System Monitoring: OMD and check_mk

Why Monitor?

- Your server and network infrastructure have limited resources
- The quality of the network and compute services that you offer depends on managing these resources intelligently

Monitoring Virtualized Systems

- Determining resource utilization in a virtualized environment requires visibility into the utilization of the “host” and “guest” systems

Where to Monitor?

- Host
  - Global perspective on resource utilization
  - “How is my cluster doing?”
- Guest
  - Local perspective on resource utilization
  - Monitoring follows guest even after migration
  - “Which host is using all the resources?”

What to Monitor?

- CPU Utilization, Context Switches
  - Does my hosts/guests need more/less CPU allocated to it?
- Disk Utilization, IO
  - Will my hosts/guests run out of storage soon?
  - Are my hosts/guests able to efficiently read and write to disk?
- Memory Utilization
  - Does my host/guest need more/less RAM allocated to it?

How to Monitor?

- Plenty of options!
  - Nagios
  - OpenNMS
  - OMD + check_mk
  - ...

Recommended Monitoring Solution

- omdistro with check_mk
  - Turn-key system/network monitoring solution
  - One package for the agent, one package for the server
  - Powered by Nagios
  - Massively scalable, small footprint

omdistro

- Bundles Nagios core and useful Nagios plugins
  - check_logfiles
  - check_mk
  - ...
- Packages for many common Linux distributions
  - RPM
  - Deb

check_mk

- **Configuration & Check Engine**
  - Automatic service detection
- **Livestatus**
  - Provides direct connection to status data via Unix socket
- **Multisite**
  - Web GUI, replaces Nagios Classic GUI
- **WATO**
  - Web Administration Tool
  - Provides administration of a Check_MK-based system possible over a Browser
- **Notify**
  - Notifications System makes the configuration of notifications simple and flexible.

Installing OMD

Installing omdistro on Ubuntu 14.04

- Package repositories available for Ubuntu, CentOS, Debian, Suse
  - https://labs.consol.de/repo/omd-thruk/
- Steps
  1. Install GPG Key
  2. Add Repository to “sources.list”
  3. Update apt-cache
  4. Install omdistro

Add Repository GPG Key

gpg --keyserver keys.gnupg.net --recv-keys F8C1CA08A57B9ED7

gpg --armor --export F8C1CA08A57B9ED7 | apt-key add -

Add repo to sources.list

```
echo 'deb
http://labs.consol.de/repo/stable/ubuntu trusty
main' >> /etc/apt/sources.list
```

Install omdistro

1. apt-get update
2. apt-get install omdistro
3. omd create <name>

Enable SSL

1. cd /etc/apache2/sites-enabled && ln -s ../sites-available/default-ssl.conf default-ssl.conf
2. a2enmod ssl
3. service apache2 restart

Allow HTTPS in UFW

1. ufw allow from any to any port 443

Installing check_mk Agent

Installing check_mk agent

1. apt-get install xinetd
2. wget http://mathias-kettner.de/download/check-mk-agent_1.2.4p5-2_all.deb
3. dpkg -i check-mk-agent_1.2.4p5-2_all.deb

