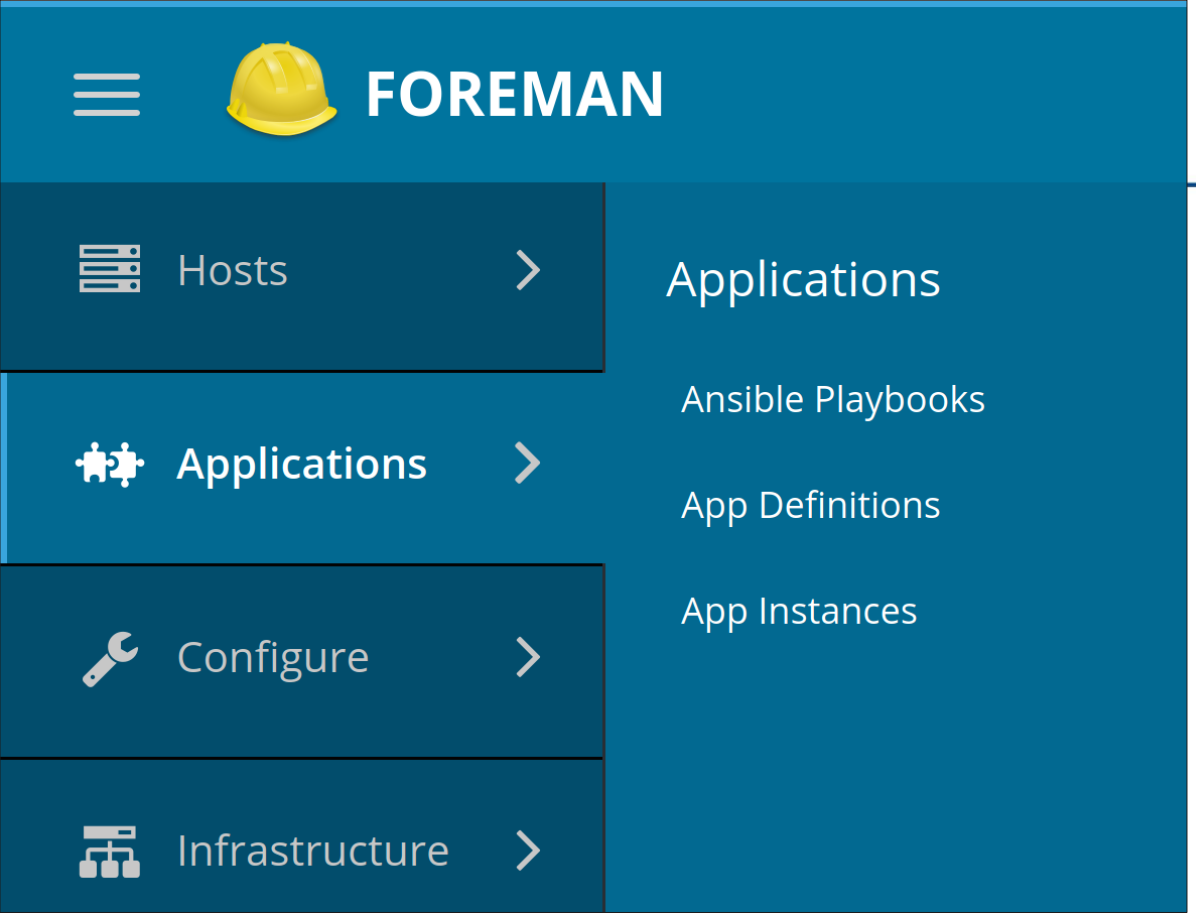


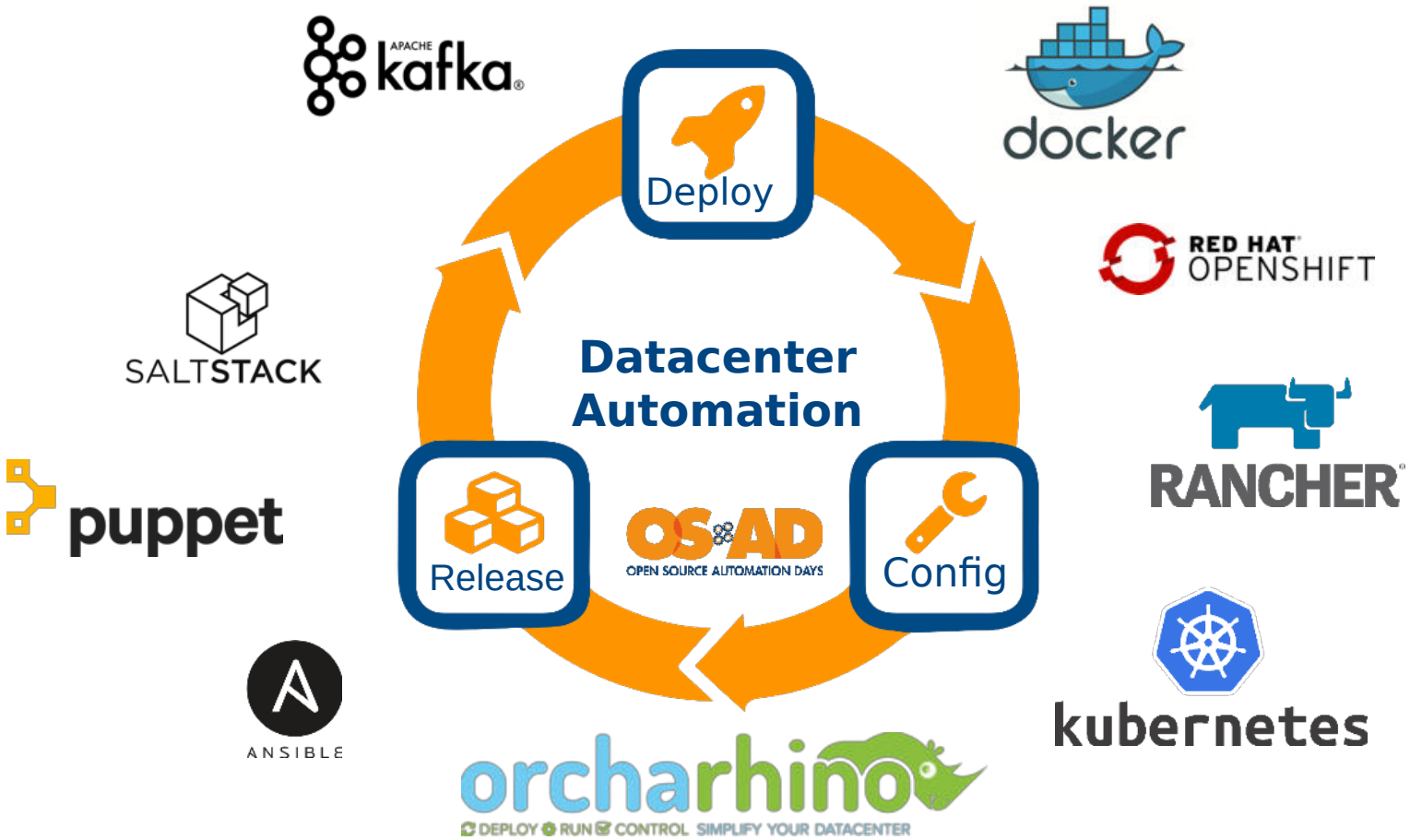
ATIX

Application centric deployment mit

foreman / katello

13.03.2021 Bernhard Suttner

SIMPLIFY YOUR DATACENTER



Open Source Automation Days

Manual Work Is
A Bug

