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http://bosdonnat.fr/slides/openSUSEAsiaSummit19

Getting started hacking Uyuni

A treck through a code jungle

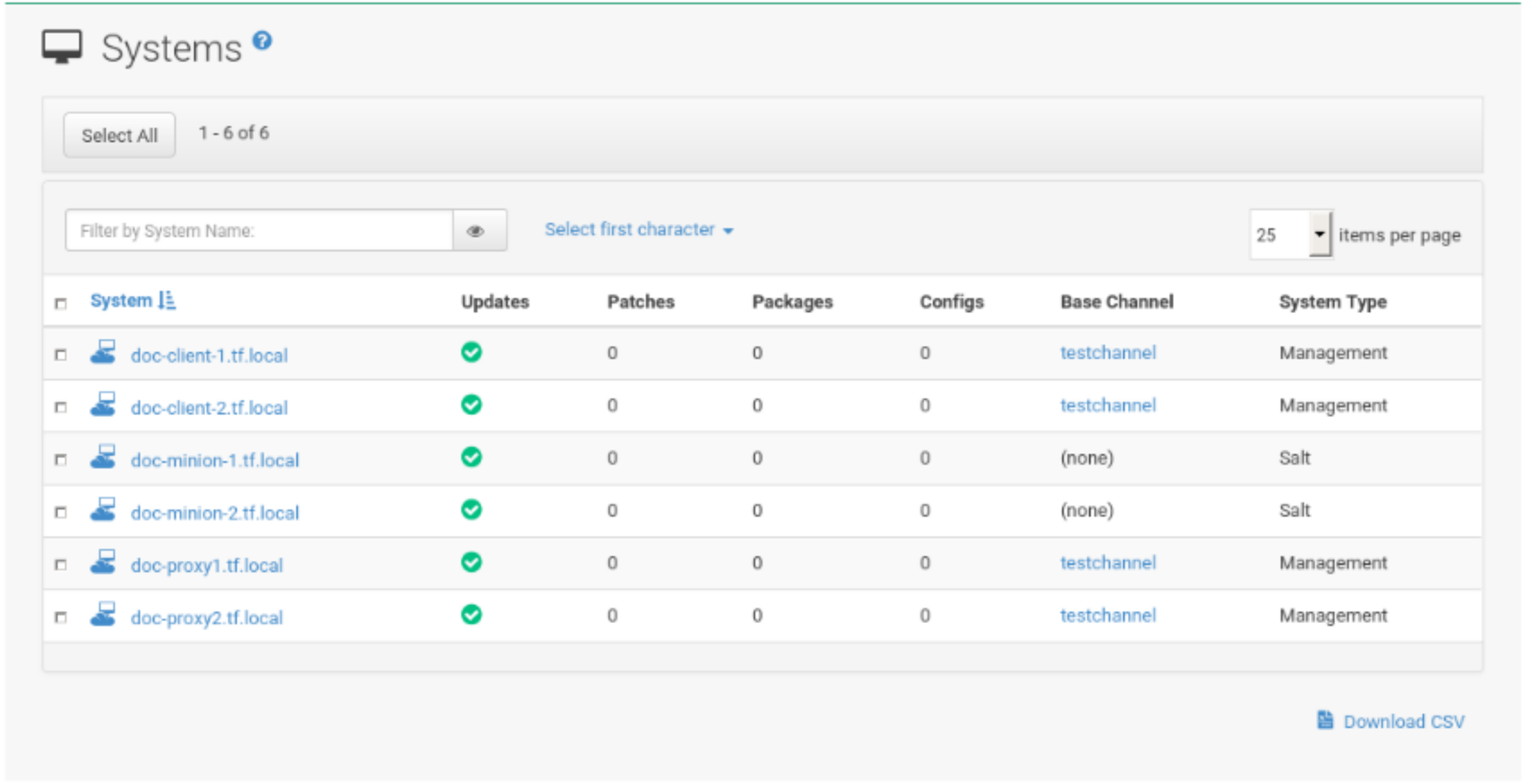
Cédric Bosdonnat
Senior Software Engineer
cbosdonnat@suse.com

Agenda

- What is Uyuni?
- Development Setup
- Code Overview
- Finding your way!

