

Meetup Campos Technology

Como Funciona o Open Source

Waldirio M Pinheiro

01/Agosto/2019

Agradecimentos

Henrique da Hora



Rogério Atem de Carvalho



Agenda

- Projeto versus Produto ou Upstream versus Downstream
 - The Foreman
 - Outros Projetos Bem Interessantes
-

Projeto versus Produto ou Upstream versus Downstream

Projeto ou Upstream

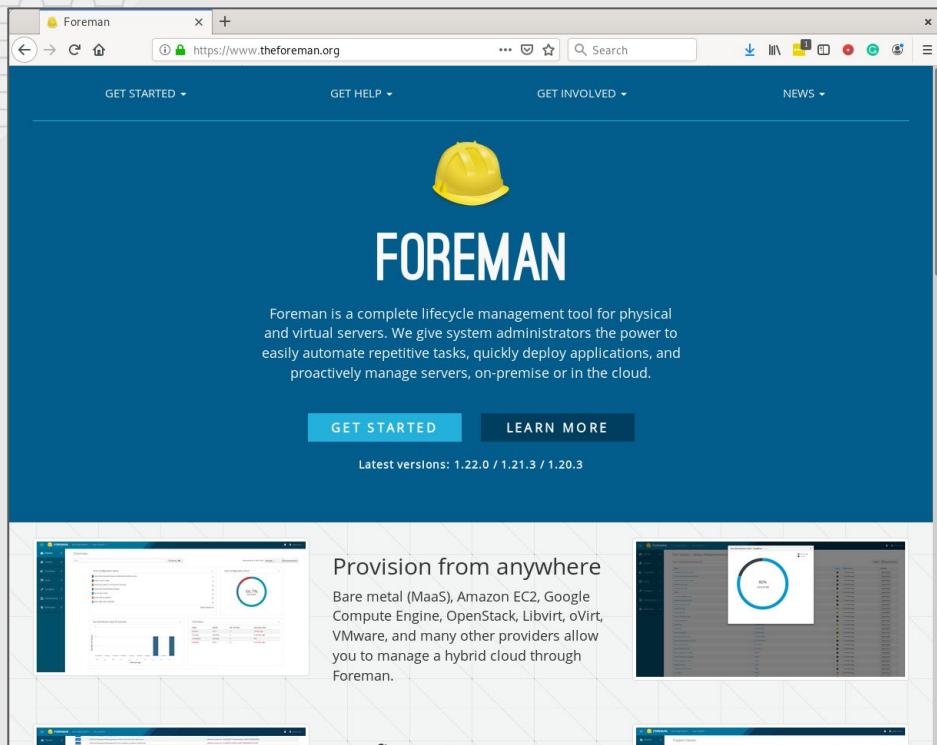
O que qualquer pessoa pode baixar, instalar e usar sem custo adicional, todavia, esse formato não inclui suporte ou SLA. (**Spacewalk, Foreman, ManagelQ**)

Produto ou Downstream

O que o cliente faz a aquisição da subscrição para instalação e uso, oferecendo uma série de benefícios ao cliente como suporte, SLA, updates, acesso a base de conhecimento e muito mais. (**Satellite 5, Satellite 6, Cloudforms**)

