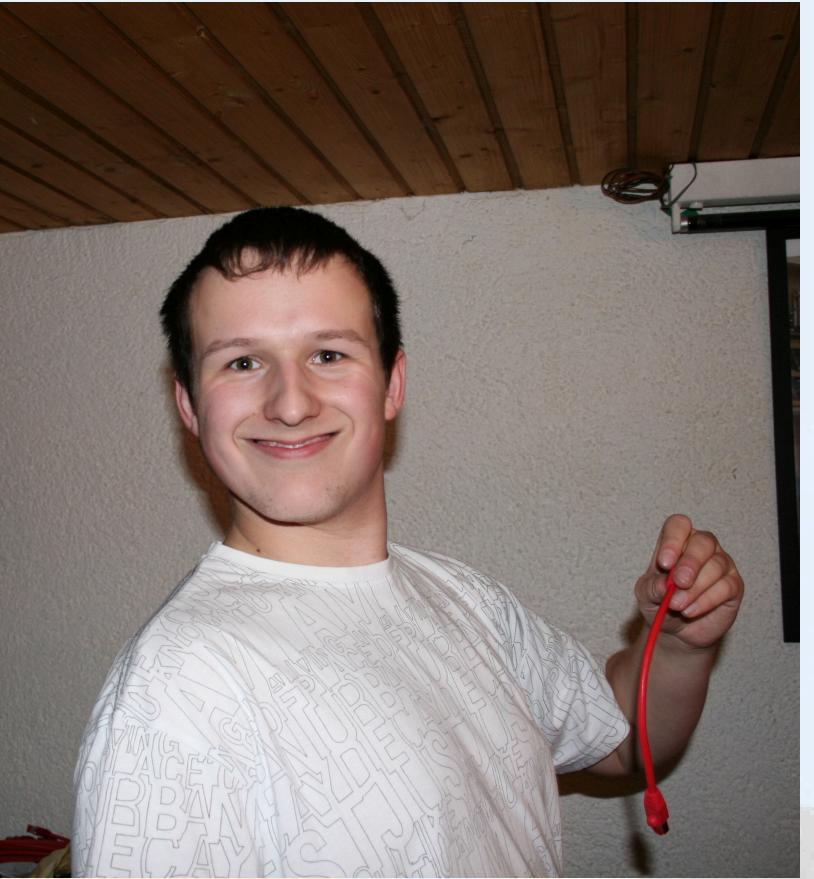


Puppet Enterprise ->  
OpenVox & Foreman

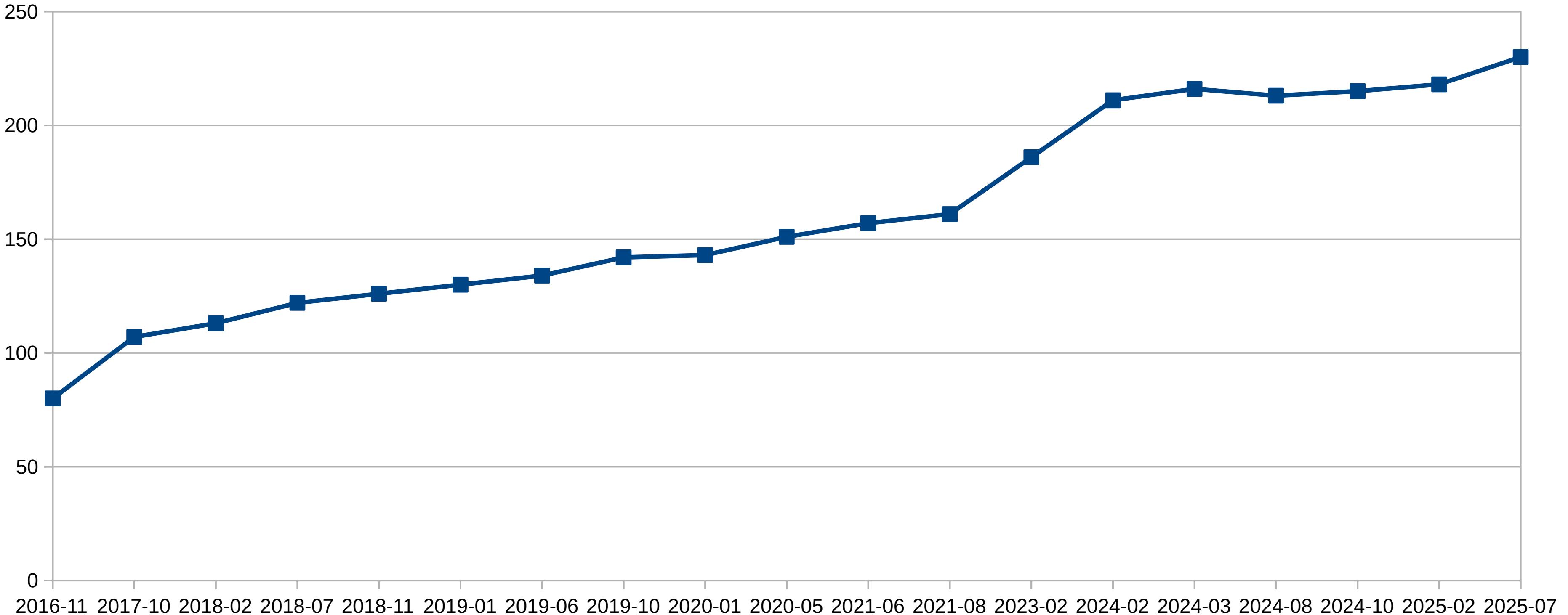
## \$ whoami

- Tim 'bastelfreak' Meusel
- Puppet Contributor since 2012
- Merging stuff on [Vox Pupuli](#) (Puppet Community) since 2015
- Vox Pupuli Project Management Committee member
- Senior IT Automation Consultant at [betadots](#)
- Foreman Contributor since 2014



