



RELEASE NOTES
SERVERware 4.7



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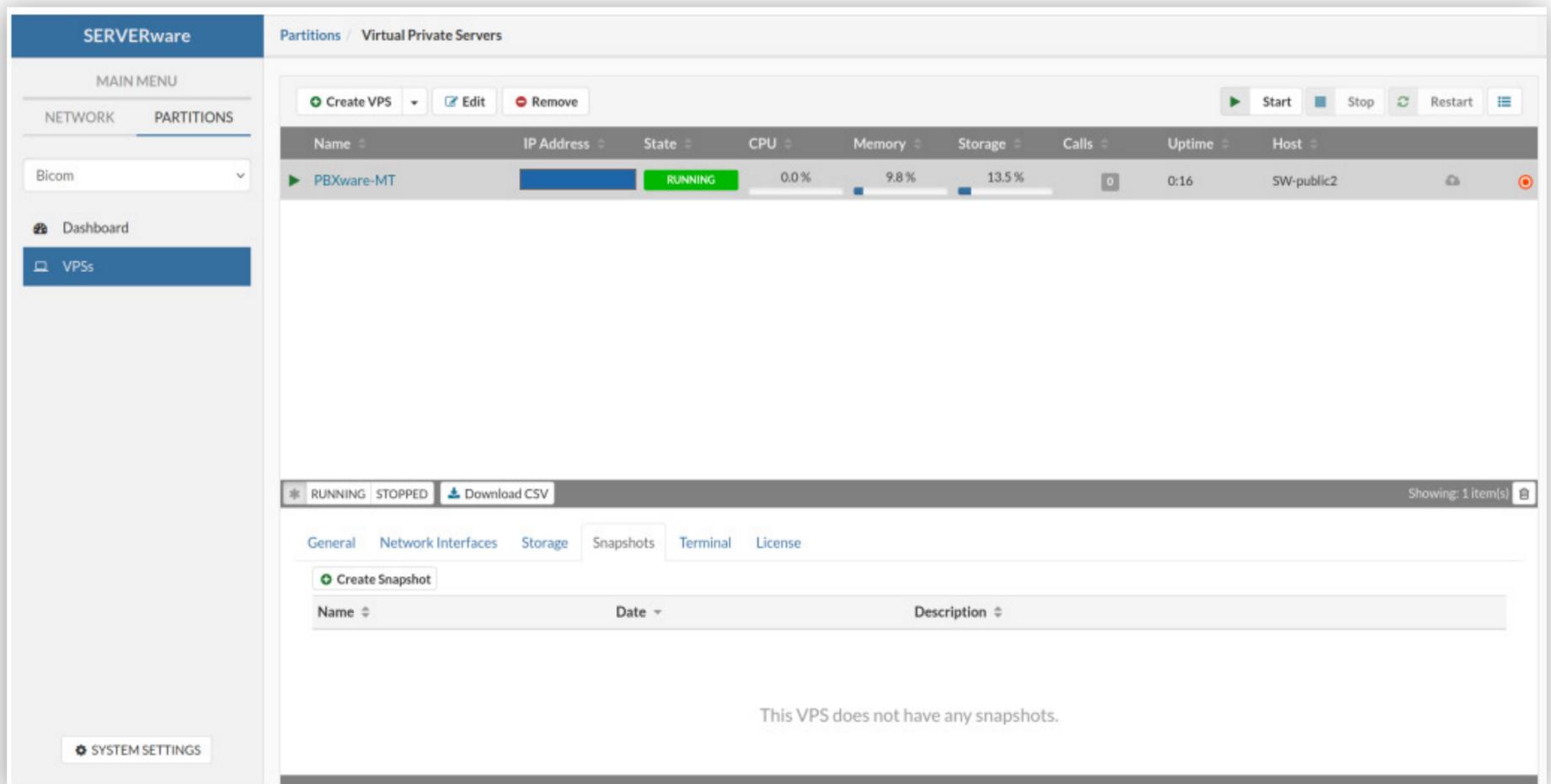
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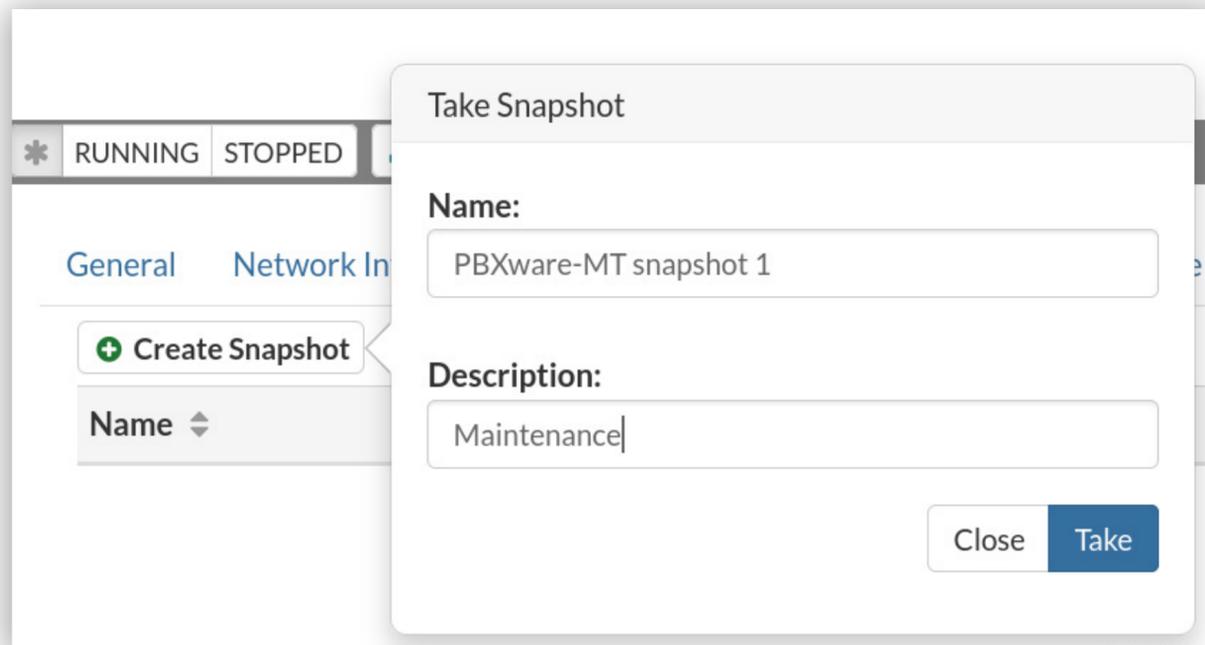
VPS Snapshots

A Snapshot is a read-only copy of a dataset or volume. Upon creation, which is almost instantaneous, snapshots do not take up any extra storage space.

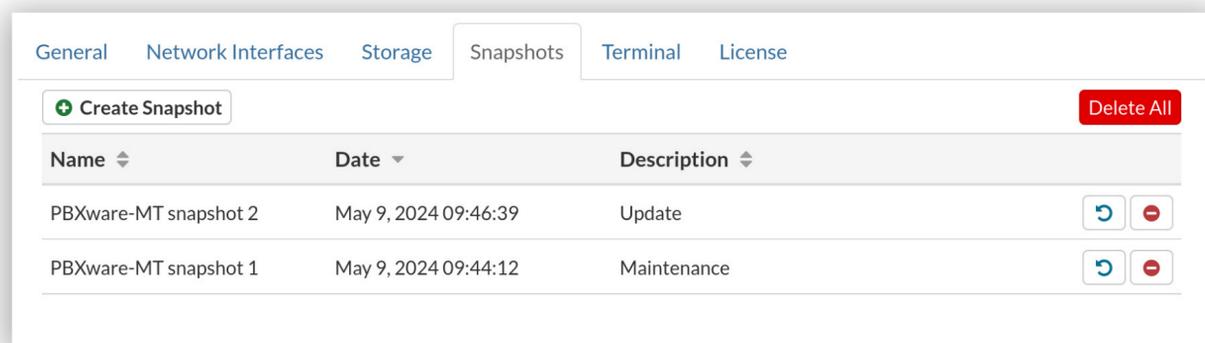
In SERVERware 4.7, you can take snapshots of individual VPSs and manage them from the snapshots tab. The supported actions in SERVERware are: creating a snapshot, removing individual snapshots, or removing all snapshots created for a single VPS, as well as performing a rollback to the point in time when the snapshot was created.



To create a snapshot, simply click on the Create Snapshot button and fill in the name of your snapshot, as well as a short description if necessary, that will help distinguish between multiple snapshots.



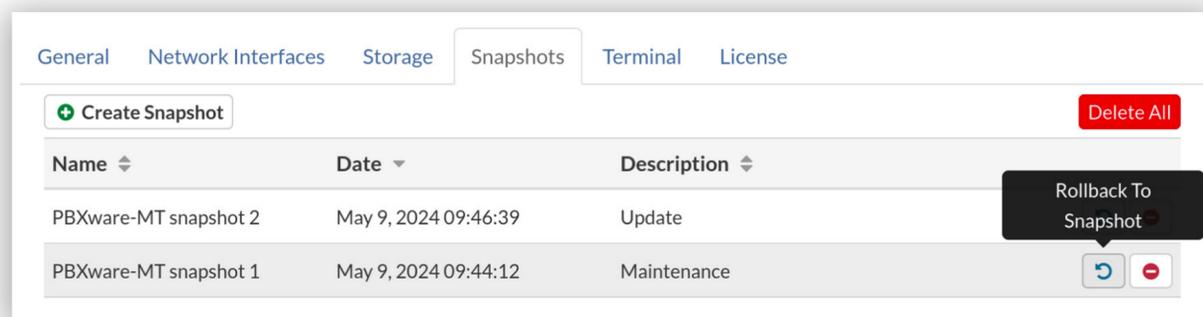
All snapshots created for a particular VPS will appear in a list under the snapshots tab, where SERVERware administrators can manage them.