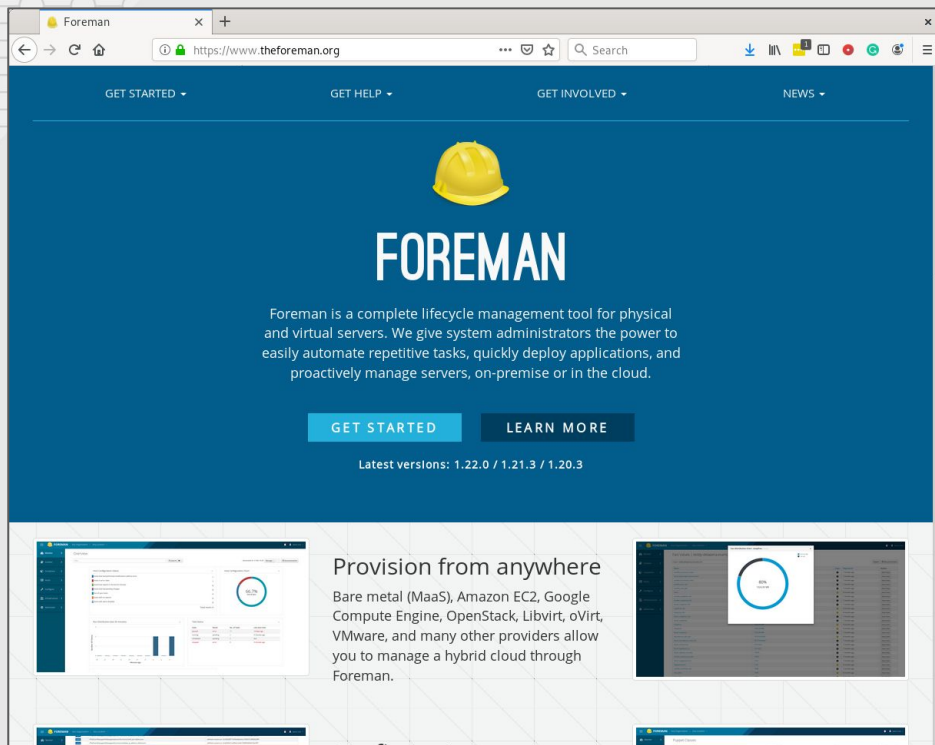
The Foreman

Vamos iniciar com o projeto The Foreman (<https://www.theforeman.org/>)



The Foreman

Vamos iniciar com o projeto The Foreman (<https://www.theforeman.org/>)



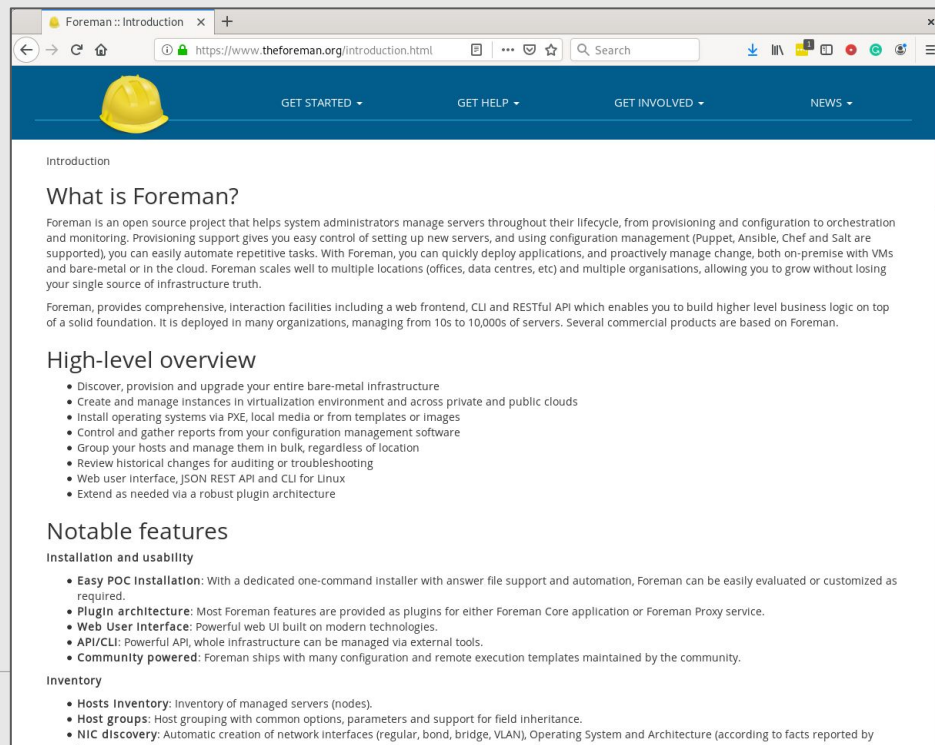
The screenshot shows the homepage of The Foreman project. The header is dark blue with navigation links: GET STARTED, GET HELP, GET INVOLVED, and NEWS. Below the header is a large blue banner featuring a yellow hard hat icon and the word 'FOREMAN' in large white letters. The text on the banner describes Foreman as a complete lifecycle management tool for physical and virtual servers. At the bottom of the banner are two buttons: 'GET STARTED' and 'LEARN MORE'. Below the banner, it lists the latest versions: 1.22.0 / 1.21.3 / 1.20.3. The footer section is divided into two columns. The left column is titled 'Provision from anywhere' and lists supported providers: Bare metal (MaaS), Amazon EC2, Google Compute Engine, OpenStack, Libvirt, oVirt, VMware, and many others. The right column shows a screenshot of the Foreman web interface displaying a circular progress chart and a list of servers.

