

Configurable Options

Proxmox KVM module **WHMCS**
































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WHMCS Configurable Options allow clients to customize their virtual machine resources at order time and during upgrades. The PUQ Proxmox KVM module reads configurable option values and uses them to override the product's default settings during provisioning and change package operations.

“ **New in v3.3.** Eleven new options (every disk size / bandwidth / IOPS parameter plus Network Bandwidth) and clean plain-English names for the four previously prefix-only ones (Backups, Snapshots, IPv4 Addresses, IPv6 Addresses). Every overridable resource also has a default in Module Settings, so a product works without any Configurable Options at all.

Configurable Options

Add New Configurable Option

Option	Sort Order	Hidden	
CPU Cores CPU Cores	1	<input type="checkbox"/>	 
RAM RAM	2	<input type="checkbox"/>	 
System Disk System Disk	3	<input type="checkbox"/>	 
System Disk Read Bandwidth System Disk Read Bandwidth	4	<input type="checkbox"/>	 
System Disk Write Bandwidth System Disk Write Bandwidth	5	<input type="checkbox"/>	 
System Disk Read IOPS System Disk Read IOPS	6	<input type="checkbox"/>	 
System Disk Write IOPS System Disk Write IOPS	7	<input type="checkbox"/>	 
Additional Disk Additional Disk	8	<input type="checkbox"/>	 
Additional Disk Read Bandwidth Additional Disk Read Bandwidth	9	<input type="checkbox"/>	 
Additional Disk Write Bandwidth Additional Disk Write Bandwidth	10	<input type="checkbox"/>	 
Additional Disk Read IOPS Additional Disk Read IOPS	11	<input type="checkbox"/>	 
Additional Disk Write IOPS Additional Disk Write IOPS	12	<input type="checkbox"/>	 
Network Bandwidth Network Bandwidth	13	<input type="checkbox"/>	 
IPv4 Addresses IPv4 Addresses	14	<input type="checkbox"/>	 
IPv6 Addresses IPv6 Addresses	15	<input type="checkbox"/>	 
Backups Backups	16	<input type="checkbox"/>	 
Snapshots Snapshots	17	<input type="checkbox"/>	 
Operating System Operating System	18	<input type="checkbox"/>	 

The screenshot above shows all 18 supported options assigned to a single product. The next screenshot shows how a client sees them on the order form:

Configurable Options

CPU Cores

System Disk

System Disk Write Bandwidth

System Disk Write IOPS

Additional Disk Read Bandwidth

Additional Disk Read IOPS

Network Bandwidth

IPv6 Addresses

Snapshots

RAM

System Disk Read Bandwidth

System Disk Read IOPS

Additional Disk

Additional Disk Write Bandwidth

Additional Disk Write IOPS

IPv4 Addresses

Backups

Operating System

Order Summary

VPS
Proxmox KVM

VPS	\$0.00
» CPU Cores: 1 Core	\$0.00
» RAM: 1 GB	\$0.00
» System Disk: 10 GB	\$0.00
» System Disk Read Bandwidth: Unlimited	\$0.00
» System Disk Write Bandwidth: Unlimited	\$0.00
» System Disk Read IOPS: Unlimited	\$0.00
» System Disk Write IOPS: Unlimited	\$0.00
» Additional Disk: No additional disk	\$0.00
» Additional Disk Read Bandwidth: Unlimited	\$0.00
» Additional Disk Write Bandwidth: Unlimited	\$0.00
» Additional Disk Read IOPS: Unlimited	\$0.00
» Additional Disk Write IOPS: Unlimited	\$0.00
» Network Bandwidth: Unlimited	\$0.00
» IPv4 Addresses: 1 IPv4	\$0.00
» IPv6 Addresses: No IPv6	\$0.00
» Backups: No backups	\$0.00
» Snapshots: No snapshots	\$0.00
» Operating System: Debian-11	\$0.00
Setup Fees:	\$0.00
\$0.00	
Total Due Today	

Continue →

Overview

Configurable Options provide a way to offer multiple resource tiers within a single product. For example, you can create one "KVM VPS" product with configurable options for CPU, RAM, and disk, letting clients pick their desired configuration and pricing tier at checkout.

