



UiO : **University of Oslo**

ZABBIX automation @ UiO

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Center for Information Technology Services
University of Oslo

UNINETT fagdager 2017
2-5 Mai. Trondheim



~ 3.000



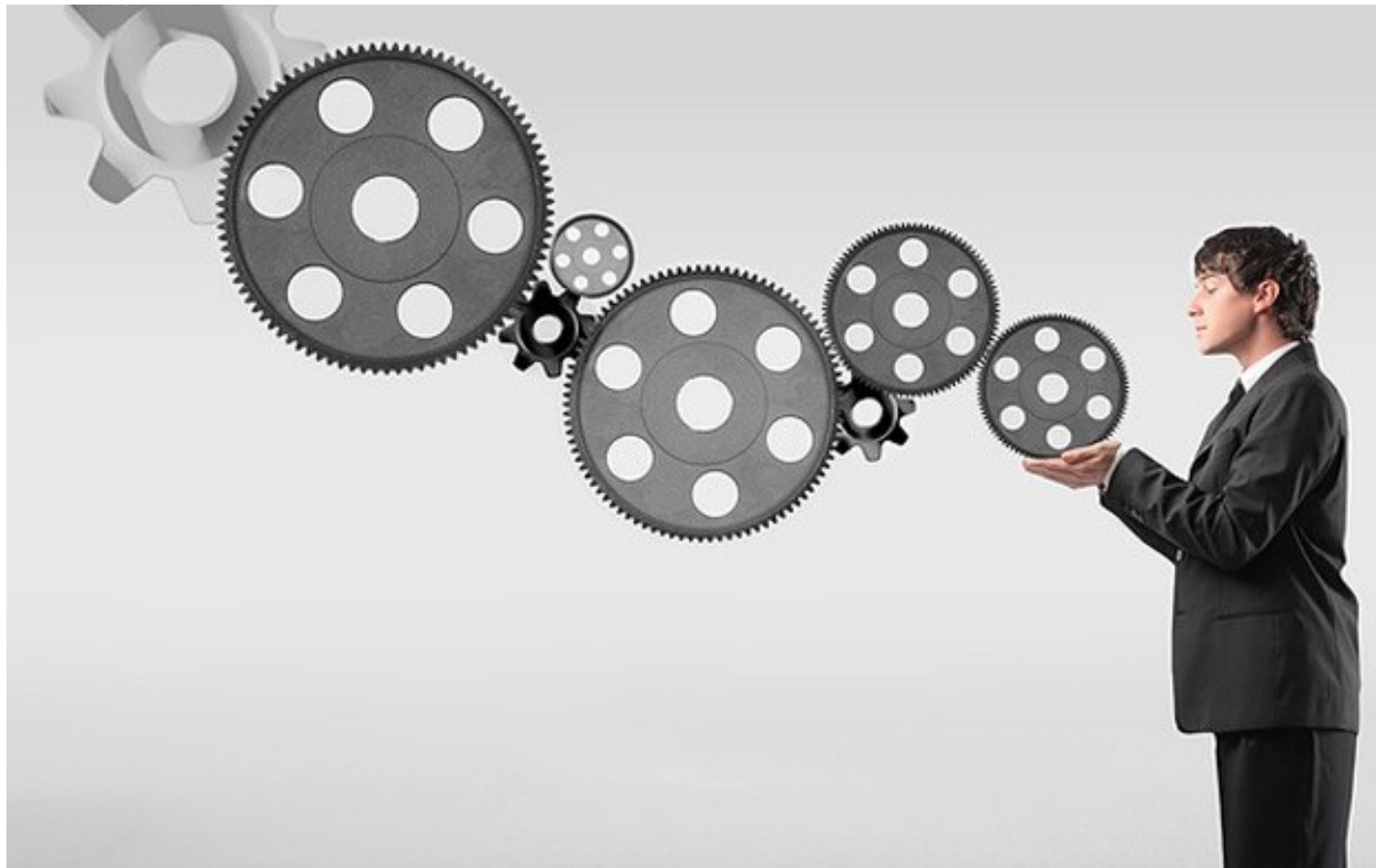
400



~ 360.000
~ 143.000.000/24H

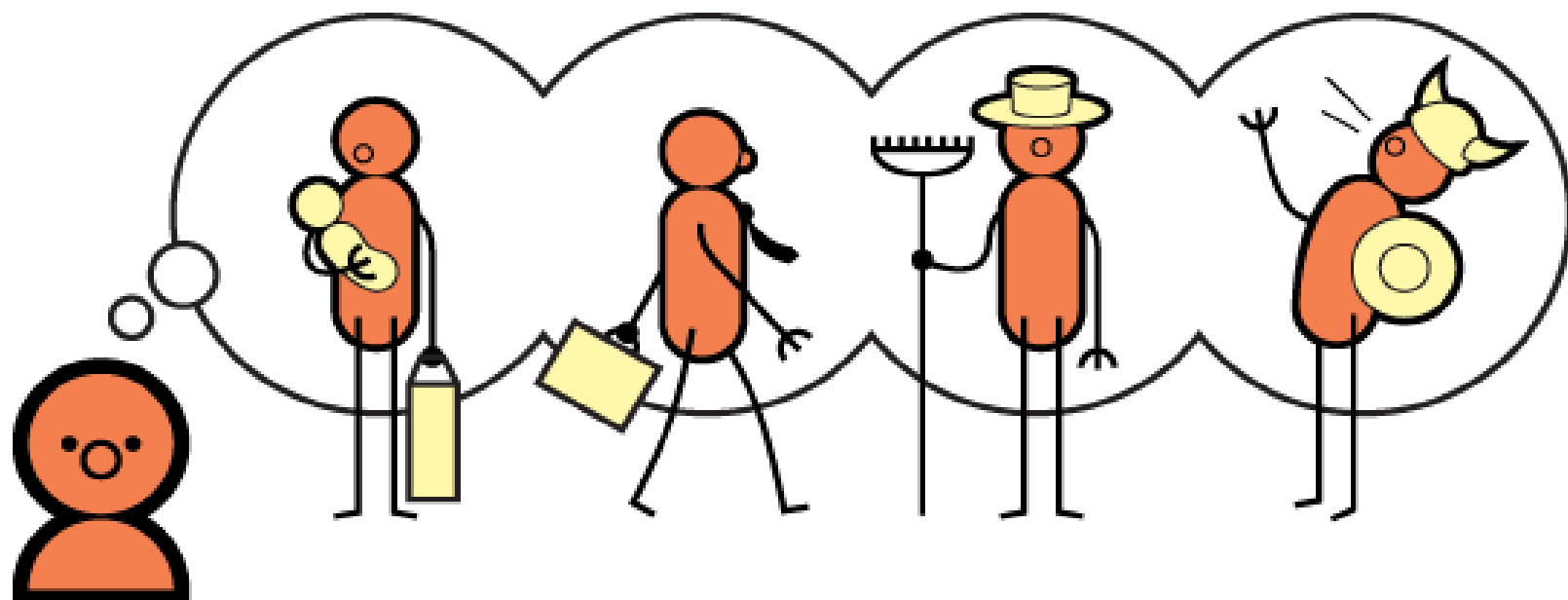


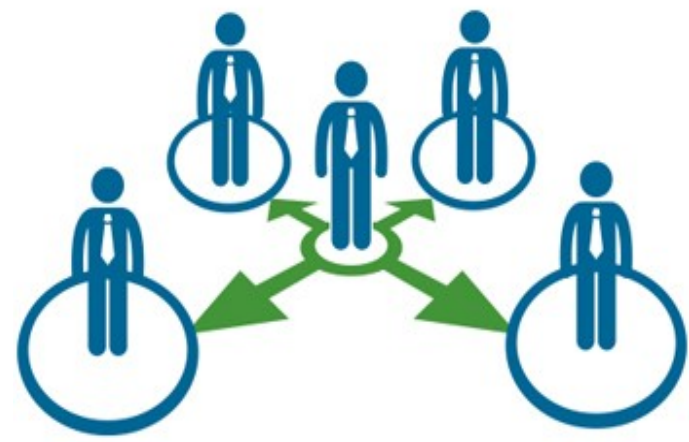
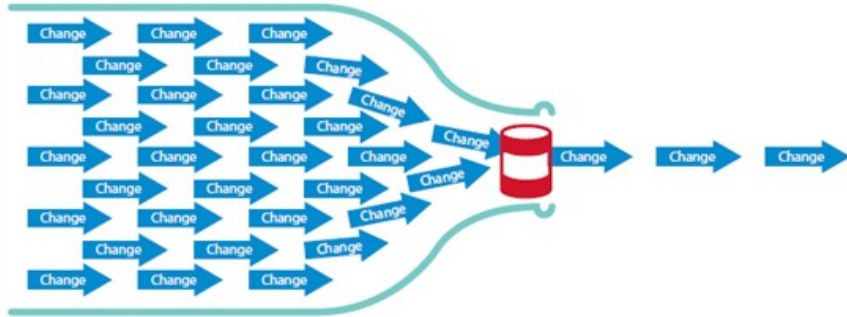
~ 214.000





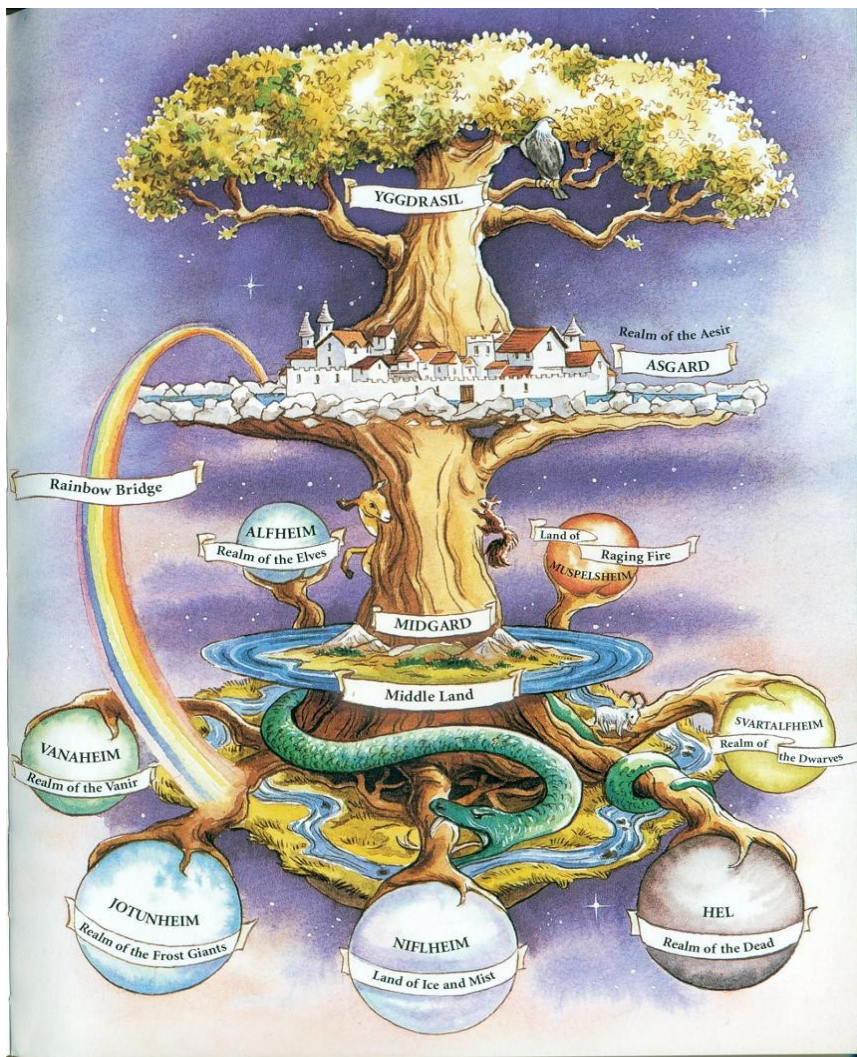












NIVLHEIM

*"...Sammen med ildlandet
Muspelheim i sør dannet
Nivlheim grunnlaget for liv..."*



Konfigurasjonsfiler



Systeminformasjon



Konfigurasjonsfiler



Systeminformasjon



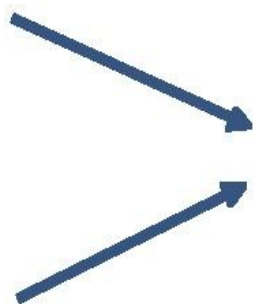
Nivlheim



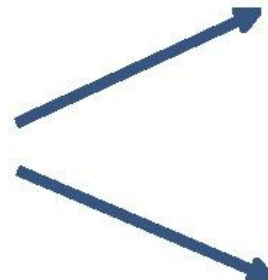
Konfigurasjonsfiler



Systeminformasjon



Nivlheim



```
{
  "result" : [
    {
      "siteadmin" : "user@usit.uio.no",
      "hostname" : "example.uio.no",
      "os" : "RHEL7",
      "kernel" : "3.10.0-514.10.2.el7.x86_64",
      "lastseen" : "2017-04-24T15:56:13+02",
      "ipaddr" : "129.240.6.44",
      "certfp" : "2248D092745C231796ACDAAD66B45445E29B9DA5",
      "nivlheim_version" : "1.06",
      "importance" : 5,
      "location" : "Kontoret til user",
      "daysLeftOfWarranty" : 71,
      "serial" : "1HEY5Y1",
      "manufacturer" : "Dell Inc.",
      "osclass" : "Linux",
      "type" : "Client",
      "product" : "OptiPlex 7010",
      "warranty" : [
        {
          "active" : true,
          "description" : "ProSupport for End Users and Next Business Day On-Site Service",
          "daysleft" : 71,
          "start" : "2013-07-03T19:00:00+02",
          "expires" : "2017-07-04T18:59:59+02"
        }
      ],
    }
  ]
}
```