Foreman is a complete lifecycle management tool for physical and virtual servers. We give system administrators the power to easily automate repetitive tasks, quickly deploy applications, and proactively manage servers, on-premise or in the cloud.

Latest versions: 1.22.0 / 1.21.3 / 1.20.3

Provision from anywhere

Bare metal (MaaS), Amazon EC2, Google Compute Engine, OpenStack, Libvirt, oVirt, VMware, and many other providers allow you to manage a hybrid cloud through Foreman.



The screenshot shows the introduction page of The Foreman project. The header is dark blue with navigation links: GET STARTED, GET HELP, GET INVOLVED, and NEWS. Below the header is a large blue banner featuring a yellow hard hat icon and the word 'FOREMAN' in large white letters. The text on the banner describes Foreman as a complete lifecycle management tool for physical and virtual servers. At the bottom of the banner are two buttons: 'GET STARTED' and 'LEARN MORE'. Below the banner, it lists the latest versions: 1.22.0 / 1.21.3 / 1.20.3. The footer section is divided into two columns. The left column is titled 'Provision from anywhere' and lists supported providers: Bare metal (MaaS), Amazon EC2, Google Compute Engine, OpenStack, Libvirt, oVirt, VMware, and many others. The right column shows a screenshot of the Foreman web interface displaying a circular progress chart and a list of servers.

Introduction

What is Foreman?

Foreman is an open source project that helps system administrators manage servers throughout their lifecycle, from provisioning and configuration to orchestration and monitoring. Provisioning support gives you easy control of setting up new servers, and using configuration management (Puppet, Ansible, Chef and Salt are supported), you can easily automate repetitive tasks. With Foreman, you can quickly deploy applications, and proactively manage change, both on-premise with VMs and bare-metal or in the cloud. Foreman scales well to multiple locations (offices, data centres, etc) and multiple organisations, allowing you to grow without losing your single source of infrastructure truth.

Foreman, provides comprehensive, interaction facilities including a web frontend, CLI and RESTful API which enables you to build higher level business logic on top of a solid foundation. It is deployed in many organizations, managing from 10s to 10,000s of servers. Several commercial products are based on Foreman.

High-level overview

- Discover, provision and upgrade your entire bare-metal infrastructure
- Create and manage instances in virtualization environment and across private and public clouds
- Install operating systems via PXE, local media or from templates or images
- Control and gather reports from your configuration management software
- Group your hosts and manage them in bulk, regardless of location
- Review historical changes for auditing or troubleshooting
- Web user interface, JSON REST API and CLI for Linux
- Extend as needed via a robust plugin architecture