Vox Pupuli &  
OpenVoxProject

## Vox Pupuli Community growth over time



# OpenVoxProject

- OpenVoxProject is a new GitHub organisation
- Same people as Vox Pupuli
- Split orgs to make permission management easier
- Makes it easier to move one or the other to the Linux Foundation or similar, if we ever want to do that



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# OpenVoxProject

- OpenVoxProject is a new GitHub organisation
- Same people as Vox Pupuli
- Split orgs to make permission management easier
- Makes it easier to move one or the other to the Linux Foundation or similar, if we ever want to do that
- We continue the open source development of Bolt, Facter, Puppet Agent/DB/Server
  - Perforce stopped their work on it last November and continues in a private & commercial fork

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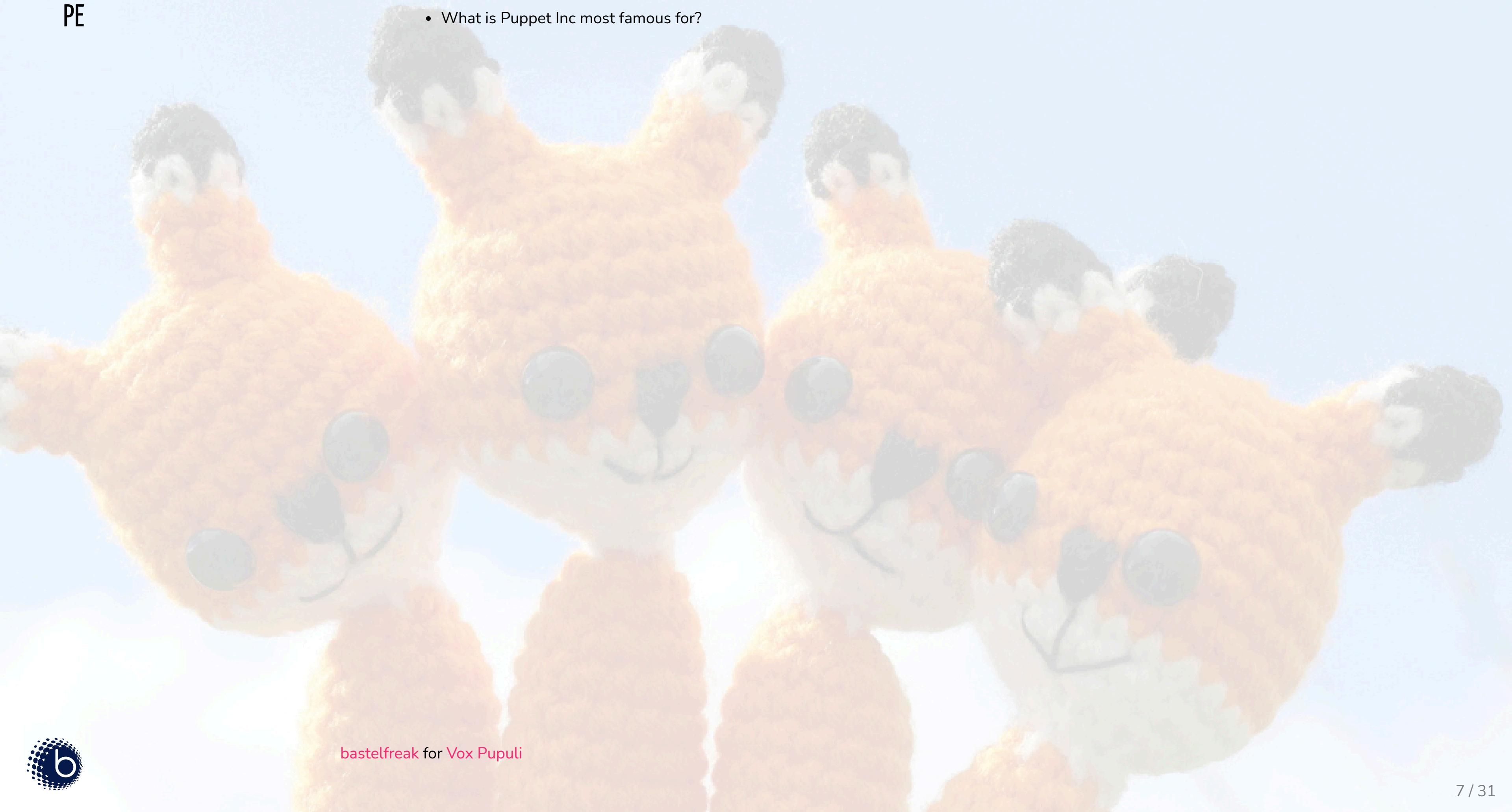


# Puppet Enterprise

also known as PE

PE

- What is Puppet Inc most famous for?

