Event-Driven Automation with StackStorm

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- slides and demo video to flash drive and dropbox

- Post this file to github

- Consider how to load configs without st2ctl reload if such a thing exists

- Make sure you have everything for the preso, like video

General Outline

- General Introduction to Event-Driven Automation, and StackStorm

- Overview of Fundamental StackStorm Concepts

- Demo

- Extensibility and Community
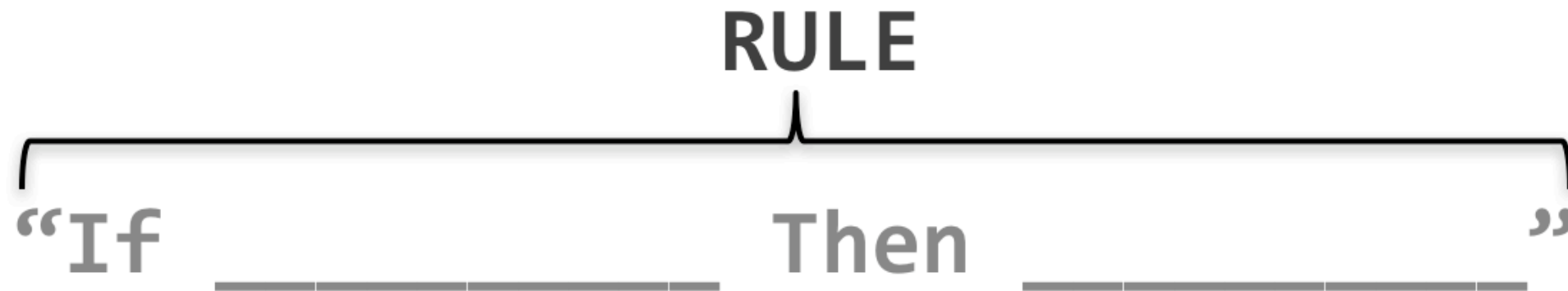
What is Event-Driven Automation?

What is StackStorm?

- StackStorm is a platform for integration and automation across services and tools. It ties together your existing infrastructure and application environment so you can more easily automate that environment. It has a particular focus on taking actions in response to events.

- "Event Driven Automation Platform"

What is StackStorm?

"If _____ Then _____"

What is StackStorm?