When a configurable option is set on an order, its value takes precedence over the corresponding product-level default configured in the Module Settings.

Setup

1. Navigate to **Setup > Products/Services > Configurable Options**
2. Click **Create a New Group**
3. Name the group (e.g., "KVM VPS Options")
4. Add individual options as described below
5. Assign the group to your PUQ ProxmoxKVM product(s) using the **Assigned Products** tab

Supported Configurable Options

The module recognizes the following configurable option names. The **Option Name** must match exactly (case-sensitive) for the module to detect and apply the value.

Compute Resources

Option Name	Type	Description	Example Values
CPU Cores	Dropdown	Number of virtual CPU cores	1 , 2 , 4 , 8 , 16
RAM	Dropdown	Memory size in GB	1 , 2 , 4 , 8 , 16 , 32

Backups & Snapshots

Option Name	Type	Description	Example Values
Backups	Dropdown	Maximum number of backups for the service (0 = backups disabled)	0 , 3 , 7 , 14 , 30
Snapshots	Dropdown	Maximum number of snapshots for the service (0 = snapshots disabled)	0 , 1 , 3 , 5 , 10

Storage

Option Name	Type	Description	Example Values
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System Disk	Dropdown	Boot disk size in GB	<input type="text" value="10"/> , <input type="text" value="20"/> , <input type="text" value="40"/> , <input type="text" value="80"/> , <input type="text" value="160"/>
Additional Disk	Dropdown	Secondary disk size in GB (0 = no additional disk)	<input type="text" value="0"/> , <input type="text" value="10"/> , <input type="text" value="20"/> , <input type="text" value="50"/> , <input type="text" value="100"/>
System Disk Read Bandwidth	Dropdown	System disk read throughput limit in MB/s	<input type="text" value="0"/> , <input type="text" value="50"/> , <input type="text" value="100"/> , <input type="text" value="200"/>
System Disk Write Bandwidth	Dropdown	System disk write throughput limit in MB/s	<input type="text" value="0"/> , <input type="text" value="50"/> , <input type="text" value="100"/> , <input type="text" value="200"/>
System Disk Read IOPS	Dropdown	System disk read IOPS limit	<input type="text" value="0"/> , <input type="text" value="500"/> , <input type="text" value="1000"/> , <input type="text" value="5000"/>
System Disk Write IOPS	Dropdown	System disk write IOPS limit	<input type="text" value="0"/> , <input type="text" value="500"/> , <input type="text" value="1000"/> , <input type="text" value="5000"/>
Additional Disk Read Bandwidth	Dropdown	Additional disk read throughput limit in MB/s	<input type="text" value="0"/> , <input type="text" value="50"/> , <input type="text" value="100"/>
Additional Disk Write Bandwidth	Dropdown	Additional disk write throughput limit in MB/s	<input type="text" value="0"/> , <input type="text" value="50"/> , <input type="text" value="100"/>
Additional Disk Read IOPS	Dropdown	Additional disk read IOPS limit	<input type="text" value="0"/> , <input type="text" value="500"/> , <input type="text" value="1000"/>
Additional Disk Write IOPS	Dropdown	Additional disk write IOPS limit	<input type="text" value="0"/> , <input type="text" value="500"/> , <input type="text" value="1000"/>

Network

Option Name	Type	Description	Example Values
Network Bandwidth	Dropdown	Network bandwidth limit in MB/s (0 = unlimited)	<input type="text" value="0"/> , <input type="text" value="10"/> , <input type="text" value="50"/> , <input type="text" value="100"/> , <input type="text" value="1000"/>
IPv4 Addresses	Dropdown	Number of IPv4 addresses to allocate from the pool	<input type="text" value="1"/> , <input type="text" value="2"/> , <input type="text" value="4"/> , <input type="text" value="8"/>
IPv6 Addresses	Dropdown	Number of IPv6 addresses to allocate from the pool	<input type="text" value="0"/> , <input type="text" value="1"/> , <input type="text" value="4"/> , <input type="text" value="16"/>

