# KONFIGURATSIOONIHALDUS

**What?**

Configuration management is a process for maintaining computer systems, servers, and software in a desired, consistent state. It's a way to make sure that a system performs as it's expected to as changes are made over time.

**Why?**

Disaster Recovery
Uptime and Site Reliability
Easier Scaling

Infrastructure-as-code (or IaC for short) is the practice of ensuring all provisioned infrastructure is done so through code. The purpose of IaC is to have a written record of which services exist, where they are located, and under what circumstance.

Configuration management gives agile teams the confidence to move quickly with their changes. Under agile practices, the company gives configuration management responsibilities to the development teams, empowering them to provision, configure, and manage their own infrastructure.**You build it, you run it**.

Ansible

CFEngine

Chef

Puppet

Salt

Ansible is an **open-source** automation engine that automates cloud provisioning, configuration management, and application deployment.

No servers, daemons, or databases required

State-driven resource model that describes the desired state of computer systems and services, not the paths to get them to this state

Default transport layer: OpenSSH.

Over 1,300+ modules in the core distribution, over 4,000 community-provided roles.

**Inventory** - meaningful groups of hosts that Ansible will provision

**Modules** - executed directly on remote hosts or through playbooks.

**Tasks** - define the expected state of the host machine at a particular time.

**Playbooks** - YAML files that describe the desired state of the host or a group of hosts declared in the inventory file

**Roles** - combination of tasks to form clean, reusable abstractions.

**Variables** - used to deal with differences between systems and to ensure that each system is provisioned based on its state and purpose.

**Templates** -  Jinja templating to enable dynamic expressions and access to variables.

**Conditionals and loops** -