Snapshots can be removed either individually or have all snapshots deleted by clicking on the Delete All button. Creating a new snapshot and removing individual or all snapshots does not require stopping the VPS in SERVERware.

One of the main advantages of snapshots is that they allow for the entire dataset to be rolled back to the point in time when the snapshot was created, which can be useful in many scenarios, for example, upgrades, various maintenance tasks, to pull out certain files and more.

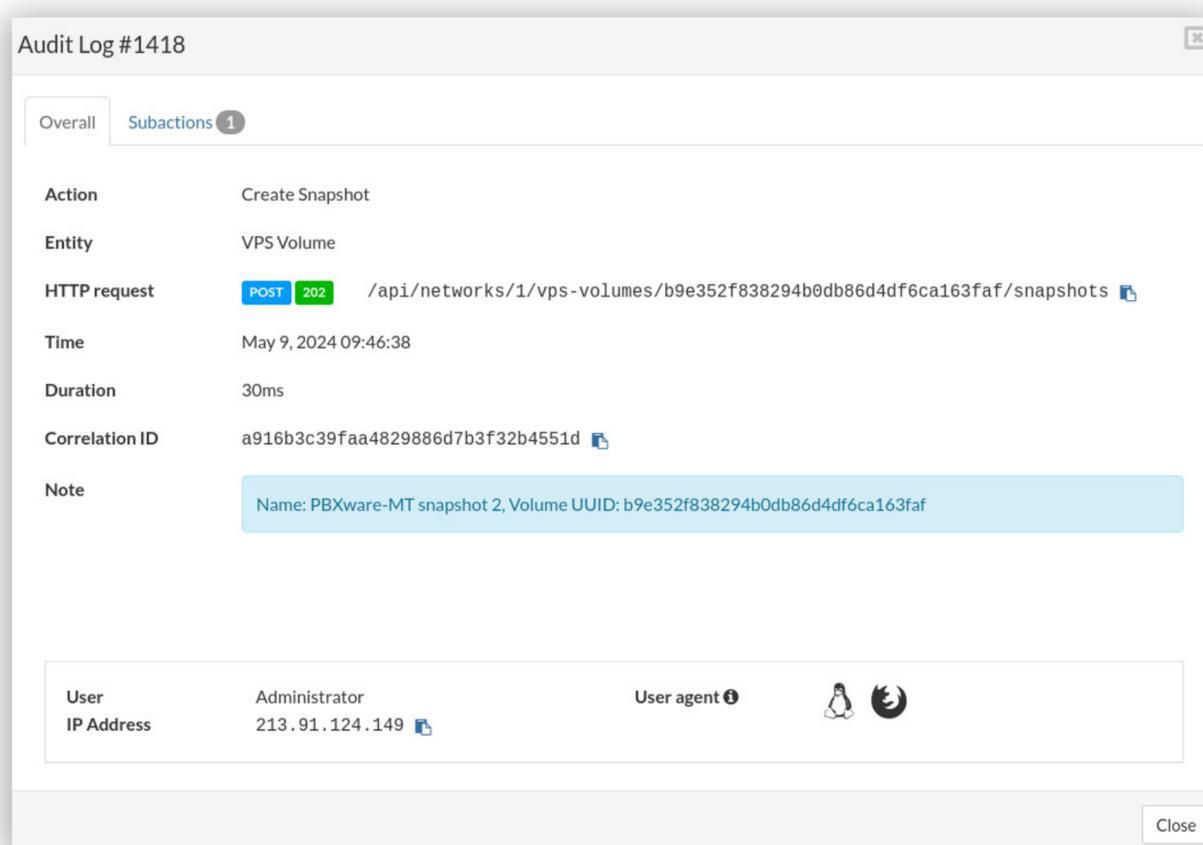
To perform a rollback of a SERVERware snapshot, simply click on the Rollback button. In order to complete the rollback function, the VPS needs to be stopped.



Snapshots initially do not take up any storage space, however once more data is added to the original dataset, so will the snapshot increase in size which is why it's recommended practice not to store snapshots for longer periods of time.

Snapshots in SERVERware will be automatically removed after 15 days.

All snapshot-related activities are recorded in the Recent Activity Log on the Dashboard, in System Logs, and in Audit Logs.



Please note that a snapshot is not a reliable alternative to a backup, as all snapshots are stored on the shared storage. Were any issues to occur with the shared storage, data loss might be imminent.

SERVERware Templates Restructure

SERVERware Templates are software packages that are run in VPSs on SERVERware. Previously, they were organized as built-in templates and OCI images, however, in 4.7 we introduced major changes in the structure and organization of SERVERware templates.

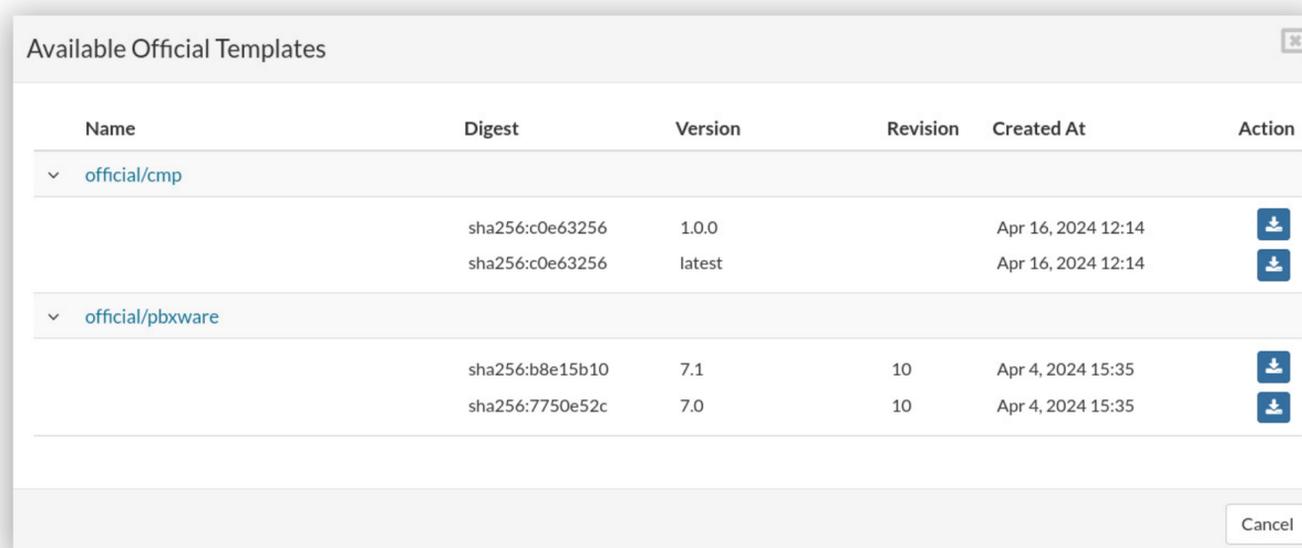
To improve security and ease of management, all SERVERware templates now conform to the OCI standard. The Open Container Initiative is an open governance structure for the express purpose of creating open industry standards around container formats and runtimes.

Templates are now grouped in three categories: official, community and third-party.

Official templates are software packages that are created, maintained and supported by Bicom Inc. Under the official category, SERVERware administrators will be able to download, install and delete PBXware templates, along with other software packages that are published by Bicom Inc. (e.g. the CMP service).