RULE

"If _____ Then _____"
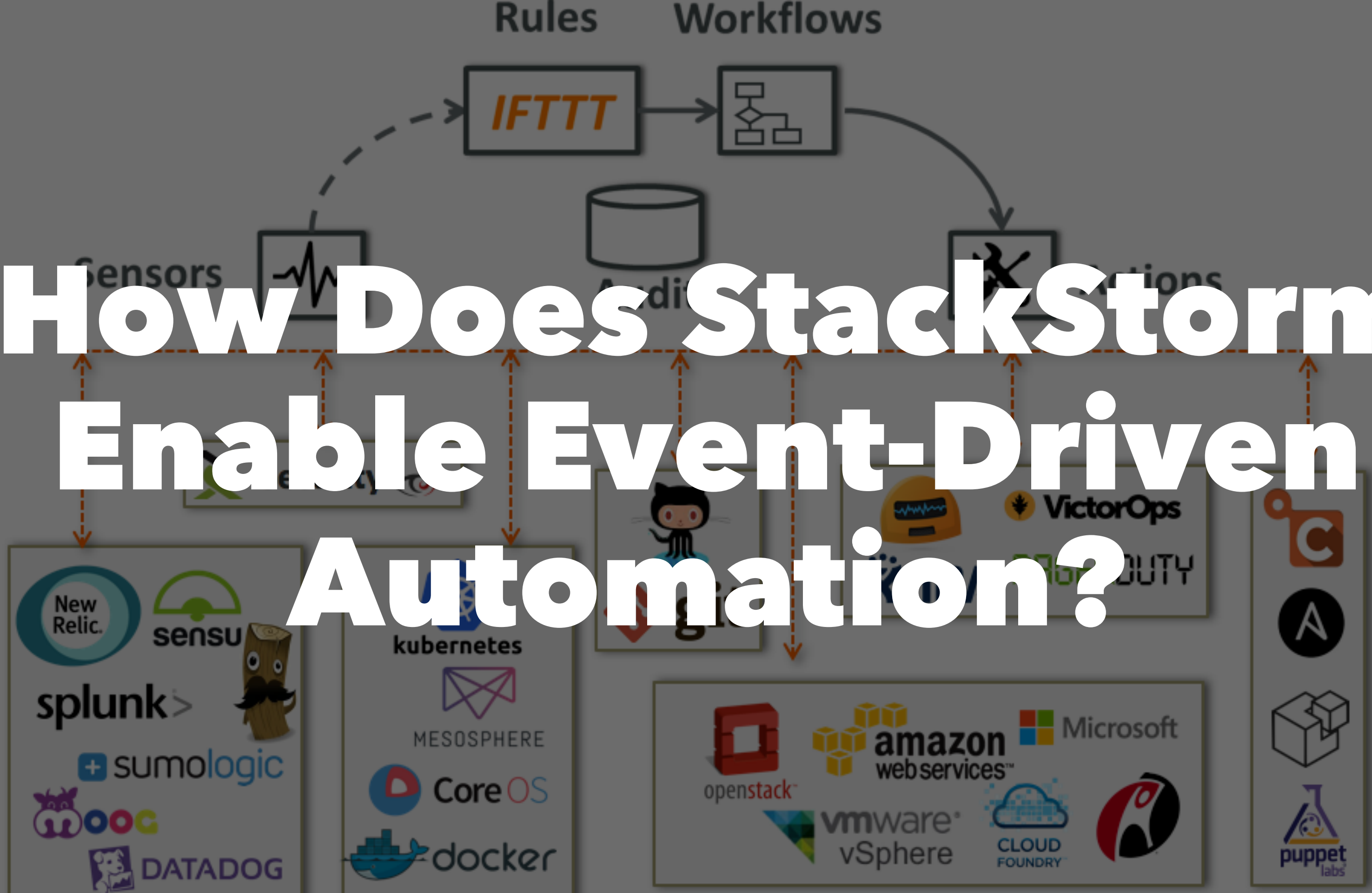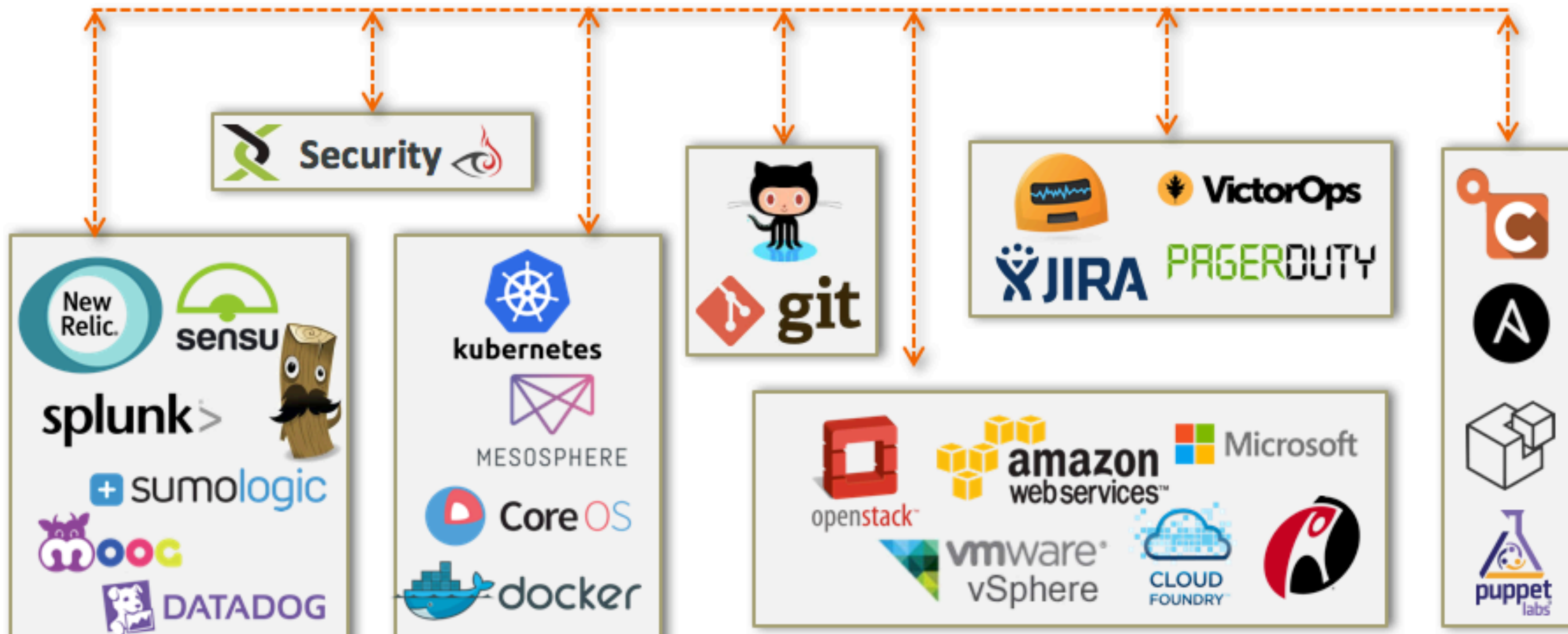
[TRIGGER]