Notable features

Installation and usability

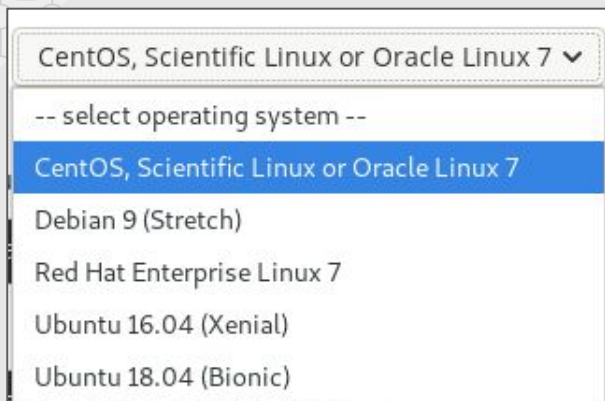
- **Easy POC Installation:** With a dedicated one-command installer with answer file support and automation, Foreman can be easily evaluated or customized as required.
- **Plugin architecture:** Most Foreman features are provided as plugins for either Foreman Core application or Foreman Proxy service.
- **Web User Interface:** Powerful web UI built on modern technologies.
- **API/CLI:** Powerful API, whole infrastructure can be managed via external tools.
- **Community powered:** Foreman ships with many configuration and remote execution templates maintained by the community.

Inventory

- **Hosts Inventory:** Inventory of managed servers (nodes).
- **Host groups:** Host grouping with common options, parameters and support for field inheritance.
- **NIC discovery:** Automatic creation of network interfaces (regular, bond, bridge, VLAN), Operating System and Architecture (according to facts reported by

The Foreman

Vamos iniciar com o projeto The Foreman (<https://www.theforeman.org/>)

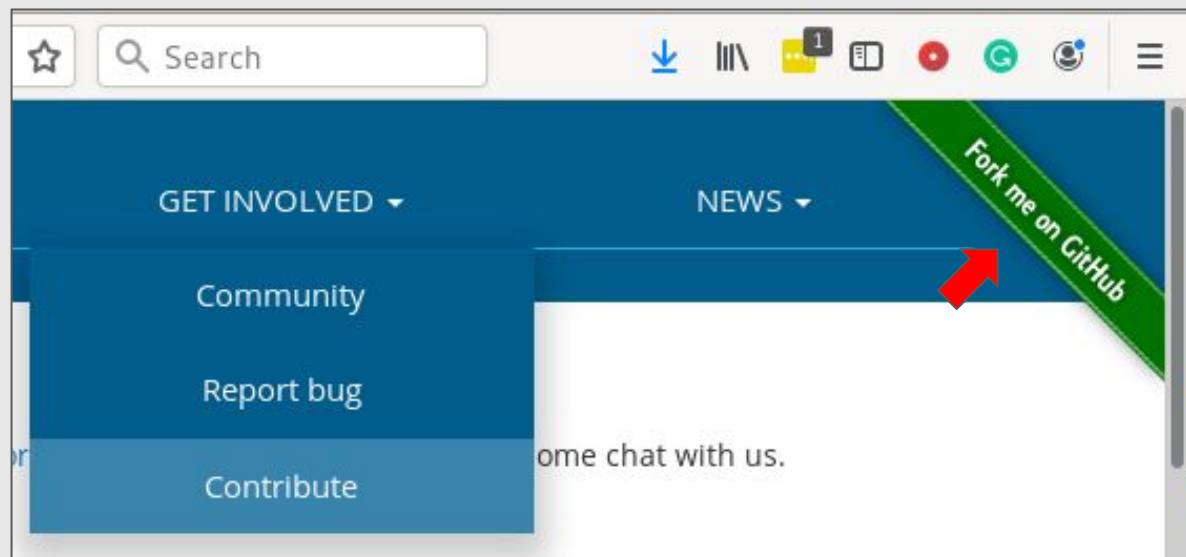
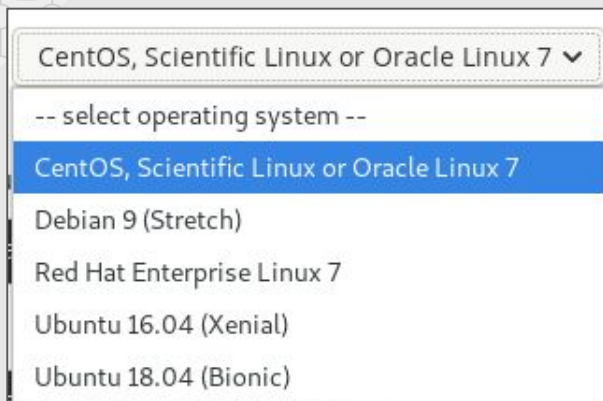


