

Puppet: Introduction to another deployment tool

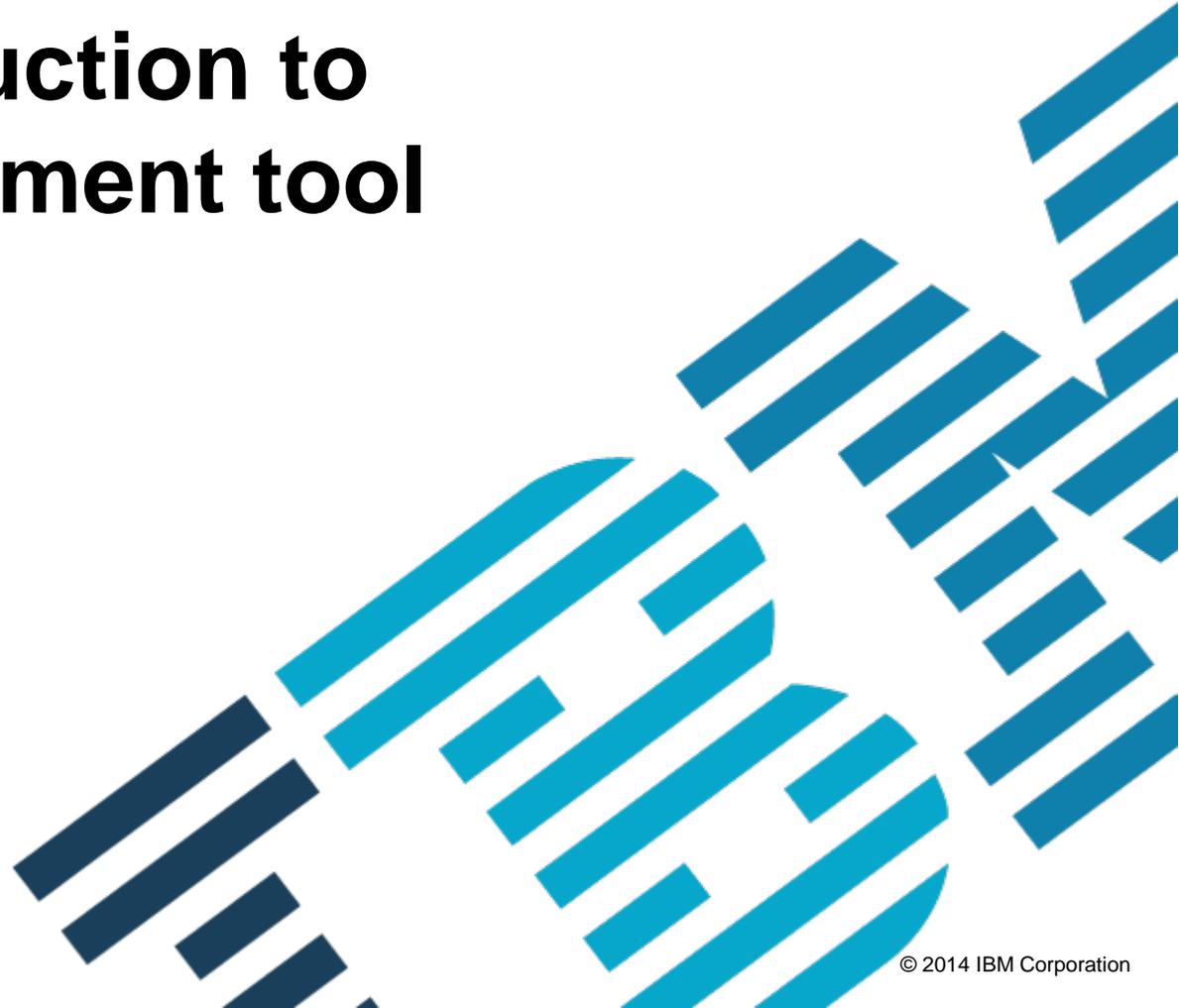


Table of contents

- Who am I (to use puppet)?**
- What is puppet?**
- What do I do with puppet?**
- Why to use puppet?**
- What are the common architectures for puppet?**
- How difficult is it to be able to use puppet?**
- Puppet in IBM**
- Let's go over some examples – What can be done with puppet?**
- Puppet code structure**
- Around puppet**

Who am I?