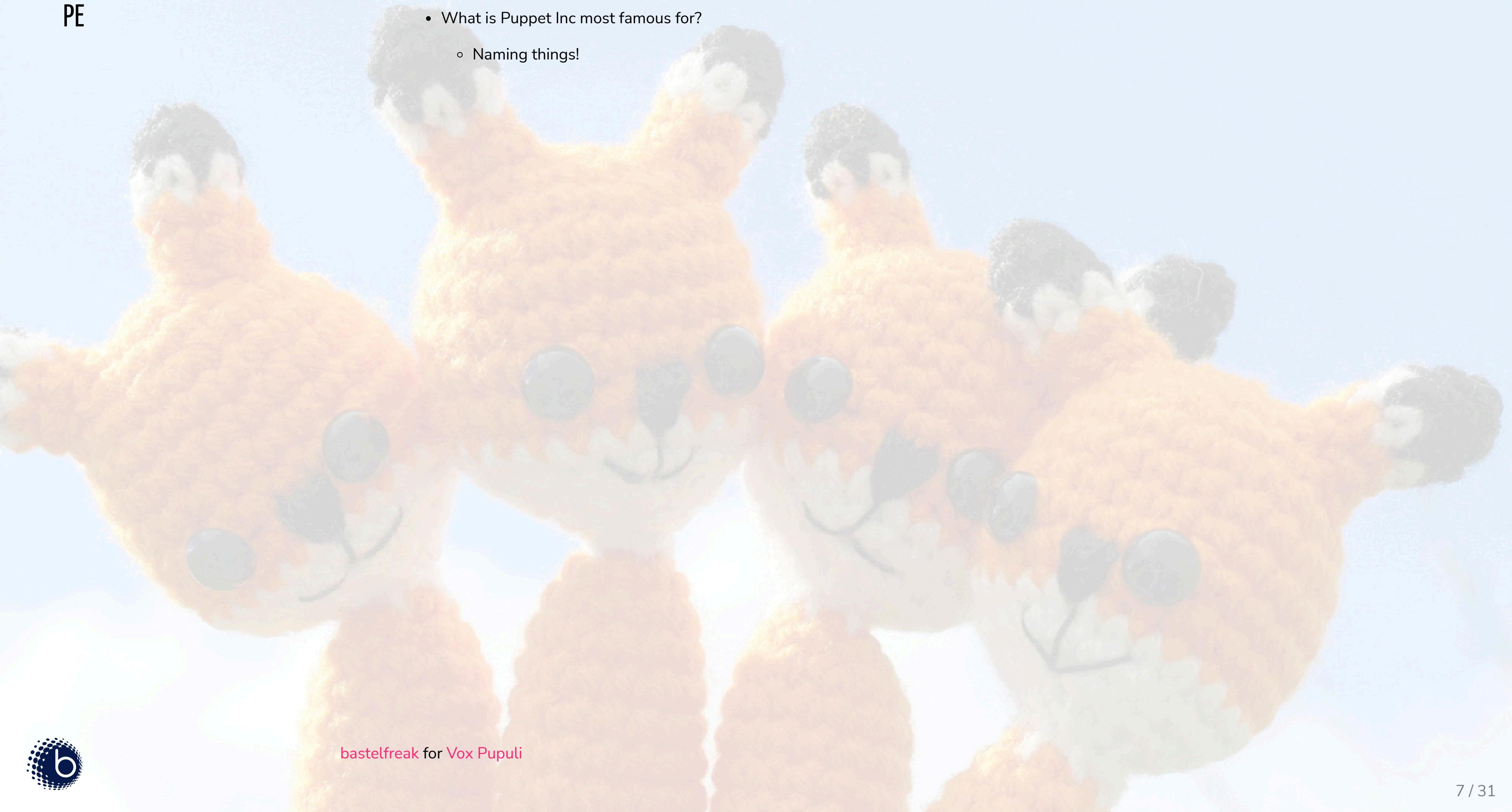


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PE

- What is Puppet Inc most famous for?
  - Naming things!



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PE

- What is Puppet Inc most famous for?
  - Naming things!
- What do you think is the "PE Console"?



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Puppet  
Enterprise

# Sign In

USERNAME:

Enter username

PASSWORD:

Enter password

Sign in



WAT



## 2 Nodes run in enforcement

-  0 [with failures](#)
-  0 [with corrective changes](#)
-  0 [with intentional changes](#)
-  2 [unchanged](#)

## 0 Nodes run in no-op

-  0 [with failures](#)
-  0 [would have corrective changes](#)
-  0 [would have intentional changes](#)
-  0 [would be unchanged](#)

Run status	No-op mode	Job ID	Last report	Node name
	-	-	<a href="#">2025-07-15 15:54 +02:00</a>	<a href="#">pe2.tim.betadots.training</a>
	-	-	<a href="#">2025-07-15 15:51 +02:00</a>	<a href="#">pe.tim.betadots.training</a>
	-	<a href="#">189</a>	<a href="#">2025-07-15 14:33 +02:00</a>	<a href="#">server3.tim.betadots.training</a>
	-	<a href="#">189</a>	<a href="#">2025-07-15 14:33 +02:00</a>	<a href="#">server1.tim.betadots.training</a>
	-	<a href="#">189</a>	<a href="#">2025-07-15 14:33 +02:00</a>	<a href="#">server2.tim.betadots.training</a>



Previous

1

Next

▶ [Add group...](#)

- [All Nodes](#) production

+ [All Environments](#) production Env group | Environment group parent and default

[consul\\_prod](#) consul

- [PE Infrastructure](#) production

+ [PE Agent](#) production

[PE Certificate Authority](#) production

[PE Console](#) production

[PE Database](#) production

+ [PE Master](#) production

[PE Orchestrator](#) production

[PE PuppetDB](#) production

+ [PE Patch Management](#) production | Apply the pe\_patch class to specific nodes in your infrastructure to enable patch management.



## Class: puppet\_enterprise::profile::agent

Parameter	Value	
Parameter name	=	<input type="text"/> <a href="#">Add to node group</a>
manage_puppet_conf	= true	<a href="#"> Edit</a> <a href="#"> Remove</a>
pcp_broker_list	= ["pe.tim.betadots.training:8142"]	<a href="#"> Edit</a> <a href="#"> Remove</a>
primary_uris	= ["pe.tim.betadots.training:8140"]	<a href="#"> Edit</a> <a href="#"> Remove</a>
server_list	= ["pe.tim.betadots.training:8140"]	<a href="#"> Edit</a> <a href="#"> Remove</a>
		<a href="#"> Remove this class</a>



PE

- Bolt tasks: executable script/binary + json file with metadata

Bolt

Tasks?!



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PE

Bolt

Tasks?!

- Bolt tasks: executable script/binary + json file with metadata

```
{  
  "puppet_task_version": 1,  
  "supports_noop": false,  
  "description": "Rename branch",  
  "parameters": {  
    "control_repo_branch": {  
      "description": "Control-repo branch",  
      "type": "String[1]"  
    }  
  }  
}
```

```
#!/bin/bash  
pushd /tmp/control-repo || exit  
git branch -m production old_prod  
git branch -m "$PT_control_repo_branch" production
```



PE

Bolt

Plans?!