Zabbix-CLI

```
File Edit View Bookmarks Settings Help
[Login - Konsole]
Zabbix CLI
add_host_to_hostgroup show_global_macros
add_user_to_usergroup show_history
add_usergroup_permissions show_host
clear show_host_inventory
create_host show_host_usermacros
create_host_interface show_hostgroups
create_hostgroup show_hosts
create_notification_user show_hosts
create_user show_hosts
create_usergroup show_hosts
define_global_macro show_templates
define_host_monitoring_status show_templates
define_host_usermacro show_triggers
export_configuration show_usergroup
import_configuration show_usergroup
link_template_to_host show_usermacro_host_list
link_template_to_host show_usermacro_template_list
move_proxy_hosts show_users
wait unlink_template_from_host
remove_host update_host_inventory
remove_host_from_hostgroup update_host_proxy
remove_user update_usergroup_permissions
remove_user_from_usergroup

Miscellaneous help topics:
=====
Shortcuts support
=====
Undocumented commands:
=====
help

[zabbix-cli rafael@zabbix-IDjs show_host
# Host: ftp1.uio.no
# Filter:
-----
| HostID | Name | Hostgroups | Templates | Zabbix agent | Maintenance | Status |
|-----|-----|-----|-----|-----|-----|-----|
| 10511 | ftp1.uio.no | All-hosts | Template-cfengine-client | Unknown (0) | No maintenance (0) | Monitored (0) |
| | | Role-rails-servers | Template-cfengine-client | | | |
| | | Role-dell-hardware | Template-cfengine-client | | | |
| | | | Template-inventory-linux | | | |
| | | | Template-ss-linux | | | |
| | | | Template-smp-dell-openmanage | | | |
| | | | Template-yum-rhel5 | | | |
| | | | Template-zabbix-agent-linux | | | |
-----

[zabbix-cli rafael@zabbix-IDjs ]
```

```
#####
zabbix cli commands
#####
_cli_commands():
zabbix-cli commands from RabbitMQ

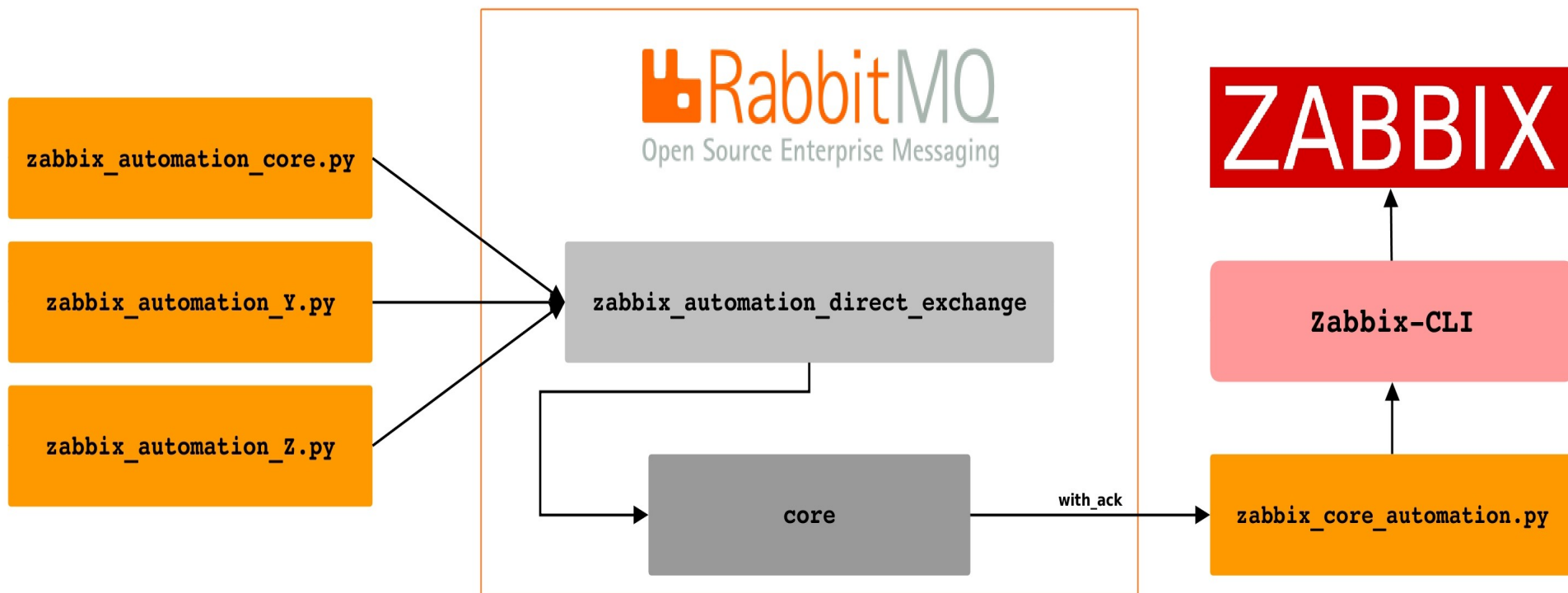
info = get_auth_info()
name = auth_info[0]
word = auth_info[1]
token = auth_info[2]

Cr 'ai' : a Zabbix-CLI object
cli = zabbixcli(logs,conf,username,password,auth_token)

# Register that this is a bulk execution. This will activate
# some performance improvements to boost bulk execution.
cli.bulk_execution = True

# Processing zabbix commands from rabbitmq.
#
rabbitmq = RabbitMQ()
if rabbitmq_server != '':
    rabbitmq.set_rabbitmq_server(rabbitmq_server)
if rabbitmq_port != '':
    rabbitmq.set_rabbitmq_port(rabbitmq_port)
    path = '': file path(auth_file_path)
```





