puppet

Puppet
Latest and Greatest

Dimitri Tischenko

Puppet Principal Sales Engineer

OSAD Munich - 19 October 2017

Who is talking to you?

@timidri

Name: Dimitri Tischenko

Lives: The Hague, Netherlands

History: 22 years IT as company owner / free-lancer

Skills: Dev, Ops, Devops, Coach, Architect

Job: SE at Puppet since September 2017

Fun fact 1: Dances + teaches Argentine Tango

Fun fact 2: Originally from St Petersburg, Russia

Fun fact 3: Tries to speak German

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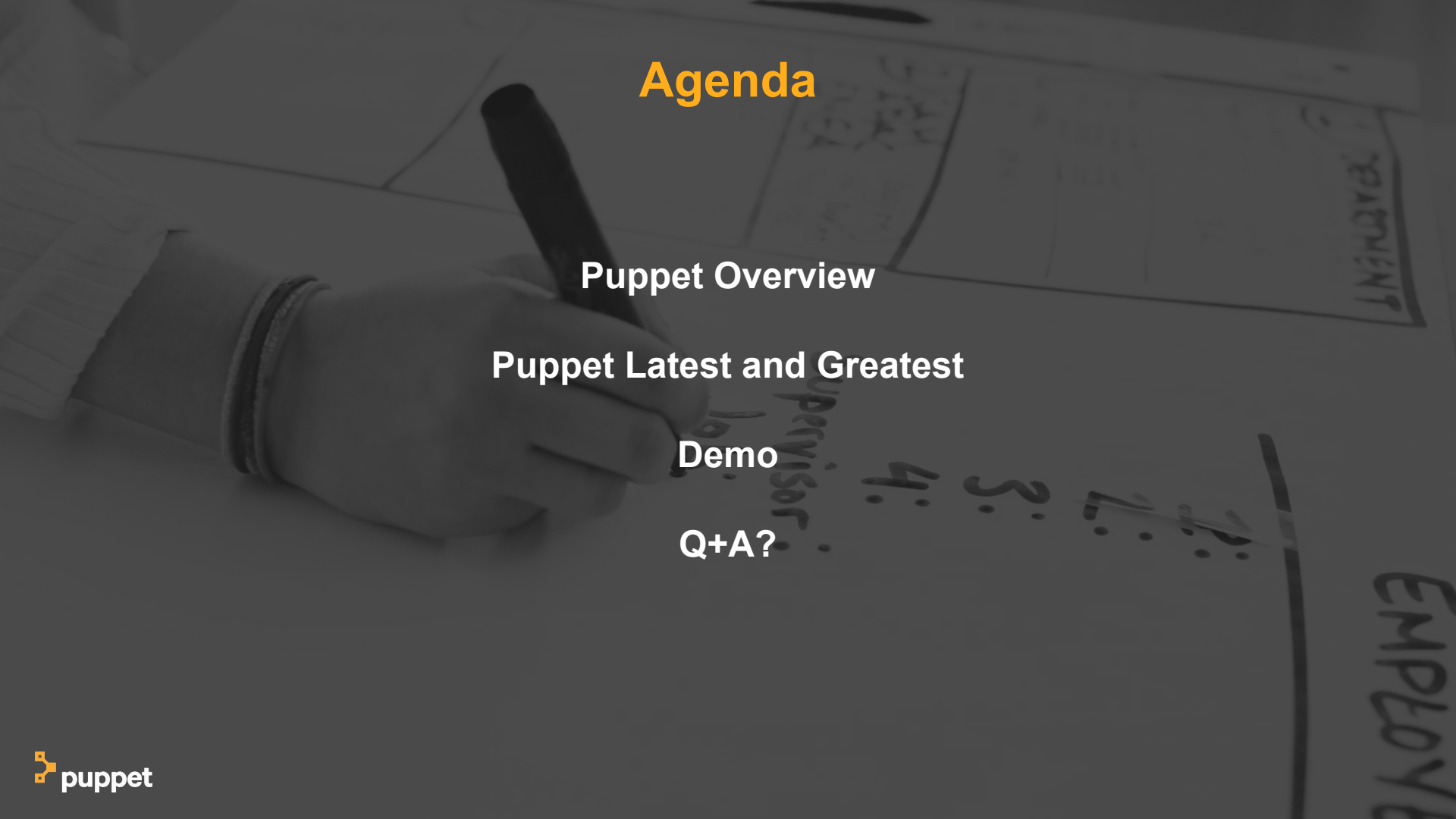
Agenda

Puppet Overview

Puppet Latest and Greatest

Demo

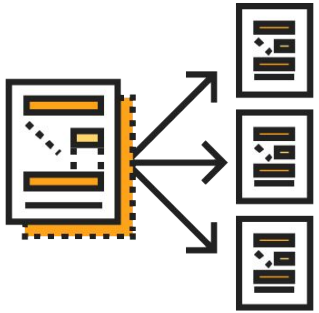
Q+A?



What is Puppet?

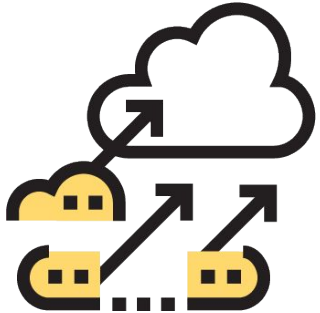
An automatic way to …

Know what you have



Control it and enforce consistency

Secure it and keep it compliant



Modernize it

Using a common language

Across everything, no matter where it runs

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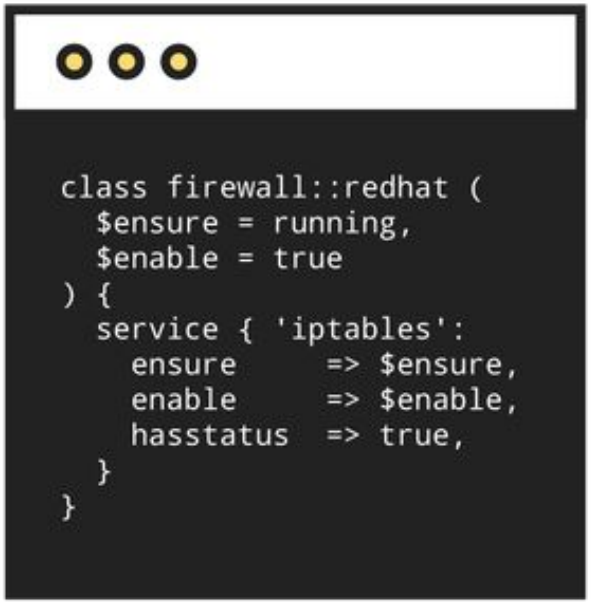
Using a common language

Get a standard way to deliver & operate all of your software



```
class firewall::redhat (
  $ensure = running,
  $enable = true
) {
  service { 'iptables':
    ensure     => $ensure,
    enable     => $enable,
    hasstatus  => true,
  }
}
```

- Define once with an easy-to-understand language & automate endlessly
- Improve collaboration by unifying processes and tooling
- Get started quickly by choosing from thousands of free modules

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Infrastructure as Code

Describe the ideal environment with a simple, commonly understood language

```
building { 'home':
  ensure      => 'clean',
  front_door  => 'closed',
  keys        => 'key_hook',
  jacket      => 'closet',
  floor       => 'vacuumed',
  litter_box  => 'empty',
  remote      => 'coffee_table',
}
```

Infrastructure as Code

```
file { '/tmp/hello.txt:
  content  => 'Hello World!',
  owner    => 'root',
  mode     => '0644',
}

package { 'httpd':
  ensure => installed,
}

service { 'httpd':
  ensure => running,
}
```