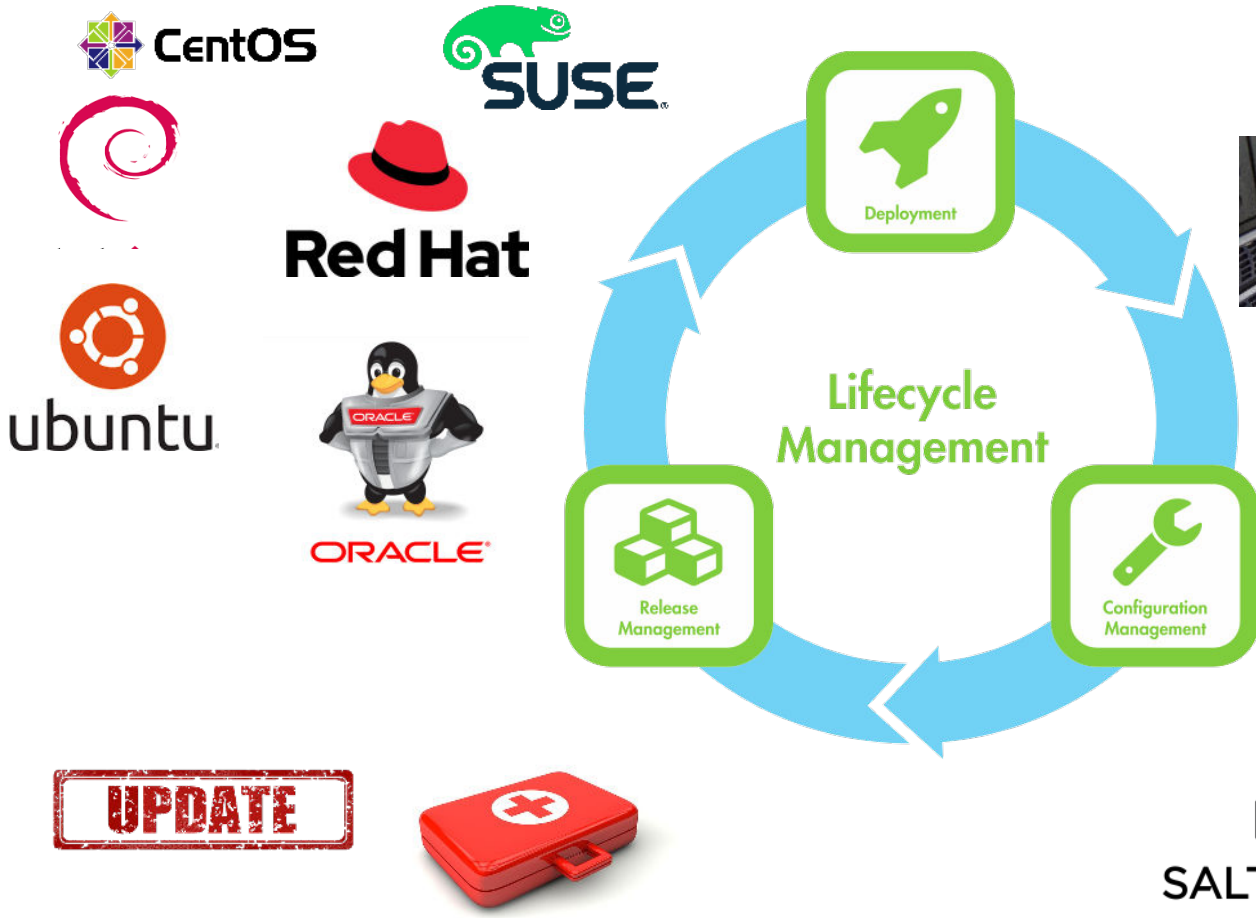
Configuration management

- Keep your configuration up to date
- Automatically deploy changes
- Reproducibility of changes
- Central repository with version control
- Human understandable
- Machine readable