A screenshot of a web form for selecting an operating system. The form has a dropdown menu at the top with the text "CentOS, Scientific Linux or Oracle Linux 7" and a downward arrow. Below the dropdown is a label "-- select operating system --". The dropdown is open, showing a list of operating systems: "CentOS, Scientific Linux or Oracle Linux 7" (highlighted in blue), "Debian 9 (Stretch)", "Red Hat Enterprise Linux 7", "Ubuntu 16.04 (Xenial)", and "Ubuntu 18.04 (Bionic)".

Operating System
CentOS, Scientific Linux or Oracle Linux 7
Debian 9 (Stretch)
Red Hat Enterprise Linux 7
Ubuntu 16.04 (Xenial)
Ubuntu 18.04 (Bionic)

The Foreman

Vamos iniciar com o projeto The Foreman (<https://www.theforeman.org/>)




The Foreman

The screenshot shows the GitHub profile for 'The Foreman' organization. The page header includes the GitHub logo, a search bar, and navigation links for Pull requests, Issues, Marketplace, and Explore. The organization's profile section features a yellow hard hat icon, the name 'The Foreman', and links to its website and email. Below this, there are tabs for Repositories (167), Packages, People (83), and Projects. The 'Pinned repositories' section displays six repositories: 'foreman' (Ruby, 1.7k stars, 805 forks), 'smart-proxy' (Ruby, 185 stars, 203 forks), 'community-templates' (HTML, 120 stars, 169 forks), 'foreman-installer' (Ruby, 96 stars, 104 forks), 'theforeman.org' (103 stars, 232 forks), and 'foreman-js' (JavaScript, 4 stars, 5 forks). A 'Top languages' section shows Ruby, Puppet, Shell, and Python. The 'Most used topics' section is partially visible at the bottom.

Foreman :: Contribute x The Foreman x +

GitHub, Inc. (US) | <https://github.com/theforeman> Search


Search or jump to... Pull requests Issues Marketplace Explore

 The Foreman [Report abuse](#)

Earth <http://theforeman.org> dev@community.theforeman.org


[Repositories 167](#) Packages People 83 Projects

Pinned repositories

 **foreman**


an application that automates the lifecycle of servers

● Ruby ★ 1.7k 🍴 805

 **smart-proxy**


RESTful proxies for DNS, DHCP, TFTP, BMC and Puppet

● Ruby ★ 185 🍴 203

 **community-templates**


A place to share templates for various OSes for Foreman's provisioning

● HTML ★ 120 🍴 169

 **foreman-installer**

Automated Foreman installation and configuration

● Ruby ★ 96 🍴 104

 **theforeman.org**

The new and improved Foreman website.

★ 103 🍴 232

Find a repository...

Type: All Language: All

foreman-js

Foreman js tools

● JavaScript 🍴 MIT ★ 4 🍴 5 Updated 9 hours ago

foreman

an application that automates the lifecycle of servers

Top languages

● Ruby ● Puppet ● Shell ● Python

● HTML

Most used topics

The Foreman

The screenshot displays the GitHub repository page for 'theforeman/foreman'. The page layout includes a header with navigation links (Pull requests, Issues, Marketplace, Explore), a repository overview section with statistics (Watch: 128, Star: 1,662, Fork: 805), and a list of recent commits. Two red arrows are overlaid on the image: one points to the 'Fork' button in the repository overview section, and the other points to the 'Clone or download' button in the commit list section.