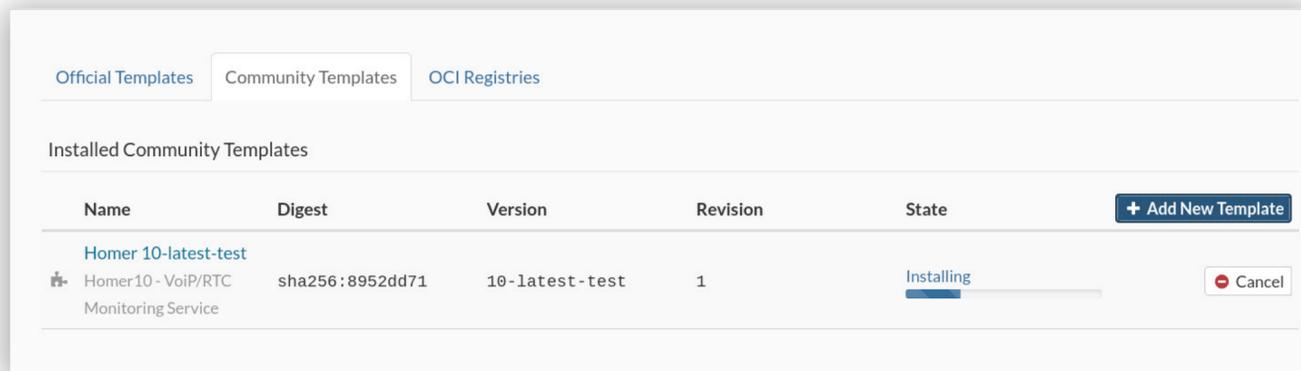


Name	Digest	Version	Revision	State
PBXware 7.1	sha256:b8e15b10	7.1	10	ENABLED

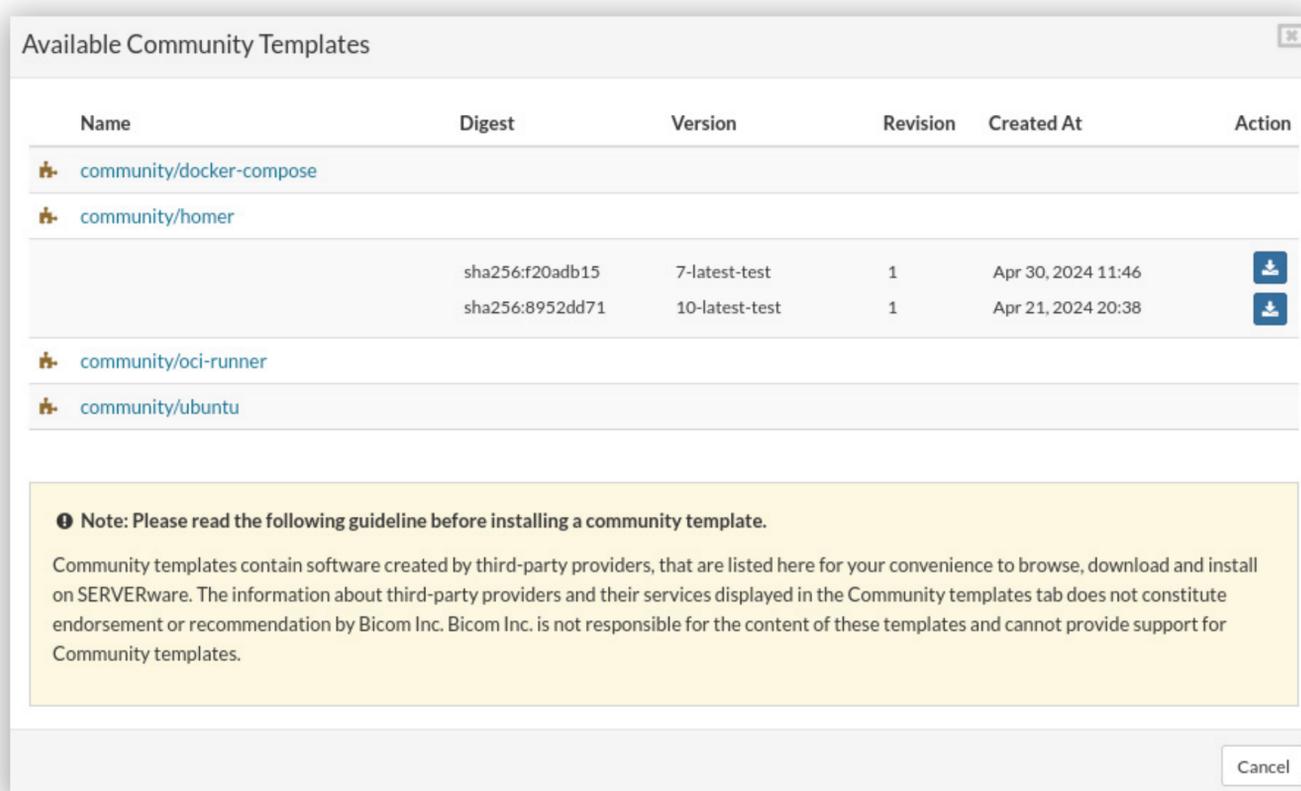


Name	Digest	Version	Revision	Created At	Action
▼ official/cmp					
	sha256:c0e63256	1.0.0		Apr 16, 2024 12:14	
	sha256:c0e63256	latest		Apr 16, 2024 12:14	
▼ official/pbxware					
	sha256:b8e15b10	7.1	10	Apr 4, 2024 15:35	
	sha256:7750e52c	7.0	10	Apr 4, 2024 15:35	

Community templates are reserved for third party software that will be available for easy install and use.

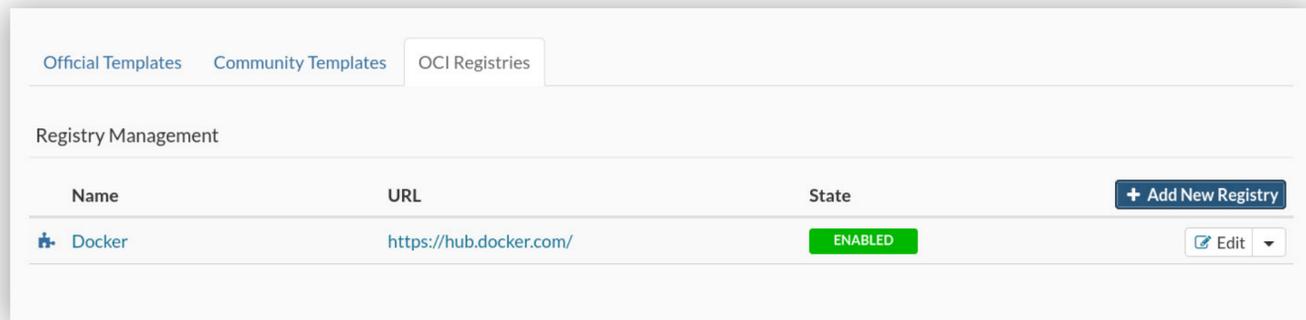


Downloading a new template can be completed by clicking on the Add New Template button, which will provide a list of available templates. The list contains information about the version number, creation date, and download button. In case a new version of the template is uploaded to the repository, an update button will appear next to the download icon.

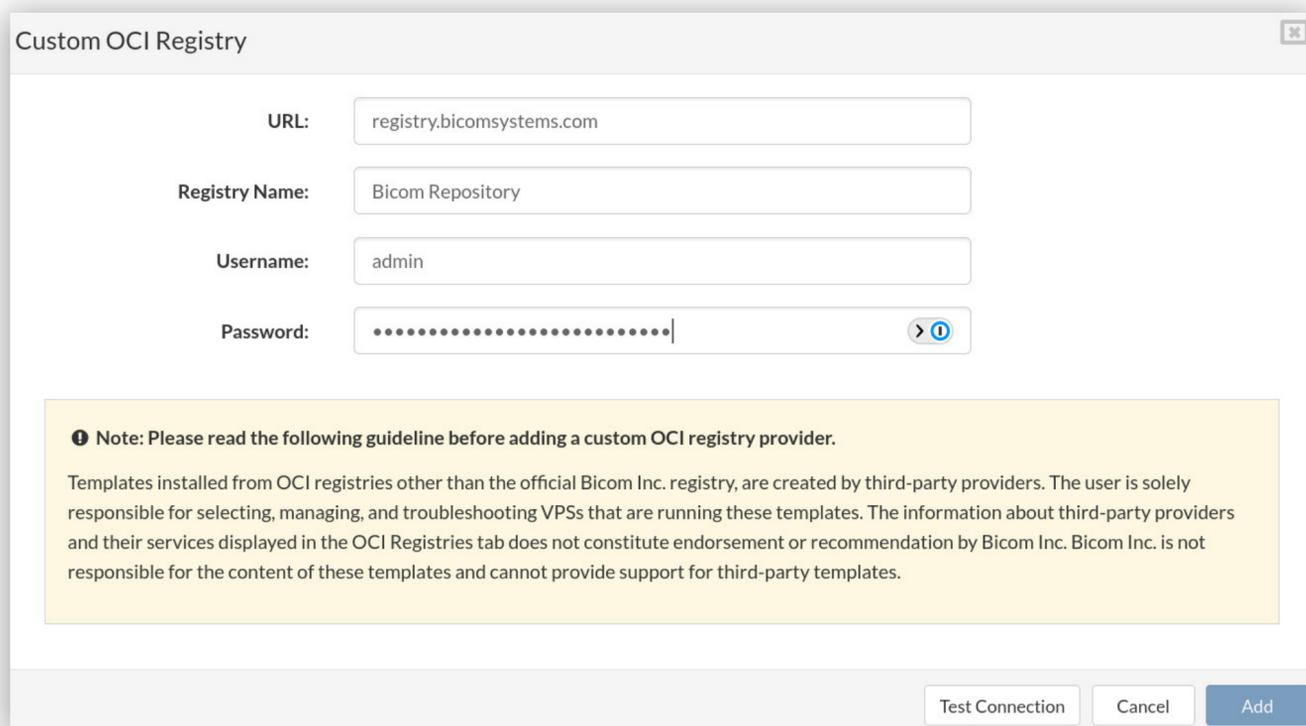


Official and community templates are hosted in our official repository, registry.bicomsystems.com.

