.219         esxi           192.168.234.219         vcenter	Infrastructure server is enabled         Host name:         192.168.234.218         User name:         root				
	i Reporting		Password: Description: Protocol & Port: https v 443				
	🗲 Preferences	+ -	🗸 Apply				
o:	System Settings						

*Archiware Pure* can be configured to protect virtual machines managed by multiple ESXi servers, with or without a vCenter. A new Infrastructure server can be added by clicking the "+" button and entering the corresponding connection parameters:

- Host name: FQDN or IP address of the vCenter or the ESXi
- User name and password: of the account used to connect to the vCenter or the ESXi
- Protocol and port: used for connection (https or http)
- Description: optional parameter

After all the required fields are entered, click the *Apply* button to save the configuration.

**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 employed as long as the vCenter connection is available. The exception is the ESXi host where the vCenter virtual appliance resides, which has to be configured in order to enable backups of the vCenter virtual machine itself.

**Note:** When configuring an *Infrastructure Server*, if the given user belongs to a vSphere role other than A*dministrators*, please ensure that the corresponding user has sufficient vSphere privileges to execute all the 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 VMWare's *Exception Users List*.<sup>8</sup>

<sup>8</sup> https://docs.vmware.com/en/VMware-vSphere/6.0/com.vmware.vsphere.security.doc/GUID-



## 5.3.3. Reporting

	<b>■ 192.168.234.137</b> Č	1 0 +
Pure	■ ② 09.Apr 13:48	🕒 Logout
击 Virtual Machines	i REPORTING	
Event Log	Archiware Pure provides detailed backup reports and notifications. It tracks the backup jobs' status and gives an overview of the utilization of the backup repository by email.	
🖨 App Configuration 👻	Send reports to the following email recipients:           user@example.com           e.g. peter@example.de,linda@example.com	
A Repository	Send daily reports at: 08:00 • e.g. 22:00	
🗃 Servers	🖋 Apply	
i Reporting		
F Preferences		
Ø\$ System Settings ►		

Archiware Pure can be configured to automatically email a detailed daily backup report. If you wish to receive daily reports, please configure the 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, the *Email server* settings need to be configured. Please see 5.4 System Settings.

## 5.3.4. Preferences

	<b>192.168.234.137</b> Ĉ		₽
Pure	≡	④ 09.Apr 13:49	🕒 Logout
击 Virtual Machines	✗ GENERAL PREFERENCES		
🗮 Event Log	The General Preferences tab contains fundamental settings that affect the overall behavior of Archiware Pure.		
App Configuration 🔻	Archiware Pure automatically recognizes new virtual machines in the infrastructure.  Automatic backup of newly discovered VMs The number of snapshots to be kept, indirectly determines the retention time. If, for example, 7 The number of snapshots to be kept, indirectly determines the retention time. If, the the state of the stat		
🖨 Repository	snapshots are kept and a daily backup is created, 7-day old data can be restored. This default is applied to each VM when first configured. 7   Number of snapshots to keep		
Servers Servers	The Archiware Pure backup repository consists of one or more drives. For each disk, a limit on the number of simultaneous backup jobs can be set. This default is applied to each repository drive when first configured.		
i Reporting	1  w Number of simultaneously running backup jobs		
🗲 Preferences	🖋 Apply		
ପ୍ଟ୍ରି System Settings ►			

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

The settings that can be adjusted 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 volume and assigned the default backup window schedule.

#### Backup retention

This settings determines the number of backup snapshots to be retained in the repository before reusing the space for new backups.

### Number of simultaneously running backup jobs

This setting determines how many backup jobs will concurrently be run for each backup volume. If there are multiple virtual machines to be backed up within a backup window, only this number of backups will be executed at the same time. All the other jobs remain in the queue until the next job slot becomes available.

**Note:** This setting is applied to newly added backup volumes only. To change this setting for an existing volume, please see 5.3.1 Configuring the Backup Repository.