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Infrastructure as Code

```
class profile::app::sample_website::linux (
  String $doc_root = '/var/www/html',
  Integer $webserver_port = 80,
  String $website_source_dir = 'puppet:///modules/profile/app/sample_website'
) {

  class {'::profile::app::webserver::apache':
    default_vhost  => false,
  }

  # configure apache
  apache::vhost { $::fqdn:
    port    => $webserver_port,
    docroot => $doc_root,
    require => File[$doc_root],
  }

  # ...
}
```

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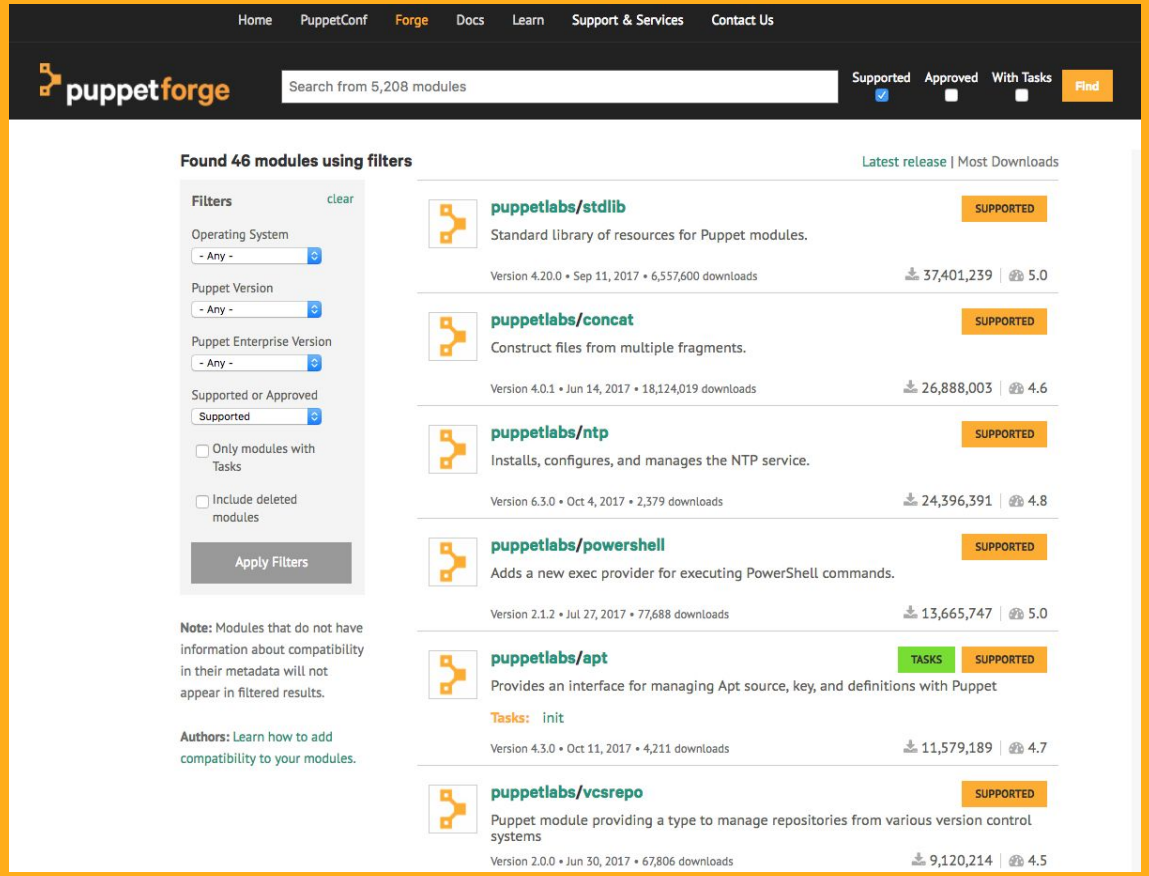
Puppet Forge: 5000+ modules



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How Puppet Works

1. Define your desired state

```
service { 'w32time':
  ensure     => running,
  enable     => true,
  subscribe => Registry_value[$key],
}
```

2. Simulate configuration

3. Enforce configuration

4. Report

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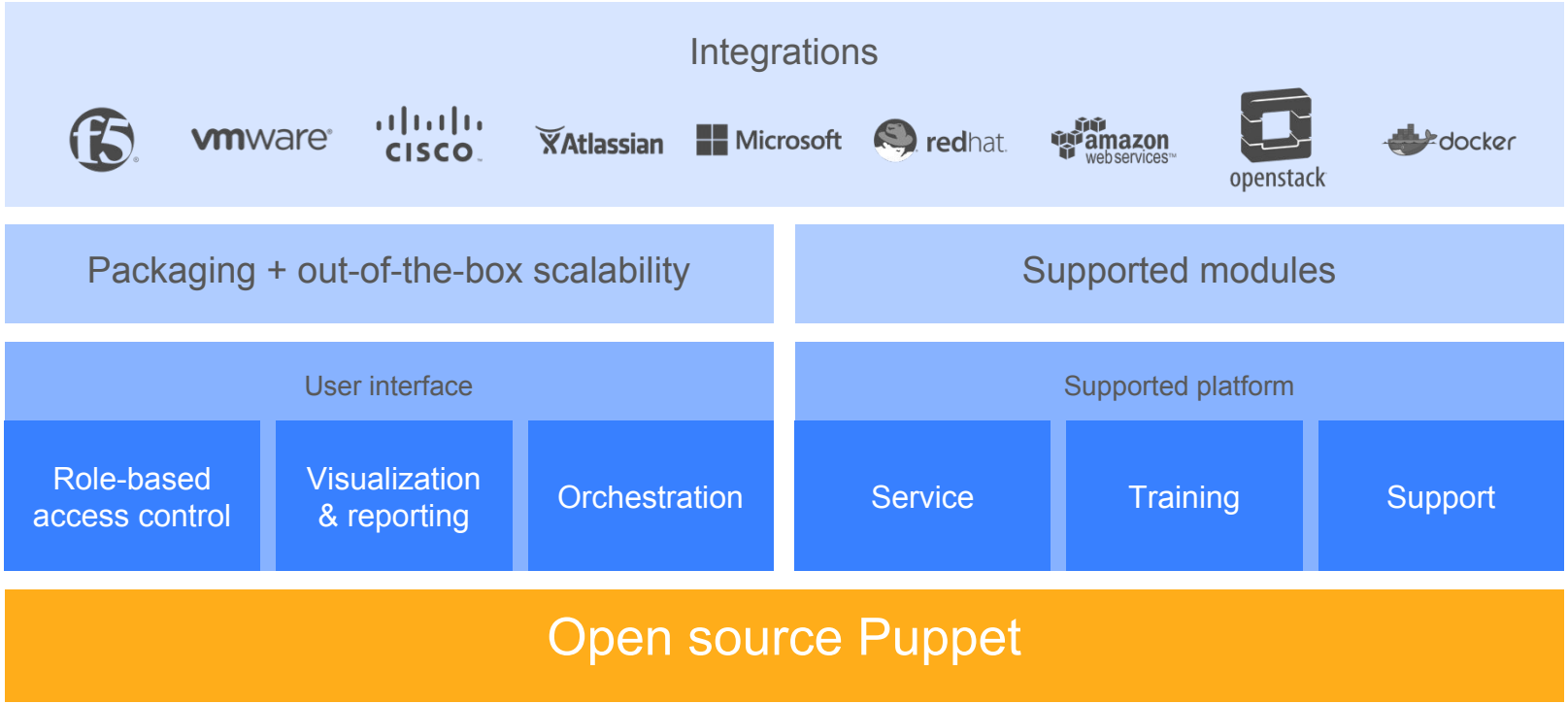
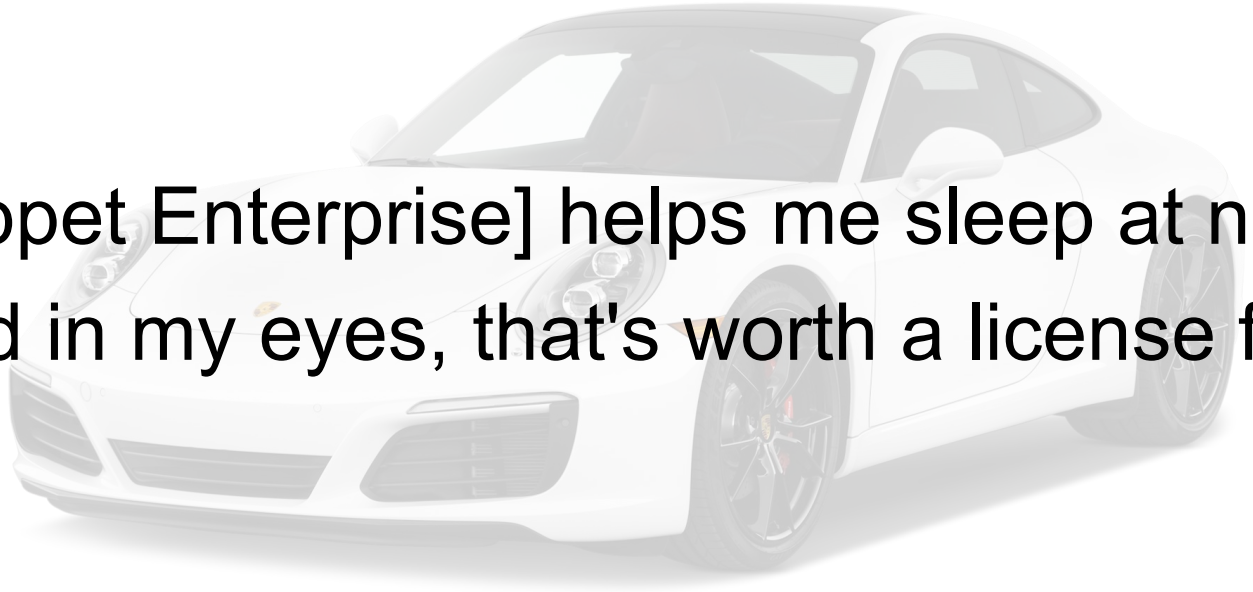
Overview: Puppet Enterprise