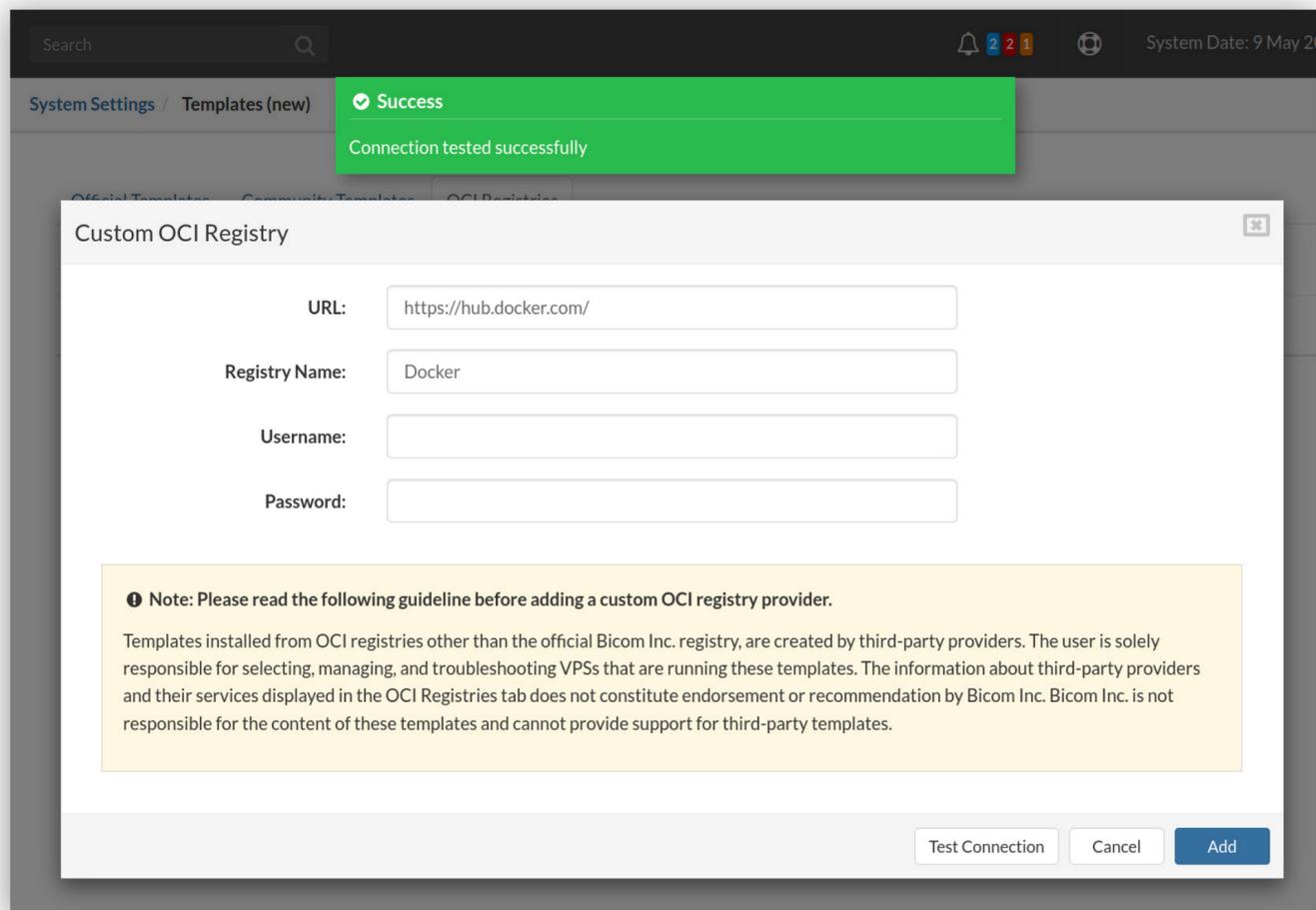
In the OCI Registries tab administrators can add other repositories, to download and install OCI images that are not Official or Community.



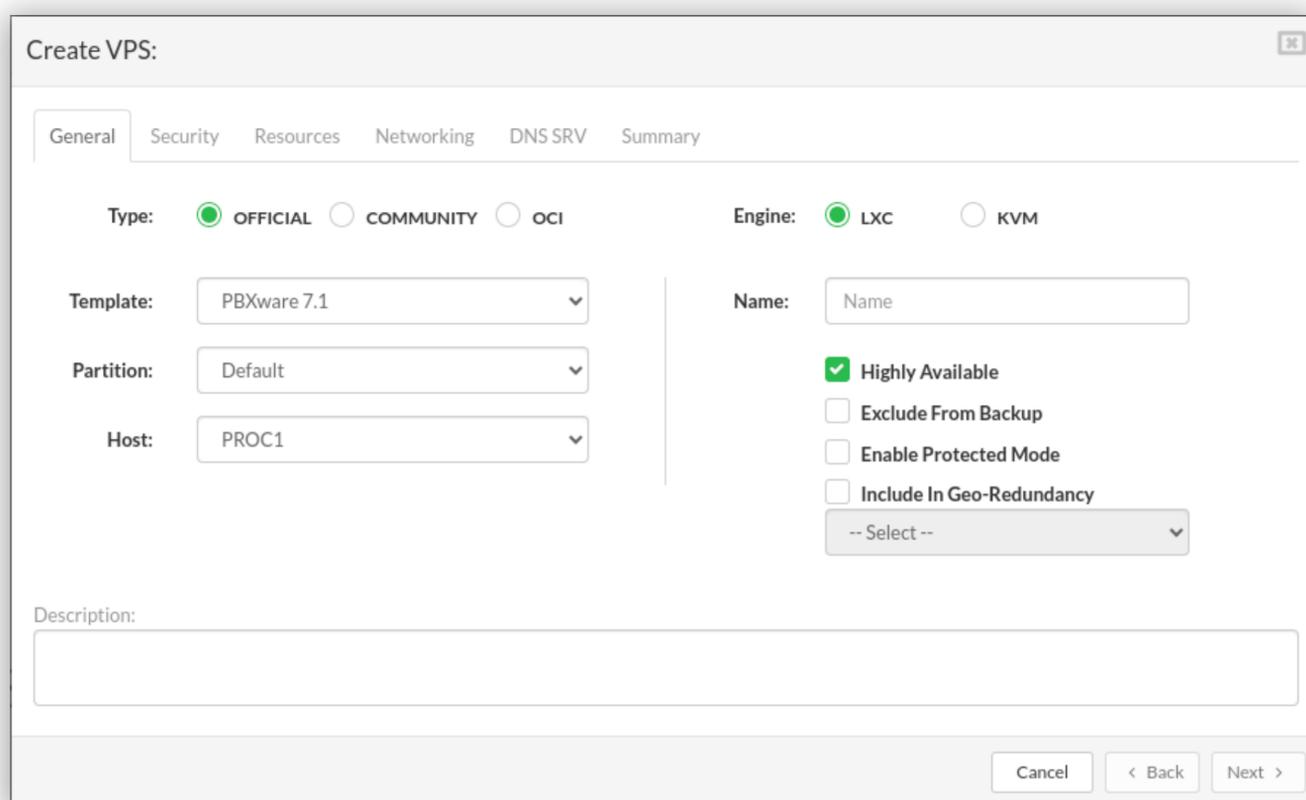
To add a new repository click on the Add new registry button, add the URL to the registry, provide a name, and, optionally, a username and password in case you're adding a private registry that requires authentication.



In the OCI registry tab, the test connectivity functionality was added to verify the network connection between SERVERware and the configured registry.

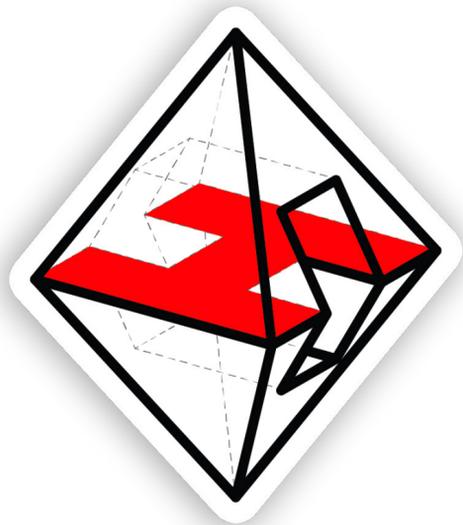


Once the templates are downloaded, they can be used to create a new VPS.

