

# opConfig Release Notes

## Product Compatibility

Refer to [product compatibility](#) to determine supported Operating Systems and Database Versions.

Download opConfig here - <https://opmantek.com/network-management-download/opconfig-download/>



Looking for opConfig4.X [Release Notes](#)?

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### Important

⚠ If you are upgrading from a version previous to 3.5.0 or greater, please read: [Upgrading Opmantek Applications](#)

### opConfig 3.6.0

RELEASED

13 Dec 2021

#### Improvements

- Added secrets randomise and secure cookies. For more information see [Security Configurations](#).
- Updated jQuery dependencies.

### opConfig 3.5.3

RELEASED

14 April 2021

## Bug Fixes

- Fixed issue in opConfig where a large amount MongoDB connections were created and retained.

## opConfig 3.5.2

RELEASED

30 March 2021

- This version provides new [authentication configurations](#):
  - Limit the number of sessions per user
  - Lock users that have not logged in in a specified period of time

## opConfig 3.5.1

RELEASED

30 Oct 2020

- **Bugfix:** When a command throws an error - For example, opConfig has no access to the node anymore - The last revision information was lost. It still persists in the database, in the collection `command_output_log`. But in the GUI, the revision is shown as no data. The behaviour was modified:
  - If there is an error with the command, a new revision is saved, indicating the last attempt and the error, even if no text output is received.
  - If the new revision has the same result as the previous, the information will be assigned to revision 0. This is the same behaviour, but now also happens with revisions with error.
- **Purging rules:** The command `purge_revisions` has been modified. Now, it also removes a queue when a revision is removed, if there are not other existing jobs referencing another existing revision. Also, a new command was created, `purge_queue`, to remove old jobs not linked with any revision, based in the parameter [opconfig\\_queue\\_expire\\_after\\_seconds](#). This parameter is 8 days by default, and is specified in seconds. You can read more about the [purging data in opConfig](#) in the next link.
- **List queue:** Now it returns only the pending jobs by default. All the jobs can be listed with `all=1`.

## opConfig 3.5.0

RELEASED

01 Oct 2020.

### Upgrade Notes

The new upcoming release of opConfig 3 will work on Opmantek's latest and fastest platform, however, the currently installed products are incompatible with this upgrade.

To find out more about this upgrade please read: [Upgrading Opmantek Applications](#)

## opConfig 3.4.0

Released 15 July 2020

- Maintenance release.

⚠ This release requires updated licenses, please contact [Opmantek Support](#) to organise new licenses.

## opConfig 3.2.4

Released 5 June 2020

- Updates to the installer.
- Fixed bug associated with events created by plugins.

## opConfig 3.2.3

Released 14th April 2020

- Maintenance release.

## opConfig 3.2.2

Released 22th January 2020

- Maintenance release.

## opConfig 3.2.1

Released 7th June 2019

### Highlights

- Improved opConfig dashboard performance
  - By default the unique commands widget is disabled enable using 'opconfig\_dashboard\_command\_summary' in opCommon.nmis

### Bug Fixes

- Auto Command Collection jobs under virtual operator did not have a clickable name
- Auto Command Collection virtual operator report fixed page rendering issue
- Plugin errors will use 'Plugin Error' as type under the ops report, this was blank before

## opConfig 3.2.0

Released 8th May 2019

This is a major release for opConfig it introduces a GUI refresh for the whole application and Virtual Operator a tool to help run commands

### Highlights

- New GUI
- Virtual Operator a tool which helps create new jobs comprised of nodes and commands
  - Create a new job with nodes, command sets or tags
  - Schedule for now or later
  - Annotate with a name and description
- Virtual Operator Report View, shows all run commands, derived data and conditions from a virtual operator job
  - Condition Troubleshooting
    - If a virtual operator job has raised conditions you can troubleshoot off this condition which creates a job with command sets filtered by this tag
    - Jobs are linked to the parent if it has been created from a conditions troubleshooting button.
  - Ops report for the current job is shown to highlight any failures with the running job
  - Derived column in the report can be expanded to show derived data and condition data
- Quick action buttons which are created in conf/table\_schemas/opConfig\_action-elements.json
  - Quick actions are templates for virtual operator jobs
  - You can add title, description nodes and command sets to be run, create new virtual operator jobs with all data filled out
- New dashboard to give an operational view of opconfig
  - quick action buttons are included on the dashboard
  - Old dashboard moved to "Changes Dashboard"
- opconfig-cli must require root or nmis users or a user who is the member of the group nmis
- Improved Search for Command Sets
- New Search Screen
- Command does not inline diff with the last revision, this is now through Compare Command Outputs
- Support optional command exec field for command set command sections
- Optional port for SSH under node connection options
- GUI shows if change detection is on for the current command
- Command view shows last 5 run commands

