

NAME

omadactl – manage TP-Link’s Omada Controller for WiFi APs

SYNOPSIS

`/etc/init.d/omadad` {start|stop|restart|status}

or:

omadactl [-hvwV] [-{W|S} *sec*] [-n *nice*] [-I {**theme|version**}] [-i *file*] *command*

DESCRIPTION

`/etc/init.d/omadad` is a sysv-init script for starting and stopping TP-Link’s Omada Controller during boot/shutdown of the system. Omada Controller is an AP controller written in Java, which allows central management of TP-Link’s wireless access points through a web-based user interface.

omadactl (formerly known as **tpcap**) is an utility to control the server process executing Omada Controller. **omadactl** recognizes the **start**, **stop**, **restart** and **status** commands of `/etc/init.d/omadactl`, but offers additional functionality such as dumping and restoring the database of Omada Controller, showing a more detailed server status, installing and selecting alternative web themes and switching between available server versions. **omadactl** supports the latest version of Omada Controller 3.0.2 for Linux as well as the previous versions 2.5, 2.6 and 2.7.

Privilege Separation

Privilege separation is a technique where processes that require root privileges at startup release these privileges again after the runtime environment has been set up. This helps to reduce the risk of massive damage due to possible security holes in the program code.

For Omada Controller versions ≤ 2.7 **omadactl** provides privilege separation for the daemon process executing the Java code. Starting with Omada Controller 3.0.2 privilege separation finally has been moved into the Java code. This requires the use of the **jsvc** wrapper (part of the Apache Commons Daemon project) to allow the Java application to release its privileges by switching to an unprivileged user assigned as the owner of the process.

Files, which are needed to be writeable by Omada Controller, are assigned to this user, therefore allowing to restrict access to all other files which need to be read-only for the daemon. For an in-depth description of how privilege separation has been implemented in Omada Controller, see the file **README.privsep** in `/usr/share/docs/omadactl`.

Monitoring the server’s state

With **omadactl** the status of the server can be monitored in detail. The program detects if Omada controller is starting, if it is ready to answer requests or if it hangs after detecting an active controller on another system in the same network (still a bug in Omada controller).

Backup and restore

omadactl provides the commands **dump** and **restore** for backing up the database, maps, portal pages and the SSL certificates of Omada Controller. The database dump is created by **mongodump** and restored using **mongorestore**. All remaining files are copied directly at the filesystem level.

Theme selection

omadactl can be used to select different themes for the web UI of Omada Controller. Currently, there are two themes available (so far for Omada Controller 2.7.0 only): the standard theme from TP-Link and a customized theme made by RENT-A-GURU®. The latter theme also fixes some bugs in the web UI.

Version switching

If different versions of Omada Controller are installed, **omadactl** can be used to easily switch between versions. Mainly intended for development, this functionality can be helpful if you need quickly to up- or downgrade the software without having to install new/old packages again.

COMMANDS

Following commands control the functions of **omadactl**:

start starts Omada Controller. If option **-w** is specified, **omadactl** waits up to *WAIT_TIME* (default: 70) seconds for the Controller to become ready. Without options **-w** or **-W**, **omadactl** just starts the Controller without waiting for it to become ready and exits immediately. See also options **-W** and **-S** below.

stop stops Omada Controller by killing the Java and **mongod** processes.

restart restarts Omada Controller. If the server is not running, this is the same as specifying the **start** command.

status shows the current state of Omada Controller. **omadactl** even checks whether the server responds to requests sent by clients to its HTTP port.

renice [*nice*]

changes the *nice* value of a process executing Omada Controller. The value can be an integer between -20 and 19, where lower values mean higher scheduling priority and higher values mean lower priority. Note that you need to mark the end of the option list using two hyphens (—) before you can specify a negative value in the parameter list. For example, to set the nice value to -10, you would type: **omadactl renice -- -10**. See also the **-n** option.

dump [*dir*]

dumps the database into directory *dir*, creating a backup. If no directory name is given, it defaults to the directory **backup** in Omada Controller's home. If a directory is specified, but does not exist, it will be created. **omadactl** saves the content of the database, the Java keystore for SSL certificates and any maps or portal pages uploaded by the user, but *not* any Java properties. Note that Omada Controller must be running for backing up its database.

restore [*dir*]

restores a database dump in Omada Controller. The dump is read from directory *dir* if specified. If no directory name is given, the directory **backup** in Omada Controller's home is used by default. Note that Omada Controller must be running to restore its database.

copydb *dir1 dir2*

copies a database on the filesystem level from Omada Controller *dir1* to the version in *dir2*. You can specify either the name of the **data** directory or just the name of Omada Controller (e.g. **OmadaController-3.0.2**). If the destination database *dir2* is not empty, **omadactl** saves the database as *dir2.ORIG* before copying files. If something went wrong during the copy, it re-installs the original database and prints an error message. Note that Omada Controller must not be running if doing a filesystem copy of a database.