Thorsten Biel, Porsche
PuppetConf 2017



[Puppet Enterprise] helps me sleep at night.

And in my eyes, that's worth a license fee.

DEMO

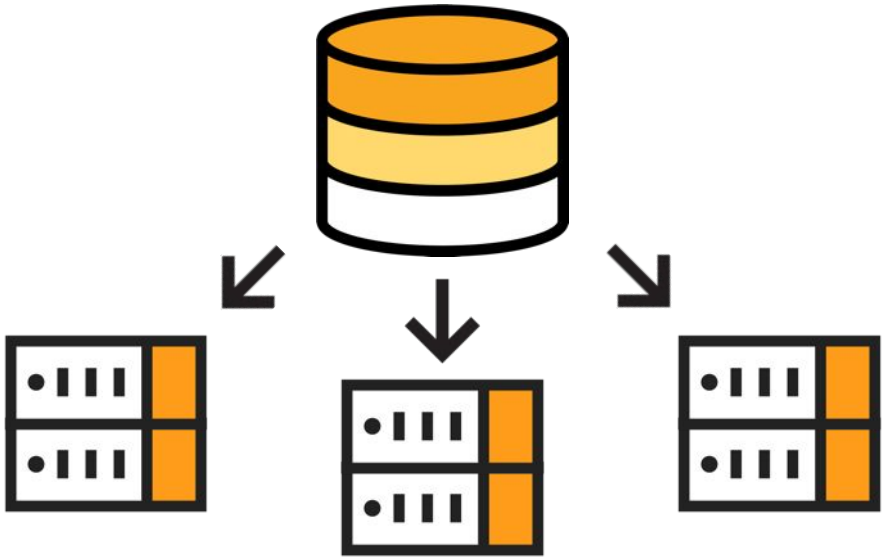
Puppet Enterprise

Puppet Tasks

Latest and Greatest

Puppet excels at modern automation

Model-driven approach helps scale your automation footprint across your organization



- Model your desired state
- Continually monitor and enforce desired configurations
- Automatically remediate any unexpected changes or drift

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But sometimes you just need to make point in time changes

Quickly troubleshooting systems & devices

Deploying one-off changes to individual systems

Executing sequenced actions as part of a deployment workflow

Stopping and restarting services where there may be multiple changes in state

Migrating databases

Introducing Puppet Tasks.

Easily automate ad hoc tasks.
Eliminate manual work.

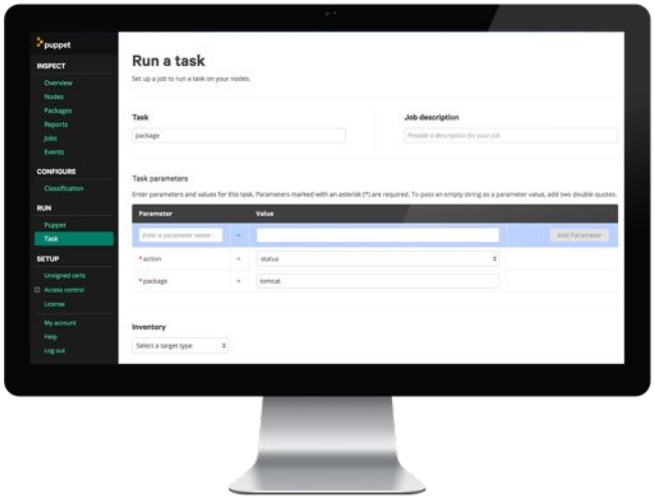
Puppet Tasks comes in two flavors

Puppet Bolt

Automate tasks across smaller infrastructures with a simple, agentless, extensible open source task runner

Puppet Enterprise Task Management

Get scale, governance and flexibility for larger organizations & infrastructures



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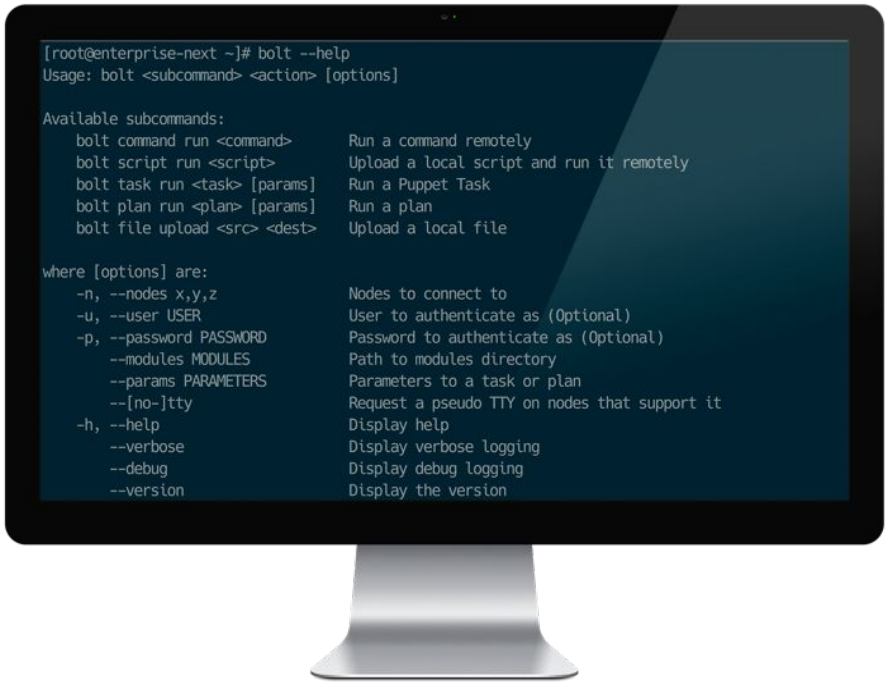
Puppet Bolt