### Bug fixes

- Command output now correctly displays XML
- If opevents\_auto\_create\_nodes is true and opconfig\_import\_nodes\_activated is false the result will be opEvents=enabled and opConfig=disabled

## opConfig 3.1.1

This major release of opConfig was published on 2 Oct 2018.

Please note that the licensing system has been updated, and any licenses issued before Sept 2017 will **not** work for opConfig 3.1.1: You will have to obtain an updated license for this version of opConfig.

You can check your licenses by visiting the [My Licenses](#) page; If unsure about your options, please email [contact@opmantek.com](mailto:contact@opmantek.com).

### Highlights

- opConfig now supports custom [plugins for configuration data collection and postprocessing](#), which provides extra flexibility for interaction with external data sources as well as new filtering and alerting capabilities.
- The Commands Overview screen now offers a flexible advanced search mechanism, which allows you to find commands by various criteria including the text that they contain; this feature optionally also searches only the most recent revision of each command.
- Commands can now be triggered for one-off immediate execution from within the GUI.
- Commands can now optionally be [shadowed on disk](#), and the handling of command outputs larger than 16 megabytes was improved as well.

- opConfig now optionally reports node configuration changes to NMIS with a new event "Node Configuration Change Detected" and more details. The new configuration option `opconfig_raise_change_event` (default: true) can be used to disable this behaviour.
- The GUI now offers a 'Raw Text' view for commands, as an alternative to the default view of a command with the most recent changes.
- The opConfig installer now offers tuning choices for configuration data retention, to make storage exhaustion less likely.
- Misconfigured overlapping command sets are now handled better: conflicting commands are now logged and only one of them is applied. This safety check is performed per-node and at the time of selecting candidate commands to run.
- The filtering logic for command sets was adjusted for greater clarity, and a command set without any filtering restrictions is now considered to be satisfied by any node.
- Various robustness and performance improvements in opConfig's daemon and command-line tools.
- opConfig now uses more precise database indices, which should reduce the MongoDB load in environments with many nodes.
- The `opconfig-cli` tool now offers more flexible access to commands and revisions.
- An updated version of the `opnode_admin` tools is included, which provides better import and export functionality.

## opConfig 3.0.7

This maintenance release of opConfig was published on 19 Sep 2017.

### Highlights

- More robust handling of slow commands  
You can now configure how opConfig should [react to a particular command \(or command set\) timing out](#): it can either terminate and reopen the connection (default) or attempt a state resynchronisation (at the cost of some extra delay).
- Improved handling of interaction with very slow devices  
opConfig now handles complex and/or slow logins (e.g. ones with extra banners) more robustly.
- This version of opConfig introduces ["Device Presets"](#), which allow more fine-grained control of a device's timing options.
- Various minor bug fixes

## opConfig 3.0.6

This is a maintenance release of opConfig and was published on 9 Jun 2017.

### Highlights

- This version of opConfig fixes some scalability and robustness issues related to MongoDB interaction.  
The first startup this version may be slow as certain missing database indices have to be generated.
- A number of robustness and reliability improvements were made in both the opConfig GUI and the backend.
- opConfig now supports [Delegated Authentication](#).
- The Help menu now provides access to MongoDB status information.
- It is now possible (but not recommended) to disable all DNS use in opConfig.
- opConfig's node selection GUI now defaults to mode `remote` for `opconfig_gui_node_search_mode`.  
This mode doesn't show group memberships as nicely as mode `prefetch`, but scales much better for large installations.
- Mikrotik device support was improved greatly, and the `run_commands_noninteractively` workaround is no longer required.
- opConfig now supports Cisco ASA devices.
- opConfig now handles discovery of device settings more robustly and communication errors are detected and reported better.
- The standard phrasebooks were cleaned up for maximum interoperability.
- Various minor improvements and bug fixes.