disk.full
intf.down
intf.still.dn

[ACTION]

logrotate && rm -rf /tmp/*
ifconfig $IFACE down && ...up
ssh $switch; shut && no shut $intf
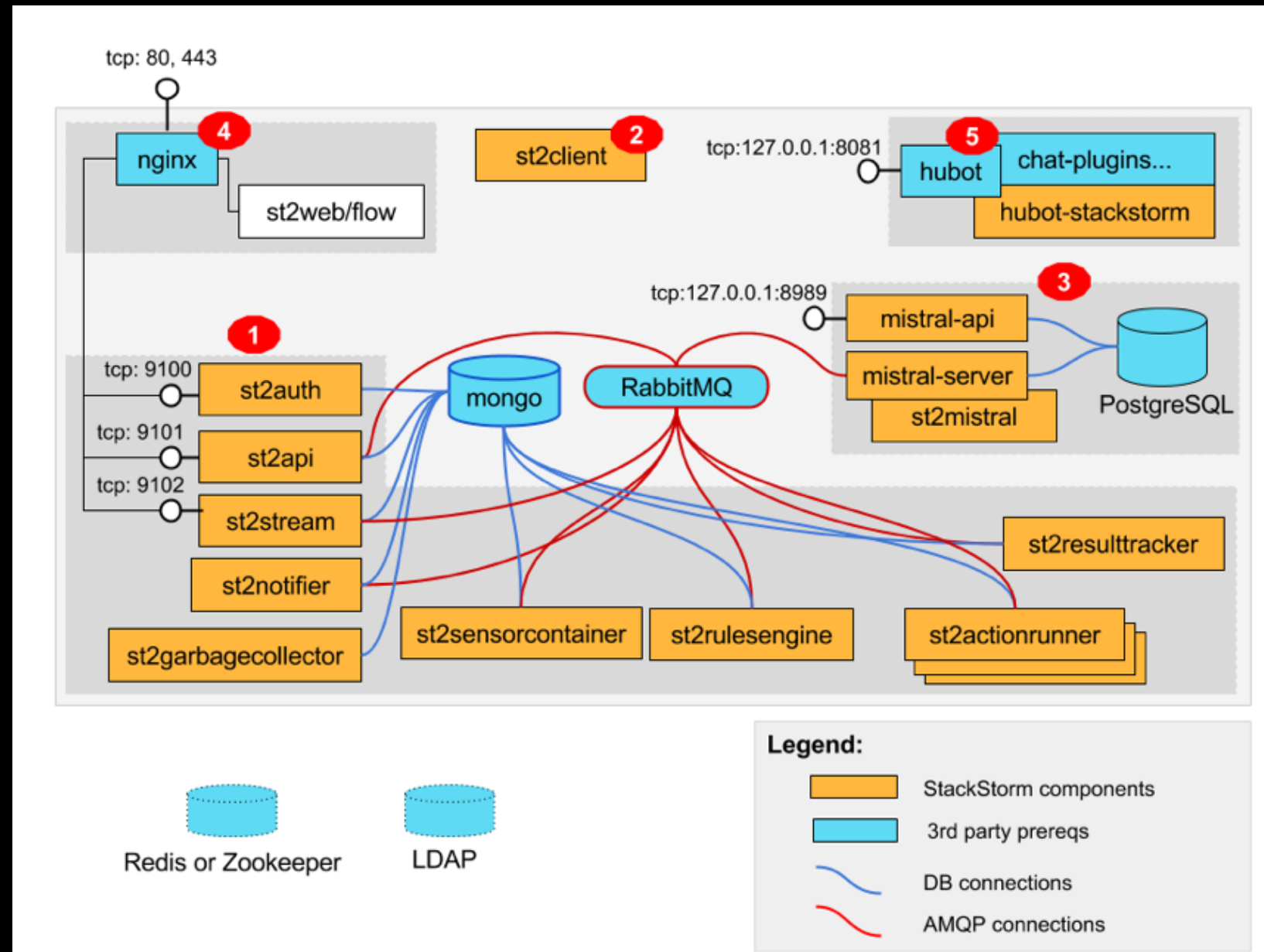
How Does StackStorm Enable Event-Driven Automation?