SiteAdmin = Owner

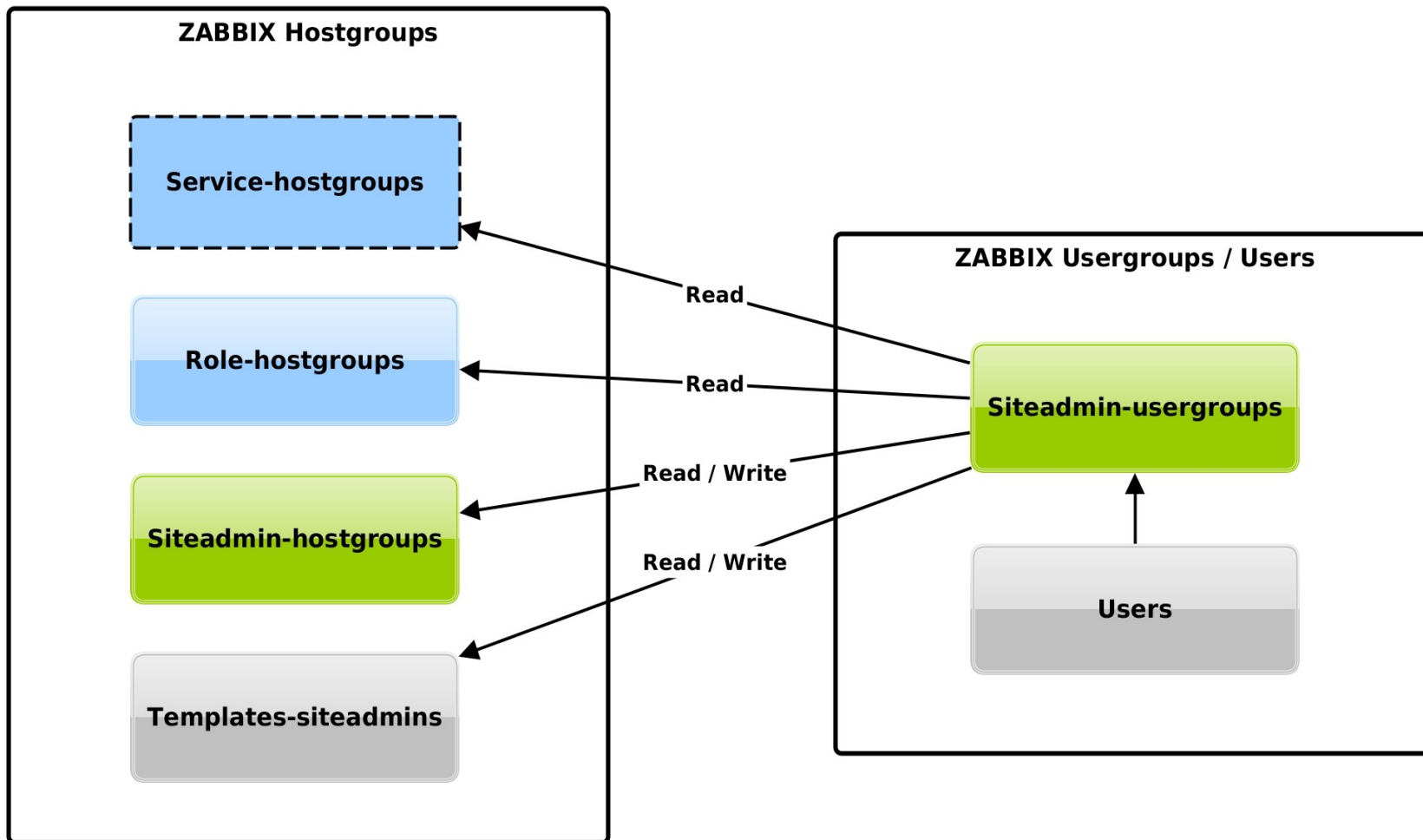
ZABBIX Hostgroups

Service-hostgroups

Role-hostgroups

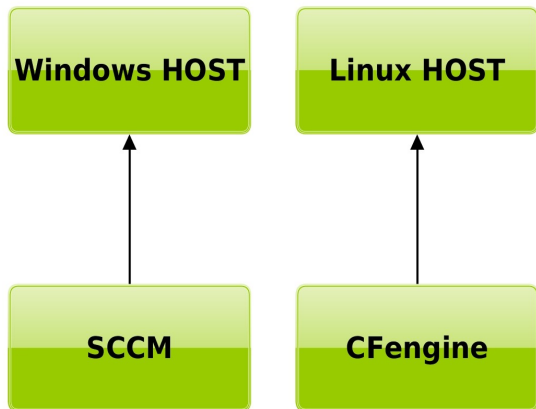
Siteadmin-hostgroups

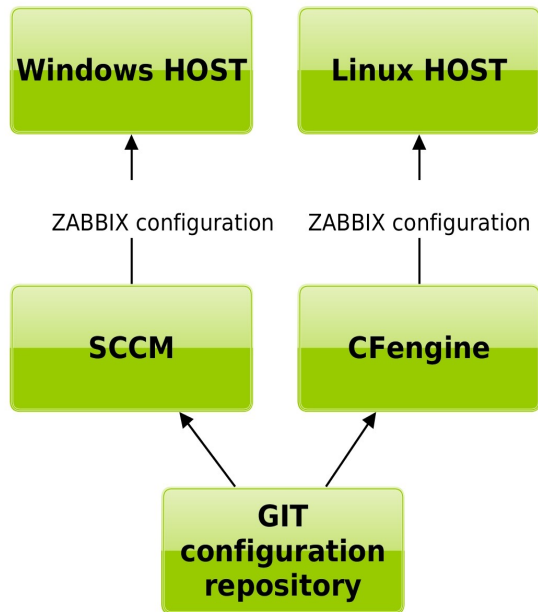
