

Ansible

Velkommen!

- Ukentlige programmeringskvelder
- MAPS og Svett bytter på å arrangere
- Alt vi synes er interessant
- Har du et morsomt prosjekt? Vis oss!

Min Ansible-bakgrunn

- Har jobbet med Ansible i 8. måneder
- Ikke ekspert, men ikke lenger nybegynner

Oppgaven min

- Finne en robust, repeterbar måte å rulle ut kode til serverne våre (*application deployment*)

I dag

- Vi bruker Ansible til å rulle ut kode (*application deployment*)
- Vi bruker Ansible til å konfigurere og vedlikeholde serverne våre (*configuration management*)
- Vi bruker Ansible, i samspill med Vagrant, til å standardisere utviklermiljøene våre

Application Deployment

- Hvordan rulle ut ny funksjonalitet på en sikker, rask og repeterbar måte?
- Sende ulike ting til ulike servere (*Staging* versus *Production*)
- Verktøy: Fabric, Capistrano

Configuration Management

- Nøkkelbegrep: *integritet*
- Er programvaren og støttebibliotekene riktig installert?
- Er alle konfigurasjoner slik de skal være? Nginx, brannmurer, brukeraksess+++
- Verktøy: Puppet, Chef

“Your servers should be cattle, not pets”



https://commons.wikimedia.org/wiki/File:Cattle_%281%29.jpg



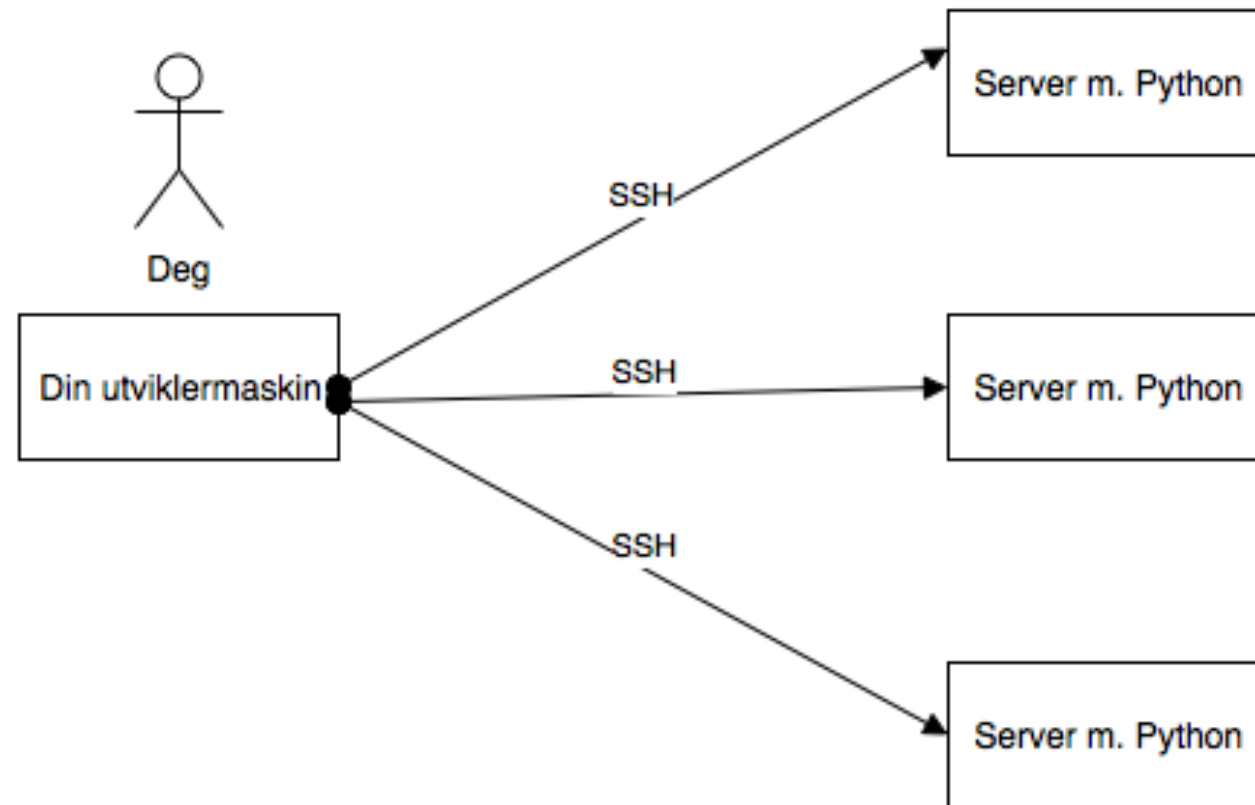
https://commons.wikimedia.org/wiki/File:Felis_catus-cat_on_snow.jpg