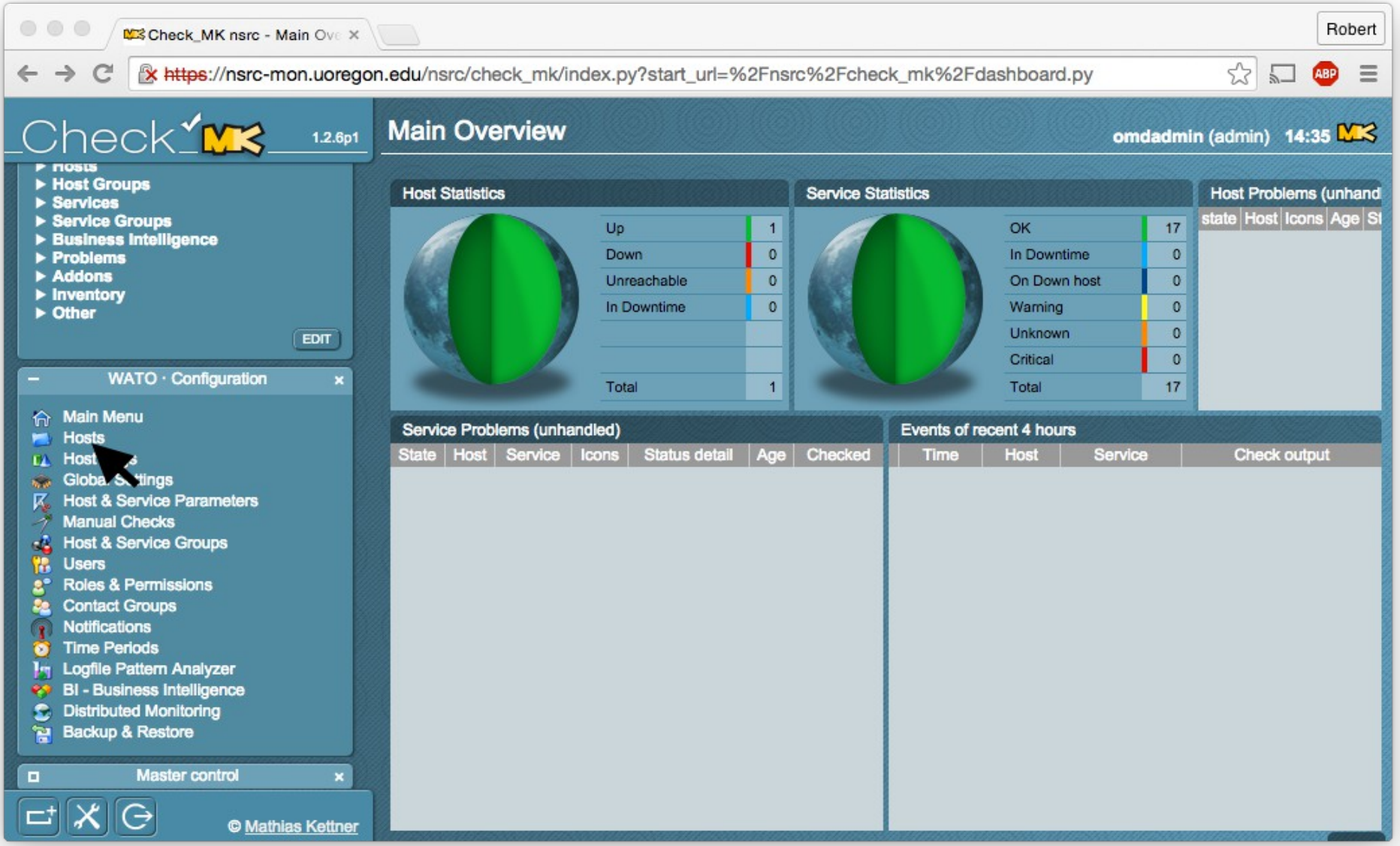
Allowing check_mk in UFW

1. ufw allow from <omd server IP> to any port 6556

