# Nagios check_all_disks.py

Steve Zwart - May 2022

*A universal disk space checker*

Why is this needed?

Because adding a separate Nagios service monitor for every drive/filesystem on every server is tedious, and added drives and filesystems aren't auto-discovered. This method discovers new drives and filesystems instantly. It doesn't track utilization history in Nagios XI. If you have a critical drive or filesystem, you can still use the regular disk space checks. It can support any system that has NCPA 2.4 installed, Windows, Linux, AIX, etc.

It takes advantage of the fact that NCPA will return a list of all drives and their attributes in a JSON dump. This runs as an active check on the Nagios server instead of passive.

The script has a list of recognized filesystem types. It might be required to update the script if an unknown filesystem type is seen in your environment:

```
valid_fstypes = ["NTFS", "FAT", "FAT32", "jfs", "jfs2", "btrfs",
"ext2", "ext3", "ext4", "xfs"]
```

Help from the command line with key options highlighted.

```
$ /usr/local/nagios/libexec/check_all_disks.py -h
Usage: check_all_disks.py [options]

Options:
  -h, --help            show this help message and exit
  -H HOSTNAME, --hostname=HOSTNAME
                        The hostname to be connected to.
  -P PORT, --port=PORT  Port to use to connect to the client.
  -w WARNING, --warning=WARNING
                        Warning value to be passed for the check.
  -c CRITICAL, --critical=CRITICAL
                        Critical value to be passed for the check.
  -t TOKEN, --token=TOKEN
                        The token for connecting.
  -a ARGUMENTS, --arguments=ARGUMENTS
                        Arguments for the plugin to be run. Not necessary
                        unless you're running a custom plugin. Given in the
                        same as you would call from the command line.
  -T TIMEOUT, --timeout=TIMEOUT
                        Enforced timeout, will terminate plugins after this
                        amount of seconds. [60]
  -v, --verbose         Print more verbose error messages.
  -x EXCLUDE, --exclude=EXCLUDE
                        Comma separated list of drives to exclude from the
                        check. Use separator | instead of \ or /. Example -x
                        'T:|,E:|' to exclude Windows drives T:\ and E:\
                        Example -x '|mkcd|cd_images' to exclude Unix
```

```
                        /mkcd/cd_images
  -D, --debug           Print LOTS of error messages. Used mostly for
                        debugging.
  -V, --version         Print version number of plugin.
  -s, --secure          Require successful certificate verification. Does not
                        work on Python < 2.7.9.
```

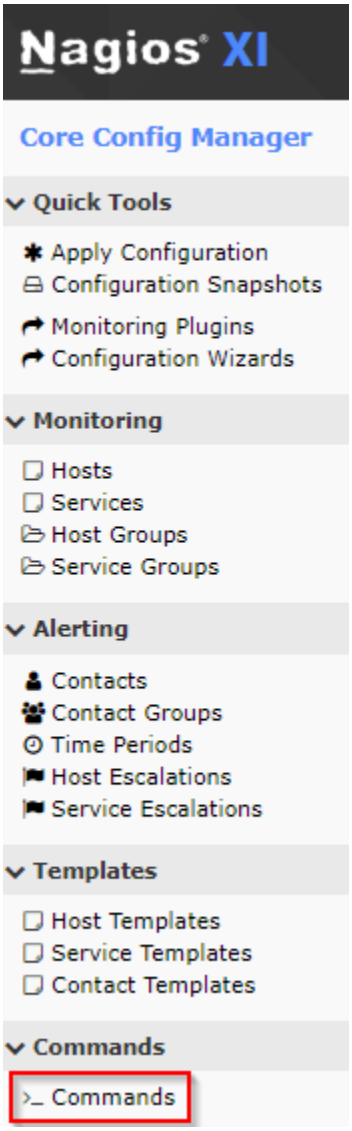
## Configure in Nagios XI

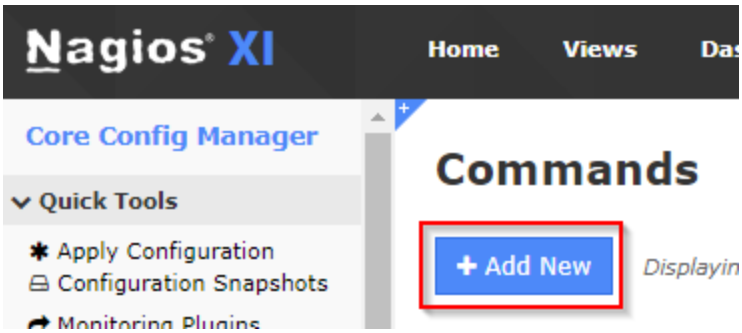
Put module in  /usr/local/nagios/libexec/check_all_disks.py, set permissions and ownership.

Login web interface as an admin.