The pitch

- Ansible er *configuration management* og *application deployment* i ett og samme verktøy
- Ble startet i 2012
- Utviklet av Michael Dehaan og andre i Red Hat-miljøet
- Skrevet i Python
- Tilgjengelig på alle *NIX (noe Windows-støtte også)
- Navnet “Ansible” kommer fra Science Fiction

Tre søyler

- Python
- SSH
- UNIX



Hello World

Nøkkelkomponenter

- Inventory
- ansible.cfg
- playbooks
- roller

Roller

Roller

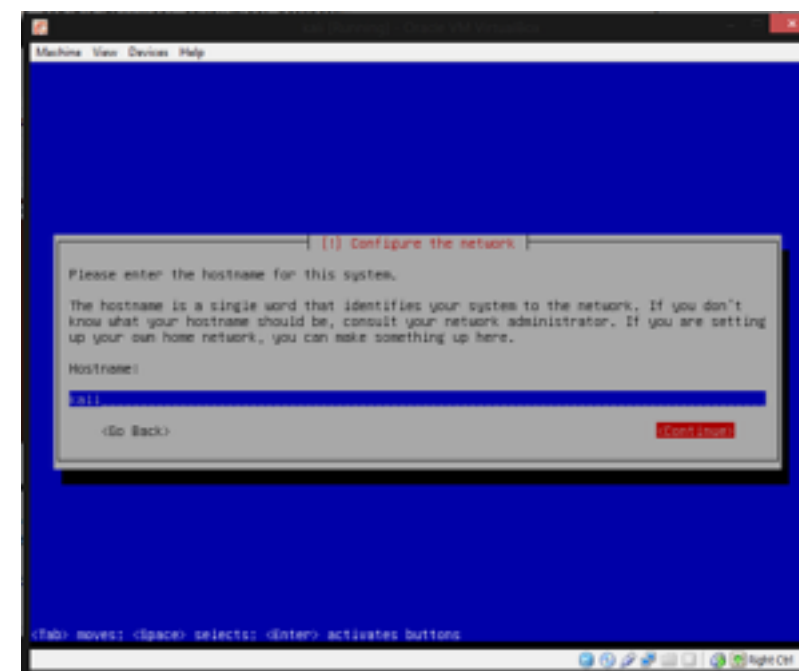
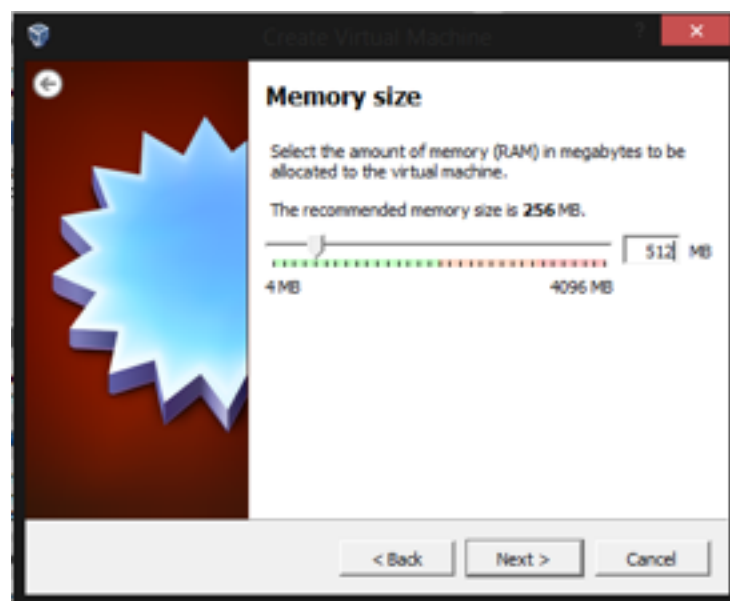
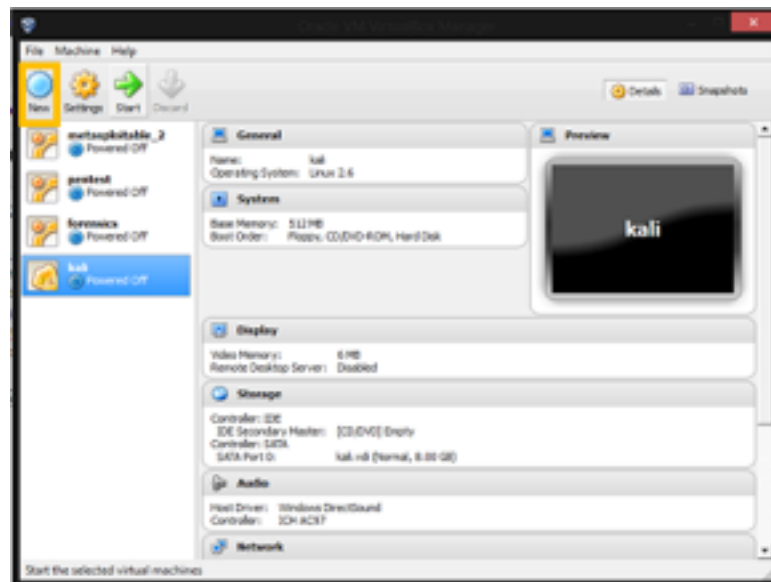
- Den viktigste abstraksjonsmekanismen i Ansible
- Lar deg lage gjenbrukbare moduler
- Samler oppgaver, avhengigheter, default-verdier o.l. i én ting.