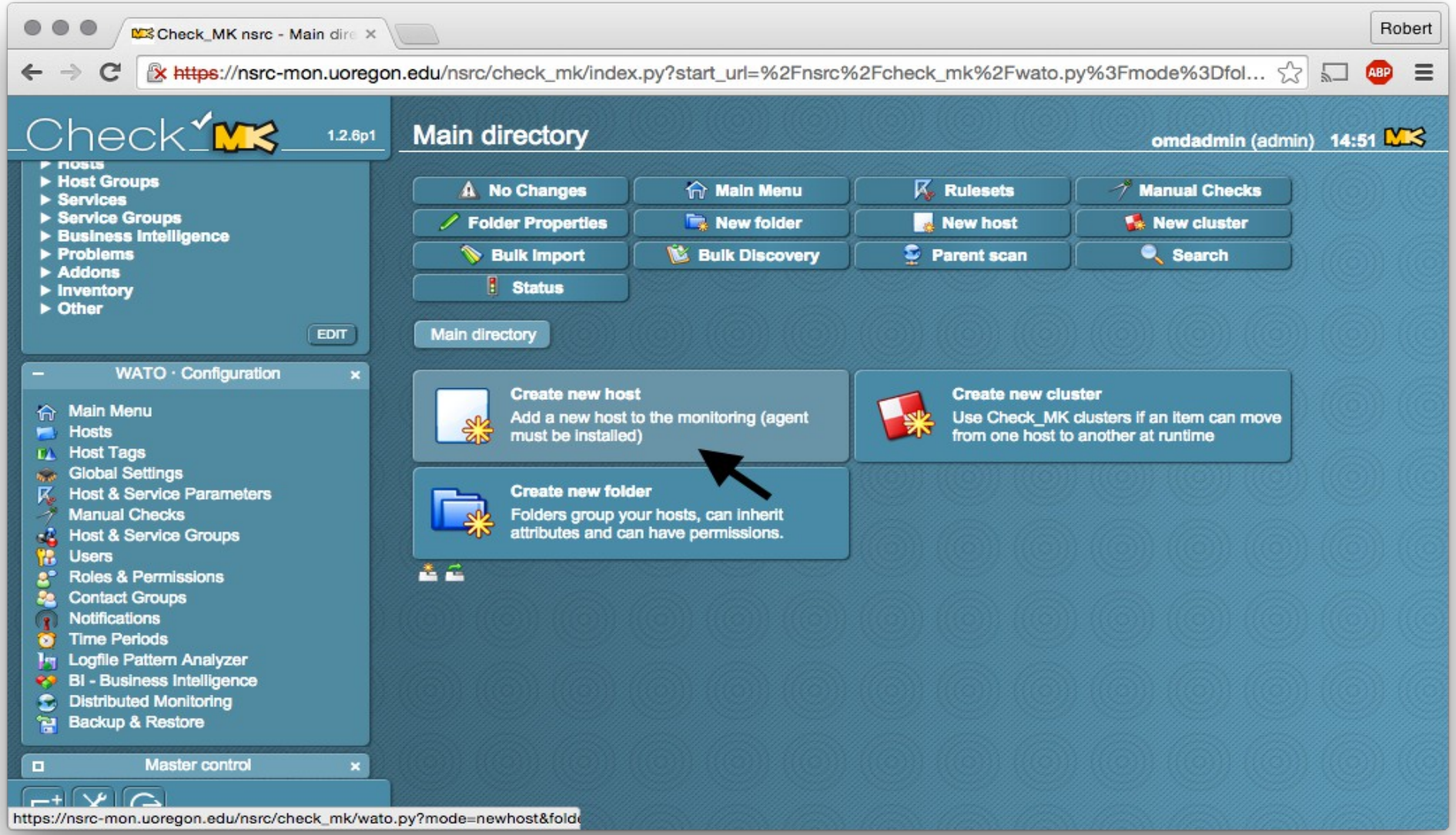
Verifying check_mk Agent

- lsof -P -i | grep xinetd
- nc localhost 6556