Repository Overview:

- Repository: `theforeman/foreman`
- Watch: 128
- Star: 1,662
- Fork: 805
- Code: 114 Pull requests, Security, Insights

Repository Description:

an application that automates the lifecycle of servers <http://theforeman.org>

Tags: `theforeman`, `foreman`, `infrastructure`, `provisioning`, `config-management`, `ruby`, `puppet`, `rails`, `maas`, `virtualization`, `hybrid-cloud`, `infrastructure-management`, `cloud`

Repository Statistics:

- 7,842 commits
- 26 branches
- 177 releases
- 294 contributors
- GPL-3.0

Commit List:

Commit	Author	Message	Latest commit
<code>7380ec4</code>	tbrisker and xprazak2	Fixes #27440 - Remove taxonomy enabled checks from views	5 days ago
<code>...</code>		Updated pull request template and review	last month
<code>...</code>		Fixes #27074 - Migrate to @theforeman/vendor pkg	14 days ago
<code>...</code>		fixes #8874 - rework POT/PO updates for gettext 3's edit.po	4 years ago

The Foreman

The screenshot shows the GitHub repository page for 'theforeman/foreman'. The repository is owned by 'theforeman' and has 167 repositories, 83 packages, and 83 people. It is a Ruby project with 1.7k stars and 805 forks. The repository description is 'an application that automates the lifecycle of servers'. The modal for cloning via SSH is open, showing the SSH URL 'git@github.com:theforeman/foreman.git' and the option to 'Clone or download'.

Clone with SSH [Use HTTPS](#)

Use an SSH key and passphrase from account.

`git@github.com:theforeman/foreman.git`

[Download ZIP](#)

Clone or download

294 contributors [GPL-3.0](#)

new file Upload files Find File **Clone or download**

Latest commit 7389ec4 5 days ago

last month

14 days ago

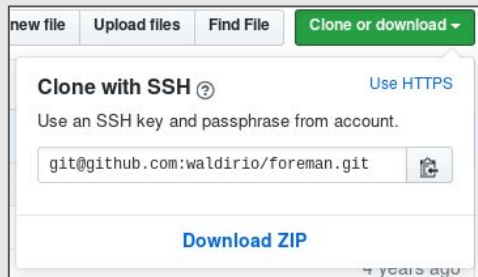
4 years ago

Most used topics

The Foreman

Passos para iniciar no projeto

- Crie seu perfil no github
- Acesse o link do projeto que deseja contribuir e clique em Fork
- Um fork será criado em seu perfil
- Clique sobre **Clone or Download** e copie o link



The Foreman

Passos para iniciar no projeto - cont.

- Acesse seu terminal e vá para o diretório de projetos, por exemplo “~/code”
- Execute “**git clone git@github.com:waldirio/foreman.git**”

Será criado um diretório chamado foreman abaixo do diretório code “~/code/foreman” com o conteúdo do fork. Neste momento, o dev criará uma nova branch e realizará as modificações necessárias no projeto.

```
# git checkout -b new_branch
```

```
<< Modificações no código aqui !!!! >>
```

```
# git commit -m “descrição do que foi realizado”
```

```
# git push --set-upstream origin new_branch
```

The Foreman

Passos para iniciar no projeto - cont.

O próximo passo será criar uma PR (ou Pull Request) com a mudança e aguardar que o mesmo seja adicionado ao projeto principal (e não somente ao seu fork). Caso haja alguma recomendação e/ou mudança necessária, todo o fluxo será via github e os novos commits já irão refletir na mesma PR.

IMPORTANTE

Quando o merge for realizado no projeto principal, será necessário atualizar o seu fork, para isso será necessário apontar o seu projeto para o upstream, sincronizar e então retornar para o fork fazendo o upload.

The Foreman

Passos para iniciar no projeto - cont.

```
$ git checkout master
```

```
$ git remote set-url origin git@github.com:theforeman/foreman.git
```

```
$ git pull
```

```
$ git remote set-url origin github.com:waldirio/foreman.git
```

```
$ git push
```

Obs1.: É possível definir ambos os links simultaneamente (origin e upstream).

Obs2.: **NUNCA** modifique o seu código na branch default ou master.

Outros Projetos Bem Interessantes

<https://github.com/oVirt>

oVirt

<https://github.com/rdo-packages>



<https://github.com/openshift/origin>



<https://github.com/ManageIQ/>