Open source, agentless task runner to automate ad hoc work



- **Simple**
  - Quickly get started automating manual, repetitive work
- **Agentless**
  - Simply connect to devices remotely and execute scripts written in any framework
- **Extensible**
  - Start automating simple tasks and simplify adoption of Puppet Enterprise

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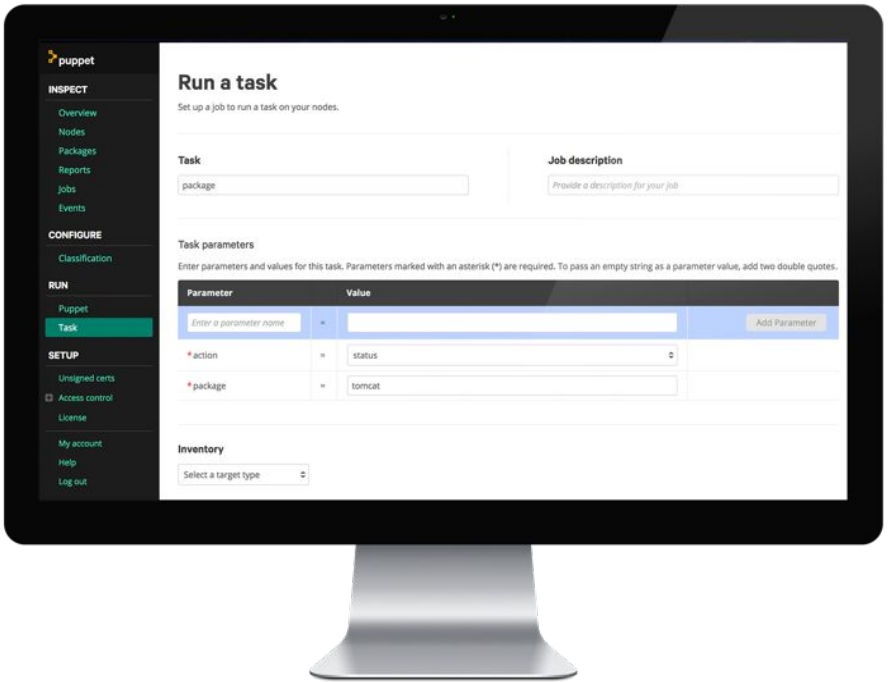
Puppet Enterprise Task Management

Powerful ad hoc task automation and visibility for larger infrastructures and teams



- **Scale**
  - Instantly run tasks across tens of thousands of nodes
- **Governance**
  - Control who runs which tasks
  - View audit histories of every action taken
- **Flexibility**
  - Run tasks from web UI, API or CLI
  - Filter and target infrastructure for task runs

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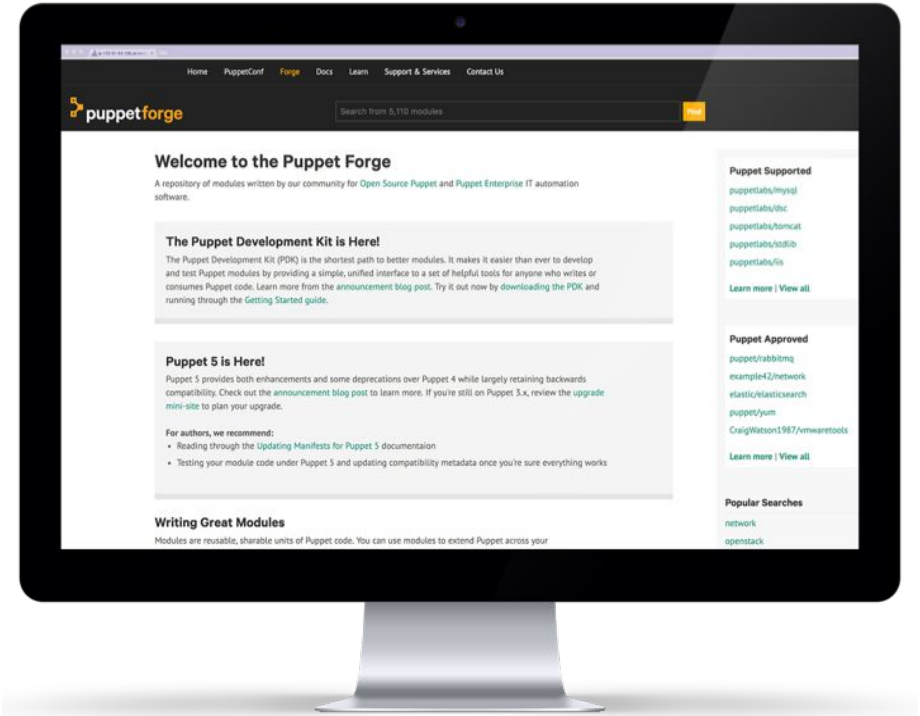
Get started faster with modules that enable tasks

Pre-written modules on Puppet Forge enable you to quickly begin automating



- Learn about Puppet Tasks
- Find modules with pre-built tasks
- Read in-line documentation about tasks
- Learn how to write tasks
- Contribute tasks as Puppet modules

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Tasks Summary

- An API for execution of scripts written in any language
- Tasks live in modules

bolt	Puppet Enterprise Task Manager
Does not need puppet server or agent	Needs Puppet Enterprise
Uses ssh or winrm	Works with the Puppet Orchestrator
Limited by machine running bolt	Scales to 100K nodes

DEMO

Puppet Tasks

Puppet Discovery

Latest and Greatest

The World is made up of Resources

Resources

Operating System

RHEL

Windows

Ubuntu

Solaris

AIX

…

Cloud Infrastructure

AWS

Azure

VMWare

OpenStack

Nutanix

…

Distributed Infrastructure

Kubernetes

Docker DataCenter

Mesos / DCOS

Splunk Enterprise

MySQL

…

Delivery Toolchain

Jenkins

Travis

Github Enterprise

Bitbucket Enterprise

Gitlab

…

3rd Party Resources

…

Discovery leads to **Insights** leads to **Action**

Discovery

Quickly identify all of the *things* that are running across your hybrid landscape