Who am I (to use puppet :))?

- UNIX system administrator**
- Using puppet for about 10 years for big or small companies**
 - **European Parliament (2000 assets)**
 - **Banking customer in Swiss Romande (300 assets)**

What is puppet?

What is puppet?

- YACMT: Yet Another Configuration Management Tool**
 - **Handle all kind of configuration items of an asset**
- Standardization tool**
 - **Consistency**
 - **Predictable**
 - **Flexible**
- Software ruby (third party) based**
- Puppet is a tool to manage:**
 - **UNIX / Windows servers**
 - **Network equipments**
 - **And more and more**

What is puppet?

- Reporting capability**
- Monitoring capability**
- Reduce support / cost**

What do I do with puppet?

What do I do with puppet? (Not exhaustive list)

- Deployment of all IBM agents tool**
 - **TSM**
 - **BigFix**
 - **TWS (scheduler)**
 - **TPC (Storage information collection)**
 - **ITM**
- System configuration**
 - **Ssh**
 - **Users**
- Server security**
 - **ITCS104, CIS**
 -

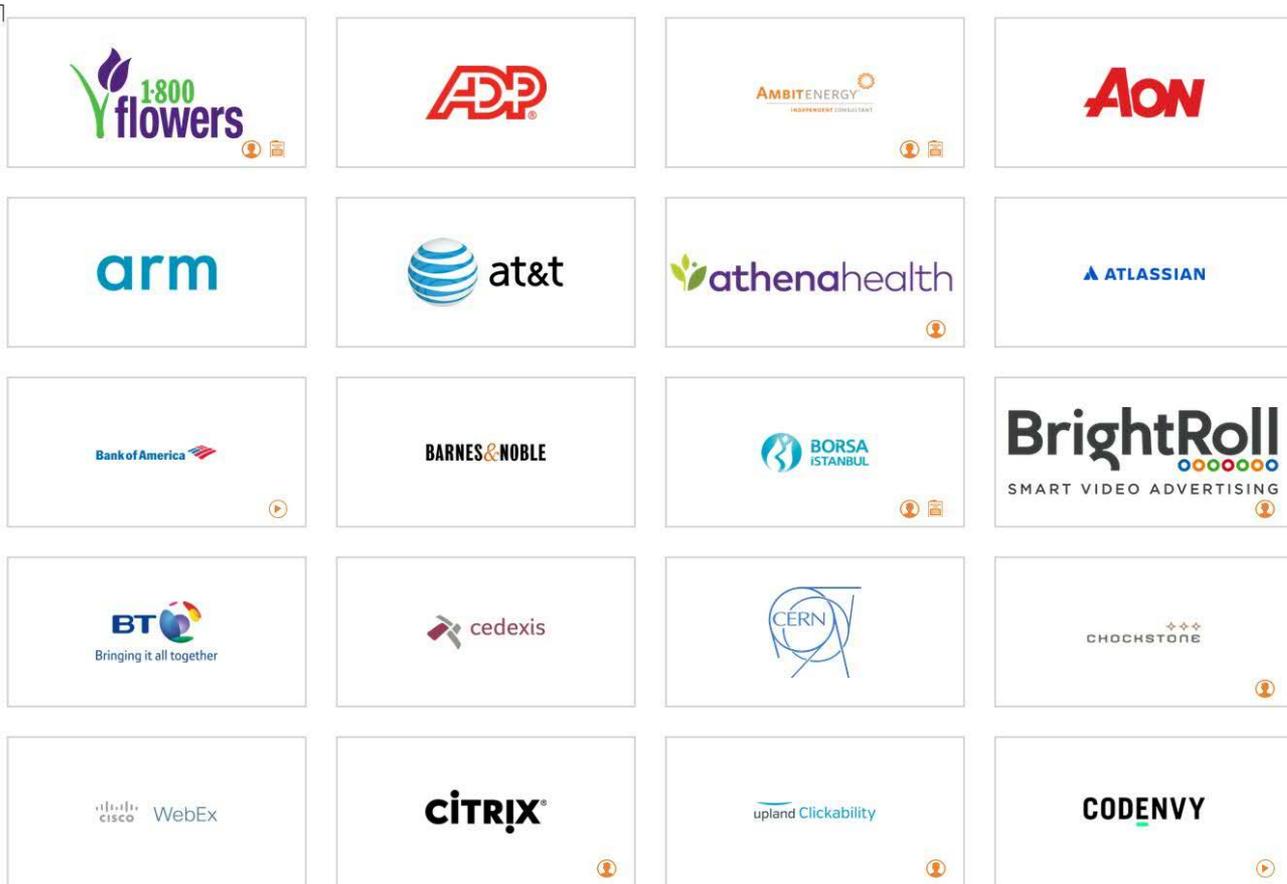
What do I do with puppet?