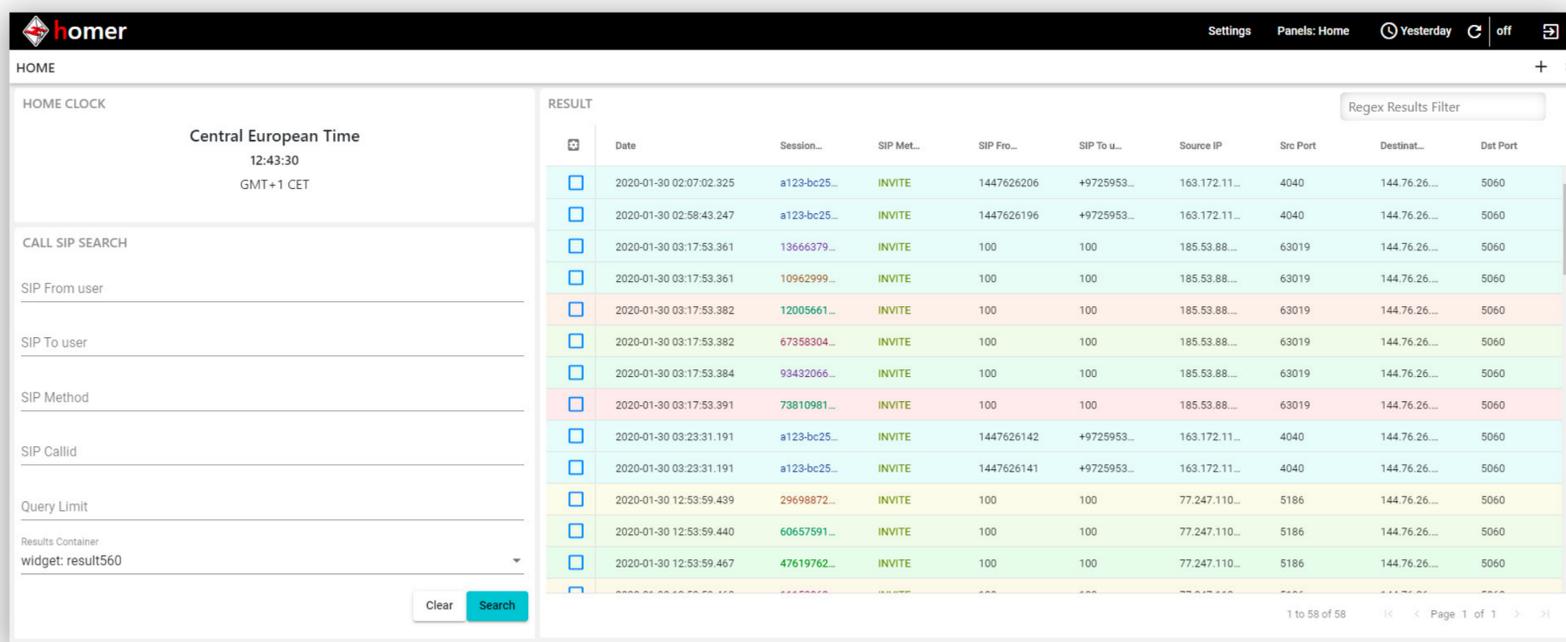


Community Templates: Homer and VoIPmonitor and Ubuntu 24.04

Our aim with the template restructure was to offer more versatility to our users in regards to applications that they can run on SERVERware. As part of the SERVERware 4.7 release, we added three brand new templates to the Community section, Homer, VoIPmonitor and Ubuntu 24.04.



Homer is an open source VoIP and RTC Capture Framework for Analysis and Monitoring based on the HEP/EEP protocol. Homer supports advanced IP, RTP/RTCP Reports, RTC events and Custom protocols, and provides various methods of processing logs, metrics and traces, including Packets and PCAP.

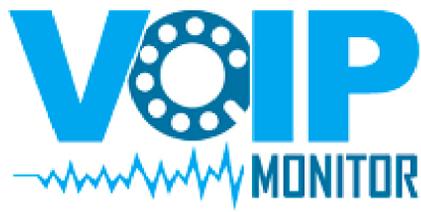


The screenshot shows the Homer web interface. On the left, there is a 'HOME CLOCK' widget displaying 'Central European Time 12:43:30 GMT+1 CET'. Below it is a 'CALL SIP SEARCH' section with input fields for 'SIP From user', 'SIP To user', 'SIP Method', and 'SIP Callid'. A 'Query Limit' field is set to 'result560'. A 'Search' button is visible. The main area is titled 'RESULT' and contains a table of search results. The table has columns for Date, Session, SIP Method, SIP From, SIP To, Source IP, Src Port, Destination, and Dest Port. The results are filtered to show 'INVITE' messages. The table shows 15 rows of data, with the first row being highlighted in light blue. The bottom right corner of the table indicates '1 to 58 of 58' and 'Page 1 of 1'.

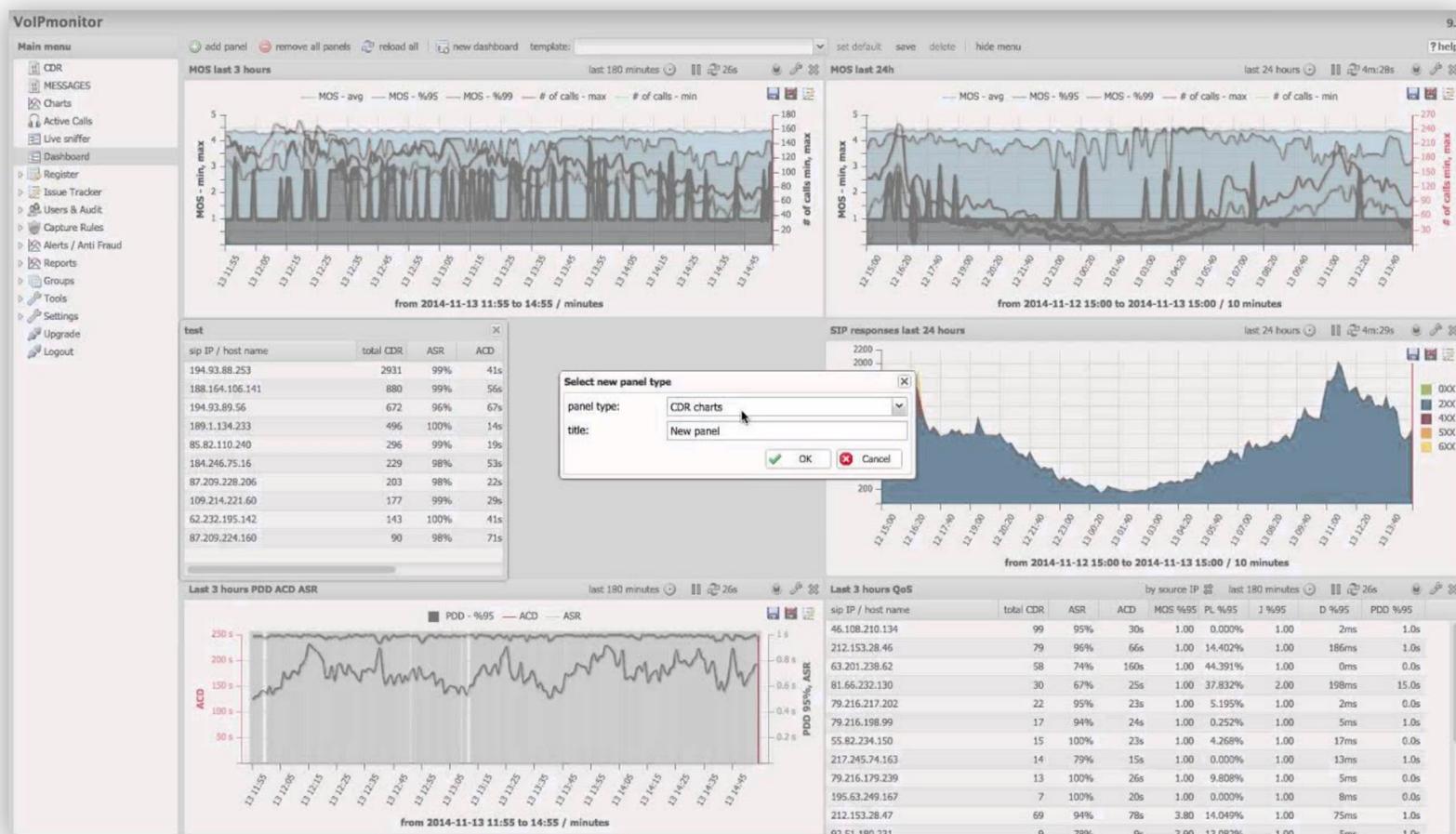
Date	Session	SIP Method	SIP From	SIP To	Source IP	Src Port	Destinat	Dest Port
2020-01-30 02:07:02.325	a123-bc25...	INVITE	1447626206	+9725953...	163.172.11...	4040	144.76.26...	5060
2020-01-30 02:58:43.247	a123-bc25...	INVITE	1447626196	+9725953...	163.172.11...	4040	144.76.26...	5060
2020-01-30 03:17:53.361	13666379...	INVITE	100	100	185.53.88...	63019	144.76.26...	5060
2020-01-30 03:17:53.361	10962999...	INVITE	100	100	185.53.88...	63019	144.76.26...	5060
2020-01-30 03:17:53.382	12005661...	INVITE	100	100	185.53.88...	63019	144.76.26...	5060
2020-01-30 03:17:53.382	67358304...	INVITE	100	100	185.53.88...	63019	144.76.26...	5060
2020-01-30 03:17:53.384	93432066...	INVITE	100	100	185.53.88...	63019	144.76.26...	5060
2020-01-30 03:17:53.391	73810981...	INVITE	100	100	185.53.88...	63019	144.76.26...	5060
2020-01-30 03:23:31.191	a123-bc25...	INVITE	1447626142	+9725953...	163.172.11...	4040	144.76.26...	5060
2020-01-30 03:23:31.191	a123-bc25...	INVITE	1447626141	+9725953...	163.172.11...	4040	144.76.26...	5060
2020-01-30 12:53:59.439	29698872...	INVITE	100	100	77.247.110...	5186	144.76.26...	5060
2020-01-30 12:53:59.440	60657591...	INVITE	100	100	77.247.110...	5186	144.76.26...	5060
2020-01-30 12:53:59.467	47619762...	INVITE	100	100	77.247.110...	5186	144.76.26...	5060

For more information on Homer visit sipcapture.org.

Under SERVERware Community templates, both Homer 7 and Homer 10 will be available to download and install.



VoIPmonitor is an open-source network packet sniffer with commercial GUI and VoIP/RTC session recorder that enables monitoring, troubleshooting, and analyzing VoIP (Voice over Internet Protocol) and RTC (Real-Time Communication) traffic. VoIPmonitor also supports real-time analysis, alerting, and reporting, enabling businesses to stay on top of their network traffic and identify issues as they occur. Additionally, the platform is scalable and can support both small and large VoIP deployments, making it an ideal choice for businesses of all sizes.