Discover Traditional Resources

Discover Cloud and Virtual Resources

Discover Containers and Cloud Native Resources

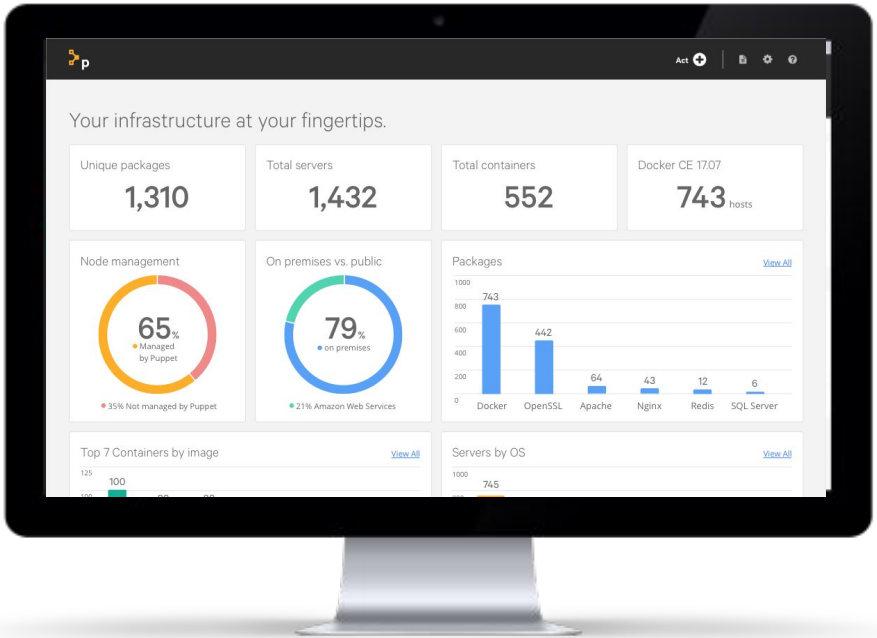
Insights

Action

Once you know what you have, manage it with puppet

Puppet Discovery

Discover what's running on your on-premises and cloud infrastructure



http://puppet.com/products/puppet-discovery

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diese etwas unpersönliche Weise v
In dieser Rolle werde ich Ihr techni

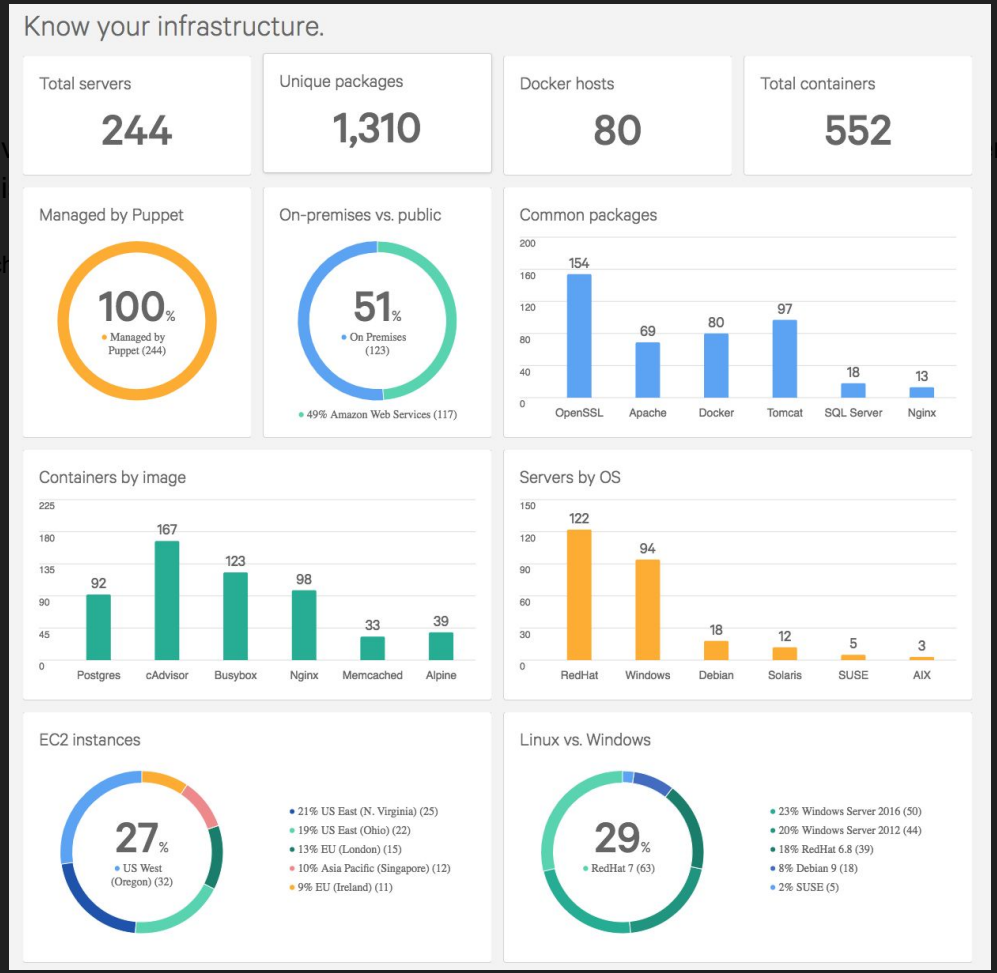
Ich hoffe Sie bald zu treffen und freue mich

Mit freundlichen Grüßen,

Dimitri Tischeko

Hallo <name>,

ich möchte mich gerne auf
r für die DACH Region bei Puppet.



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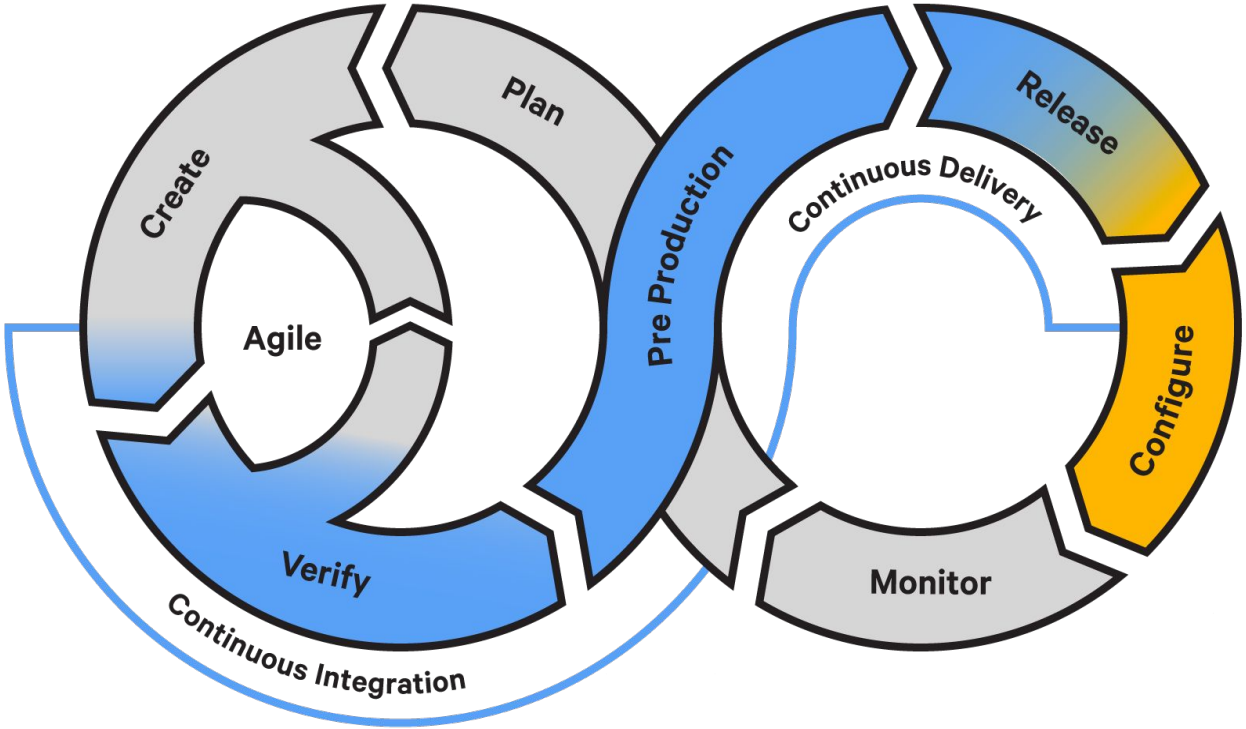
Puppet Discovery