Templates-siteadmin

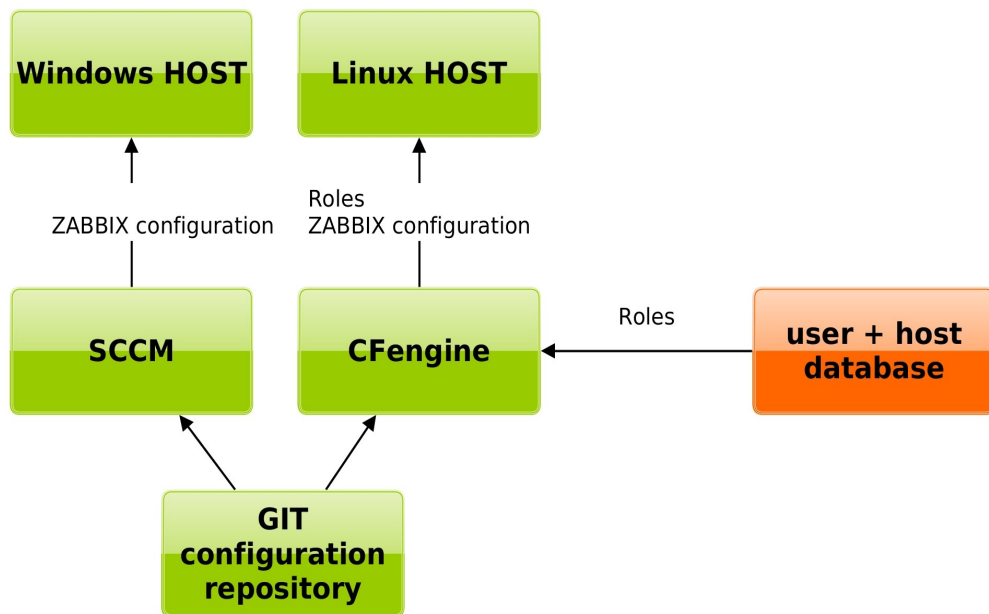


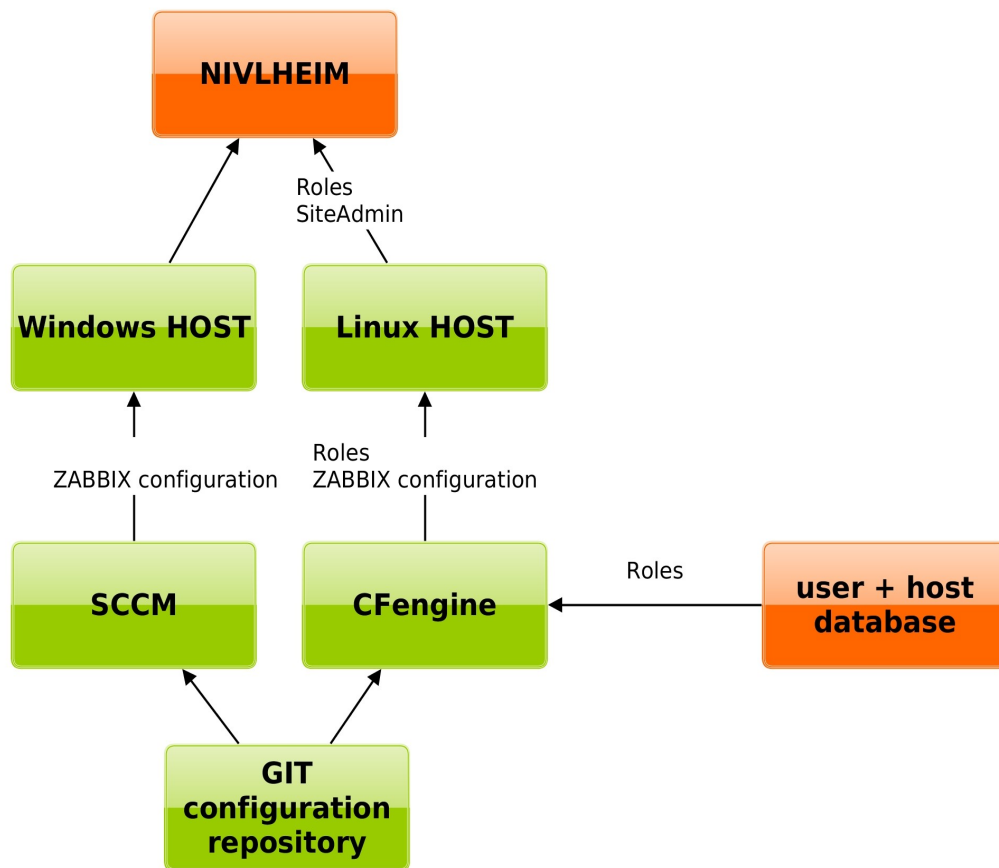
Windows HOST

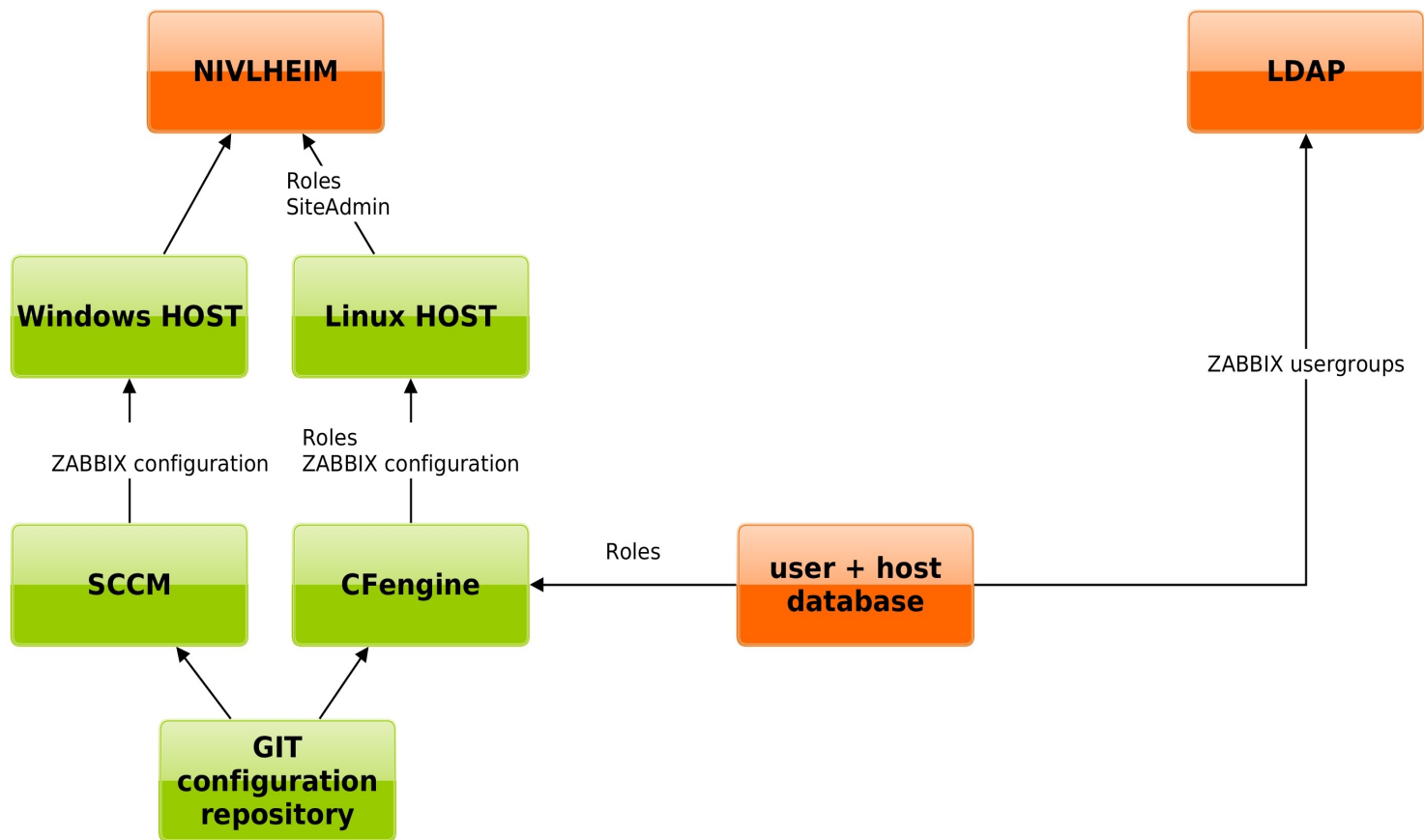
Linux HOST

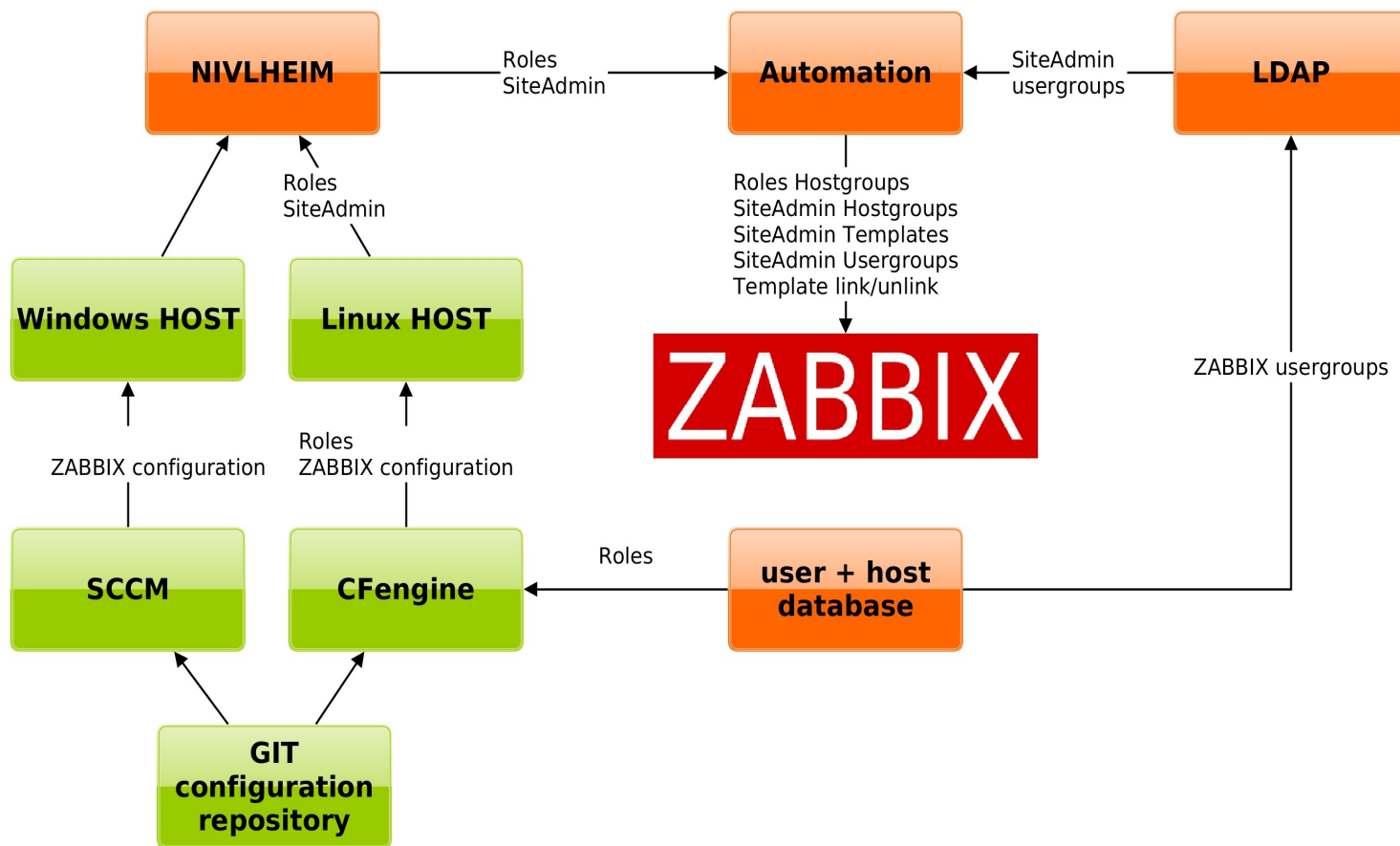