- Bolt Plans are written in Puppet DSL
- Plans apply puppet code, execute Bolt or Puppet functions, start tasks or other plans

```
# @param message the string we want to paste to STDOUT
plan test::foo (
  String[1] $message = 'Hi VoxConf!',
) {
  out::message($message)
  run_task('puppet_agent::install', get_targets('all'))
}
```



PE

- Bolt supports inventory- and transport plugins

Bolt

Plugins?!



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PE

Bolt

Plugins?!

- Bolt supports inventory- and transport plugins
- Uses WinRM or SSH by default as transport protocol
  - Also native support for Docker, lxd, Jails, podman

PE

Bolt

Plugins?!

- Bolt supports inventory- and transport plugins
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  - Also native support for Docker, lxd, Jails, podman
- Most used inventory plugin: PuppetDB



PE

Bolt

Plugins?!

- Bolt supports inventory- and transport plugins
- Uses WinRM or SSH by default as transport protocol
  - Also native support for Docker, lxd, Jails, podman
- Most used inventory plugin: PuppetDB
- There is also a Foreman inventory plugin! [forge.puppet.com/modules/foreman\\_inventory](https://forge.puppet.com/modules/foreman_inventory)

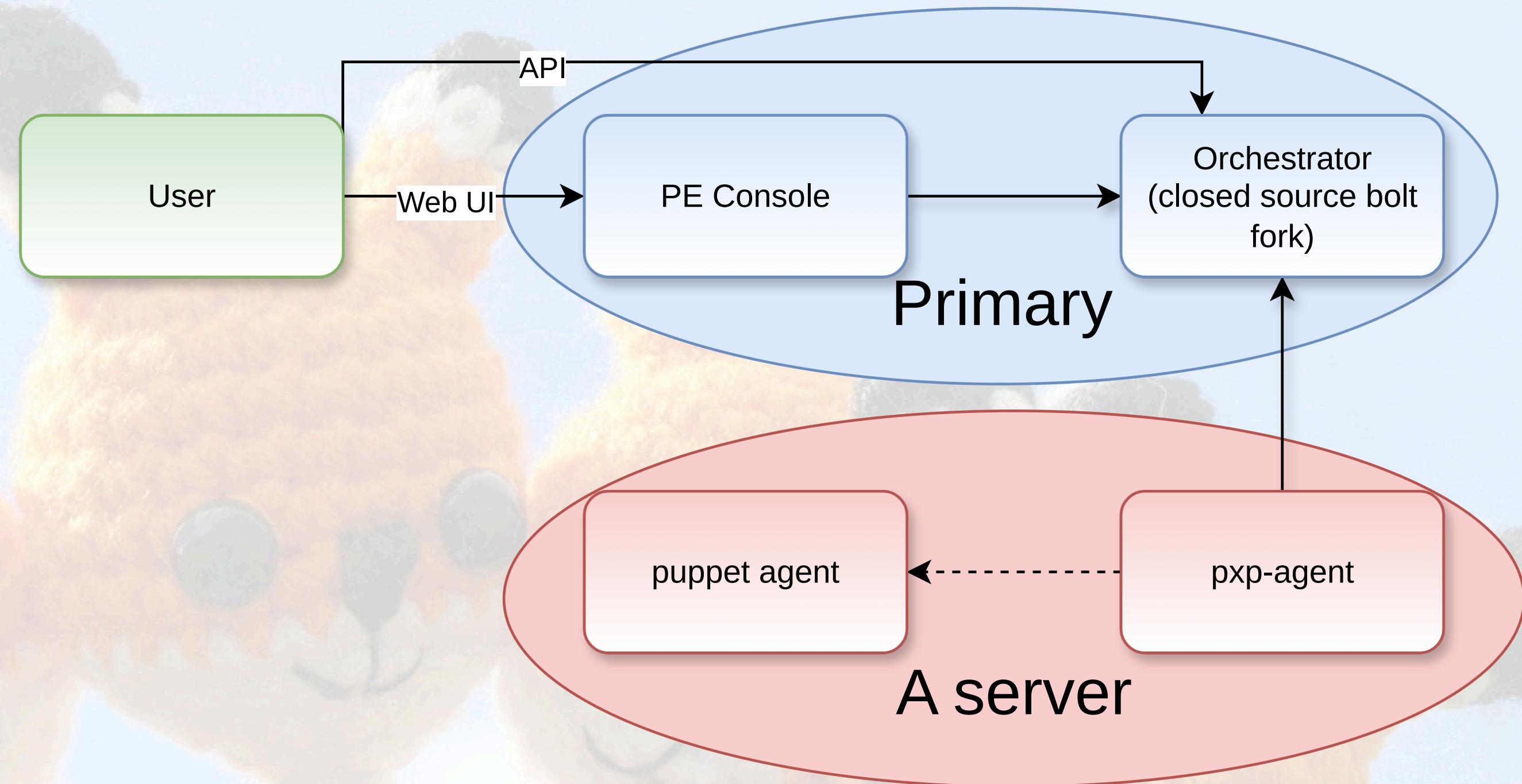


Bolt is the missing part in the ecosystem for imperative workflows and orchestration  
It combines scripts and Puppet code