What is Uyuni?

Systems Management



Uyuni's History

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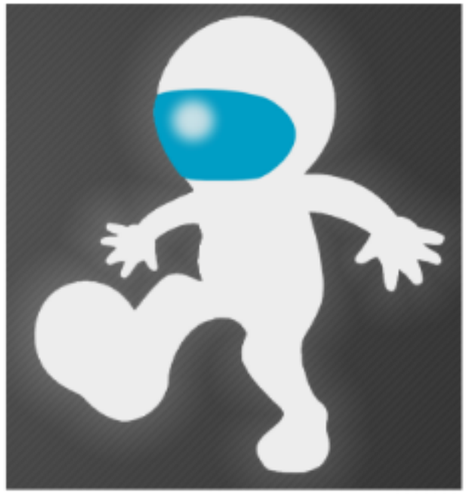

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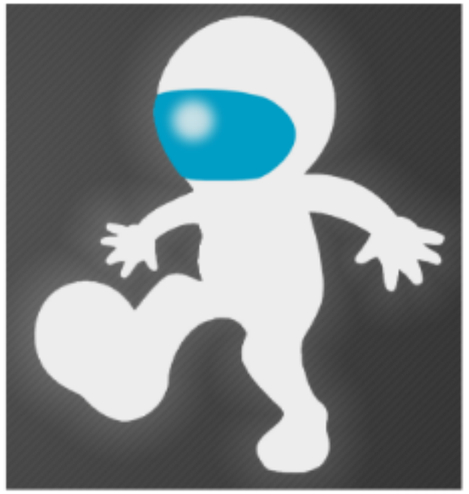

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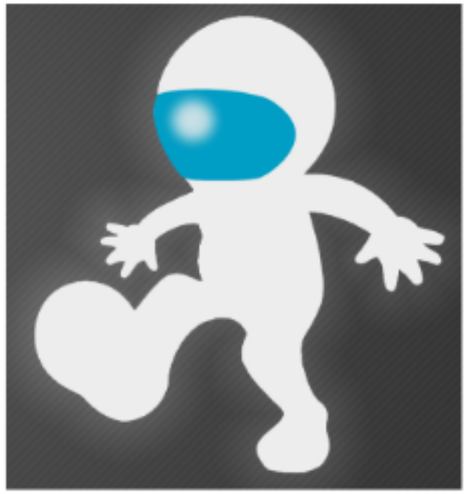

UYUNI

Development Environment Setup

Setting Up Eclipse

Eclipse Download page:

Setting Up Eclipse

Eclipse Download page:

Plugins:

Setting Up Eclipse

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Setting Up Eclipse

Eclipse Download page:

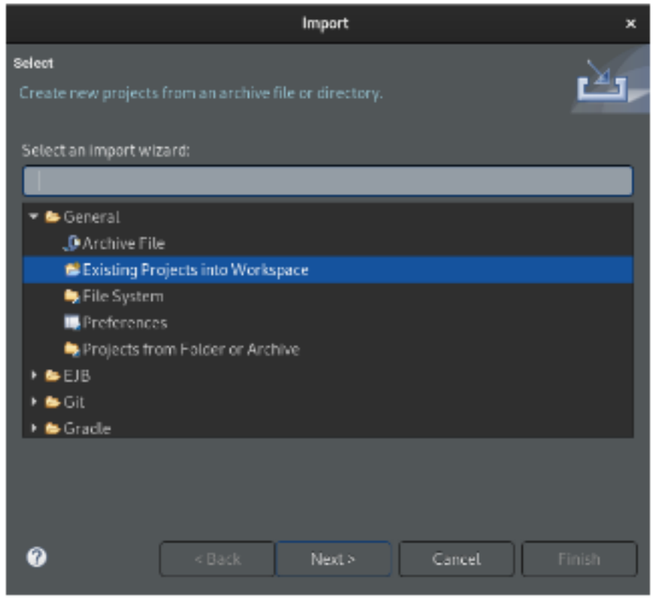
Plugins:

Getting the Sources

```
git clone https://github.com/uyuni-project/uyuni/
```

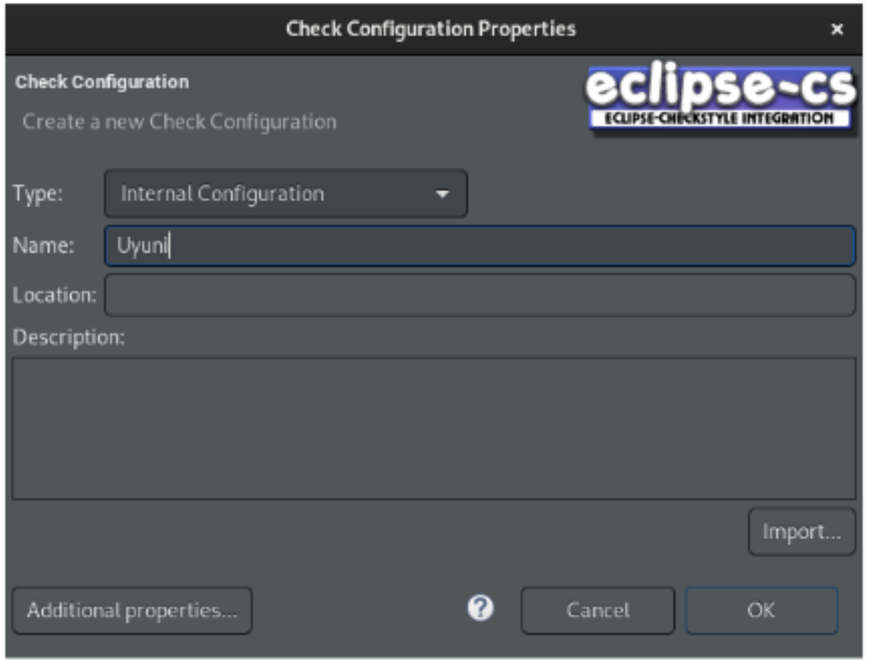
```
cd uyuni/java
ant make-eclipse-project
```

File > Import > General > Existing Projects into Workspace



Checkstyle Setup

- In *Window* > *Preferences* > *Checkstyle* > *New*
  - Internal Configuration
  - Name: *Uyuni*
  - Import `conf/eclipse/checkstyle_eclipse.xml`



https://github.com/uyuni-project/uyuni/wiki

Building

Building

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zypper ar http://download.opensuse.org/... systemsmanagement:Uyuni:Utils
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- `ant -f manager-build.xml webapp`

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```

```
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https://github.com/uyuni-project/uyuni/wiki/Java-Development-Environment

Sumaform

Sumaform

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- Create main.tf

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- Create main.tf

```
terraform init
terraform apply --auto-approve
```

Sumaform

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zypper in terraform-provider-libvirt
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git clone https://github.com/uyuni-project/sumaform
```

- Create main.tf

```
terraform init
terraform apply --auto-approve
```

- Wait!

main.tf

```
provider "libvirt" {
  uri = "qemu:///system"
}

module "base" {
  source = "./modules/libvirt/base"

  cc_username = ""
  cc_password = ""

  name_prefix = "dev-"
  images = ["opensuse151"]
}
```

main.tf - Server

```
module "srv" {
  source = "./modules/libvirt/suse_manager"
  base_configuration = "${module.base.configuration}"
  product_version = "uyuni-master"
  name = "srv"
  image = "opensuse151"
  use_os_released_updates = true
  auto_accept = false
  skip_changelog_import = false
  browser_side_less = false
  mgr_sync_autologin = false
  create_sample_channel = false
  create_sample_activation_key = false
  create_sample_bootstrap_script = false
  publish_private_ssl_key = false
  java_debugging = true
  ssh_key_path = "./salt/controller/id_rsa.pub"
}
```

main.tf example - Minion

```
module "minion" {
  source = "./modules/libvirt/minion"
  base_configuration = "${module.base.configuration}"
  server_configuration = "${module.srv.configuration}"
  product_version = "uyuni-master"
  name = "minion"
  image = "opensuse151"
  auto_connect_to_master = true
  ssh_key_path = "./salt/controller/id_rsa.pub"
  memory = 512
}
```