More information can be found on their official website, voipmonitor.org.

Another Community template that was added was the newly released Ubuntu 24.04 LTS. This update builds on the advancements of the last three interim releases to ensure a secure and optimized platform.

Available Community Templates ✕

Name	Digest	Version	Revision	Created At	Action
community/docker-compose					
community/homer					
	sha256:f20adb15	7-latest-test	1	Apr 30, 2024 11:46	
	sha256:8952dd71	10-latest-test	1	Apr 21, 2024 20:38	
community/oci-runner					
community/ubuntu					
	sha256:ee10ed07	24.04	1	Apr 15, 2024 11:08	

Note: Please read the following guideline before installing a community template.

Community templates contain software created by third-party providers, that are listed here for your convenience to browse, download and install on SERVERware. The information about third-party providers and their services displayed in the Community templates tab does not constitute endorsement or recommendation by Bicom Inc. Bicom Inc. is not responsible for the content of these templates and cannot provide support for Community templates.

Cancel

Please note that software installed from the Community templates, as well any other third party software installed from the OCI registries tab is not supported by Bicom Inc.

Deploying OCI Images

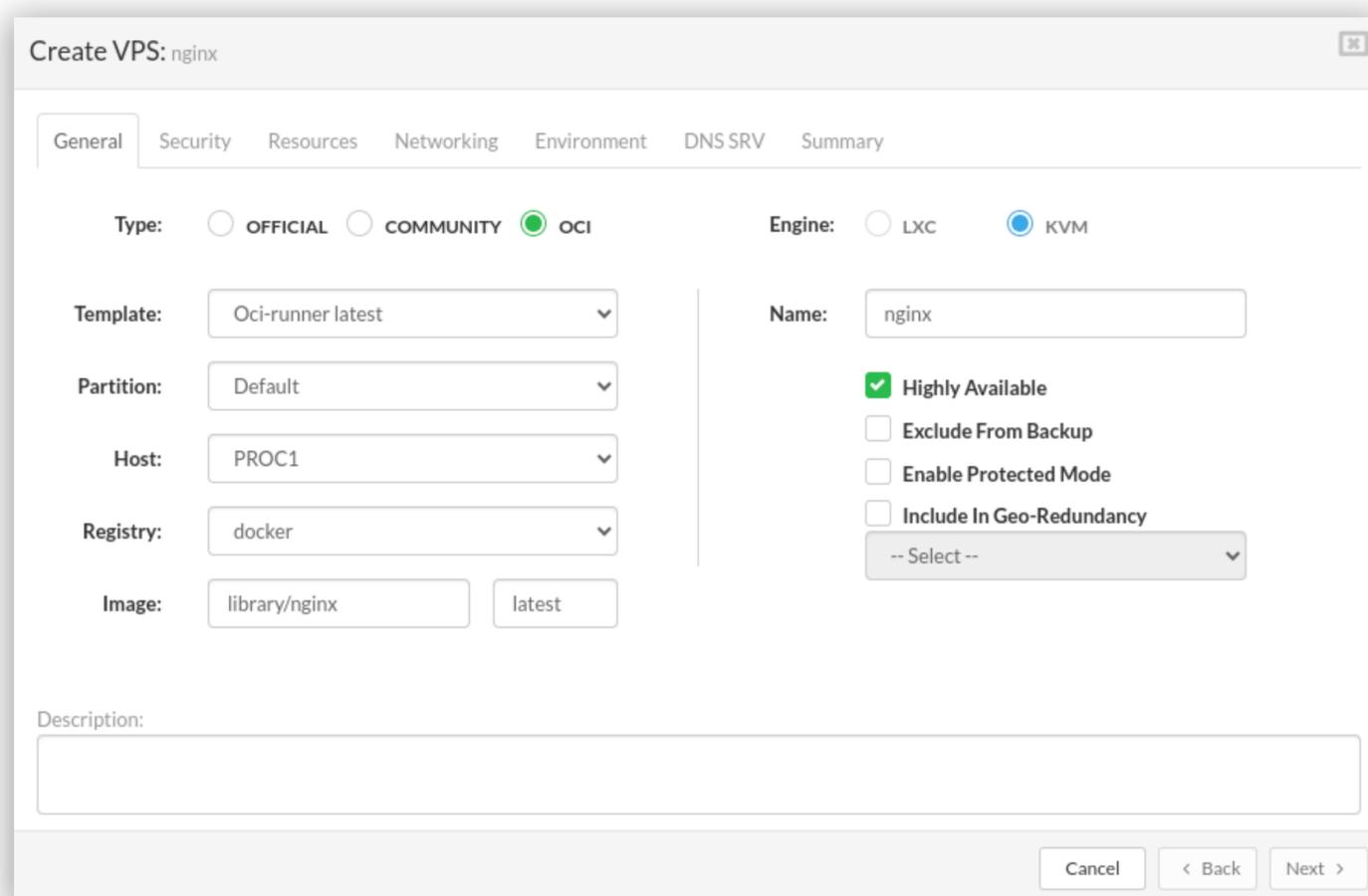
In order to run an OCI image in SERVERware, we added a template that will automatically provide a docker container engine. The OCI runner template will automatically pull and start an app using the specified OCI image.

Once a new version of the template is available, the Update button will appear next to the template.



Deploying third-party OCI images has been reorganized, so everything can be completed from a single point, the Create VPS dialog, once the OCI registry has been added.

Selecting the OCI option changes the view to include the required information including the registry, the image name and tag.



Under the Environment tab, administrators can add required environment variables for that particular image.

In a constant effort to improve efficiency, SERVERware 4.7 now supports volume mapping for OCI images from the GUI. Volume mapping is a feature that allows mapping directories or files on the host machine to directories within a container. SERVERware's implementation pertains solely to the VPS and docker container that's running inside the VPS, enabling data to be shared and persisted between them.

The screenshot shows the 'Create VPS: nginx' window with the 'Environment' tab selected. The 'Environment Variables' section contains two entries: 'NGINX_PORT' with value '80' and 'NGINX_HOST' with value '192.168.100.100'. The 'Volume Mapping' section contains two entries: '/templates' mapped to '/etc/nginx/templates' and '/conf/nginx.conf' mapped to '/etc/nginx/nginx.conf', both with 'Writable' permissions. Navigation buttons 'Cancel', '< Back', and 'Next >' are at the bottom.

Environment Variables	
Name	NGINX_PORT
Value	80
Name	NGINX_HOST
Value	192.168.100.100

Volume Mapping		
VPS	/templates	Container /etc/nginx/templates
		Read-only Writable
VPS	/conf/nginx.conf	Container /etc/nginx/nginx.conf
		Read-only Writable

Shared data between the docker container and the VPS can also be bi-directional, writable, and in read-only mode.

To prevent any unnecessary risks that might come with open source software, running Community and Third-party templates will only be possible in KVM VPSs.

Administrators can also create VPSs using OCI images from a password protected registry.

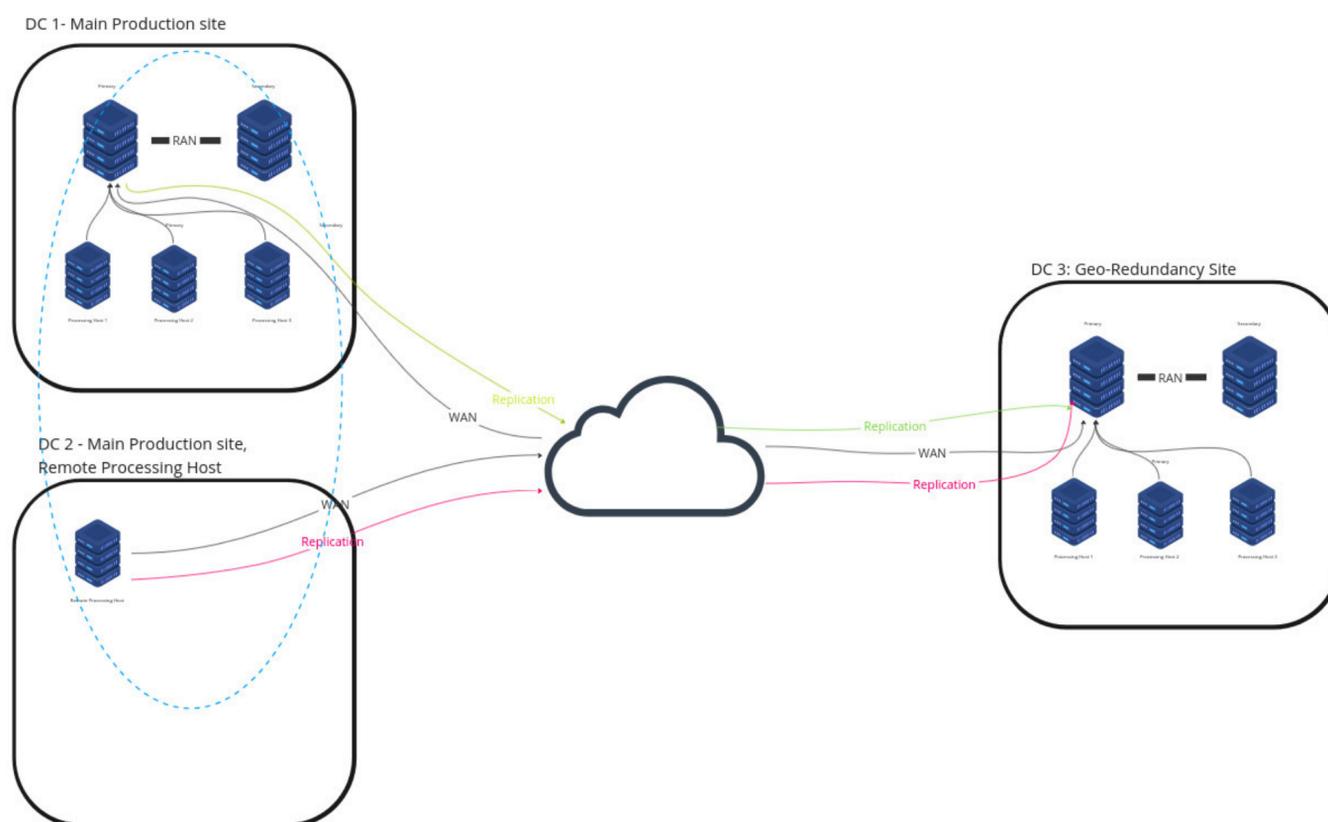
Replication and Backup from Local Storage on Processing Hosts

With a focus on expanding the capabilities of our Cluster edition, SERVERware 4.7 now supports adding processing hosts from remote locations in different networks.