PE

Bolt

PE & Bolt

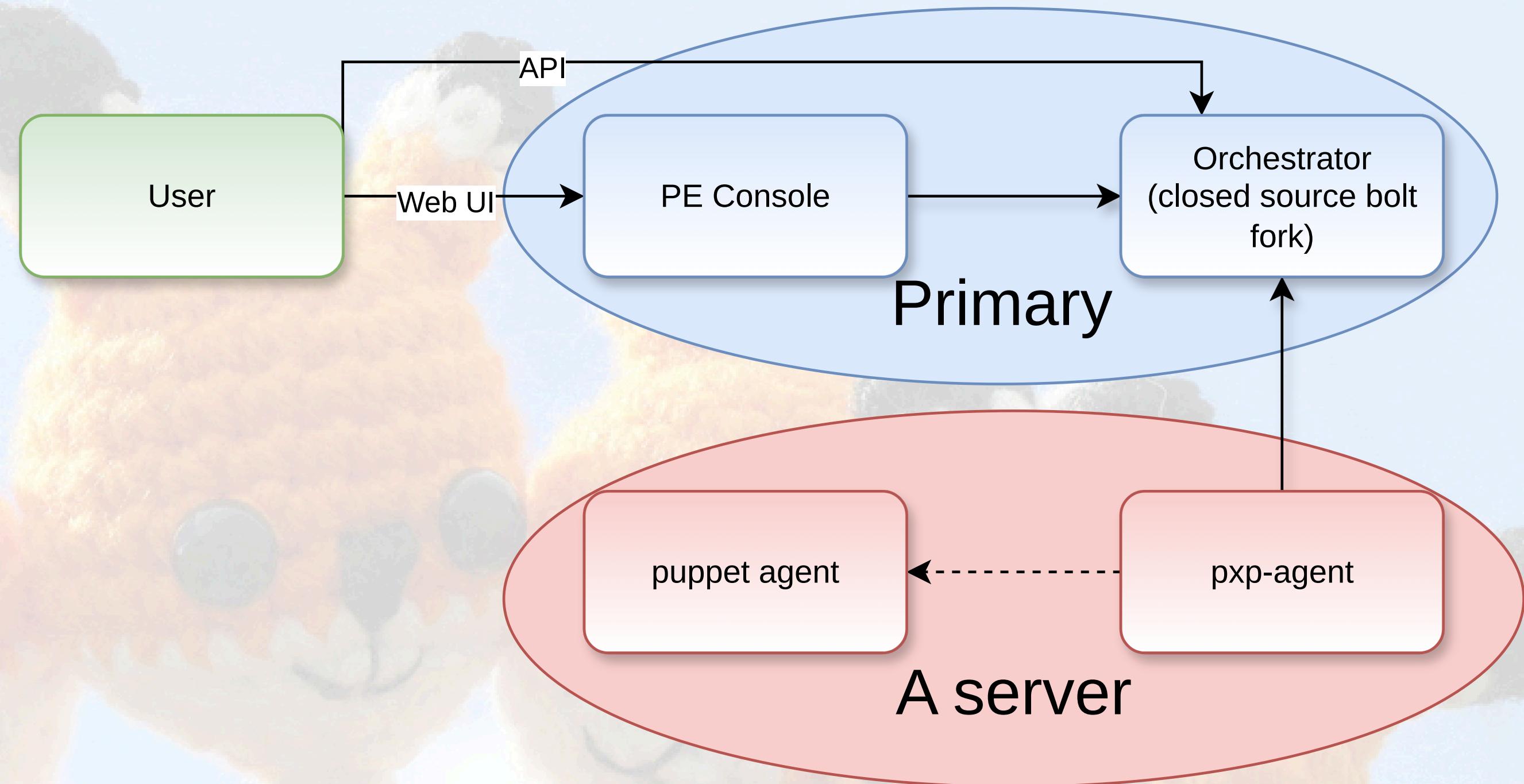


- Orchestrator can run Puppet tasks and Plans
- Basically an API & Web UI for bolt

PE

Bolt

PE & Bolt



- Orchestrator can run Puppet tasks and Plans
- Basically an API & Web UI for bolt
- Similar concept as the remote execution within Foreman!

How do we  
migrate?

PE

Bolt

PE & Bolt

Marriage

Perforce Puppet  
Agent

PE Primary

Puppetserver

PuppetDB

Orchestrator

PE "Console"