## opConfig 3.0.4

Version 3.0.4 is a maintenance release of opConfig, published on 21 Feb 2017.

### Highlights

- The GUI performance was improved for greater scalability, and the dashboard and overview pages now allow to view substantially longer time periods without excessive slowdown.
- opConfig now fully supports MongoDB 3.2, and the installer will offer to install that version if your system doesn't have MongoDB installed.
- The Node editing index page now shows which applications the nodes are enabled/activated for.
- The `opconfig-cli` action `test_connect` produces better (and safer) diagnostic output, and now supports option `always_privileged=1/0` and `ssh_key=<somepath>`.
- OS detection rules and phrasebooks for Fortinet and Mikrotik devices were updated.
- opConfig's import from Open-Audit Enterprise honors filter expressions in `confcommand_sets.d/externals.nmis` again.
- Various smaller bug fixes and minor improvements.

## opConfig 3.0.3

Version 3.0.3 was released on 16 Nov 2016. It's a maintenance version with two new features.

### Highlights

- opConfig can now optionally run commands over SSH noninteractively  
The new command set scheduling option "run\_commands\_noninteractively" controls this behaviour: if set to true, all commands in the command set are issued using separate, independent and non-interactive SSH connections to the node.  
The normal default mode is to open *one* interactive SSH session to the device, then run commands sequentially in that shared session. This requires a fully working 'phrasebook' for the device (e.g. for determining when a command is done, where the next prompt is and so on). For certain devices (e.g. Mikrotik) this interactive to-and-fro operation doesn't work reliably, and run\_commands\_noninteractively provides a more robust but less efficient alternative. The [opConfig User Manual](#) describes this feature in more details
- New capability for transferring and tracking arbitrary files  
A new special command called `_download_file_` was added for command sets, which (combined with the new options `run_local` and `store_internal` allows you to specify what files opConfig should download from a node (using SCP) and whether they should be tracked as text or as binary files. Please see the [opConfig User Manual](#) for further details.
- Diagnostic output of `opconfig-cli.pl act=test_connect` was fixed, and `always_privileged` can now be passed through to `test_connect`, too.
- New and improved device support for Mikrotik and Fortinet
- Various bug fixes and minor improvements.

## opConfig 3.0.2

Version 3.0.2 was released on 3 Nov 2016.

This is primarily a maintenance release but we couldn't help introducing a few new features as well.

### Highlights

- opConfig now fully supports SSH keys for authentication at target system, managed using the Credential Set GUI.
- opConfig now properly supports devices which provide direct access to privileged/superuser/enabled mode (e.g. when TACACS+ is configured to put the user in enable mode).  
To inform opConfig to adjust its behaviour accordingly you'll have to set the new option "Automatically Privileged" for the given credential set.
- Connection details and credential discovery was improved for greater robustness.  
opConfig now deals properly with partially overlapping credentials (e.g. same user name and login password but different privileged/enable passwords), also taking into account the privileged mode.
- Discovery of a node's connection details and credentials is now possible from the GUI  
The new button "Discover Connection Details" schedules an immediate (but asynchronous) (re)discovery of a node.
- Discovery of connection details can now be scheduled for a future time using `opconfig-cli`.
- Initial state of nodes imported from NMIS is now configurable.  
This is meant for sites with lots of nodes in NMIS but only a few managed by opConfig: If you set the configuration option `opconfig_import_node_des_activated` to false, then any newly imported nodes will be added as 'deactivated for opConfig'.  
Please note that this applies only to new nodes, and only to the node's activation state for opConfig (i.e. not opEvents or other applications).
- Configuration change pushing for devices without explicit 'configure' mode (e.g. Unix servers) is now more robust  
opConfig now autodetects whether a configuration mode is available, based on the phrasebook for the selected node personality. If no configuration mode is available, opConfig performs the configuration change operations in privileged/enabled/superuser mode instead.
- The installer now automatically sets up a unique application secret (on install or upgrade), unless your system is already [configured for SSO](#).
- Various bug fixes and minor improvements

## opConfig 3.0.1

Version 3.0.1 was released on 24 Jun 2016.