- Compliance (Check list activation, ...)**
- VG, LV, FS management**
- Middleware/DBA layer**
 - **WebSphere**
 - **Oracle**
 - **IHS (IBM HTTP server)**
 - **Tomcat**
 - **MQ Series / MQ FTE**

Why to use puppet?

Why to use puppet?

❑ But who is using puppet?

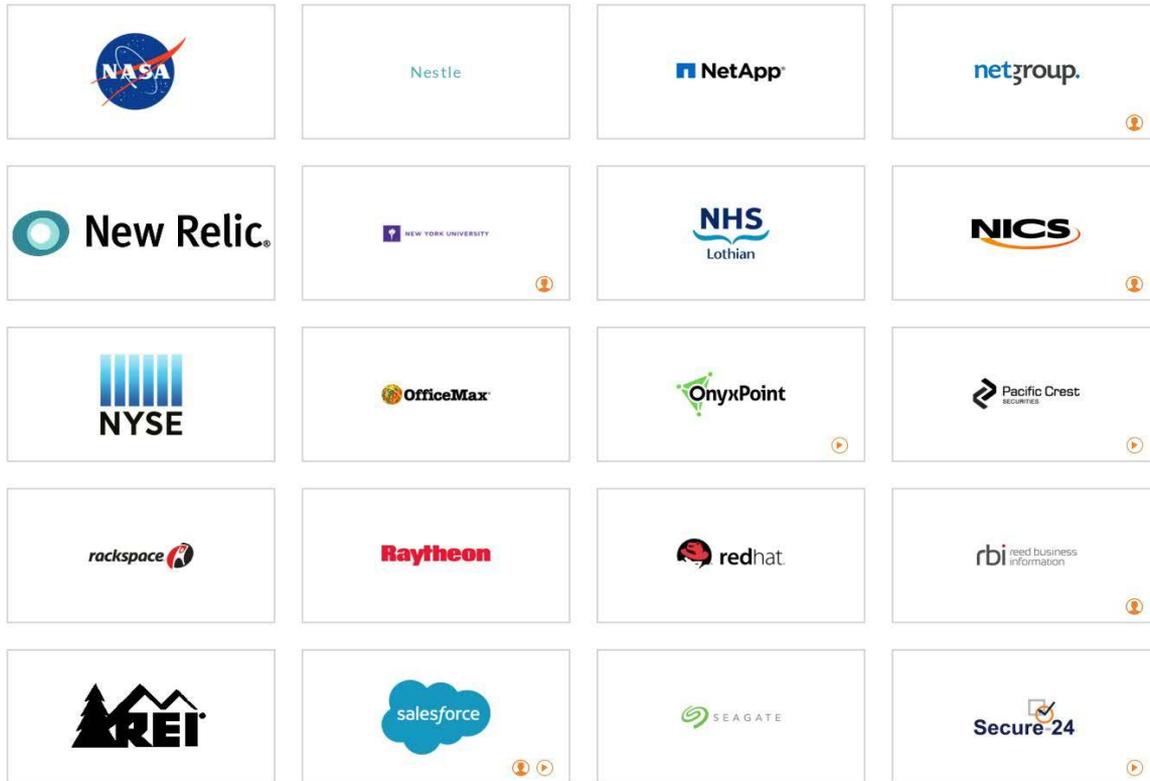


Do I have



Why to use puppet?

❑ But who is using puppet?



Let's p

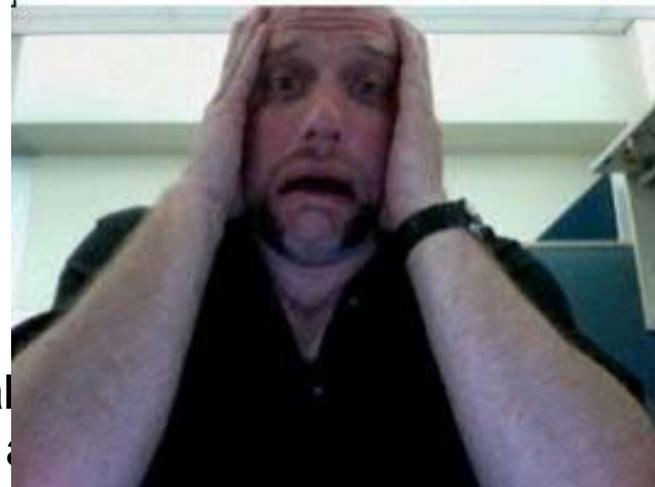
tes :D



Why to use puppet?

Before using puppet

-
-
-
-
-
-
-
- **Why the hell I have to do this manual**
- **Why the hell my 200 zillions servers**
- **Why and why and why?**
- **Ok, I will connect to all servers to apply the same setting on them?**
Thanks god I am paid for it!



Why to use puppet?