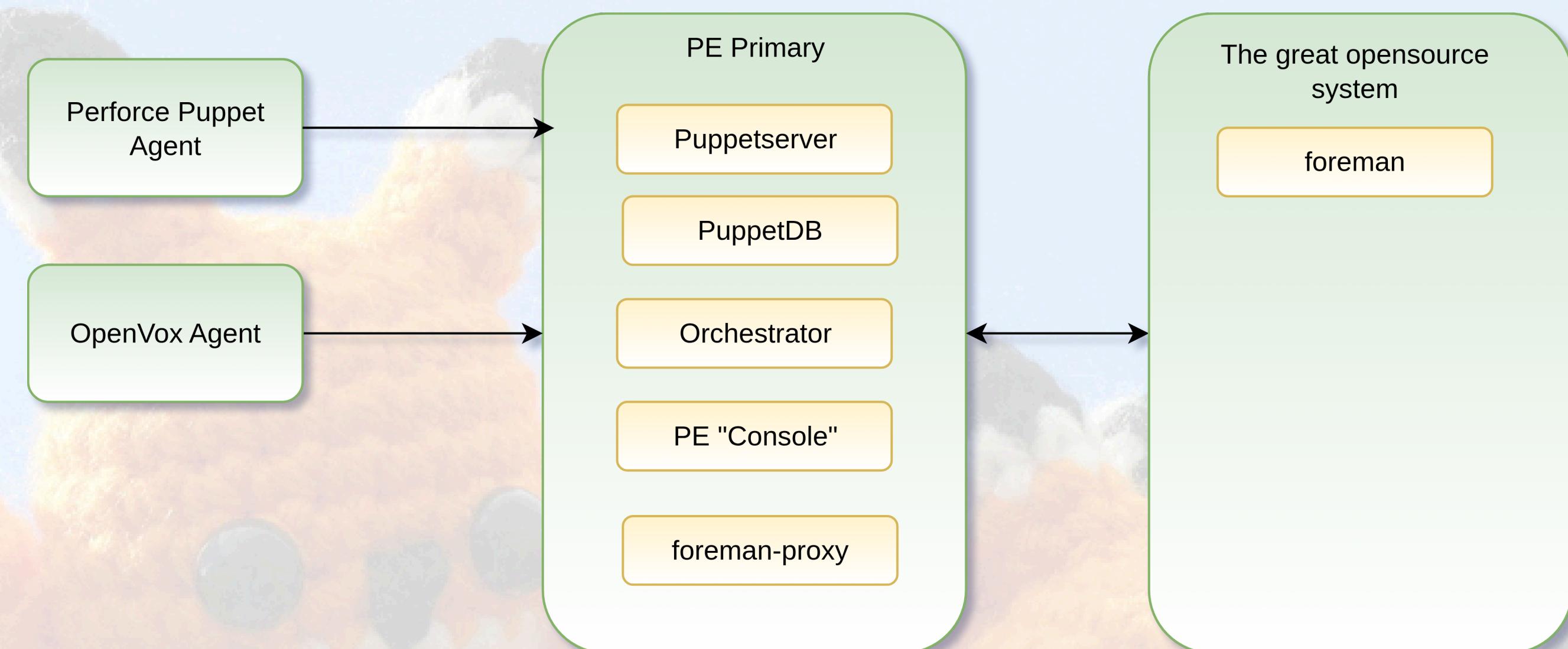


PE

Bolt

PE & Bolt

Marriage



- Configure foreman-proxy on PE infra
- PE uses `pe-puppet` user, not `puppet`, supported by [theforeman/foreman\\_proxy 28.0.0](#)
- PE is still the ENC
- Foremans `node.rb` pushes facts to foreman, PE support in [theforeman/puppserver\\_foreman 4.1.0](#)



PE

Bolt

PE & Bolt

Marriage

```
# https://github.com/puppetlabs/puppet-enterprise_issues/issues/55
ini_setting { 'enable reporting into Foreman':
  ensure  => 'present',
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  setting => 'reports',
  value   => 'puppetdb,foreman',
  section => 'master',
  notify   => Service['pe-puppetserver'],
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- we need to tell PE to use the foreman report processor
- Perforce renamed master section to server years ago



PE

Bolt

PE & Bolt

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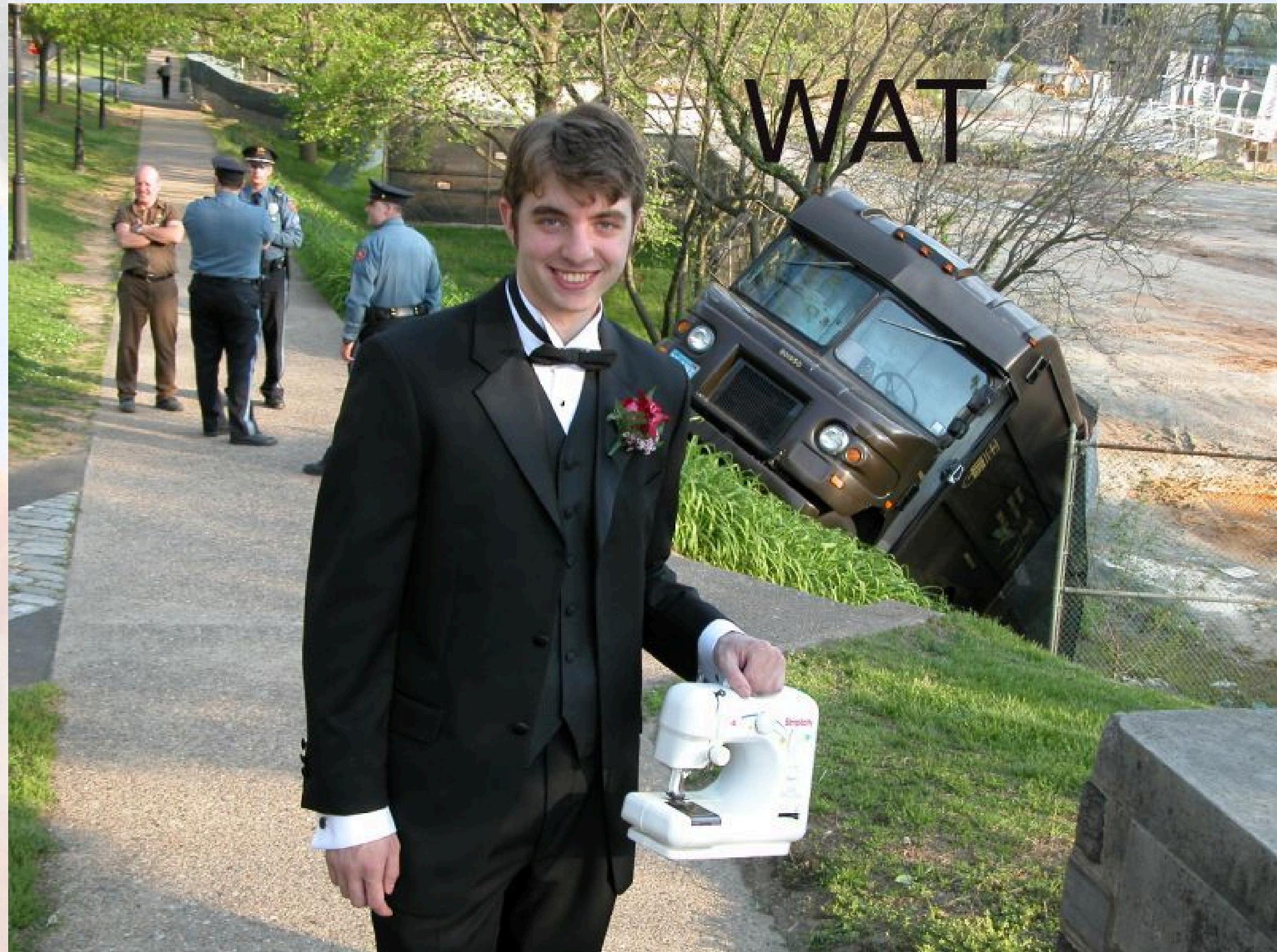


PE

Bolt

PE & Bolt

Marriage



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PE

Bolt

PE & Bolt

Marriage

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PE

Bolt

PE & Bolt

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- we need to tell PE to use the foreman report processor
- Perforce renamed master section to server years ago
- except for PE, where I still need to set the master section
- Why does that even work?
- PE doesn't manage puppet.conf out of the box on puppetservers



PE

Bolt

PE & Bolt

Marriage



PE

Bolt

PE & Bolt

Marriage

- PE now speaks to foreman
- We can add openvox-server on additional machines
- Move agents from PE puppetserver to openvox-server
- Perforce legacy open source agents / PE agents / OpenVox Agents are all compatible with PE puppetserver / legacy opensource puppetserver / openvox-server



PE

Bolt

PE & Bolt

Marriage

- You can already manage OpenVox with the foreman puppet modules!