This is a maintenance release to address a number of compatibility and robustness issues that surfaced recently. No new features were added.

## opConfig 3.0.0

Version 3 of opConfig was released on 23 May 2016.

### Highlights

- opConfig now provides a flexible infrastructure for [pushing configuration changes](#) to devices.
- The opConfig daemon was made much more robust, and the application logging was reworked for improved consistency.
- The installer now provides example cron snippets in `conf/cron.d/`.
- Phrasebooks are now updated automatically, and the application warns if conflicting phrasebooks exist.
- The opConfig daemon now restarts when configuration file changes are detected.
- OS Detection is now extensible and customisable, using the new configuration file `OS_Rules.nmis`, and discovery and NMIS import are more robust.  
Various new device types are now detectable.
- Various GUI pages were reworked for improved performance and usability, e.g. more flexible search functionality, bulk operations etc.
- Importing Open-Audit Enterprise results is now more robust.
- The running of command sets can now be scheduled for a future time, using `opconfig-cli`'s new `at=<timespec>` argument.
- User actions are now logged comprehensively in the new log file `log/audit.log`.
- The opConfig GUI now supports time zones.  
If you set the config option `omkd_display_timezone` to your desired timezone, then all times in the opConfig GUI will be displayed in that timezone *and* including the timezone offset.  
You can use any timezone definition from the ISO8601 standard and the Olson database, plus "local" (meaning the timezone configured on the server).  
If this option is not set, the times will be shown in the "local" timezone but *without* zone offset. If explicitly set to "local", the offset suffix is shown.

## opConfig 2.2.4

Version 2.2.4 was released on 23 Nov 2015. It is primarily a maintenance release, but we couldn't help introducing a number of new features.

### Highlights

- opConfig now offers **free licenses which are not time limited (but limited to 20 nodes)**.  
With this version it is also much simpler to select and download any of your existing licenses from within the opConfig GUI.
- The command sets configuration file, `conf/commands_sets.nmis`, was split into a directory of smaller files in `conf/command_sets.d`, which makes them easier to maintain. The installer offers to disable the old file if it wasn't modified since the last release; for backwards-compatibility purposes the old file is consulted first and only non-clashing command sets are used.  
The list of default command sets shipped with opConfig was also extended.
- The phrasebooks for various device types were reorganized and a number of new device types are now included.
- Node editing activities are now logged in `log/audit.log` for auditing purposes. This covers both changes made in the GUI as well as via `opnode_admin.pl`.
- The installer now offers to merge and consolidate the authentication files for OMK applications and NMIS into a single `htpasswd` file.
- `opconfigd` was reworked for better robustness and now logs to `log/opConfig.log`; it also restarts automatically on configuration changes.
- The opConfig GUI now reuses and caches database connections for increased performance, and a number of other performance-improving modifications were made.
- Irrevocable operations in the GUI now require confirmation.
- The GUI dashboard was reorganized somewhat, and less essential menu items were moved to the right (e.g. links to other modules).  
There is now an "Advanced" drop down menu to let you set the Top-N parameter (as well as custom time periods) for the primary dashboard.  
Page/Tab titles were improved and now reflect what part of the opConfig GUI is being accessed.
- The GUI has a new screen named "Commands Overview" which shows the most recent commands in tabular form. The Node Summary page now provides direct access to both Commands and Changes Overview for the given node.
- The new configuration option `opconfig_default_period` lets you select the default period for all GUI pages.  
The new configuration option `opconfig_application_heading` lets you change the page heading to a custom value.
- `opnode_admin.pl` now works better even with badly named nodes, and is more user-friendly: it now supports the new operations `act=show` and `act=set` for easy access to a node's properties and for changing those. In addition to that, the tool can now *completely* delete nodes (including any opConfig or opEvents data for them) when the extra argument `deletedata=true` is given.
- A bug in importing nodes from NMIS was repaired, and now notes and comments are retained on refresh.
- There is a new example script `bin/opconfig_node_update.pl` which is shipped in source and demonstrates various large-scale automation operations related to opConfig.
- A bug in the multiprocessing code in `opconfig_cli.pl` was repaired, which could lead to the tool deadlocking and consuming all CPU until killed manually. The help text in `opconfig_cli.pl` was also improved, as was the argument format for passing in multiple nodes. The transport and credential set discovery operation now learns from past successes and tries common combinations of transport and credential set first, and the diagnostic output for the various types of discovery outcomes was improved.