- Where (asset like) can I use puppet?**
 - **Not free version**
 - https://puppet.com/docs/pe/2017.3/installing/supported_operating_systems.html
 - **Free version:**
 - **Everywhere ruby (version \geq 1.8) can be installed (It covers all OS version not listed in previous email... Including AIX 5.3 and Solaris 8 :D)**
- (FYI) History:**
 - **Designed first for Linux (All kind of flavours)**
 - **And thus indirectly the network equipments**
 - **Then Solaris**
 - **Then AIX**
 - **Then HP-UX, then, then....**
-

Why to use puppet?

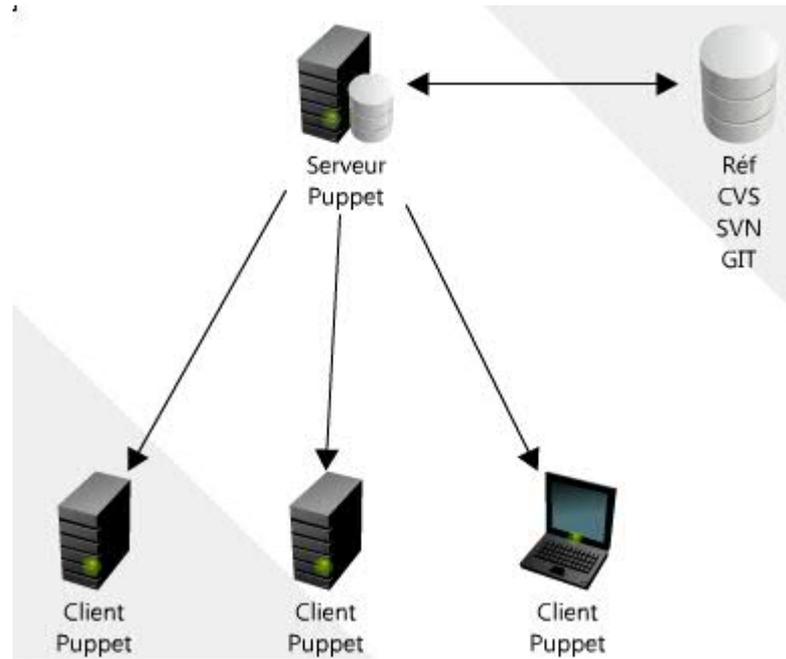
- What do I need to run puppet**
 - **Ruby**
 - **Facter**
 - **And.... Puppet**
- Puppet is by default on RedHat 7 and Solaris 11**
-