Operating System

Option Name	Type	Description	Example Values
Operating System	Dropdown	OS template selection (Proxmox template VM ID)	Template IDs from Proxmox

Creating a Configurable Option

For each option:

1. Click **Add New Configurable Option** in your group
2. Set the **Option Name** to match one of the supported names above
3. Set the **Option Type** to **Dropdown**
4. Add sub-options with the format: `|value| Display Name|`

Compute resources

Example: CPU Cores

Option Name: CPU Cores

Option Type: Dropdown

Sub-options:

1| 1 Core

2| 2 Cores

4| 4 Cores

8| 8 Cores

16| 16 Cores

Example: RAM

Option Name: RAM

Option Type: Dropdown

Sub-options:

1| 1 GB

2| 2 GB

4| 4 GB

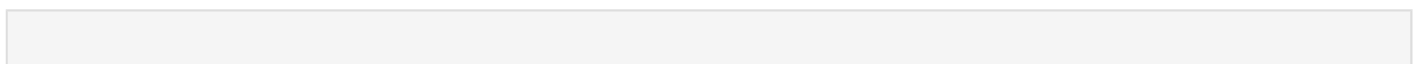
8| 8 GB

16| 16 GB

32| 32 GB

Backups & Snapshots

Example: Backups



Option Name: Backups

Option Type: Dropdown

Sub-options:

0| No backups

3| 3 backups

7| 7 backups

14| 14 backups

30| 30 backups

Example: Snapshots

Option Name: Snapshots

Option Type: Dropdown

Sub-options:

0| No snapshots

1| 1 snapshot

3| 3 snapshots

5| 5 snapshots

10| 10 snapshots

Storage — size

Example: System Disk

Option Name: System Disk

Option Type: Dropdown

Sub-options:

10| 10 GB

20| 20 GB

40| 40 GB

80| 80 GB

160| 160 GB

Example: Additional Disk

Option Name: Additional Disk

Option Type: Dropdown

Sub-options:

0| No additional disk

10| 10 GB

20| 20 GB

50| 50 GB

100| 100 GB

500| 500 GB

“ **Note:** [0] means no additional disk required by the package. If a disk already exists on the VM, the module does not delete it — the existing disk is preserved.

Storage — I/O limits

Example: System Disk Read Bandwidth

Option Name: System Disk Read Bandwidth

Option Type: Dropdown

Sub-options:

0| Unlimited

50| 50 MB/s

100| 100 MB/s

200| 200 MB/s

500| 500 MB/s

Example: System Disk Write Bandwidth

Option Name: System Disk Write Bandwidth

Option Type: Dropdown

Sub-options:

0| Unlimited

50| 50 MB/s

100| 100 MB/s

200| 200 MB/s

500| 500 MB/s

Example: System Disk Read IOPS

Option Name: System Disk Read IOPS

Option Type: Dropdown

Sub-options:

0| Unlimited

500| 500 IOPS

1000| 1000 IOPS

2500| 2500 IOPS

5000| 5000 IOPS

Example: System Disk Write IOPS

Option Name: System Disk Write IOPS

Option Type: Dropdown

Sub-options:

0| Unlimited

500| 500 IOPS

1000| 1000 IOPS

2500| 2500 IOPS

5000| 5000 IOPS

Example: Additional Disk Read Bandwidth

Option Name: Additional Disk Read Bandwidth

Option Type: Dropdown

Sub-options:

0| Unlimited

50| 50 MB/s

100| 100 MB/s

200| 200 MB/s

Example: Additional Disk Write Bandwidth

Option Name: Additional Disk Write Bandwidth

Option Type: Dropdown

Sub-options:

0| Unlimited

50| 50 MB/s

100| 100 MB/s

200| 200 MB/s

Example: Additional Disk Read IOPS

Option Name: Additional Disk Read IOPS

Option Type: Dropdown

Sub-options:

0| Unlimited

500| 500 IOPS

1000| 1000 IOPS

2500| 2500 IOPS

Example: Additional Disk Write IOPS

Option Name: Additional Disk Write IOPS

Option Type: Dropdown

Sub-options:

0| Unlimited

500| 500 IOPS

1000| 1000 IOPS

2500| 2500 IOPS

“ **Note:** For bandwidth / IOPS options, `0` means **unlimited** — the value is omitted from the disk config string sent to Proxmox.