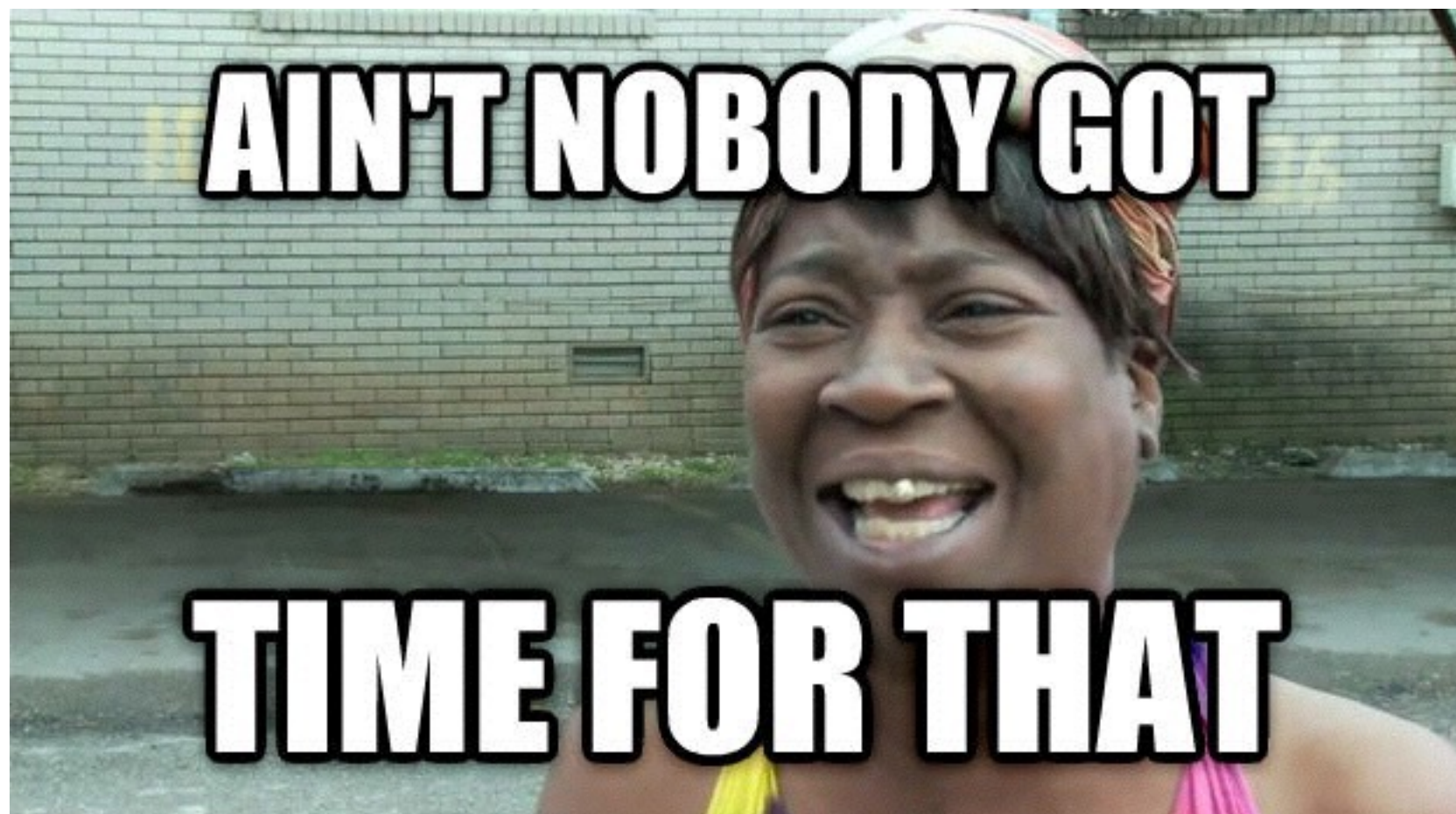
Mappestrukturen til en rolle

```
[cmr@fram ~/D/l/a/r/roles> tree full_role/
full_role/
├── README.md
├── defaults
│   └── main.yml
├── files
├── handlers
│   └── main.yml
├── meta
│   └── main.yml
├── tasks
│   └── main.yml
├── templates
├── tests
│   ├── inventory
│   └── test.yml
└── vars
    └── main.yml

8 directories, 8 files
```