- theme** [*name*]
selects the theme *name* for Omada Controller. The theme can be changed even if the controller is running, but to activate the theme, a restart of the service is required.
- switch** [*version*]
switches between installed versions of Omada Controller. This is useful if you did upgrade the software and decide to downgrade later without having to set up everything again.

OPTIONS

Options usually precede *commands*, but **omadactl** is smart enough to recognize options if they follow a *command*.

- h** prints a short help and exits.
- V** prints the version of **omadactl** and Omada Controller.
- v** sets verbose mode and displays startup messages by executing the command **tail -f** on the logfile of the launch process for Omada Controller. In this mode **tail** must be interrupted with \hat{C} to force termination of **omadactl**.
- w** starts Omada Controller in background and waits up to 70 seconds until it becomes ready to serve clients. **omadactl** measures the time required to start the Controller and prints it on *stdout* if the start did succeed.

Note: if **omadactl** exits with an error message, but Omada Controller is still running, it needs longer than a minute to start on your platform (e.g. on a PC Engines APU or on a RaspberryPi). See options **-W** and **-S** to increase or decrease the time-out temporarily or permanently.

- W sec** starts Omada Controller in the background and waits up to *sec* seconds until it becomes ready to serve clients. This time-out is set temporarily. See option **-S** to save a time-out permanently for use with **-w**.
- S sec** saves the value *sec* as the new default time-out for the **-w** option in file **/etc/default/omadactl**. After the value has been saved, **omadactl** exits without performing any other action. See also option **-W** to find the best time-out value for a given platform.
- n nice** sets the nice value (-20 to 19) for Omada Controller. A lower value means a high priority and a higher value means lower priority. The standard nice value for most processes is 0, while daemon processes often voluntarily lower their priority. If no nice value is specified, **omadactl** starts Omada Controller with a value of 10, thus reducing its priority.
- l {themes|versions}**
lists all installed themes or versions of Omada Controller. The option argument can be abbreviated to its first letter **t** or **v**. See also the commands **theme** to select a theme and **switch** to switch to another version of Omada Controller.
- i theme**
installs the named *theme* for Omada Controller. Currently, there are two themes available for Omada Controller 2.7.0: the standard theme **tp-link** from TP-Link and the customized theme **awesome** from RENT-A-GURU®.

FILES

Unless given a full path name, following filenames are relative to Omada Controller's home directory, which by default is **/opt/tplink/OmadaController**.

/opt/tplink/OmadaController

A symbolic link to the actual version of Omada Controller. All references should use this symlink rather than hard-coding the targets of different versions of Omada Controller.

/etc/default/omadad

Common definitions for **/etc/init.d/omadad** and **omadactl**.

CONFIG

An (internal) config file automatically maintained by **omadactl**. Important settings in this file are **JAVA_HOME** for the home of the Java VM, **JAVA_CMD** defining the pathname of the **java** executable (Omada Controller versions 2.x only), **JAVA_J SVC** for defining the pathname of the **jsvc** executable (version 3.x and above) and **VERSION**, which helps **omadactl** to select the correct functions for starting/stopping Omada Controller. Usually you don't need to change anything in here. To change global config settings, use **/etc/default/config**, which will be kept intact over upgrades if changed.

backup Default directory for storing a dump of Omada Controller's database, maps, portal and keystore files (created automatically on request).

themes Directory with web theme archives. The selected theme is hard-linked to **webapps/com.tplink.eap.web.war**, from where Omada Controller creates the web UI in the directory **works** automatically. **WARNING**: if you remove the themes directory while the TP-Link theme is **not** selected as the active theme, it gets deleted, too.

logs/startup.log

Logfile with startup messages from **jsvc** and associated Java classes. This logfile will be truncated each time **omadactl** starts Omada Controller, so it doesn't grow.

logs/server.log

Logfile for messages from Omada Controller. This logfile grows and will be rotated by Omada Controller if its size reaches a certain threshold.

logs/mongod.log

Logfile for messages from the **mongod** database daemon. Messages in this logfile will be retained until Omada Controller rotates the file.

logs/backup.log

Logfile containing messages from **mongodump** and **mongorestore** (if option **-v** is given, they are written to *stdout* only). This logfile will be truncated on every **dump** or **restore** operation.

BUGS

You tell me.

AUTHOR

The Omada EAP Controller software has been developed by TP-Link.
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omadactl and this manpage was written by Stefan Stapelberg, RENT-A-GURU®.

SEE ALSO

mongodump(1), *mongorestore(1)*, *nice(2)*, *java(1)*, *jsvc(1)*, *update-rc.d(8)*