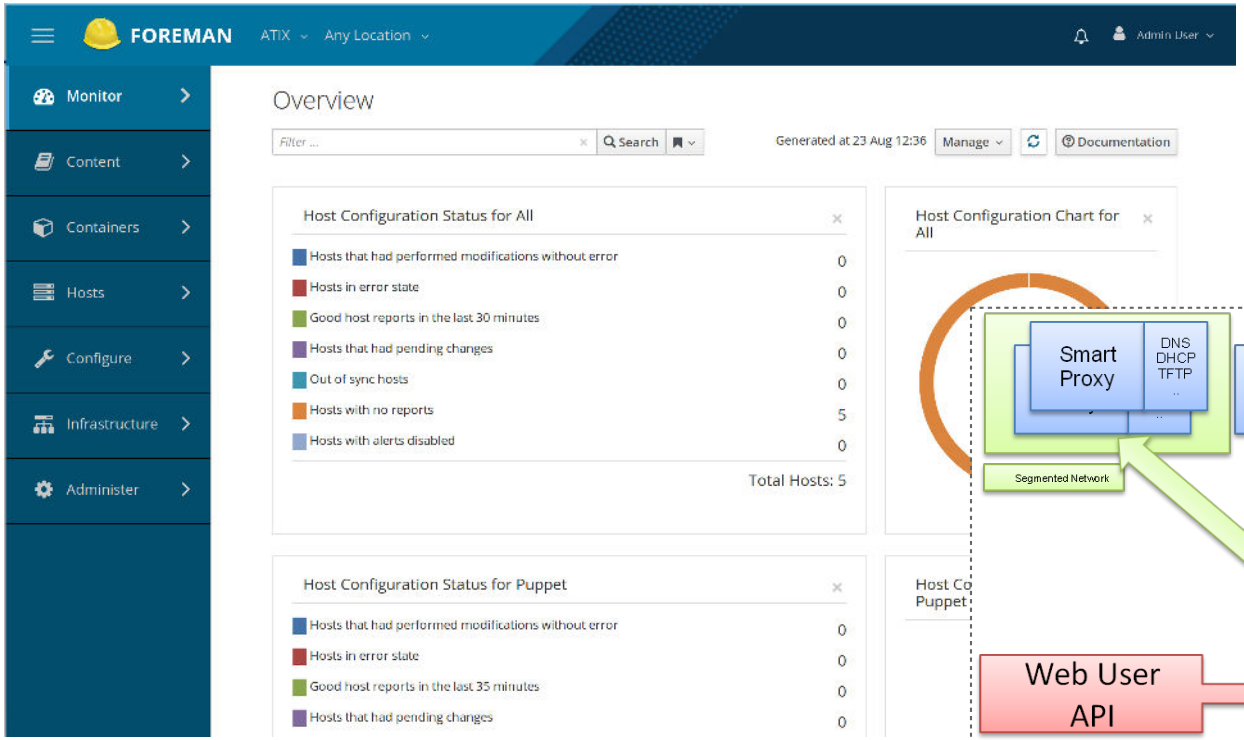
The Foreman Project

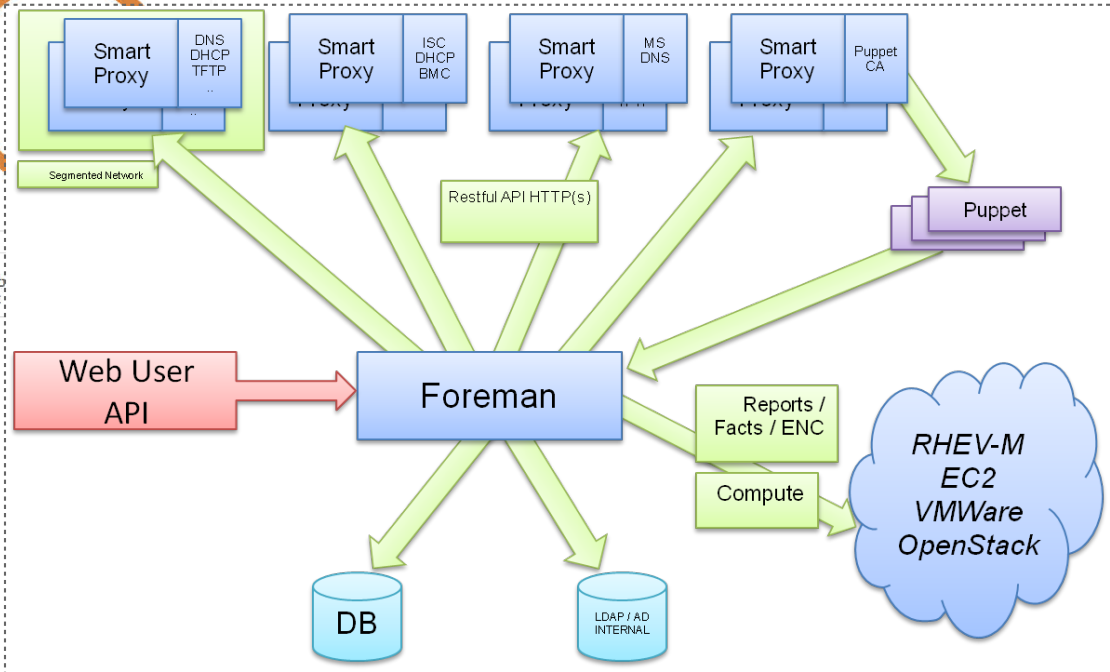
- Open Source project initiated by
  Ohad Levy committed on 13 Jul 2009
- Ruby on Rails
- Puppet ENC
- Show reports & facts
- Host provisioning