This will enable SERVERware administrators to expand the computing and storing power of their cluster by adding another processing host from a secondary location, that is operating from a different network, while keeping the management simple through a single user interface.

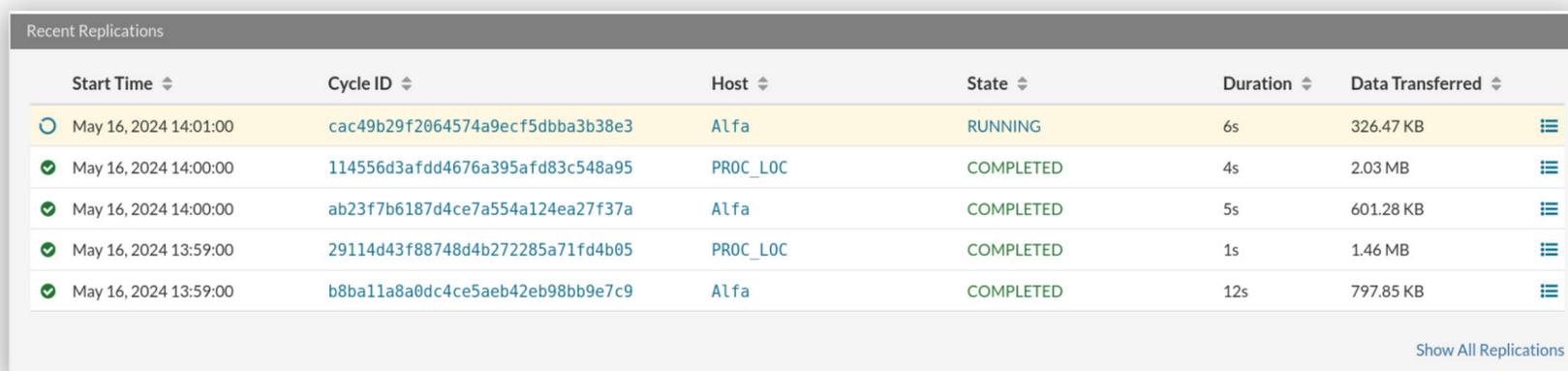
VPSs running on remote processing hosts will use the local storage of the processing host to store all generated data.

To provide the same disaster recovery options supported in SERVERware to setups described above, in SERVERware 4.7 VPSs running on local storage on a processing host can be replicated to a geo-redundancy server, as well as backed up on a backup host.



Monitoring Replications

The Recent Replications view allows monitoring replications from the storage host and processing hosts. Important information for running replications and past replications, such as from which host the replication is running, duration, and data transferred, can be found here.



Start Time	Cycle ID	Host	State	Duration	Data Transferred
May 16, 2024 14:01:00	cac49b29f2064574a9ecf5dbba3b38e3	Alfa	RUNNING	6s	326.47 KB
May 16, 2024 14:00:00	114556d3afdd4676a395afd83c548a95	PROC_LOC	COMPLETED	4s	2.03 MB
May 16, 2024 14:00:00	ab23f7b6187d4ce7a554a124ea27f37a	Alfa	COMPLETED	5s	601.28 KB
May 16, 2024 13:59:00	29114d43f88748d4b272285a71fd4b05	PROC_LOC	COMPLETED	1s	1.46 MB
May 16, 2024 13:59:00	b8ba11a8a0dc4ce5aeb42eb98bb9e7c9	Alfa	COMPLETED	12s	797.85 KB

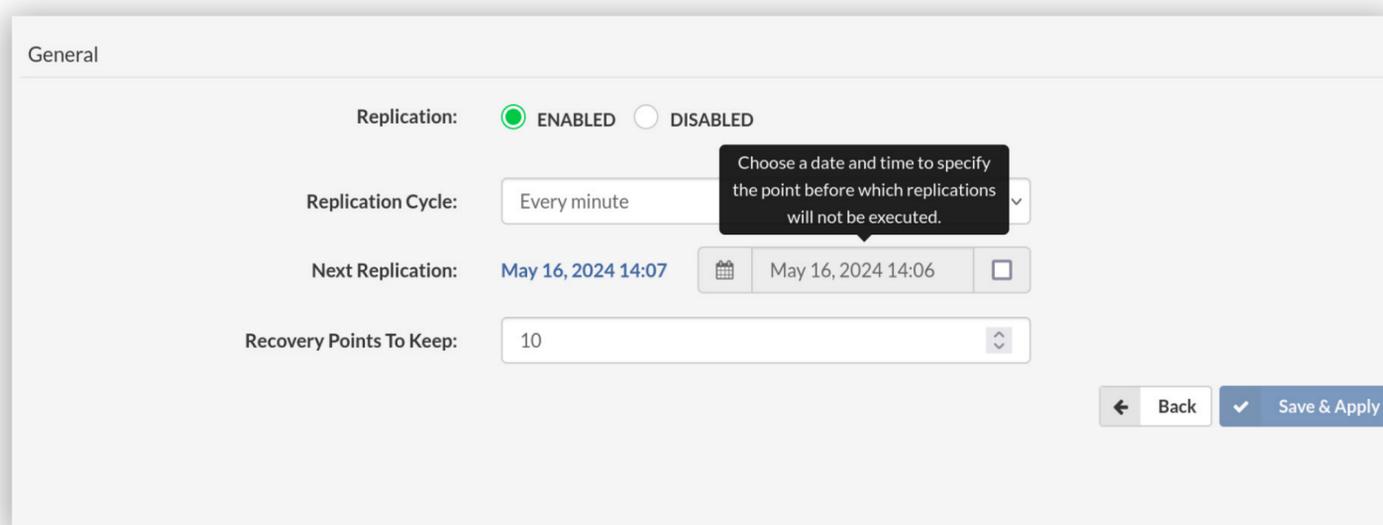
Show All Replications

Scheduling Replications

Configuring and scheduling replications remained the same, with added improvements for scheduling replications. While it was possible to postpone the first replication job, it was only possible to schedule it for cycles that are set to start every two hours and higher.

However in SERVERware 4.7, scheduling replications is not limited by the replication cycle anymore.

Depending on the Replication Cycle, SERVERware will calculate and display the time and date of the next replication.



General

Replication: ENABLED DISABLED

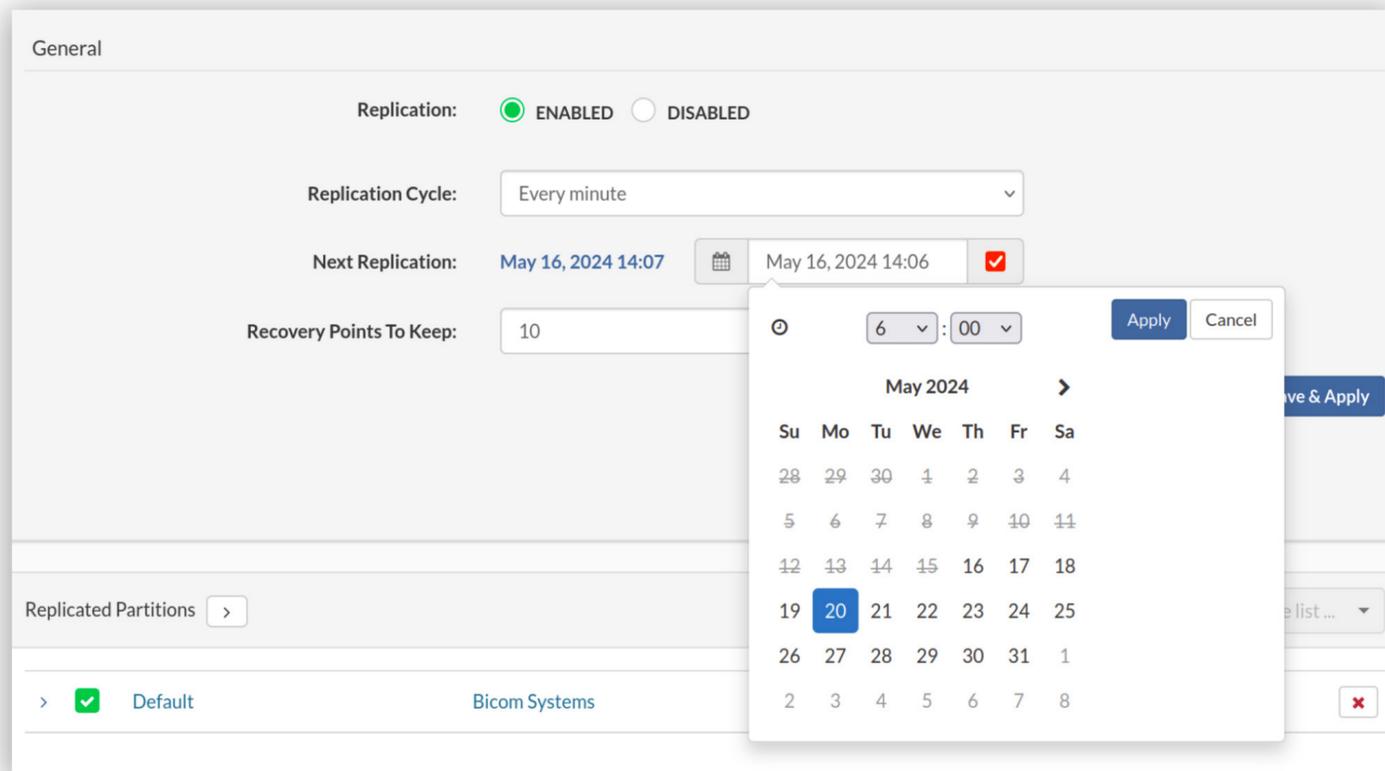
Replication Cycle: Every minute Choose a date and time to specify the point before which replications will not be executed.