## opConfig 2.2.2

Version 2.2.2 is a maintenance release with only a small number of new features.

### Highlights

- This version interoperates fully with NMIS 8.5.10G, and requires at least this version of NMIS to be installed. Please check the [Product Compatibility](#) page for details.
- opConfig now works with MongoDB 2.4, 2.6 and 3.0.
- The Help/About screen shows more useful information, including a note about new opConfig releases. The window titles and icons have been updated.
- Some new device types have been added to the Personality list, and the default command set was adjusted.
- If installed together with opEvents or opAddress, then opConfig now provides links to node-related dashboards in those products when possible.

## opConfig 2.2.0

Version 2.2.0 was released on 30 Jan 2015. It includes a number of new features.

### Highlights

- `opconfig-cli.pl` now supports bulk transport and credential set discovery for all defined nodes.
- opConfig can now optionally raise "Node Configuration Change" events via NMIS when a change is detected for a particular command.  
To enable this the command must be tagged with both `change-detect` and `report-change`. There is also the option to set a fixed event severity level (with `report_level`) or dynamically based on the number of changes detected (with `report_level_min_changes`). The default `command_sets.nmis` contains examples for both.
- opConfig now supports a flexible and configurable mechanism for purging old revisions from the database. The details are documented on the separate page about [how to purge old data](#) in opConfig. You can also set/unused a "protected" flag for a particular command's revision from within the GUI.
- opConfig now includes a new Operational Status Report page, which makes it easier to get an overview of what opConfig is doing to which nodes, when, and how successful it was with these operations.
- Compliance summaries are now shown on a separate page under Views -> Compliance Summary, not buried among the Compliance Status Details.

- There is a new Node Report page, which provides a convenient overview of the active nodes, when the last commands were run, most recent change detected, most recent problem encountered etc.
- The per-node Node Info page now includes a link to the node editing page, if the privileges of the current user are sufficient.
- The opConfig GUI now provides a more interactive Node selector in the menu bar, which allows node lookup based on node name, IP address, group (and fragments thereof).  
This feature is adjustable using `opconfig_gui_node_search_mode` in `opCommon.nmis` and you can disable it altogether should you prefer the old drop-down list.
- The default `command_set.nmis` that is shipped with opConfig was extended to include more common diagnostic/troubleshooting commands, suitable for example for running in reaction to an event in opEvents.
- Group-based access control was refined and corrected in a few places. A user whose privileges don't include a particular group will now not be able to access any data related to nodes in said group and any nodes that don't belong to any group.
- opConfig's import capability from Open-Audit Enterprise was improved and now provides (optional) filtering, so that unimportant changes in the audit data (e.g. uptime or last DHCP lease renewal) can be ignored and don't create unwanted new revisions in opConfig.
- The help texts and tool tips in the GUI were reworked and improved.
- Log file rotation now works correctly and logs are reopened post-rotation.
- The default file permissions for opConfig-generated files were adjusted and improved.
- The installer is now more robust.
- opconfig's init script was made more robust and brought into line with the Linux Filesystem Hierarchy Standard.
- Some nuisance warning outputs of `omkd` and `opconfig-cli.pl` were eliminated, and error reporting and logging in general were improved.
- The CSS and Javascript components of the GUI were reworked for improved performance

## opConfig 2.1.0

Version 2.1.0 was released on 24 Nov 2014, and includes some new features as well as numerous bug fixes.