Foreman: manage your hosts

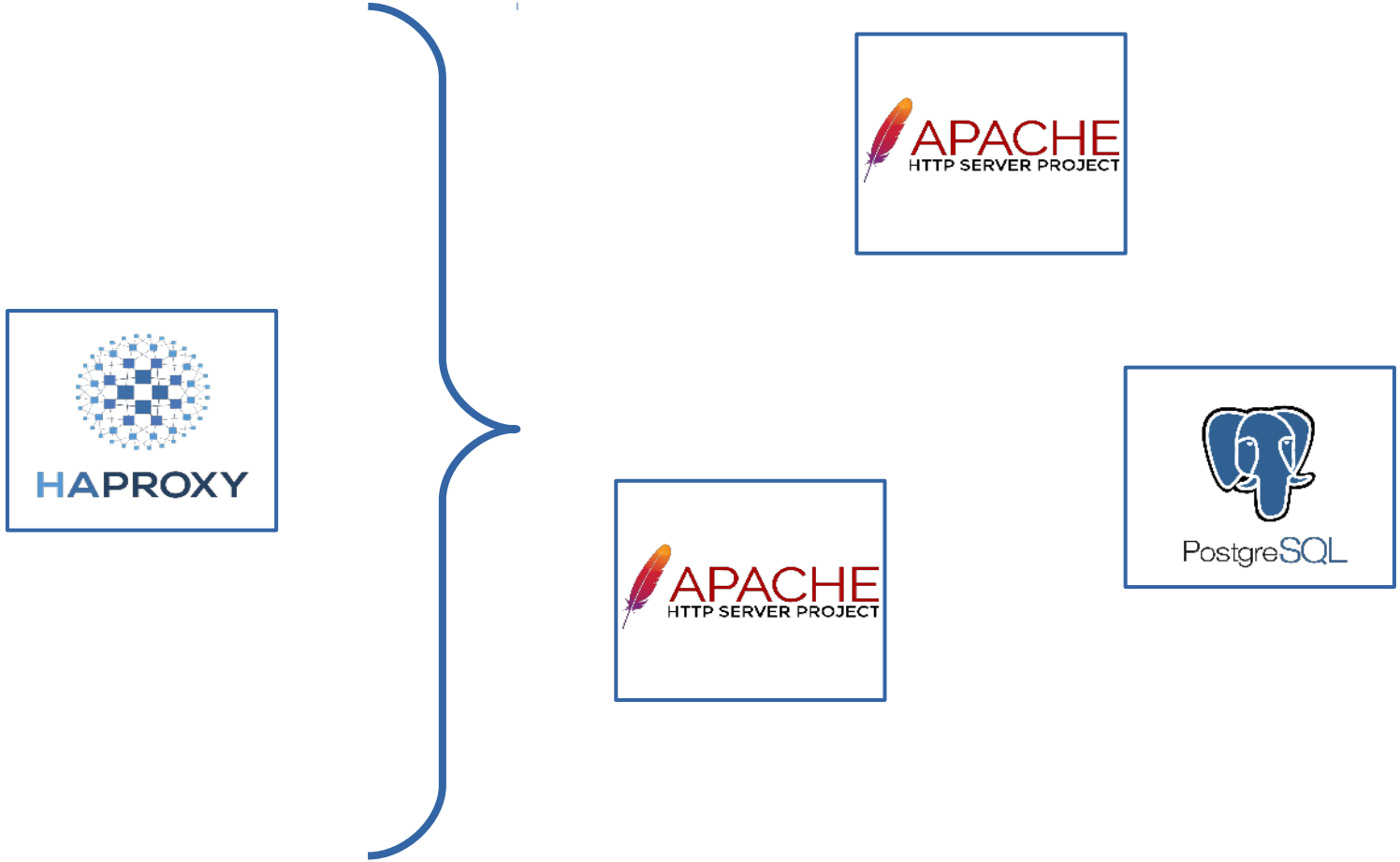


Foreman UI(s)


FOREMAN
ATIX
Any Location
Admin User
Monitor
Content
Containers
Hosts
Configure
Infrastructure
Administer
Overview
Filter ...
Search
Generated at 23 Aug 12:36
Manage
Documentation
Host Configuration Status for All
Hosts that had performed modifications without error 0
Hosts in error state 0
Good host reports in the last 30 minutes 0
Hosts that had pending changes 0
Out of sync hosts 0
Hosts with no reports 5
Hosts with alerts disabled 0
Total Hosts: 5
Host Configuration Chart for All
Host Configuration Status for Puppet
Hosts that had performed modifications without error 0
Hosts in error state 0
Good host reports in the last 35 minutes 0
Hosts that had pending changes 0


Smart Proxy
DNS DHCP TFTP
Smart Proxy
ISC DHCP BMC
Smart Proxy
MS DNS
Smart Proxy
Puppet CA
Segmented Network
Restful API HTTP(s)
Puppet
Web User API
Foreman
Reports / Facts / ENC
Compute
RHEV-M
EC2
VMWare
OpenStack
DB
LDAP / AD INTERNAL