Add a command:

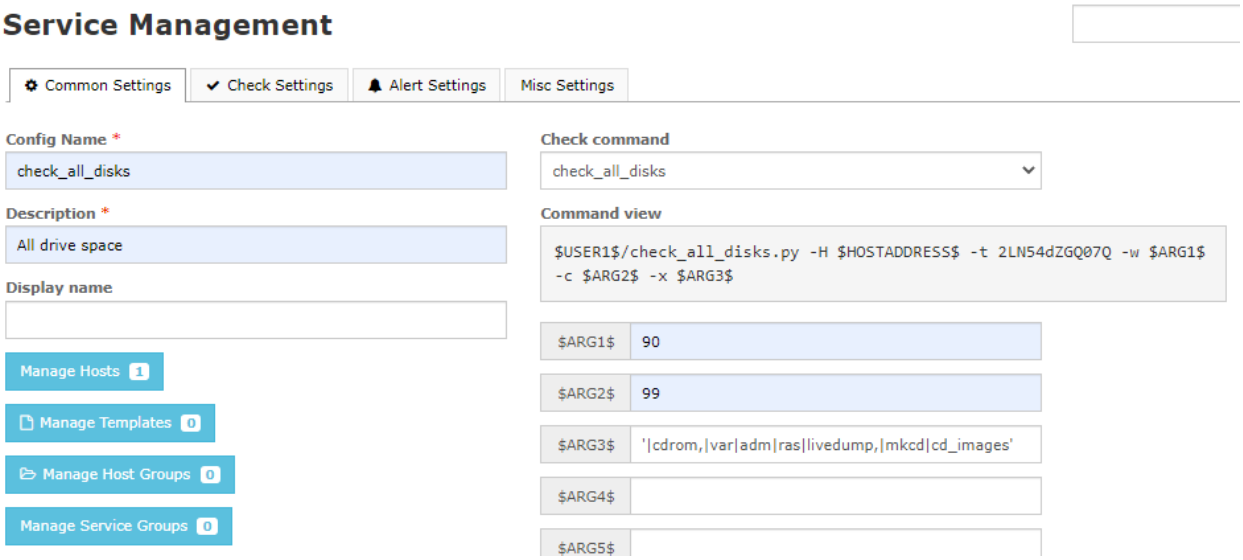
Configure->Core Config Manager

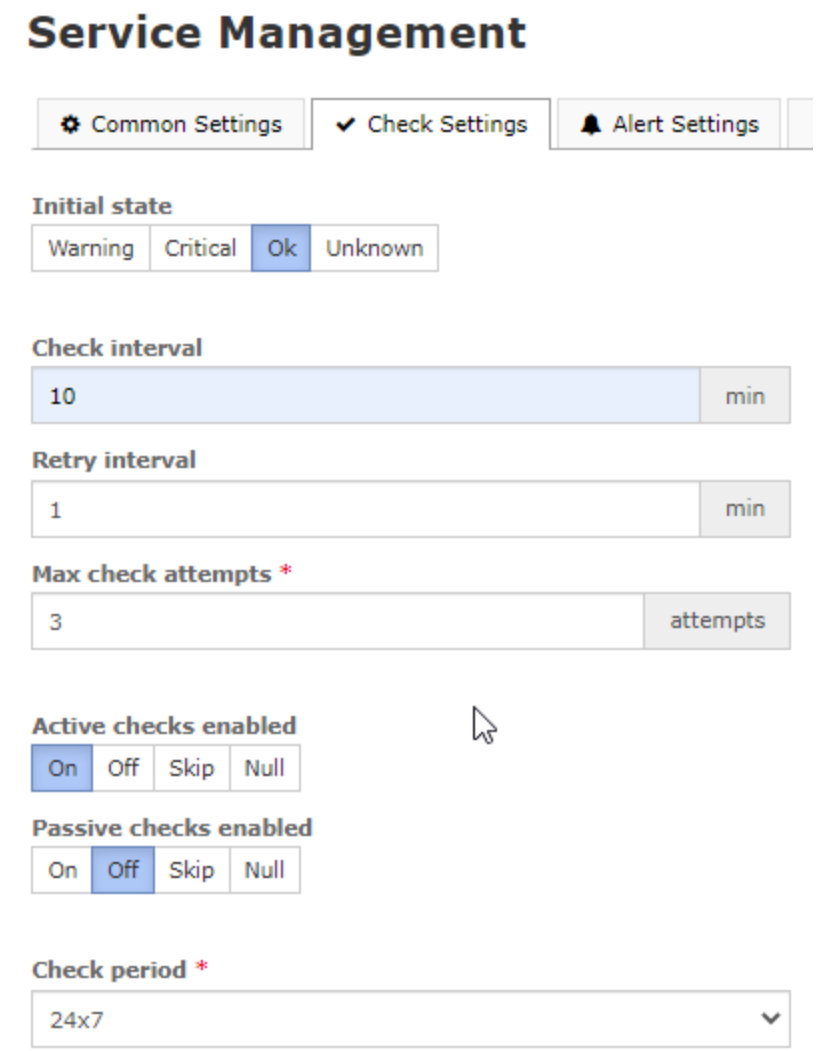





| Command Name | Command Line |
|---|---|
| check_all_disks | $USER1$/check_all_disks.py -H $HOSTADDRESS$ -t $_HOSTNCPA_TOKEN$ -P $_HOSTNCPA_PORT$ -w $ARG1$ -c $ARG2$ -x $ARG3$ |

Create a service using the command. This one is tailored for AIX systems.






And the service status shows OK:

| | | | | | |
|---|---|---|---|---|---|
| All drive space | Ok | N/A | 1/3 | 2022-04-02 08:52:52 | OK: success |