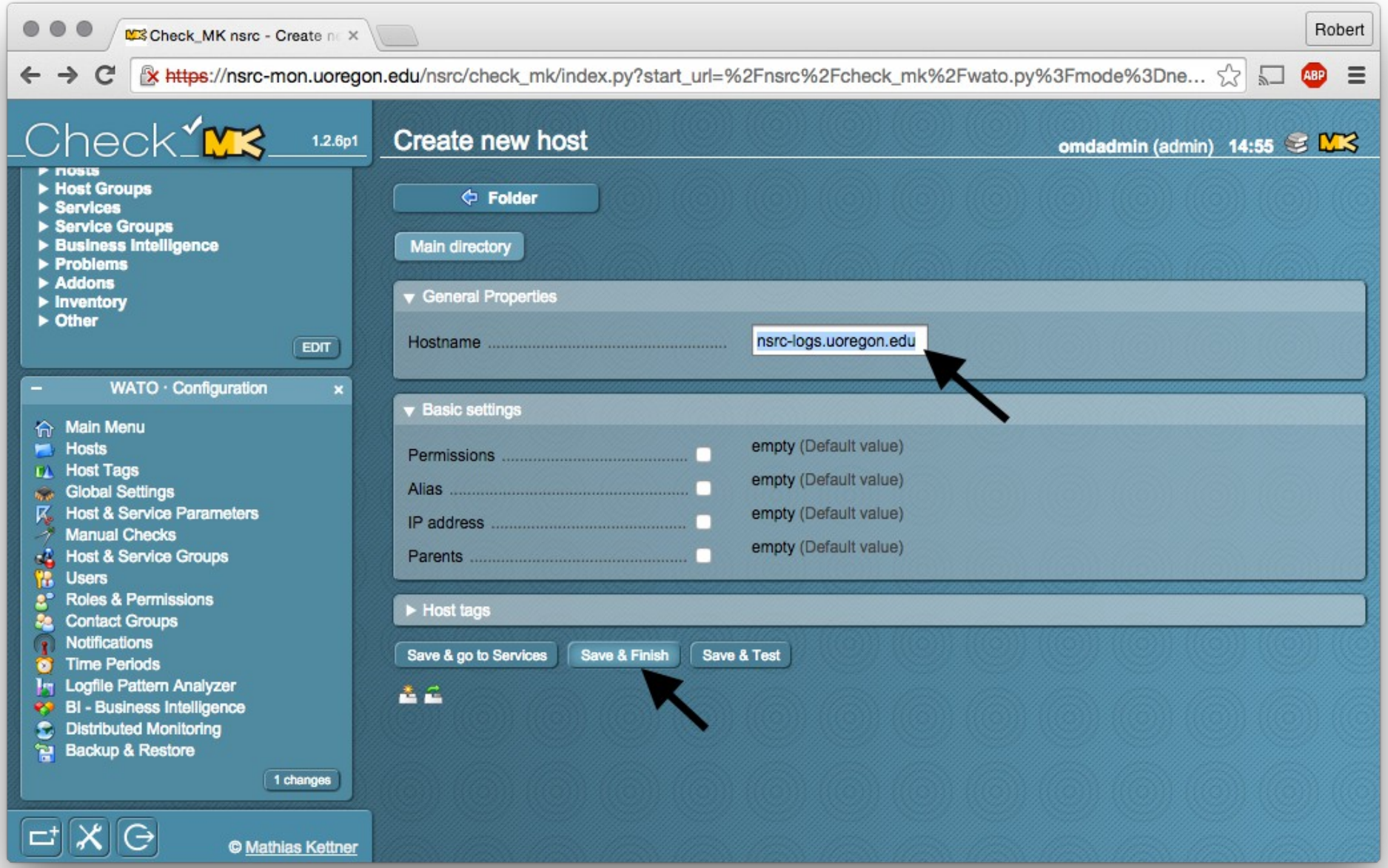
Add Host to Monitoring Server



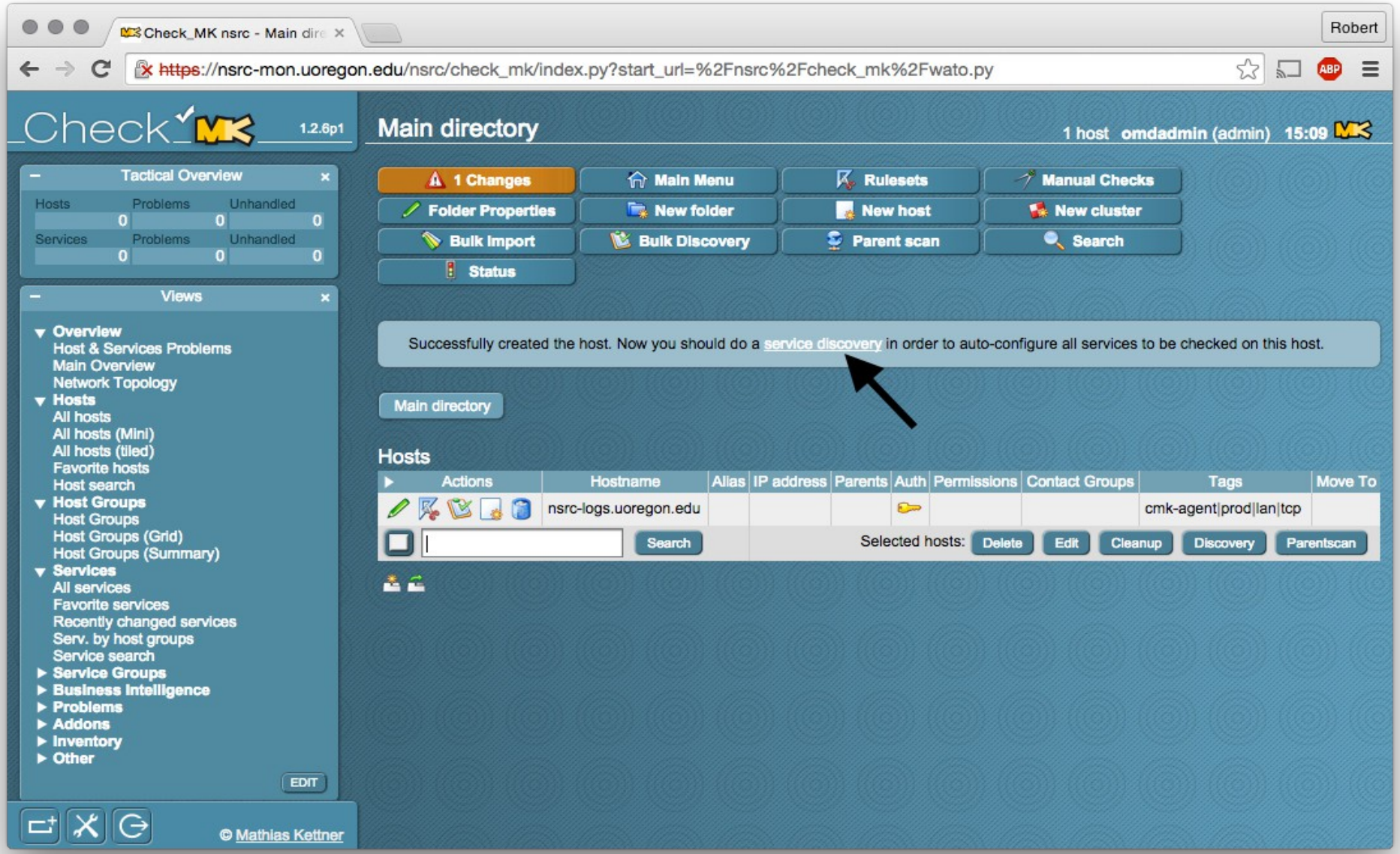