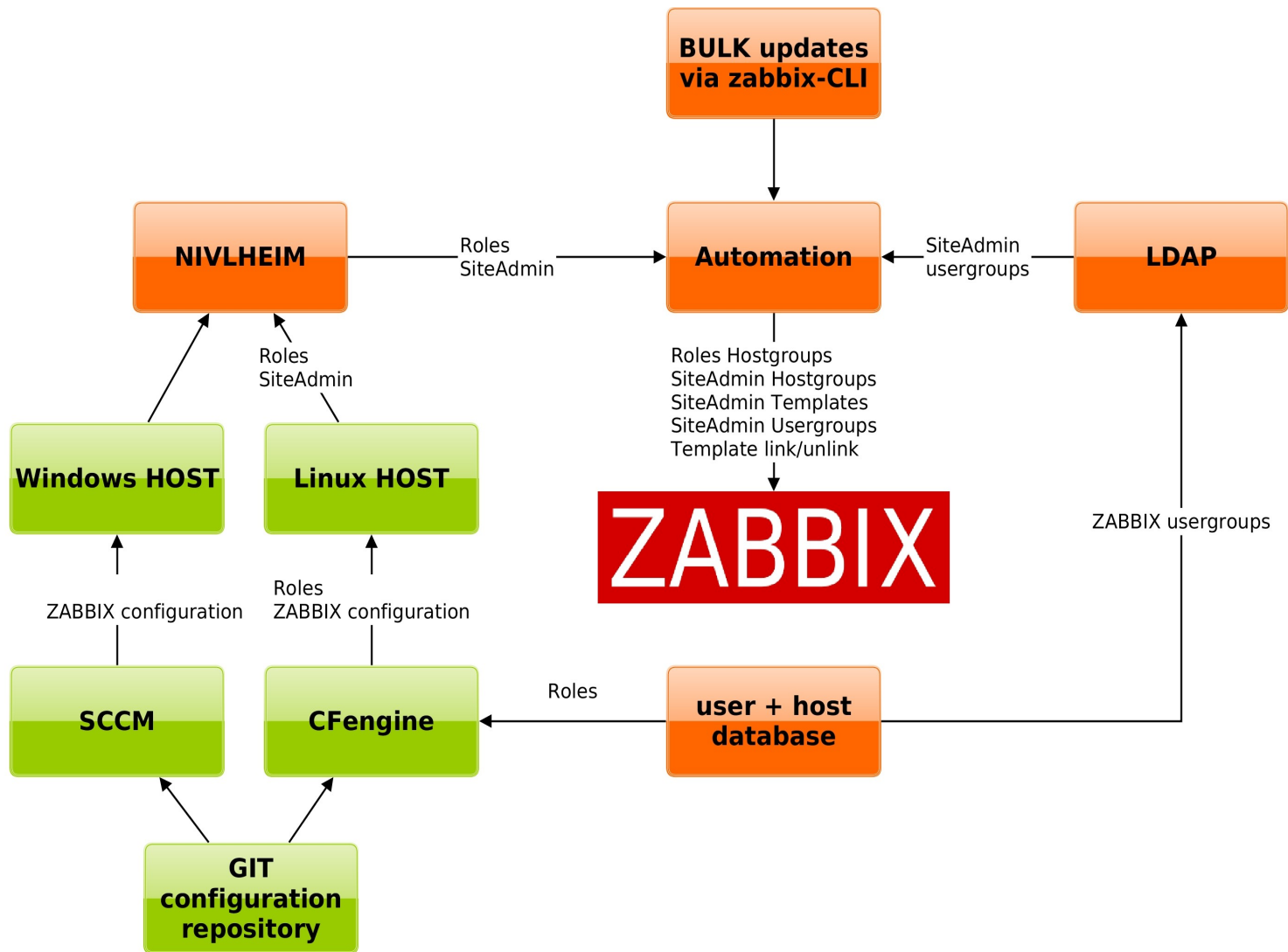












GRAFANA-ZABBIX

Uptime

1.535 week

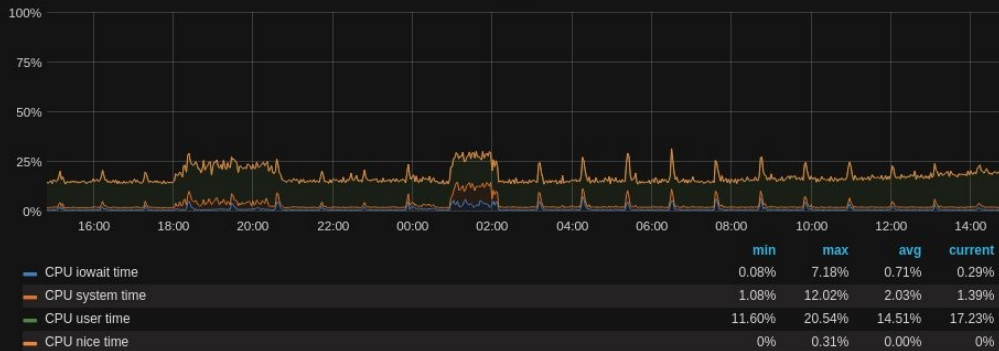
PostgreSQL Status

PostgreSQL is running

Zabbix agent status

Zabbix agent is running

CPU



PostgreSQL Processes