The web application

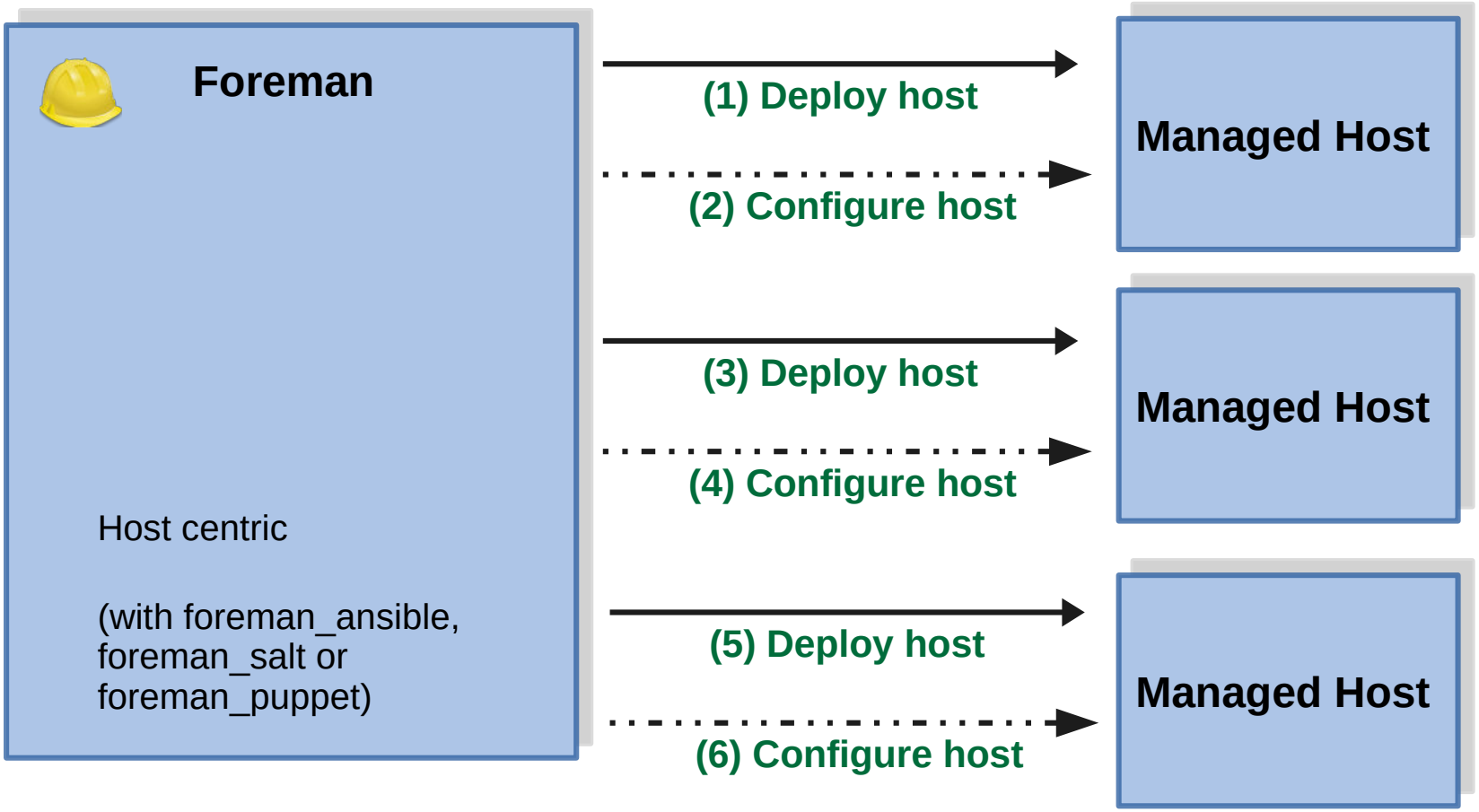


What we currently need to do…

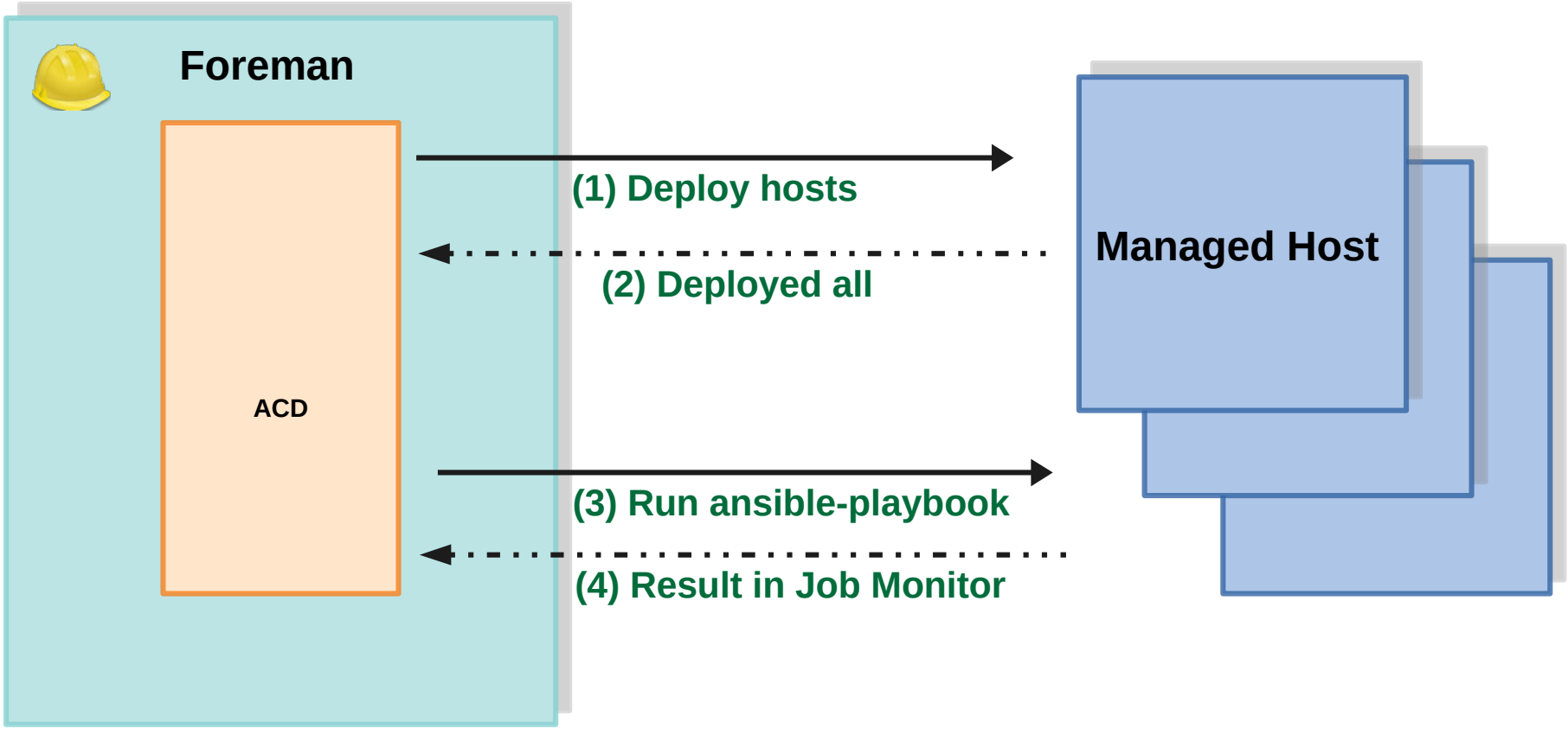
- Configure the foreman environment (hostgroup, operating systems, …)
- Provision 3 new hosts
- Configure each host individually (manually, or by ansible, salt, puppet)
- Make sure all hosts are up and are „connected“

What we actually want to do...