Add Host to Monitoring Server



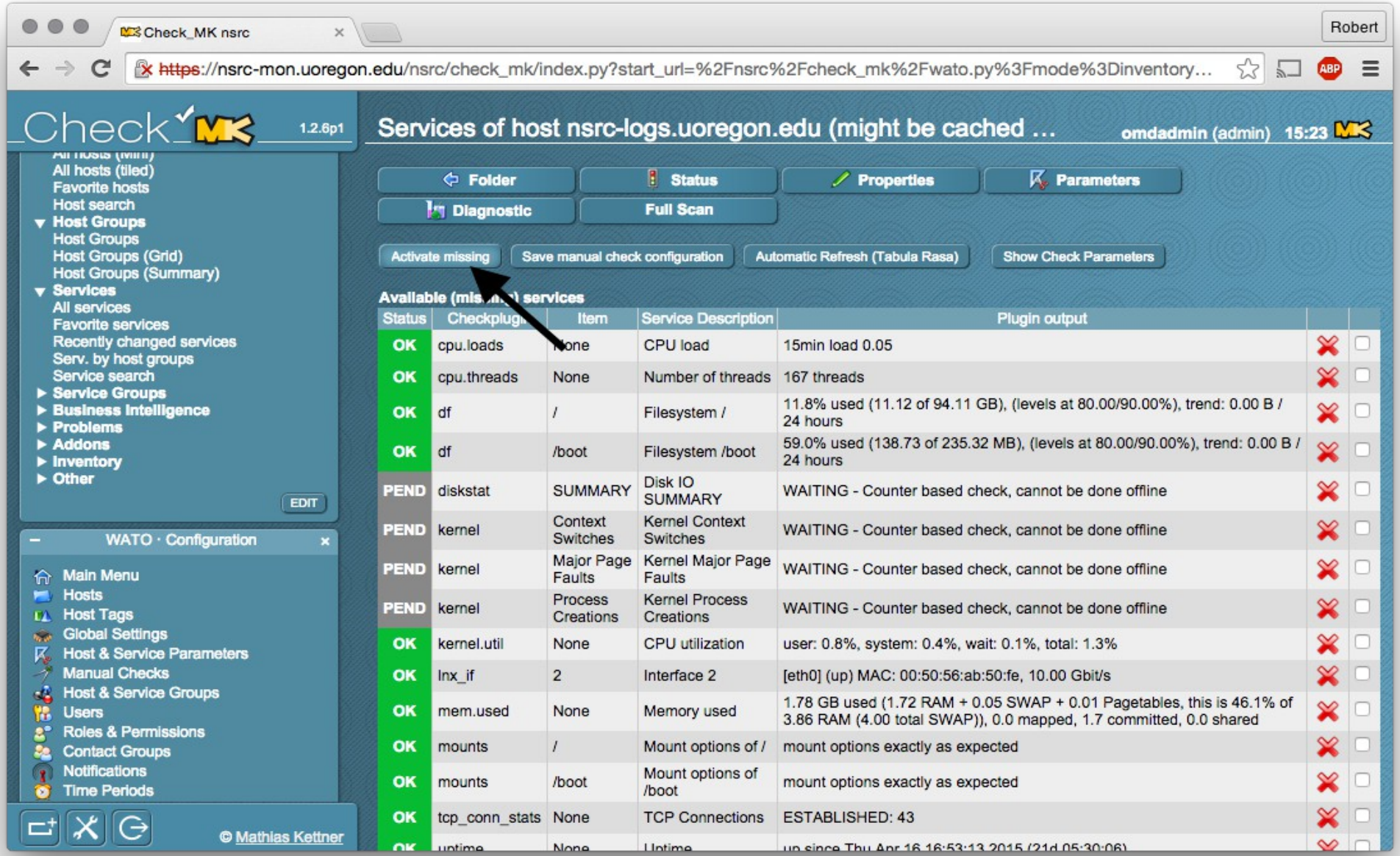
Add Host to Monitoring Server



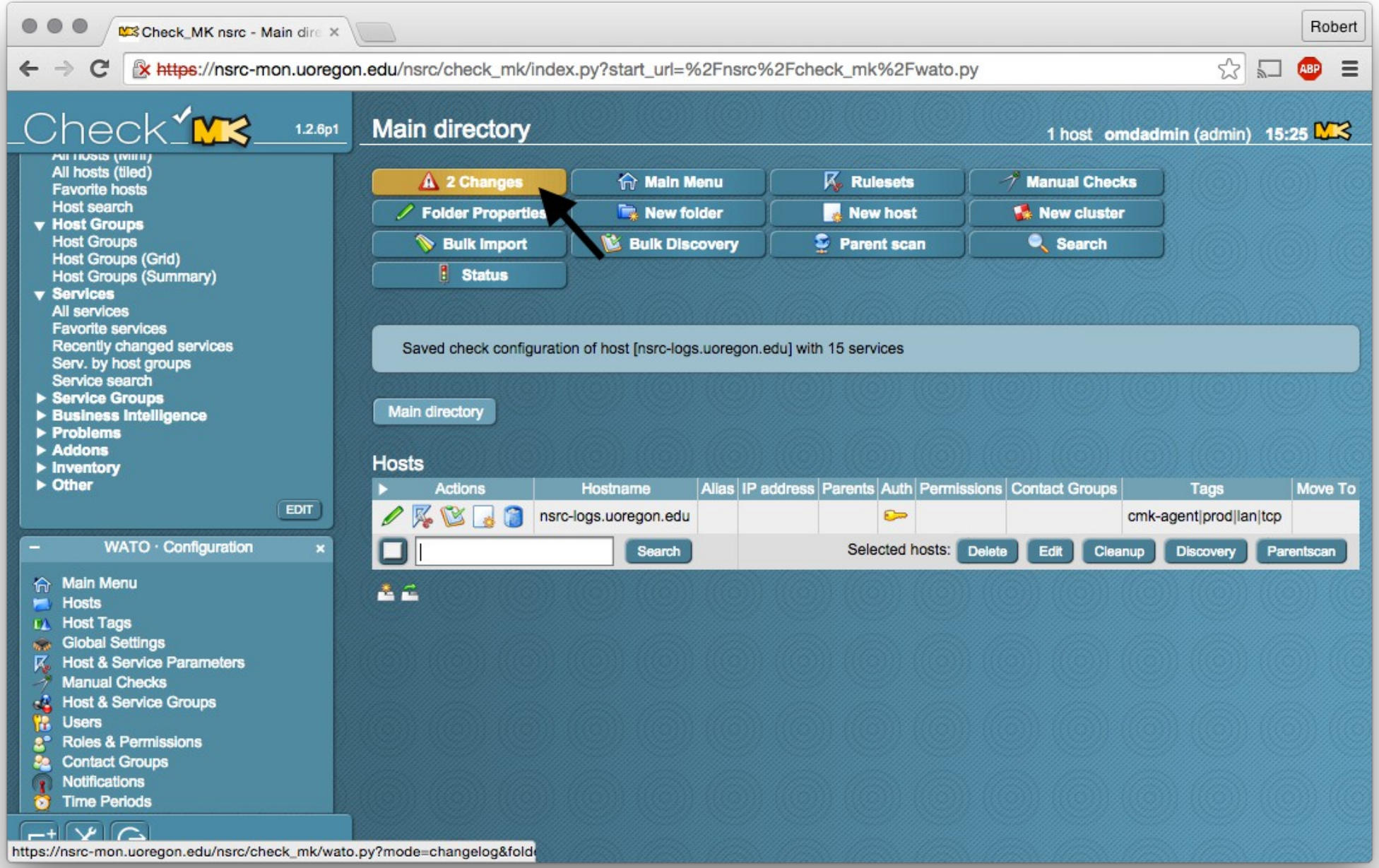
Perform Service Discovery



Activate Service Monitoring



Apply Configuration



Apply Configuration