Click Apply for any of the above changes to become active

# 5.4 System Settings

## 5.4.1. Email

			192.168.234.1	37	Ċ		
Pure	=					④ 09.Apr 13:49	🕩 Logout
📥 Virtual Machir	nes 🗹 El	MAIL SERVER					
	Sene	der (Reply To) email:	user@example.com				
Event Log	Outç	going mail server:	mail.example.com				
		SMTP Authentication:	TLS 🔻				
🖨 App Configura		to connect to:	587				
🗱 System Settin	ngs 👻 For t	the authentication optional us	ername and password:				
<b>— — — — — — — — — —</b>	Use	rname:	User name				
🗹 Email	Pass	sword:	Password				
C Softwa	are		Send Test Mail 🖋 Apply				

In order to enable *Archiware Pure* to send daily email reports, the email server settings need to be configured first. Please provide the following parameters:

Sender email - the email address to be used as a sender

Outgoing mail server – the FQDN or IP address of your mail server. In case a FQDN name is entered, please make sure the name can be resolved to an IP address.

Use SMTP Authentication – enter the desired type of encryption TLS/SSL/NONE

Port to connect to – by default this port is related to the encryption type and is preset to the default port for each encryption type. If required, it can be manually set to a desired value.

Username & Password - enter valid login credentials for the selected email server

After configuring the email server settings click *Apply* to save the configuration.

To ensure that the entered email settings are correct and that emails can be sent, use the *Send Test Mail* function and fill in the email recipient when prompted.

# 5.4.2. Software Settings

	<b>≜</b> 192.168.234.137 Č		1 0 +
Pure	≡	<b>O</b> 09.May 12:05	Logout
📩 Virtual Machines	LICENSING This software is fully functional and can be used until 9-Jun-2019 for testing before a software license		
🔳 Event Log	is required. A registered license is a prerequisite to use the software in a full-production environment. <b>Note:</b> This copy of Archiware Pure is not registered yet. There are <b>30 days</b> remaining to test the product.		
App Configuration	Next Steps: If you already have a Pure license click below on "License Registration" to register it, or request a <u>free</u> <u>license</u> for this installation. Archiware Pure is provided free of charge. For commercial use or in production environments, an <b>Archiware Support Package</b> can be <u>purchased online</u> . Contact us to		
😂 System Settings 🛛 🗸	request a <u>quote</u>		
🗹 Email	To complete the registration a Pure license and customer details are required.		
C Software	SOFTWARE UPDATE Installed version: 2.0.0 Release date: 09-May-2019		
	Check for Updates		
	SUPPORT		
	This allows you to manually obtain the support data for your system. Please send the log file if asked by the support staff.		
	Download Support Data		

The *Software settings* view allows you to register and license *Archiware Pure*, perform software updates and download the support data.

#### Licensing

To allow testing the product, *Archiware Pure* will run for 30 days before a software license is required. Once a license is obtained, click on the *License Registration* button to start the *License Registration Wizard* and register your copy of the software.

### Update

The *Update* section displays information about the currently installed *Archiware Pure* version and allows checking for new updates online. Because the *Archiware Pure* could be placed behind a firewall, without direct Internet access, the update process is separated into several steps:

- 1. Using the Download button, the update package can be downloaded to your PC
- 2. With the *Select* button, select the downloaded *update package*. With the *Upload* button, transfer the package to the *Archiware Pure*
- 3. Start the update process and let *Archiware Pure* restart in order to finish the update

**Note:** The update process will restart *Archiware Pure* and any active backup or restore tasks will consequently be interrupted. Please make sure that there are no active jobs at the time of the update.

**Note:** The update button will be disabled when *Archiware Pure* is deployed on a NAS appliance. Please use the respective vendor's app marketplace to perform update. The corresponding software update package can also always be downloaded from Archiware's web site.



### Support

In order to aid customer support, *Archiware Pure* can collect and pack the necessary support data to be forwarded to the support staff if requested. The support package contains the *Archiware Pure's* log files, configuration, selected OS logs and the *vSphere's* inventory and configuration. Click on the *Download Support Data* button to prepare and download a zip archive to be attached to your support ticket, if requested by the *Archiware* support staff.