Network

Example: Network Bandwidth

Option Name: Network Bandwidth

Option Type: Dropdown

Sub-options:

0| Unlimited

10| 10 MB/s

50| 50 MB/s

100| 100 MB/s

500| 500 MB/s

1000| 1 GB/s

Example: IPv4 Addresses

Option Name: IPv4 Addresses

Option Type: Dropdown

Sub-options:

1| 1 IPv4

2| 2 IPv4

4| 4 IPv4

8| 8 IPv4

16| 16 IPv4

Example: IPv6 Addresses

Option Name: IPv6 Addresses

Option Type: Dropdown

Sub-options:

0| No IPv6

1| 1 IPv6

4| 4 IPv6

16| 16 IPv6

“ **Note:** Setting either count to `0` means «no addresses of that family will be allocated from the IP pool for this service». Upgrades that lower the count automatically release the excess addresses back to the pool.

Operating System

Example: Operating System

Option Name: Operating System

Option Type: Dropdown

Sub-options:

9001| Ubuntu 22.04 LTS

9002| Debian 12

9003| AlmaLinux 9

9004| Windows Server 2022

“ **Note:** The sub-option values for **Operating System** must be the Proxmox template VM IDs. The display names can be human-readable OS names.

Pricing

Each sub-option can have its own pricing configured per billing cycle. Navigate to the sub-option's pricing section to set monthly, quarterly, semi-annual, and annual prices.

For options where [0] means "not configured" or "unlimited" (such as Additional Disk = 0, Network Bandwidth = 0), you would typically set the price for the [0] sub-option to \$0.00.

Upgrade/Downgrade

When a client upgrades or downgrades their service through the WHMCS client area, the module automatically detects the changed configurable option values and triggers a **change package** operation. This operation updates the VM's resources on Proxmox to match the new configuration.

The change package process is logged step-by-step in the [Deploy Log](#) and can be monitored from the admin service management page.

Disk size constraints

System Disk and Additional Disk size can only be increased. Proxmox does not support shrinking VM disks (it would risk corrupting/losing data), so any configurable option that would result in a smaller disk than the current size is rejected by the module.

ⓘ System Disk and Additional Disk can only be increased (Proxmox does not support shrinking). For Additional Disk you may select "0" to remove the existing disk — this action also erases its data.

	Current Configuration		New Configuration
CPU Cores	1 Core	»	No Change
RAM	4 GB	»	No Change
System Disk	160 GB	»	No Change
System Disk Read Bandwidth	500 MB/s	»	No Change
System Disk Write Bandwidth	500 MB/s	»	No Change
System Disk Read IOPS	5000 IOPS	»	No Change
System Disk Write IOPS	5000 IOPS	»	No Change
Additional Disk	10 GB	»	No Change
Additional Disk Read Bandwidth	200 MB/s	»	No Change
Additional Disk Write Bandwidth	200 MB/s	»	No Change
Additional Disk Read IOPS	2500 IOPS	»	No Change
Additional Disk Write IOPS	2500 IOPS	»	No Change
Network Bandwidth	1 GB/s	»	No Change
IPv4 Addresses	1 IPv4	»	No Change
IPv6 Addresses	4 IPv6	»	No Change
Backups	3 backups	»	No Change
Snapshots	3 snapshots	»	No Change
Operating System	Debian-11	»	No Change

How it is enforced

The module applies the constraint at three layers:

1. **Client-area upgrade page** — on `/clientarea.php?action=upgrade&type=configoptions`, sub-options whose value is smaller than the currently selected one are visually disabled in the System Disk / Additional Disk dropdowns and marked `(downgrade not allowed)`. A warning banner is shown above the form.
2. **Change-package state machine** — if a smaller value still reaches the backend (e.g. via direct admin edit), the `Resize system disk` / `Resize additional disk` step is skipped with status `skip - shrink not allowed by Proxmox`. The VM is **not** stopped, snapshots are **not** removed, and the step is logged via `LogModuleCall` under the action name `system_disk_shrink_rejected` / `additional_disk_shrink_rejected`.
3. **Post-backup-restore re-apply** — when the module re-applies package configuration after a backup restore, a smaller package disk size is treated the same way: the resize is silently skipped, the existing larger disk is kept, and the rejection is logged.

Resulting behaviour for clients

- A client picking a smaller System Disk / Additional Disk in an upgrade order cannot submit it — the option is disabled in the UI.
- If by some path a smaller value reaches the change-package operation, the **disk size stays unchanged**. All other configurable options in the same change-package operation (CPU, RAM, bandwidth, IOPS, IPv4/IPv6 count, etc.) are still applied normally.

Additional Disk special cases

- `Additional Disk = 0` with no existing disk → no action.
- `Additional Disk = 0` with **existing disk** → the existing disk is **detached and deleted**. VM is stopped first, all snapshots are removed (Proxmox requires this for detach), the disk interface is removed from the VM config, and the disk file is purged from storage. **All data on the additional disk is lost**. Logged via `LogModuleCall` under `additional_disk_deleted`.
- `Additional Disk` increased from `0` to `N` → new disk is created with size `N` GB.
- `Additional Disk` increased from `N` to `M > N` → disk is resized in place (no data loss).
- `Additional Disk` decreased while `> 0` (e.g. from `50` to `20`) → treated as shrink, rejected, current size kept.

“ **Note for clients:** The upgrade form shows a confirmation dialog before

submitting an Additional Disk = `|0|` change. The sub-option is also labeled `|removes the existing disk – data will be lost|` in the dropdown to make the destructive effect visible.

“ **Note for admins:** If you do not want clients to be able to delete the additional disk via the configurable option, omit the `|0| ... |` sub-option from the Additional Disk dropdown — make the lowest entry the minimum disk size you offer (e.g. `|10| 10 GB|`).

Priority Order

When determining the final value for a VM resource, the module follows this priority:

1. **Configurable Option value** (highest priority — applied whenever the option is assigned to the service, including a value of `|0|`)
2. **Product Module Settings default** (used only when no configurable option for that resource is assigned to the service)

Every overridable resource has a default in **Module Settings** for the product. If you do not create a Configurable Option for a resource, that default is used for every service of the product. The defaults live in:

Resource	Module Settings location	Default value (if you don't set it)
CPU Cores	VM Configuration → CPU	<code> 1 </code>
RAM	VM Configuration → RAM	<code> 1 </code> GB
Backups	VM Configuration → Backups	<code> 0 </code> (disabled)
Snapshots	VM Configuration → Snapshots	<code> 0 </code> (disabled)
System Disk size + bandwidth + IOPS	Storage → System Disk	<code> 0 </code> (no change)
Additional Disk size + bandwidth + IOPS	Storage → Additional Disk	<code> 0 </code> (no additional disk)
Network Bandwidth	Network → Bandwidth	<code> 0 </code> (unlimited)
IPv4 count	Network → IPv4 count	<code> 1 </code>
IPv6 count	Network → IPv6 count	<code> 0 </code>
Operating System	VM Configuration → OS template	<code> configoption4 </code> (default OS template)

`|0|` is a meaningful value for many options and is **always** applied when a client selects it through a Configurable Option:

- `|Additional Disk| = |0|` → existing disk is **detached and deleted** (data lost)
- `|Network Bandwidth| = |0|` → unlimited
- `|*Bandwidth| / |*IOPS| = |0|` → unlimited
- `|IPv4 Addresses| / |IPv6 Addresses| = |0|` → no address of that family (existing addresses are released back to the pool)
- `|Backups| / legacy |B| Backup| = |0|` → backups disabled for the service
- `|Snapshots| / legacy |S| Snapshot| = |0|` → snapshots disabled for the service

This means you can set conservative defaults in the product configuration and allow clients to customize resources both upward (more CPU/RAM/disk) and downward (disable additional disk, set unlimited bandwidth) through configurable options.