Running Unit Tests

Running Unit Tests

Building the test containers

```
sudo systemctl start docker
cd uyuni/susemanager-utils/testing/docker/master
make public_containers
```

Running Unit Tests

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Running the unit tests

```
cd uyuni/java
make -f Makefile.docker dockerrun_pg
mkdir -p /var/log/rhn/
mkdir -p /srv/susemanager
```

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sudo systemctl start docker
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```

Junit3 Run Configuration

```
-Drhn.config.dir=${workspace_loc:spacewalk-java}/buildconf/test/
-Dlog4j.threshold=debug
```

Running Unit Tests

Building the test containers

```
sudo systemctl start docker
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Junit3 Run Configuration

```
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-Dlog4j.threshold=debug
```

```
ant -f manager-build.xml test
```

Cucumber Tests

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- UI / integration tests

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- Ruby + cucumber

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- UI / integration tests
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- Special Sumaform setup
  - `terraform workspace --help`
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- UI / integration tests
- Ruby + cucumber
- Special Sumaform setup
  - `terraform workspace --help`
  - `ln -s main.tf main.tf.test`
  - Controller
  - Test client + minion
- On the controller VM:
  - Edit `spacewalk/testsuite/run_sets/testsuite.yml`
  - `run-testsuite`
  - `cucumber spacewalk/testsuite/features/my_feature.feature`

Test Packages using OBS

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- Branch a package in `systemsmanagement:Uyuni:Master`

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```
export OSCAPI=https://api.opensuse.org
export OBS_PROJ=home:you:branches:systemsmanagement:Uyuni:Master
export TEST=--test
cd uyuni/rel-eng
./build-packages-for-obs.sh && ./push-packages-to-obs.sh
```

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- Rebuild sumaform from scratch

Code Overview

Main Blocks

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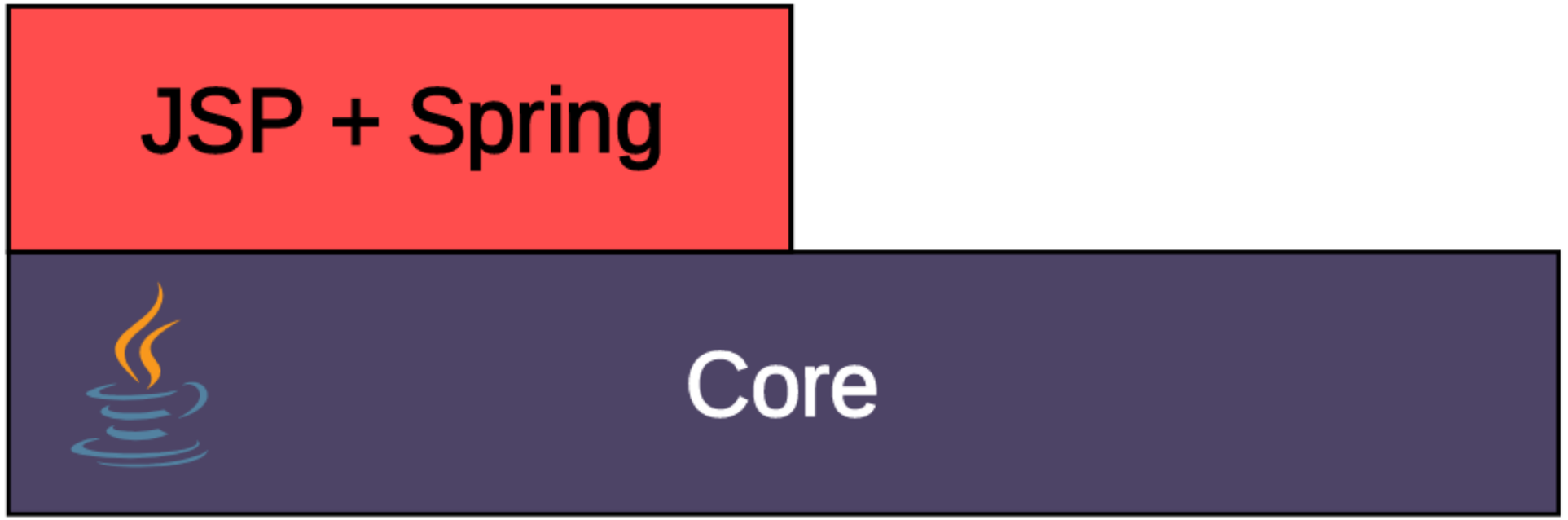