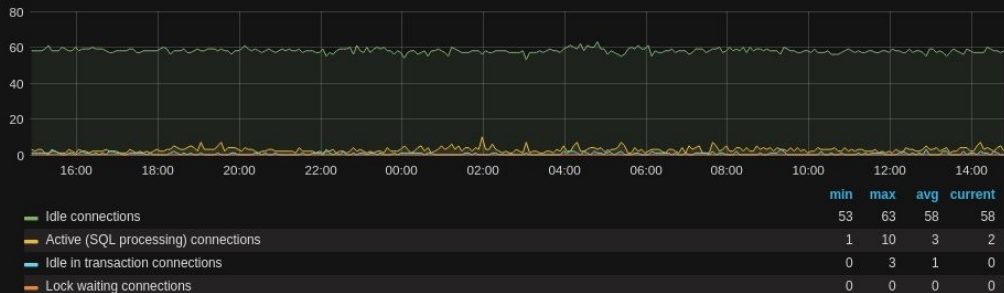
Transactions



Memory available



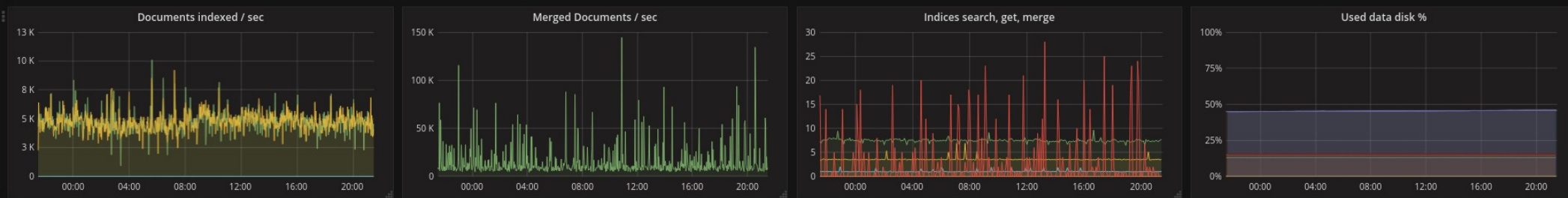
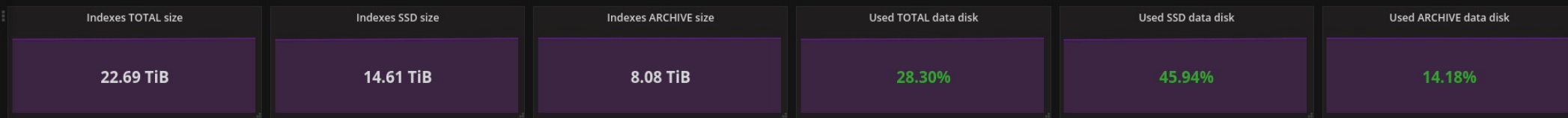
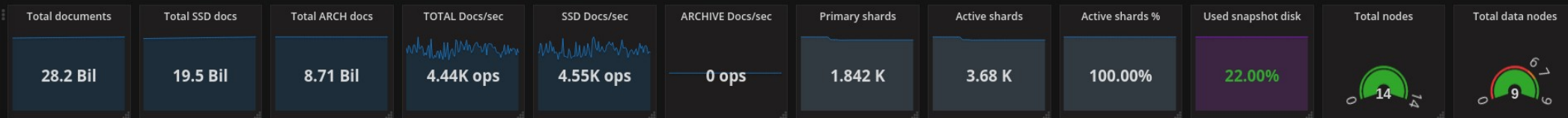
Connections