Puppet Pipelines

Latest and Greatest

Puppet and Distelli

Orchestrating and automating the entire software delivery lifecycle



Puppet portfolio

Puppet + Distelli portfolio

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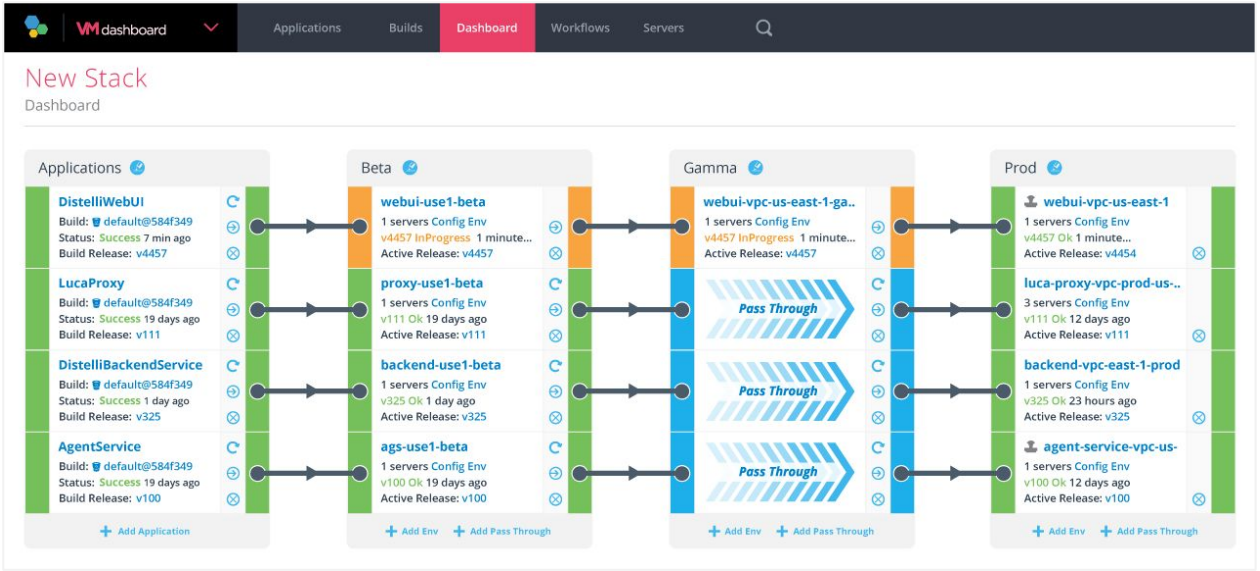
Puppet Pipelines for Applications

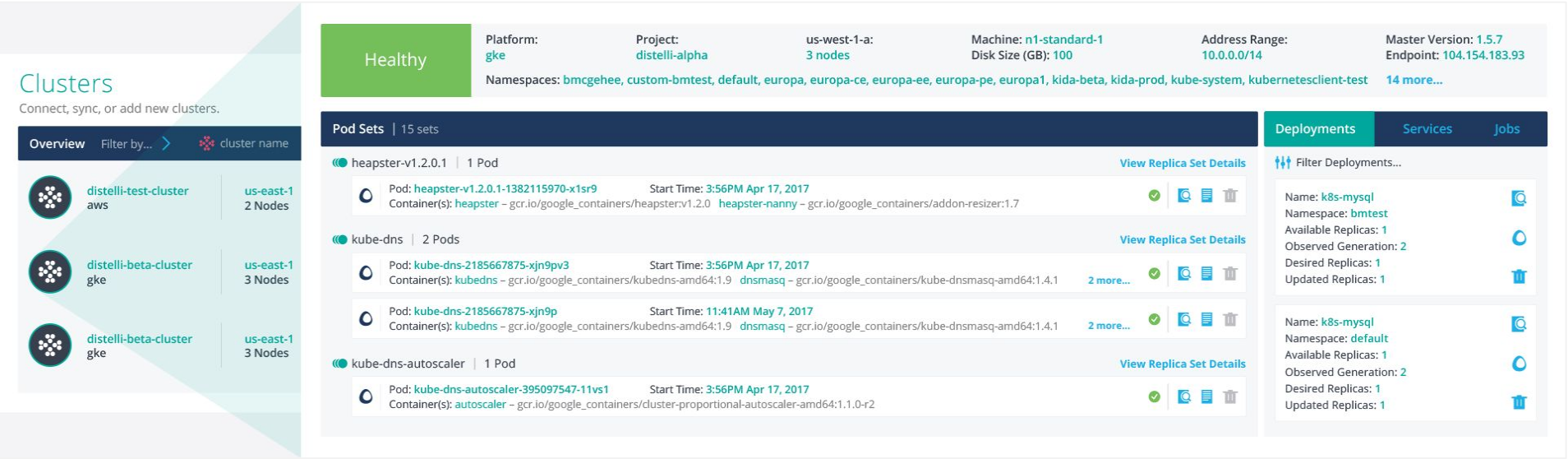
Build and deploy containers to virtual machines on any cloud



access controls and audit trails • automate deployments and pipelines with gates dashboards for complete visibility • integrated build system • cloud server management and provisioning • notifications to Slack, Hipchat and email • on cloud and on-premises

Puppet Pipelines for Containers

Build containers and deploy to Kubernetes on any cloud



create and manage Kubernetes clusters anywhere • deploy to Kubernetes • build Docker images • automate pipelines to Kubernetes clusters • track every event on your apps

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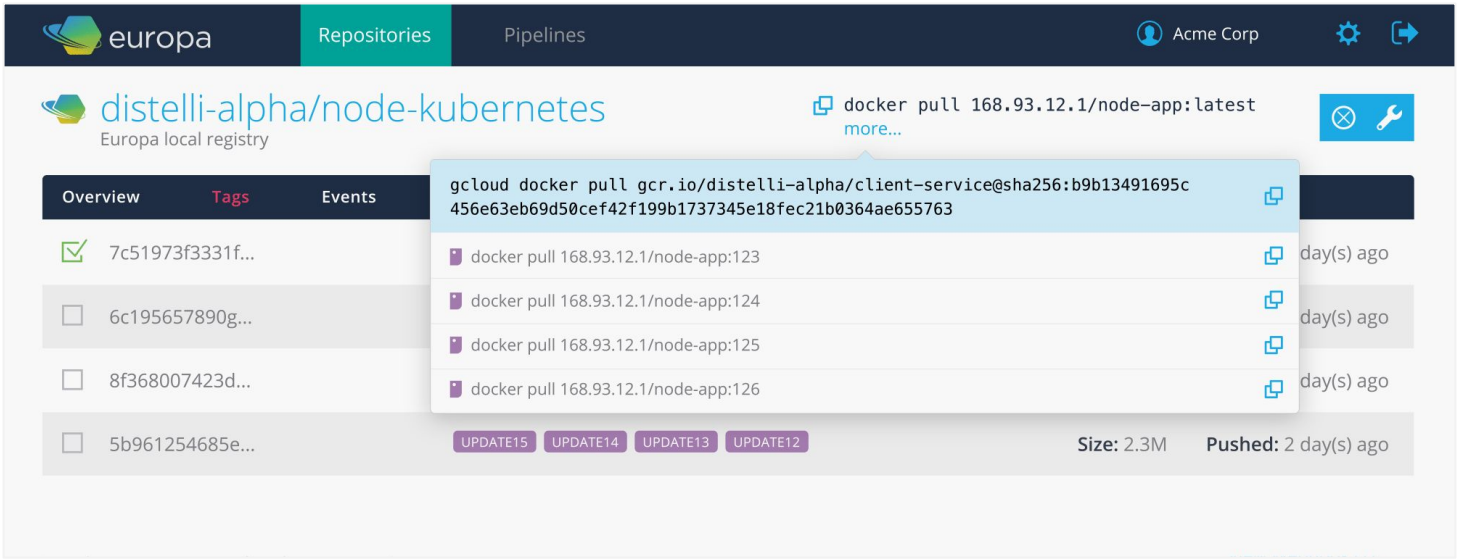
Puppet Container Registry

A Docker registry for the modern world



local and remote repositories • audit trails • automated push pipelines

access control • image locality • teams • single sign-on

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DEMO?