Puppet architecture

Puppet architecture

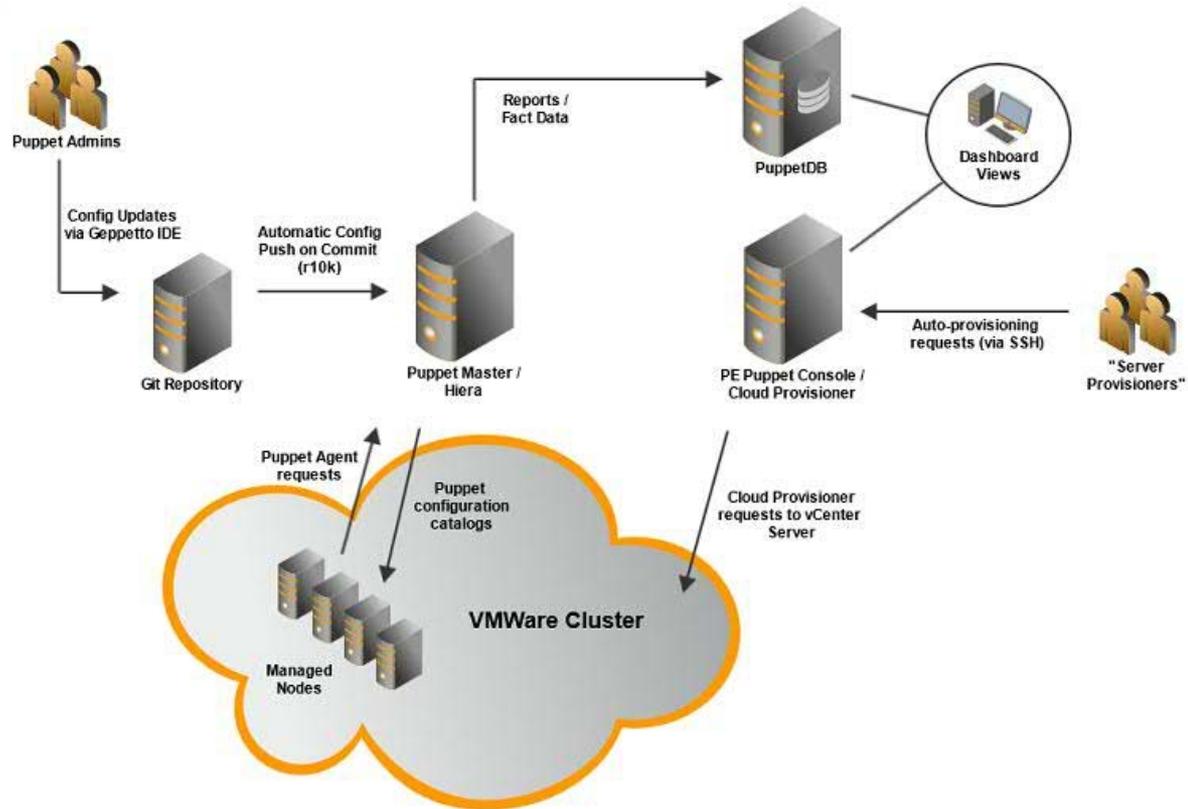
❑ Master ↔ agent architecture

-



Puppet architecture

❑ Real life architecture



Setup time?