Slow queries



Zabbix alarms

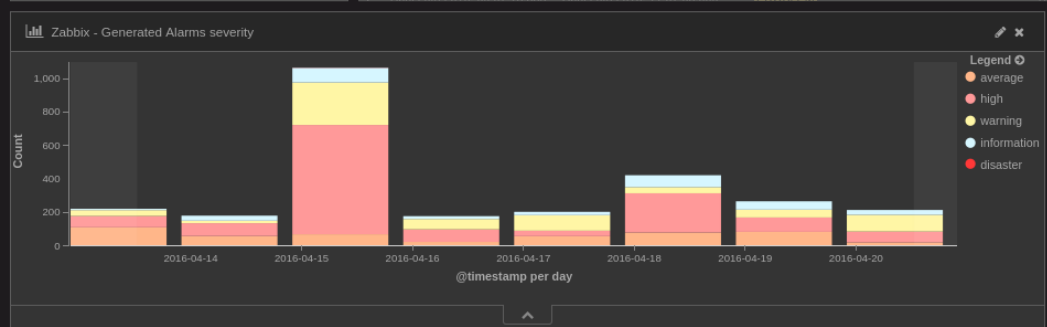
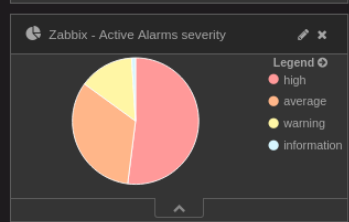


ELK - ZABBIX

Zabbix - Total active alarms

100

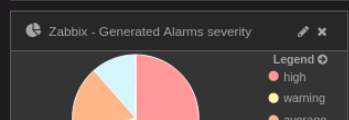
Count



Zabbix - Total generated alarms

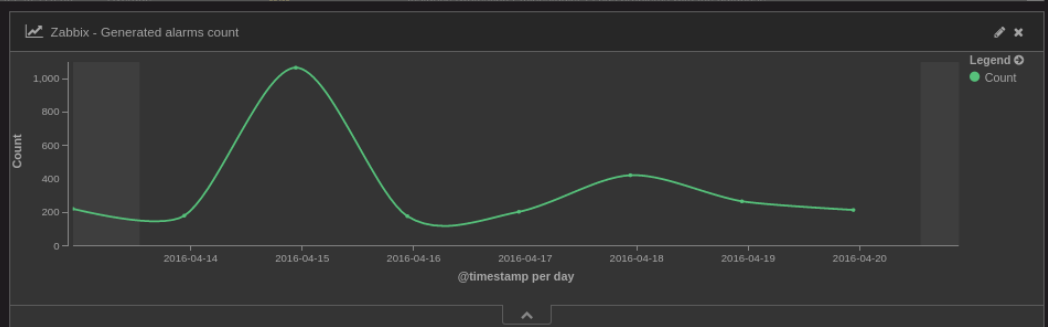
2,749

Count



Zabbix - All active alarms

Time	timestamp	alarm_status	hostname	ip	alarm_severity	ack_status	alarm_name
▶ April 20th 2016, 14:17:51.099	April 20th 2016, 16:17:29.000	PROBLEM	-	129.240.188.198	Average	No	The disk /home has used more than 95% of total diskspace (Free: 4.96 %)
▶ April 20th 2016, 13:51:56.645	April 20th 2016, 15:51:29.000	PROBLEM	-	129.240.133.10	High	No	Host is unavailable via ICMP ping
▶ April 20th 2016, 13:03:17.277	April 20th 2016, 15:02:47.000	PROBLEM	-	129.240.3.146	Average	No	The disk /dbfiles/dbora-uo-test01/ora01 has used more than 92% of total diskspace (Free: 7.95 %)
▶ April 20th 2016, 11:22:46.053	April 20th 2016, 13:22:06.000	PROBLEM	-	129.240.188.214	Average	No	The disk /var has used more than 95% of total diskspace (Free: 4.98 %)
▶ April 20th 2016, 10:45:47.669	April 20th 2016, 12:45:19.000	PROBLEM	-	129.240.120.181	High	No	Host is unavailable via ICMP ping
▶ April 20th 2016, 10:37:19.498	April 20th 2016, 12:36:58.000	PROBLEM	-	129.240.102.243	High	No	[KANT] - The virtual volume kant-med-fs02/med-imb-pkanne is full
▶ April 20th 2016, 09:08:59.791	April 20th 2016, 11:08:25.000	PROBLEM	-	0.0.0.0	Average	No	Instance [w3utvjb02-foransatte-2] has problems with the database
▶ April 20th 2016, 09:07:51.991	April 20th 2016, 11:07:13.000	PROBLEM	-	0.0.0.0	Average	No	Instance [w3utvjb03-foransatte-1] has problems with the database
▶ April 20th 2016, 09:07:18.835	April 20th 2016, 11:07:03.000	PROBLEM	-	129.240.170.80	Average	No	Instance fw3testib04-minestudier-21 has problems with the database



Zabbix - All generated alarms

Time	timestamp	alarm_status	hostname	ip	alarm_severity	ack_status	alarm_name
▶ April 20th 2016, 14:23:33.772	April 20th 2016, 16:21:57.000	OK	-	129.240.253.202	Information	No	VoIP: SIP ping voiptest2-sbc2 softphone
▶ April 20th 2016, 14:20:30.583	April 20th 2016, 16:17:50.000	OK	-	129.240.4.68	Warning	No	[fsweb.no:443/evuweb/sjekk] - jboss sjekk code
▶ April 20th 2016, 14:17:51.099	April 20th 2016, 16:17:29.000	PROBLEM	-	129.240.188.198	Average	No	The disk /home has used more than 95% of total diskspace (Free: 4.96 %)
▶ April 20th 2016, 14:12:19.459	April 20th 2016, 16:10:38.000	OK	-	129.240.4.68	Warning	No	[fsweb.no:443/evuweb/sjekk] - jboss sjekk code
▶ April 20th 2016, 14:07:10.002	April 20th 2016, 16:05:23.000	OK	-	129.240.4.68	Warning	No	[fsweb.no:443/evuweb/sjekk] - jboss sjekk code
▶ April 20th 2016, 14:04:00.520	April 20th 2016, 16:02:19.000	OK	-	129.240.4.68	Warning	No	[fsweb.no:443/evuweb/sjekk] - jboss sjekk code