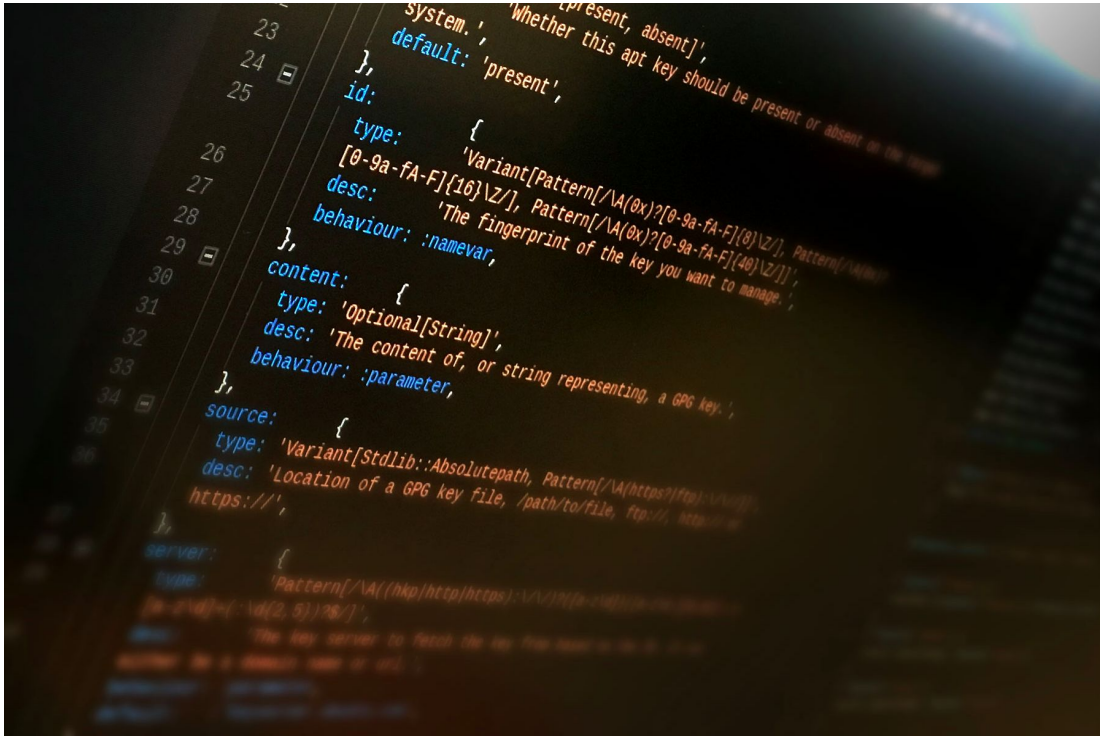
Puppet Pipelines

Puppet 5

Latest and Greatest

Platform 5

Download, implement and upgrade your Puppet platform more easily



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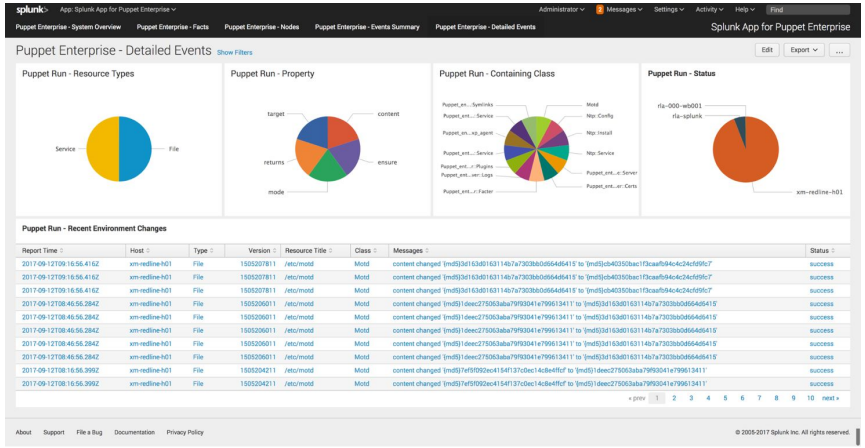
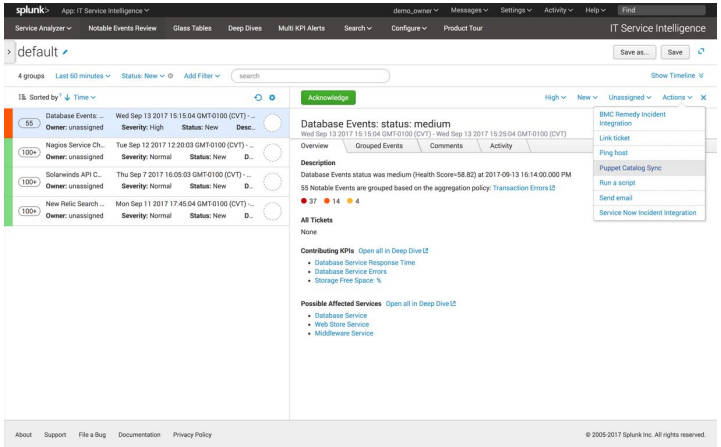
Splunk Partnership

Splunk and Puppet drive enterprise DevOps transformation with new integration and updated app



Splunk App and Add-On for Puppet Enterprise



Splunk ITSI Module for Puppet

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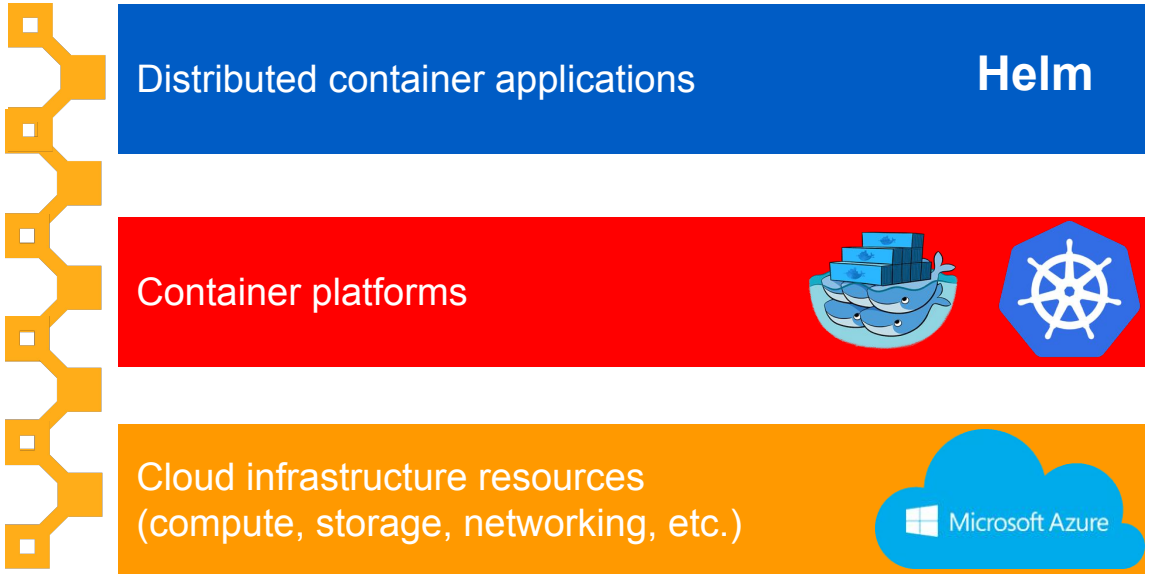
Cloud & Containers