How long does it take to setup puppet

Let's demo it

-

How long does it take to setup puppet

- ❑ **Different ways to run puppet**
 - **Daemon**
 - **One time execution**
 - **Planned executions**
 -

Puppet in IBM

Puppet in IBM

- ❑ **Puppet is not owned by IBM. Chef vs puppet**
- ❑ **.... nevertheless, IBMers use it**
 - **Code is done to better integrate AIX:**
 - **Integration of modules (I.e code) around VG, LV and FS management (Lab in Egypt)**
 - **It is part of the architecture infrastructure of a brand new customer**
 - **VRA → PowerVC → Puppet**
 - **Personally: in use since 2011 for banking customer**
 -

Some examples

Some examples

- Installation of package**
- SSH management**
- Deployment of IHS (IBM HTTP Server)**

-

Puppet code structure

Puppet code structure

- Module → classes → references**
- Node definition (your puppet agent name)**
 - **Define what classes I can run on my agent**
- Some examples of codes**
 -

Around puppet

Around puppet

❑ Puppet dashboard



Puppetboard | Overview | Nodes | Facts | Reports | Metrics | Inventory | Catalogs | Query | Environments ▼ v0.1.3

2 nodes
with status failed

0 nodes
with status pending

5 nodes
with status changed

55 nodes
unreported in the last 96 hours

201
Population

17086
Resources managed

78
Avg. resources/node

Nodes status detail (62)

Status	Hostname	Report
CHANGED	...	Apr 22 2016 - 15:32:23
CHANGED	...	Apr 22 2016 - 15:25:52
CHANGED	...	Apr 22 2016 - 13:39:48
FAILED	...	Apr 22 2016 - 12:24:50
FAILED	...	Apr 21 2016 - 19:03:49
CHANGED	...	Apr 21 2016 - 14:28:21
CHANGED	...	Apr 20 2016 - 12:26:58
UNREPORTED	...	Apr 18 2016 - 12:37:41
UNREPORTED	...	Apr 17 2016 - 19:48:57
UNREPORTED	...	Apr 16 2016 - 11:41:24
UNREPORTED	...	Apr 15 2016 - 13:53:29
UNREPORTED	...	Apr 14 2016 - 13:40:50
UNREPORTED	...	Apr 14 2016 - 13:34:06
UNREPORTED	...	Apr 14 2016 - 11:03:49
UNREPORTED	...	Apr 14 2016 - 09:51:07
UNREPORTED	...	Apr 13 2016 - 10:31:41
UNREPORTED	...	⊘

Copyright © 2013-2016 Puppet Community.
Live from PuppetDB.

Around puppet

❑ Foreman to integrate puppet



Foreman
Dashboard
Hosts ▾
Reports ▾
Facts
Audits
Statistics
More ▾

Overview

Generated at 14 Nov 19:48

Description	Data
Hosts that had performed modifications	6
Hosts in Error State	1
Good Host Reports in the last 30 minutes	52 / 81 hosts (64%)
Out Of Sync Hosts	27
Hosts With No Reports	1
Hosts With Alerts Disabled	0

Puppet Clients Activity Overview

Category	Count
OK	46
Out of sync	27
Active	6
Error	1
No report	1
Notification disabled	0

Run Distribution in the last 30 minutes

Time Interval	Number Of Clients
30 minutes	10
27 minutes	5
24 minutes	8
21 minutes	3
18 minutes	5
15 minutes	3
12 minutes	3
9 minutes	4
6 minutes	9
3 minutes	9