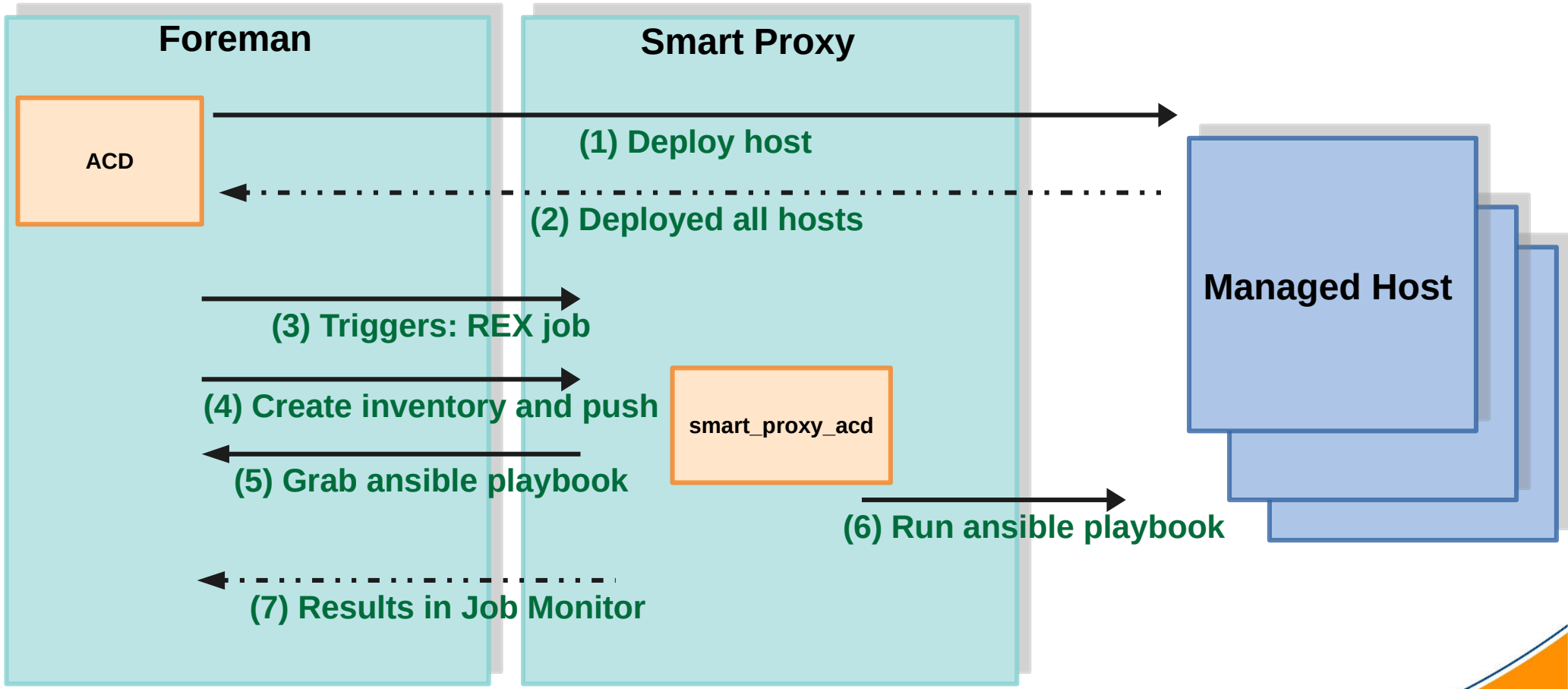
Host centric deployment



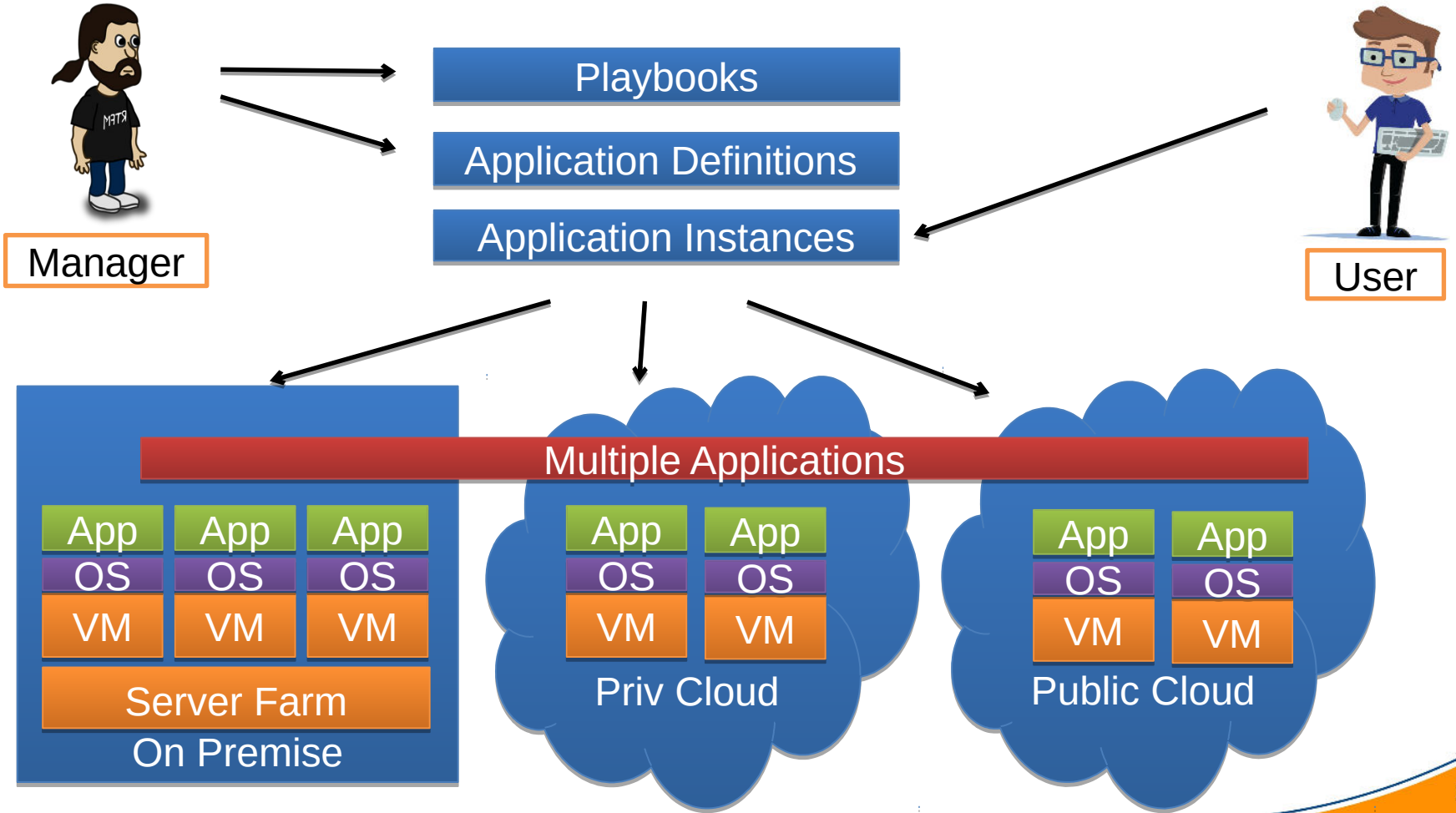
ACD, how it works!?



How it really works...



User roles


Manager
Playbooks
Application Definitions
Application Instances
User
Multiple Applications
App
App
App
OS
OS
OS
VM
VM
VM
Server Farm
On Premise
App
App
OS
OS
VM
VM
Priv Cloud
App
App
OS
OS
VM
VM
Public Cloud

Edit Application Definition LAMP — Mozilla Firefox (Private Browsing)
Edit Application Definitic
https://or.deploy3.dev.atix/acd/app_definitions/1-LAMP/edit
FOREMAN
Any Organization
Any Location
Admin User
Monitor
Content
Hosts
Applications
Configure
Infrastructure
Administer
App Definitions
Edit LAMP
Application Definitions
Locations
Organizations
Name *
LAMP
Description
Ansible Playbook
LAMP
Name
Description
Hostgroup
Ansible Group
min count
max count
Actions
web
centos7
webservers
db
centos7
dbservers
Ansible group vars 'all':

Application centric deployment: summary

- Process:
  1. aPlaybook = AnsiblePlaybook.new()
  2. aDefinition = appDefinition.new(aPlaybook)
  3. aInstance = appInstance.new(aDefinition)
  4. aInstance.deploy()
  6. aInstance.configure()
- Roles

  manager: Ansible Playbook & application definition

  user: Application instance

Future plan

- Support of multiple smart proxies
- „Safe“ Re-deploy
- Provide and share ready to use application templates (Application definition + playbook)
- Ansible playbook git support
- Salt support
- Translations

Links

- https://www.theforeman.org
- https://community.theforeman.org
- https://github.com/ATIX-AG/
- https://github.com/theforeman/foreman/
- https://github.com/ATIX-AG/foreman_acd/
- https://github.com/ATIX-AG/smart_proxy_acd/
- Soon: a lot of ACD related documentation at https://docs.orcharhino.com

Stay in contact

sbernhard @ #theforeman-dev

https://github.com/sbernhard

@_sBernhard

suttner@atix.de