```
---  
puppet::client_package: openvox-agent  
puppet::server::package: openvox-server  
puppetdb::puppetdb_package: openvoxdb  
puppetdb::master::config::terminus_package: openvoxdb-termini  
foreman::providers::oauth: false
```

```
# on the foreman node  
package { 'oauth':  
    ensure => 'installed',  
    provider => 'puppet_gem',  
}
```

- Foremans puppet-agent-oauth rpm/deb package depends on `puppet-agent`, not all OpenVox packages have `provides puppet-agent` in their metadata yet!



PE

- For years, PE customers just wanted to run Foreman + Bolt tasks/plan via API
- Perforce ignored it: [https://github.com/puppetlabs/puppet-enterprise\\_issues/issues/28](https://github.com/puppetlabs/puppet-enterprise_issues/issues/28)

Bolt

PE & Bolt

Marriage

PE

Bolt

PE & Bolt

Marriage

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- Perforce ignored it: [https://github.com/puppetlabs/puppet-enterprise\\_issues/issues/28](https://github.com/puppetlabs/puppet-enterprise_issues/issues/28)
- We started a little side project <https://community.theforeman.org/t/rfc-integrating-bolt-into-remote-execution/39901>

## RFC: Integrating bolt into remote execution

Community puppet remoteexecution rfc



bastelfreak

Oct 2024

Hi!

I would like to add support for bolt tasks to the remote execution architecture in foreman.

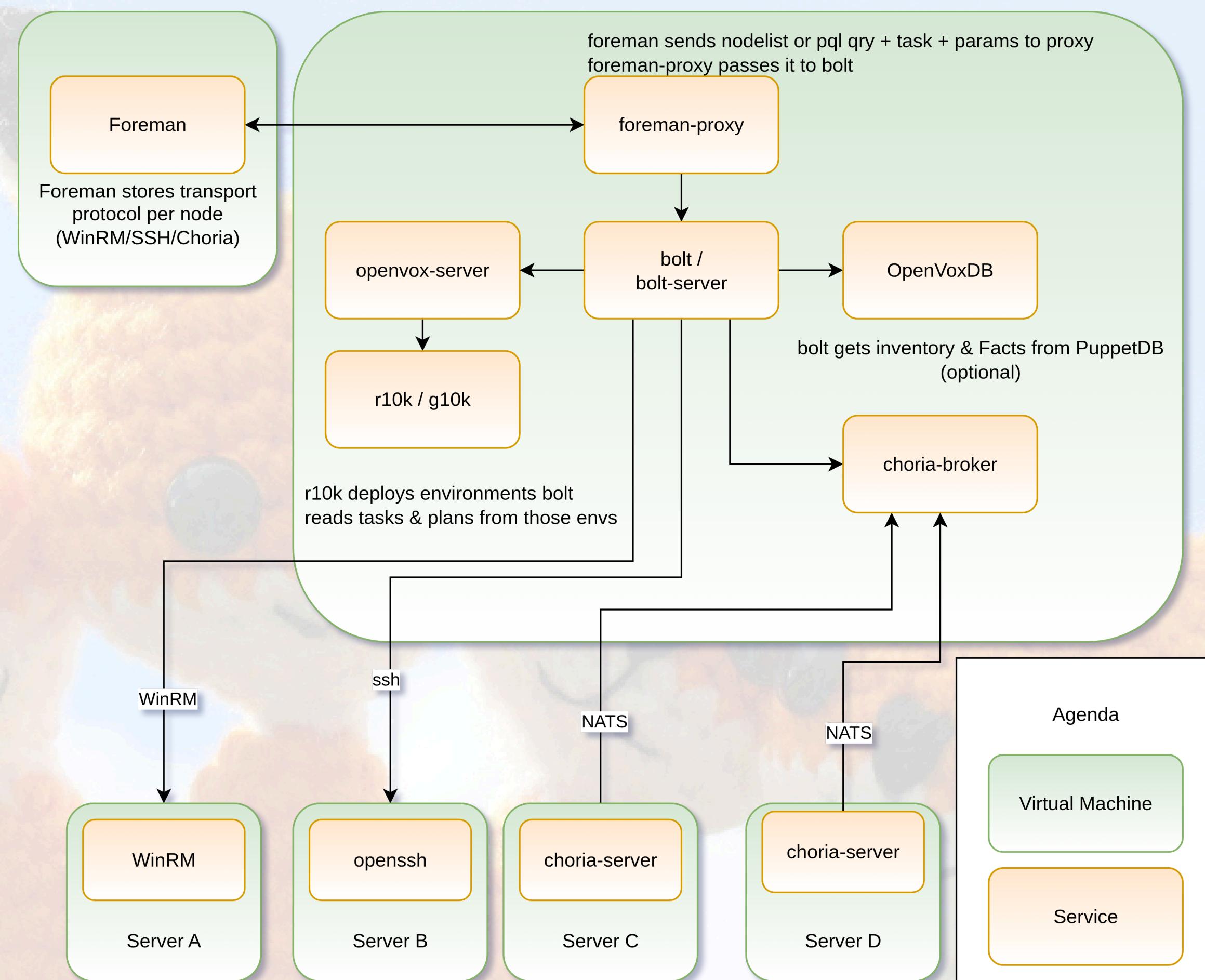


PE

Bolt

PE & Bolt

Marriage