Next Replication: May 16, 2024 14:07 May 16, 2024 14:06

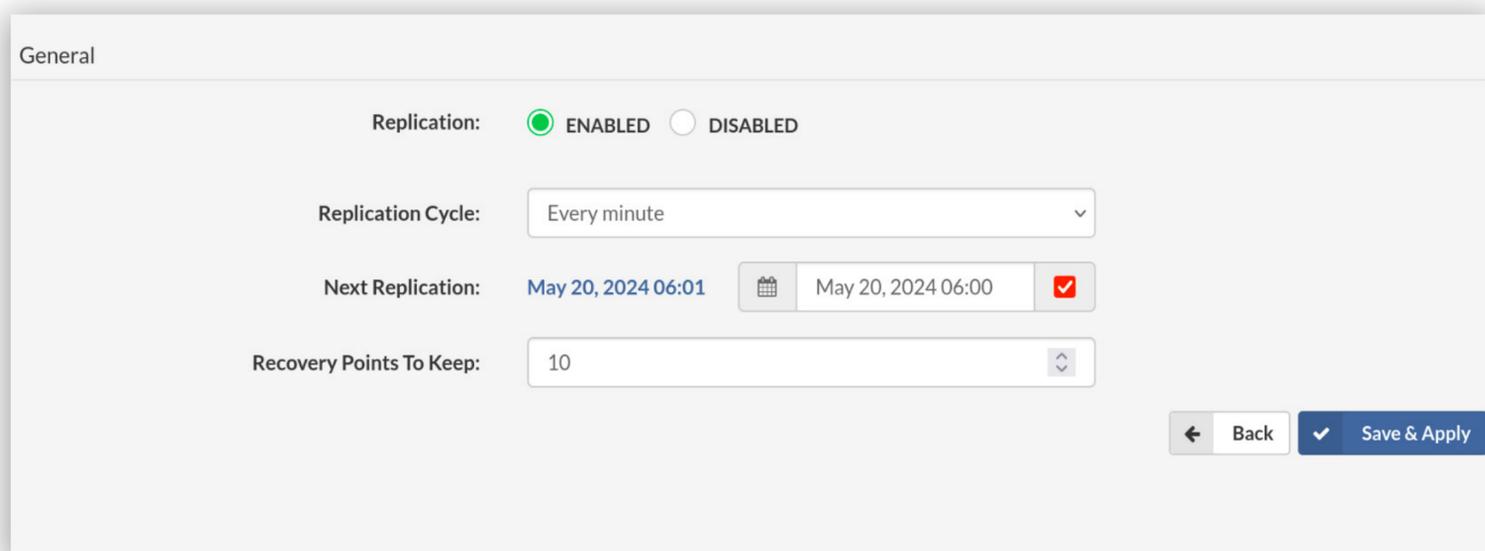
Recovery Points To Keep: 10

Back Save & Apply

However, if that time is not convenient, by checking the box next to the calendar administrators can select the exact time and date before which the first replication job will not start.



Next Replication will display the actual start time of the next replication.

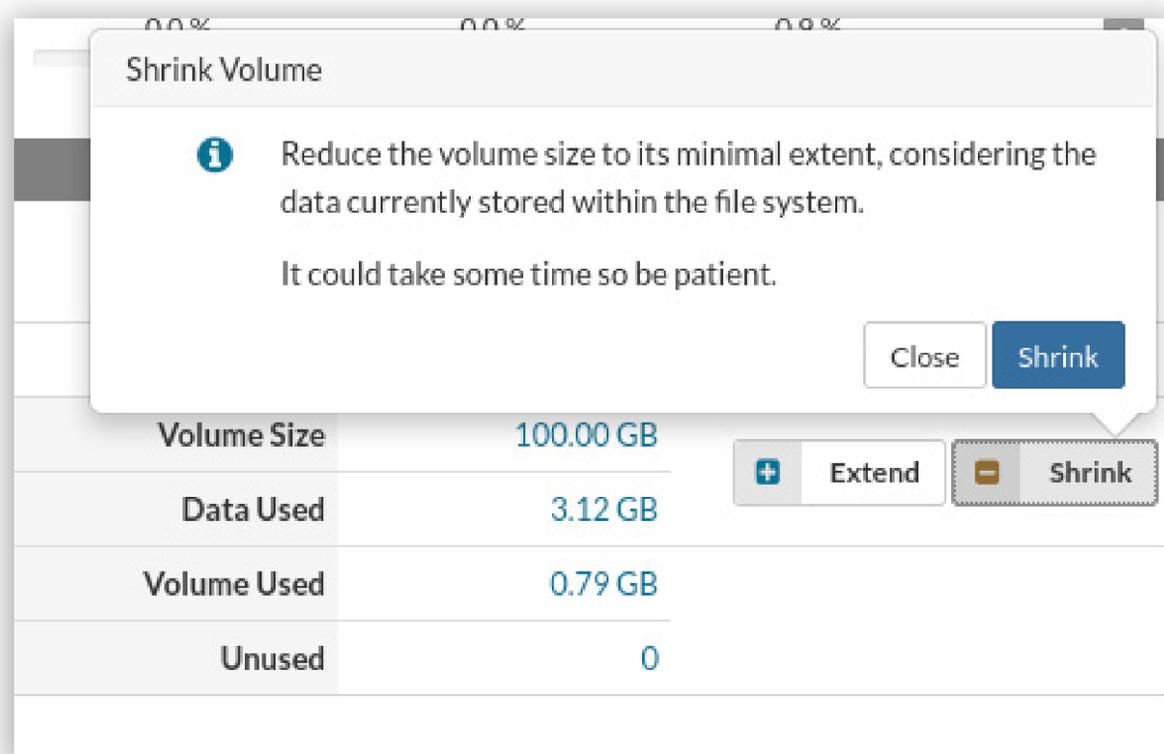


Volume Shrinking through the SERVERware GUI

In SERVERware 4.7, shrinking VPSs can be done with a single click through the SERVERware GUI.

SERVERware will automatically calculate the required volume size based on the Data Used values within the volume.

Before shrinking the volume, the VPS needs to be stopped.



The shrink button is located next to the extend button and as with the extend functionality, this is a process that might take a while, so it's recommended not to immediately start the VPS once the dialog is closed. The shrinking process can be tracked through the system logs and audit logs.

DNS Cache Improvements

Processing hosts will retrieve DNS information from the Setup Wizard after they're added to the cluster. This will prevent issues that cause VPS outages like the failure to start the CoreDNS service, configuration files that point only to the loopback address or are empty.

In case the `/etc/resolv.conf.upstream` file is empty, all queries will be passed to Google DNS.

CONTACT BICOM SYSTEMS TODAY

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Bicom Systems (USA)

2719 Hollywood Blvd
B-128
Hollywood, Florida
33020-4821
United States
Tel: +1 (954) 278 8470
Tel: +1 (619) 760 7777
Fax: +1 (954) 278 8471
sales@bicomsystems.com



Bicom Systems (CAN)

Hilyard Place
B-125
Saint John, New Brunswick
E2K 1J5
Canada
Tel: +1 (647) 313 1515
Tel: +1 (506) 635 1135
sales@bicomsystems.com



Bicom Systems (UK)

Unit 5 Rockware BC
5 Rockware Avenue
Greenford
UB6 0AA
United Kingdom
Tel: +44 (0) 20 33 99 88 00
sales@bicomsystems.com



Bicom Systems (FRA)

c/o Athena Global Services
Telecom
229 rue Saint-Honoré – 75001
Paris
Tel : +33 (0) 185 001 000
www.bicomsystems.fr
sales@bicomsystems.fr



Bicom Systems (ITA)

Via Marie Curie 3
50051 Castelfiorentino
Firenze
Italy
Tel: +39 0571 1661119
sales@bicomsystems.it



Bicom Systems (RSA)

12 Houtkapper Street
Magaliessig
2067
South Africa
Tel: +27 (10) 0011390
sales@bicomsystems.com

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www.bicomsystems.com