Legacy prefix-based option names (v1.x-v2.x)

“ **Still supported in v3.0.** In v1.x-v2.x, PUQ Proxmox KVM used a **prefix-based convention** for configurable option names where the prefix identified the option type and the display name was free text. If you upgraded from an older version, your existing configurable options continue to work without any changes — the module recognizes both the legacy prefix-based names and the v3.0 plain names.

The legacy convention uses an Option Name of the form `|PREFIX| Display Name|` (the text on the right of the `| |` can be whatever you want — "My Backup Offer", "Sicherheit", etc.) and sub-options of the form `|value| Display Name|`.

Legacy Option Name	Sub-option format	Meaning
<code> B Backup </code>	<code> <count> Name </code>	Number of allowed backups (0 disables backups for the service)
<code> S Snapshot </code>	<code> <count> Name </code>	Number of allowed snapshots (0 disables snapshots for the service)
<code> CPU Processor </code>	<code> <count> Name </code>	Number of CPU cores
<code> RAM Memory </code>	<code> <count> Name </code>	RAM in GB

Legacy Option Name	Sub-option format	Meaning
ipv4 IPv4	<count> Name	Number of IPv4 addresses to allocate
ipv6 IPv6	<count> Name	Number of IPv6 addresses to allocate
OS Operating system	<template_id> Name	Proxmox template VM ID to clone from

Legacy example: Operating System

Option Name: OS| Operating system

Option Type: Dropdown

Sub-options:

1010| Debian-10.12

1011| Debian-11

1012| Debian-12

1021| Ubuntu-20.04

1022| Ubuntu-22.04

The sub-option values are the Proxmox template VMIDs (e.g. `1010` = a template VM in Proxmox with ID 1010 based on Debian 10). The module uses the number on the left of the `|` to call `qm clone`; the text on the right is shown to the admin/client in the order form.

Legacy example: Backup

Option Name: B| Backup

Option Type: Dropdown

Sub-options:

0| No backups

3| 3 backups

7| 7 backups

14| 14 backups

Legacy example: Snapshot

Option Name: S| Snapshot

Option Type: Dropdown

Sub-options:

0| No snapshots

1| 1 snapshot

3| 3 snapshots

5| 5 snapshots

10| 10 snapshots

Legacy example: CPU

Option Name: CPU| Processor

Option Type: Dropdown

Sub-options:

1| 1 Core

2| 2 Cores

4| 4 Cores

8| 8 Cores

16| 16 Cores

Legacy example: RAM

Option Name: RAM| Memory

Option Type: Dropdown

Sub-options:

1| 1 GB

2| 2 GB

4| 4 GB

8| 8 GB

16| 16 GB

Legacy example: IPv4

Option Name: ipv4| IPv4

Option Type: Dropdown

Sub-options:

1| 1 IPv4

2| 2 IPv4

4| 4 IPv4

8| 8 IPv4

Legacy example: IPv6

Option Name: ipv6| IPv6

Option Type: Dropdown

Sub-options:

0| No IPv6

1| 1 IPv6

4| 4 IPv6

16| 16 IPv6

Which format should I use?

- **New installations** — use the plain v3.0 names shown higher on this page (`|CPU Cores|`, `|RAM|`, `|System Disk|`, etc.).
- **Upgrades from v1.x/v2.x** — keep using your existing prefix-based names. They are still recognized and require no changes. Migrating them to the new names is optional and purely cosmetic.
- **Mixing both** — not recommended, but technically allowed. If both a legacy `|CPU Processor|` and a new `|CPU Cores|` option are assigned to the same product, the plain v3.0 name wins.

Revision #8

Created 10 April 2026 12:07:51 by Ruslan

Updated 15 May 2026 07:07:22 by Ruslan