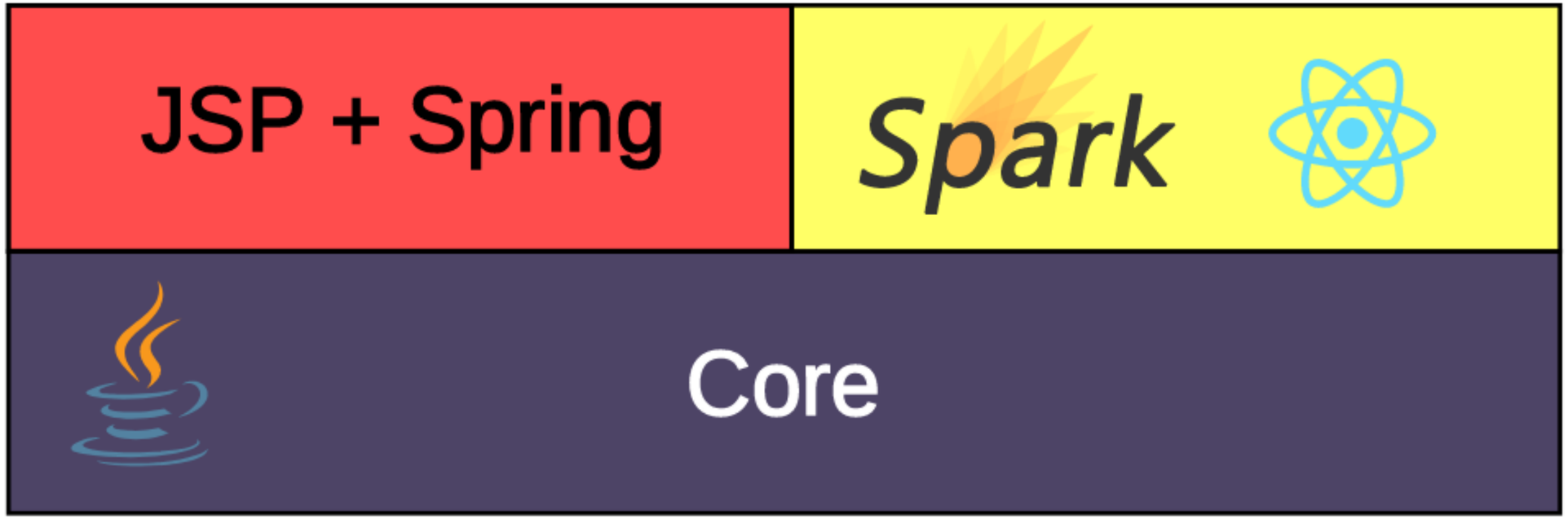
Main Blocks

JSP + Spring

Core

Backend

Main Blocks



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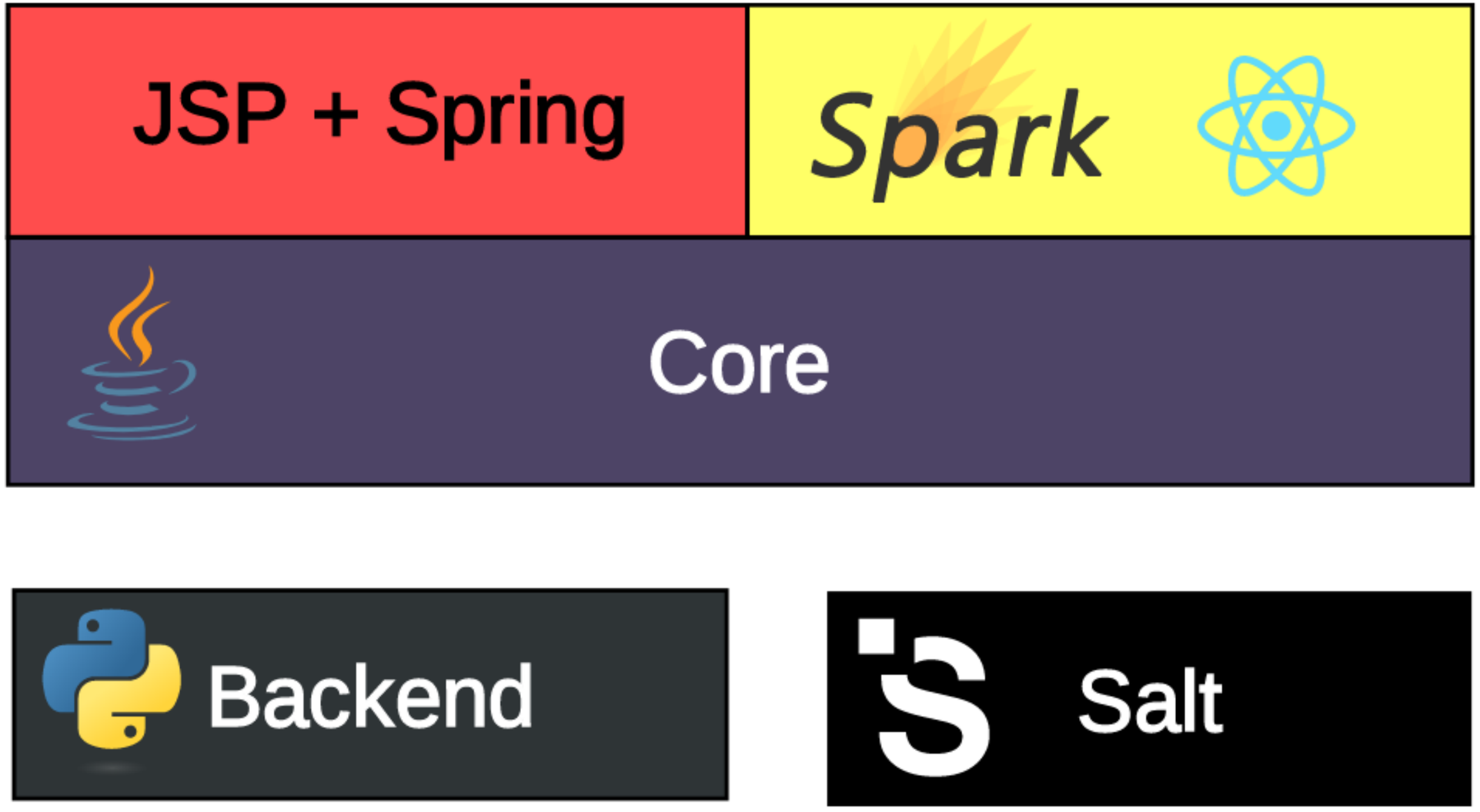

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- **susemanager-utils/testing**: tools for automated tests

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- Salt events listener: com.suse.manager.reactor.SaltReactor

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- Data model and Hibernate bindings: com.redhat.rhn.domain
- Old UI + XMLRPC: com.redhat.rhn.frontend