Latest and Greatest

What we're delivering for customers

End-to-end management



AWS CloudFormation Template

Faster deployments of Puppet Enterprise

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Azure Marketplace image and module

Updated to Puppet Enterprise 2017.3 and supported in both Azure and AzureStack

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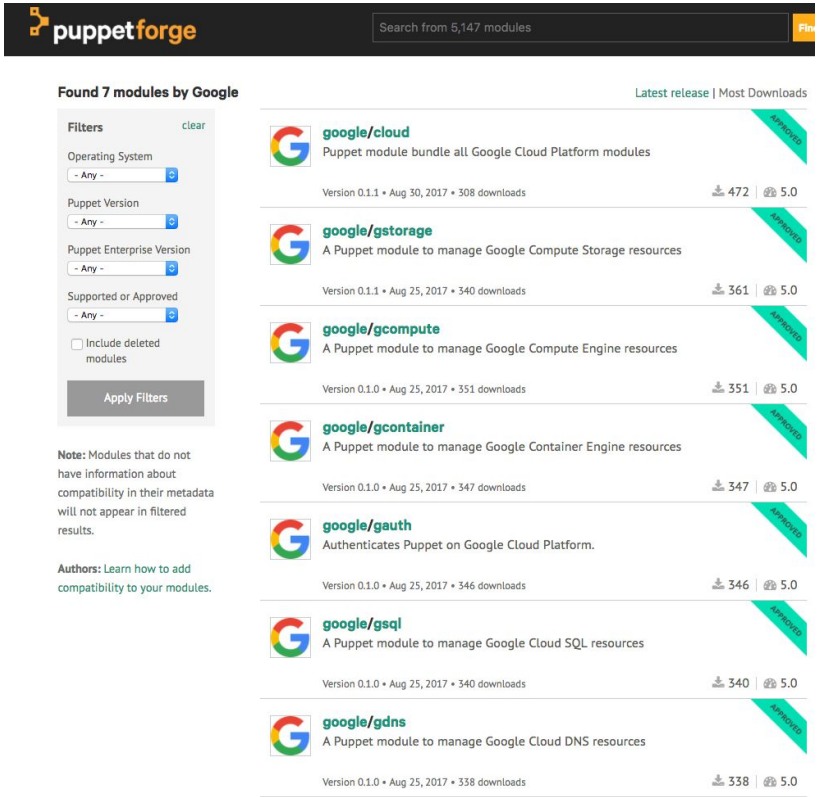
Google Cloud Platform

Updates and new additions to Google Cloud modules on Puppet Forge



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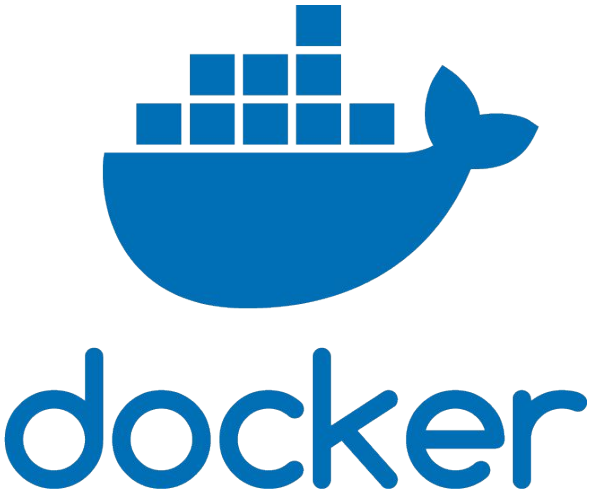
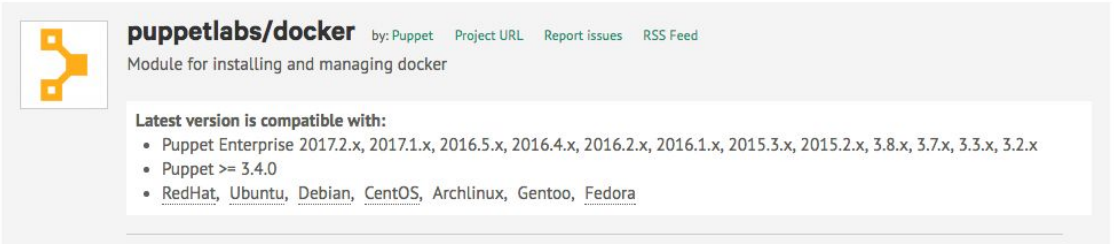
Docker module

The official Puppet | Docker module. Now supports Code Manager!





Kubernetes and Helm modules

Deploy and manage Kubernetes. End-to-end support.

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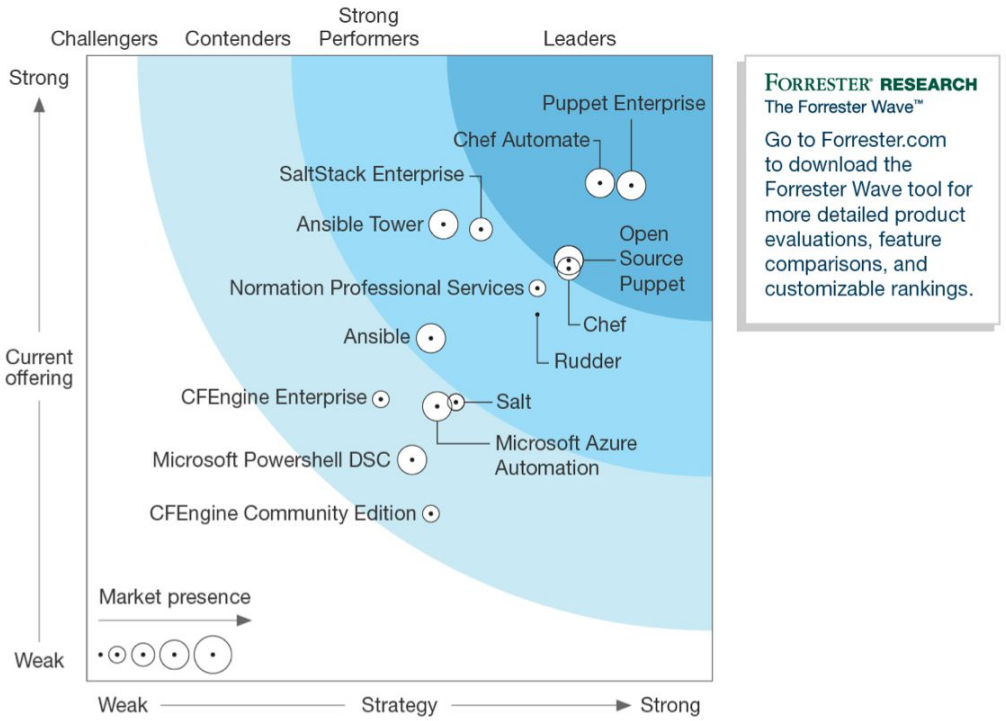
Cloud & Containers

Latest and Greatest

Last but not least

FIGURE 4 Configuration Management Software For Infrastructure Automation, Q4 '17



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The shortest path
to better software.