## Conclusion

- You can already run Foreman with OpenVox Agent/DB/Server packages



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## Conclusion

- You can already run Foreman with OpenVox Agent/DB/Server packages
- You can already use OpenVox Agents with Puppet Enterprise

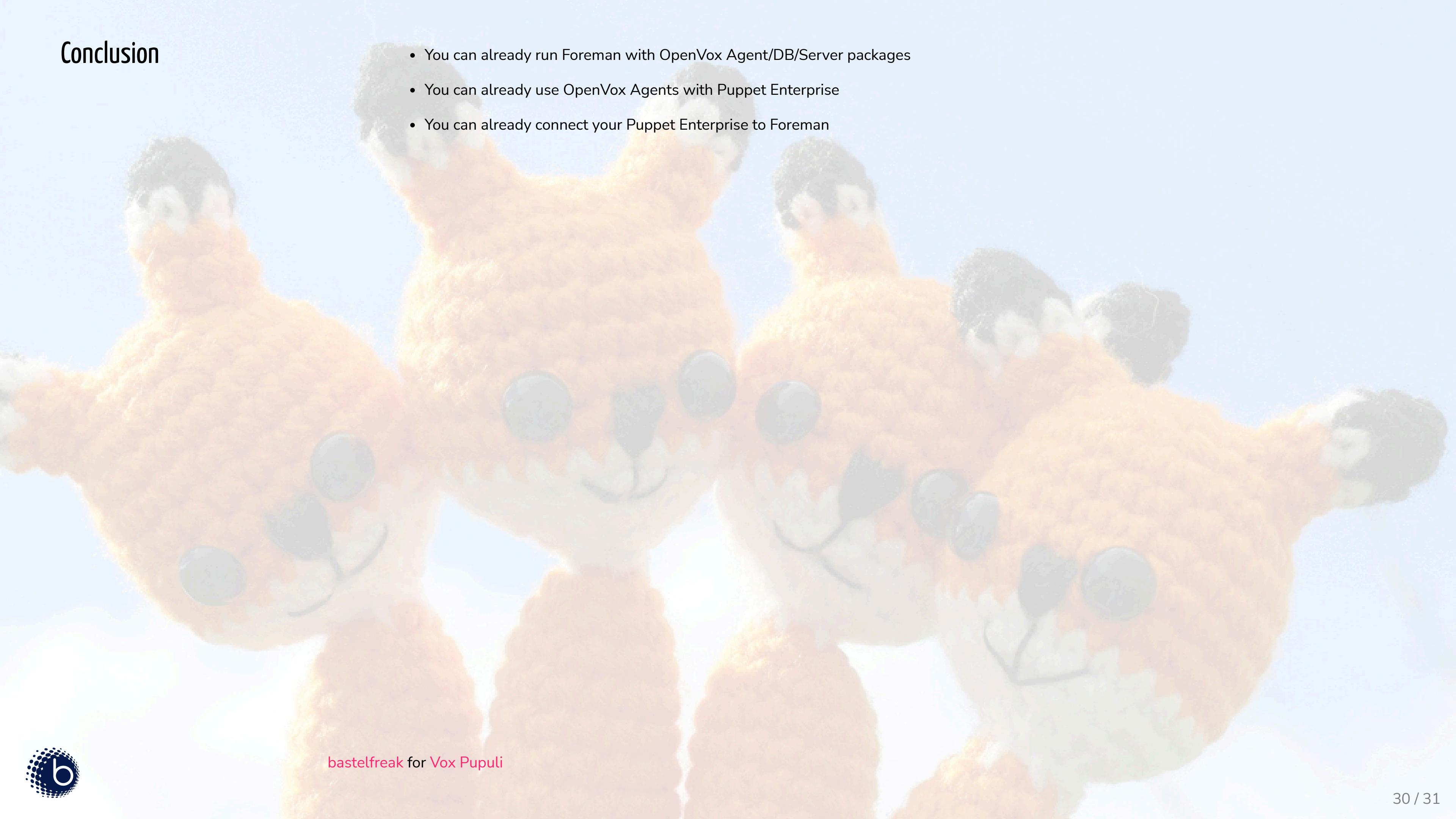


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- Soon we will have Bolt Tasks/Plans integration in Foreman



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- With Choria, we have a scaleable open source broker Setup to replace the pxp-agent and PE-Orchestrator



## Conclusion

- You can already run Foreman with OpenVox Agent/DB/Server packages
- You can already use OpenVox Agents with Puppet Enterprise
- You can already connect your Puppet Enterprise to Foreman
- Soon we will have Bolt Tasks/Plans integration in Foreman
- With Choria, we have a scaleable open source broker Setup to replace the pxp-agent and PE-Orchestrator
- Different companies offer consulting & support & training for Foreman & OpenVox





There is no reason to run  
Puppet Enterprise anymore

## Conclusion

- All memes are a homage to the awesome WAT talk, [destroyallsoftware.com/talks/wat](http://destroyallsoftware.com/talks/wat)
- For feedback: [bastelfreak](#) on Libera.Chat IRC or [tim@bastelfreak.de](mailto:tim@bastelfreak.de)
- This talk and previous ones: [github.com/bastelfreak/talks](https://github.com/bastelfreak/talks)

Thanks for your attention!