- Det hadde vært fint å teste lokalt! Kanskje jeg skal prøve meg med en virtuell maskin...





Vagrant to the rescue!

- Gjør det kjempelett å bruke Virtuelle maskiner!
- Gir deg en meny av ferdiglagede, minimale virtuelle maskiner
- Fikser ssh, delte mapper, private nettverk og mye mer.
- www.vagrantup.com
- <https://atlas.hashicorp.com/boxes/search>

- vagrant up
- vagrant ssh
- vagrant provision
- vagrant destroy

Vagrant + Ansible

- Standard provisioner
- `ansible_local`
- Privat nettverk

Ting å sjekke ut



1/4

19 Minutes With Ansible (1/4)

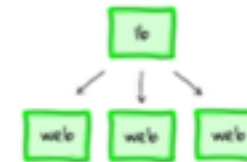
In this episode series, we will be looking at Ansible, which is an easy to use configuration management and orchestration tool. My goal for this series, is to show you what Ansible is, how it works, and the steps to get going on your own.



2/4

Learning Ansible with Vagrant (2/4)

In this episode, we are going to play around with Ansible via four Vagrant virtual machines. We will install Ansible from scratch, troubleshoot ssh connectivity issues, review configuration files, and try our hand at common commands.



3/4

Config Management with Ansible (3/4)

In this episode, we are going to create a load balanced web cluster using Vagrant and Ansible. The goal is to show how Ansible can solve real problems by building up complex infrastructure from scratch.



4/4

Rolling Deploys with Ansible (4/4)

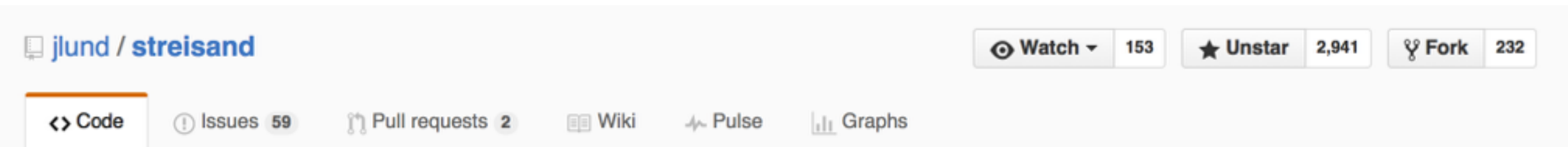
In this episode, we will do a zero-downtime rolling website deployment, across a cluster of nginx web nodes, sitting behind a haproxy load balancer. We will use Ansible to orchestrate the deployment in a repeatable and consistent way.

<https://sysadmincasts.com/>

Ting å sjekke ut



Ting å sjekke ut



The screenshot shows the GitHub repository page for 'jlund / streisand'. The repository name is displayed in the top left. On the right, there are buttons for 'Watch' (153), 'Unstar' (2,941), and 'Fork' (232). Below these, there are tabs for 'Code', 'Issues' (59), 'Pull requests' (2), 'Wiki', 'Pulse', and 'Graphs'. The 'Code' tab is currently selected.

Streisand sets up a new server running L2TP/IPsec, OpenSSH, OpenVPN, Shadowsocks, sshh, Stunnel, and a Tor bridge. It also generates custom configuration instructions for all of these services. At the end of the run you are given an HTML file with instructions that can be shared with friends, family members, and fellow activists.

<https://github.com/jlund/streisand>

Ting å sjekke ut

DebOps

tips \$0.00/week

YOUR DEBIAN-BASED DATA CENTER IN A BOX

A collection of `Ansible` playbooks, scalable from one container to an entire data center.



DEBOPS IS A FRAMEWORK

- `60+ highly extensible roles` with sane defaults
- `Tuned for production` and works great for development
- `Built for modularity` so extending it is simple
- `Custom scripts` to tie everything together

<http://debops.org/>

- docs.ansible.com
- vagrantup.com
- github.com/cmrosenberg/setup