### Highlights

- opConfig can now use a separate MongoDB if so desired (but node and credential configuration remain in the default/common/shared database).
- This version includes a [helper for setting up MongoDB for Opmantek use](#), and the installer offers to run the helper on installations and upgrades.
- opConfig now supports per-node licensing and activation: nodes can be marked disabled from within the GUI, in which case the node does not count for license limits and no commands are run on that node, nor are audit results imported or compliance rules evaluated. By default all nodes are active.
- The node configuration infrastructure in opConfig is now fully unified and shared with opEvents.
- opConfig now includes a full-featured command line tool for node administration, `bin/opnode_admin.pl`. This tool implements all node management functions already present in the GUI, as well as some extras to make it suitable for [scriptable node creating and editing](#).
- The display of errors and exceptions in the GUI has been improved.
- Opmantek applications can now be selectively enabled using the configuration option `load_applications`.
- `opconfig-cli` can now be told to echo command outputs (via command line option `print_command_output=true`) to better integrate with external tools
- Importing audit results from Open-Audit Enterprise was improved to analyze and use more of a node's characteristics
- The node editing gui was extensively reworked.
- Error handling and reporting for `opconfig-cli` were improved.
- Various fixes and improvements to both GUI and back ends

## opConfig 2.0.1

Version 2.0.1 was released on 30 Sep 2014, and is an important bug-fix release. We **strongly recommend** that you upgrade from version 2.0.0 at your earliest convenience.

- We detected a problem with the version of the bundled MongoDB client library, which causes database connections not to be closed correctly. This causes the MongoDB server to reject new connections once the normal limit of concurrent connections is exhausted (in the high hundreds). This, in turn, causes both the Opmantek GUI and `opconfig-cli` to fail after a number of accesses.
- Release 2.0.1 was built with an updated, fixed version of the MongoDB client.
- If you have opEvents and opConfig 2.0.0 installed on your system, then the MongoDB client problem **will affect both products** as the library module is shared.  
Upgrading opConfig to version 2.0.1 will resolve the issue for both products.
- This version also ships with the newest version of the [Opmantek Support Tool](#).

## opConfig 2.0.0

Version 2.0.0 was released on 25 Sep 2014.

It's a new major release of opConfig with many substantial changes.

### Highlights

- This version comes with the interactive [Opmantek Installer](#) which guides you through both upgrades and initial installations.
- opConfig no longer uses CGI scripts; instead it integrates with the Opmantek Web Server infrastructure, which provides consistency across applications and better scalability.  
opConfig now runs out of `/usr/local/omk` and interoperates with all other current Opmantek Applications (ie. opExport, opEvents, opCharts, opHA 2, Open-Audit Enterprise).
- The GUI was revised and modernized, and both interactive response time and performance have improved substantially.
- opConfig now provides a flexible and extensible facility for [\(software and configuration\) Compliance Management](#).

- Credential sets are now stored in encrypted form within the database.
- opConfig now provides integration with [Open-Audit Enterprise](#) and optionally imports complete audit information for nodes known to Open-Audit Enterprise.
- opConfig now interoperates better with opEvents, and node configurations are shared between the applications. Importing node information from NMIS also has been simplified.
- [User authorization](#) (using groups) is now supported and nodes are completely invisible to users whose authorization doesn't match the nodes' groups.
- The default command sets were reorganized and now support easier separation into different classes, e.g. hourly/daily/weekly sets of commands.
- The functionality of the opconfig-cli.pl CLI tool and its builtin documentation were extended and improved.
- opConfig now also ships with the [Opmantek Support Tool](#).
- Almost all configuration is now performed from within the GUI. The only remaining configuration files are the opCommon file, and the command set and compliance policy files.
- Existing credential sets and connection lists are migrated automatically on first startup.
- Application logging was revised and overhauled.
- opConfig now deals better with querying Unix systems for configuration.
- And of course lots of bugs were resolved, and minor imperfections repaired.

## opConfig 1.1.9

Version 1.1.9 was released on 21 Feb 2014.

### Highlights

This is a maintenance release incorporating primarily minor bug fixes. The main noteworthy change is an update to the licensing system: to evaluate opConfig you will require a [new evaluation license](#). Full licenses are not affected by this change.