Java Workflow

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```
ant -f manager-build.xml refresh-branding-jar \
    deploy restart-tomcat restart-taskomatic
```

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- Add entry in `java/spacewalk-java.changes`

Web Workflow

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```
cd uyuni/web/html/src
yarn proxy --server https://dev-srv.tf.local
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- Hack
- See changes live

Web Workflow

- Start dev instance

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cd uyuni/web/html/src
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```

- Hack
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- Add entry in `web/spacewalk-web.changes`

Web Workflow

- Start dev instance

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cd uyuni/web/html/src
yarn proxy --server https://dev-srv.tf.local
```

- Hack
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- Add entry in `web/spacewalk-web.changes`

https://github.com/uyuni-project/uyuni/wiki/Frontend-Development-Environment

Writing Tests

- Feature / Scenario / Steps
  - English only
  - Code in `testsuite/features/step_definitions`
- Existing steps in `testsuite/documentation/cucumber-steps.md`
- New **idempotent** features in `testsuite/features/secondary`

Test Example

Test Example

```
@virthost_kvm
  Scenario: Resume a KVM virtual machine
    Given I am on the "Virtualization" page of this "kvm-server"
    When I wait until table row for "test-vm" contains button "Resume"
    And I click on "Resume" in row "test-vm"
    Then I should see "test-vm" virtual machine running on "kvm-server"
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    Then I should see "test-vm" virtual machine running on "kvm-server"
```

```
Then(/^I should see "([^"]*)" virtual machine (shut off|running|paused)
      on "([^"]*)"$/x) do |vm, state, host|
  node = get_target(host)
  repeat_until_timeout(message: "#{vm} virtual machine on #{host} "\
                                "never reached state #{state}") do
    output, _code = node.run("virsh domstate #{vm}")
    break if output.strip == state
    sleep 3
  end
end
```

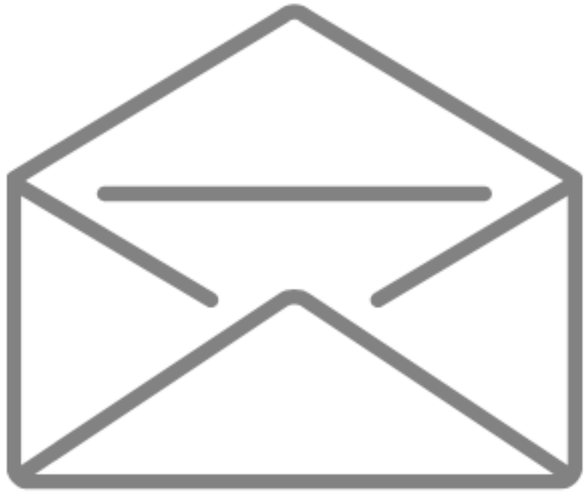
Find your way

Good First Issues

https://github.com/uyuni-project/uyuni/issues

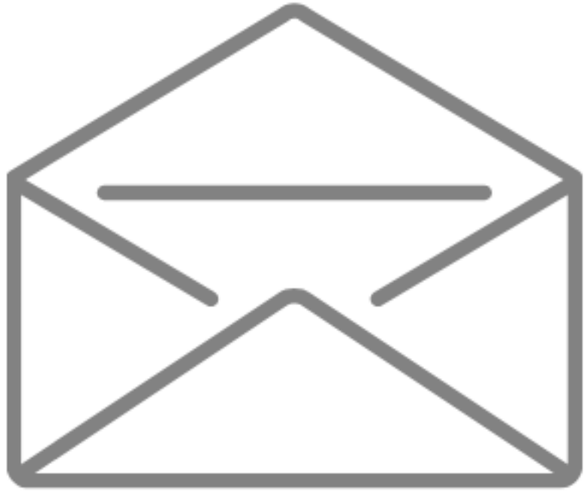
Contact

Contact



uyuni-devel@opensuse.org

Contact



uyuni-devel@opensuse.org

#uyuni on Freenode.net

Questions?

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We adapt. You succeed.

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