

# Scheduled Tasks

## Proxmox KVM module **WHMCS**

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## Overview

The module runs six scheduled tasks through the cron system. Each task has a configurable interval and independent lock management to prevent overlapping executions.

## Task List

Task	Default Interval	Description
<b>Process VMs</b>	1 minute	Processes the deploy and change package pipelines. Picks up VMs in non-ready states and executes the next step in their pipeline. Also handles DNS record creation and updates. This is the primary task responsible for VM provisioning and modification.
<b>Remove Snapshots</b>	60 minutes	Checks for expired snapshots based on the configured snapshot lifetime setting and automatically removes them from Proxmox. Keeps the snapshot count manageable and frees up storage.
<b>Restore Backup</b>	5 minutes	Monitors active backup restore tasks on Proxmox. When a restore operation completes, it updates the VM status and sends the "Backup restored" email notification to the client.

Task	Default Interval	Description
<b>Backup Status</b>	5 minutes	Monitors active manual backup tasks on Proxmox. When a backup operation completes, it updates the backup record with the result(success or failure).
<b>Schedule Backup</b>	60 minutes	Executes scheduled backups based on per-VM backup schedules. Checks each VM's configured backup days and initiates a backup if one is due. Runs once per day per VM per scheduled day.
<b>Collect Statistics</b>	60 minutes	Aggregates network traffic statistics (inbound and outbound bytes) from Proxmox RRD data. Used for WHMCS Metric Billing to enable usage-based network traffic billing.

# Configuring Task Intervals

Task intervals can be adjusted in the addon settings:

1. Navigate to **Addons > PUQ Proxmox KVM**
2. Go to **Settings > Cron**
3. Adjust the interval for each task as needed
4. Save settings

The interval specifies the minimum time between executions of a task. For example, a 5-minute interval means the task will run no more frequently than once every 5 minutes.

“ **Tip:** For faster VM provisioning, keep the **Process VMs** interval low (1-2 minutes). For less time-sensitive tasks like statistics collection, longer intervals reduce system load.

# Lock Management

Each task uses a lock mechanism to prevent concurrent execution:

- When a task starts, it acquires a lock
- If the lock is already held, the task is skipped for that cron cycle

- When the task completes, the lock is released
- Stale locks (from crashed processes) are automatically detected and cleared based on a timeout

If a task appears to be stuck, you can check and manage locks from the addon's Cron settings page.

## CLI Tools

The module provides command-line tools for manual task execution and diagnostics. These can be useful for troubleshooting or for running tasks on demand outside the normal cron schedule.

```
whmcs-dev-puq-pl@hestiacp-test:/home/ruslan$ php /home/whmcs-dev-puq-pl/web/whmcs-dev.puq.pl/public_html/modules/addons/puq_proxmox_kvm/cron.php --help
PUQ Proxmox KVM - Standalone Cron

Usage:
php cron.php                Run all tasks (with interval checks)
php cron.php --task=processVirtualMachines  Run single task (skip interval check)
php cron.php --force        Run all tasks (skip interval checks)
php cron.php --list         Show tasks status
php cron.php --no-lock      Run without lock file (debug)
php cron.php --help         Show this help

Available tasks:
processVirtualMachines - Process Virtual Machines (default: 1m)
removeOldSnapshots - Remove Old Snapshots (default: 5m)
restoreBackupStatus - Restore Backup Status (default: 1m)
nowBackupStatus - Now Backup Status (default: 1m)
scheduleBackup - Schedule Backup (default: 5m)
collectingStatistics - Collecting Statistics (default: 60m)
```

To see available CLI commands, run:

```
php /path/to/whmcs/modules/addons/puq_proxmox_kvm/cron.php --help
```

## Common CLI Operations

Command	Description
<code>--help</code>	Display available commands and usage information
<code>--run-task=process_vms</code>	Manually run the Process VMS task
<code>--clear-locks</code>	Clear all stale lock files

## Monitoring

To monitor cron health:

1. Check the **Last Run** timestamp for each task on the Cron settings page
2. Verify no tasks have stale locks

3. Review the WHMCS activity log for any cron-related errors
4. For deploy issues, check the per-VM deploy log in the VM Management section

If tasks are consistently failing or not running, refer to the [Cron Configuration](#) guide to verify your cron setup.

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