StackStorm Components

Installing StackStorm

- One-liner install (NOT FOR PRODUCTION)

  - st2vagrant

- OR, "real" install.

- Docs at https://docs.stackstorm.com/install/index.html

Installing StackStorm

Can deploy StackStorm with configuration management tools

- Ansible VERY active work going on here

  - https://github.com/StackStorm/ansible-st2

- Chef Cookbook - maintained by community; prod.deployment options

  - https://github.com/StackStorm/chef-stackstorm

StackStorm Concepts

Actions

- The "that" part of "if this then that"

- Defined in YAML

  - May also be accompanied by script or other YAML files

Actions

```
vagrant@st2vagrant:~$ st2 runner list
+------------------------------+--------------------+--------------------------------------------+
| id                           | name               | description                                |
+------------------------------+--------------------+--------------------------------------------+
| 57d462c4ac5b0c1b03ede43e     | action-chain       | A runner for launching linear action chains. |
| 57d462c3ac5b0c1b03ede43b     | http-request       | A HTTP client for running HTTP actions.    |
| 57d462c3ac5b0c1b03ede43c     | http-runner        | A HTTP client for running HTTP actions.    |
| 57d462c3ac5b0c1b03ede433     | local-shell-cmd    | A runner to execute local actions as a fixed user. |
| 57d462c3ac5b0c1b03ede435     | local-shell-script | A runner to execute local actions as a fixed user. |
| 57d462c3ac5b0c1b03ede43d     | mistral-v2         | A runner for executing mistral v2 workflow. |
| 57d462c4ac5b0c1b03ede43f     | python-script      | A runner for launching python actions.     |
| 57d462c3ac5b0c1b03ede437     | remote-shell-cmd   | A remote execution runner that executes actions |
| 57d462c3ac5b0c1b03ede439     | remote-shell-script | A remote execution runner that executes actions |
| 57d462c3ac5b0c1b03ede434     | run-local          | A runner to execute local actions as a fixed user. |
| 57d462c3ac5b0c1b03ede436     | run-local-script   | A runner to execute local actions as a fixed user. |
| 57d462c4ac5b0c1b03ede440     | run-python         | A runner for launching python actions.     |
| 57d462c3ac5b0c1b03ede438     | run-remote         | A remote execution runner that executes actions |
| 57d462c3ac5b0c1b03ede43a     | run-remote-script  | A remote execution runner that executes actions as a |
```

Sensors and Triggers

- The "this" part of "if this then that"

- Sensors gather information about the world

- Triggers let us know when something interesting has happened

Rules

- Ties everything together

- Watches for triggers, executions actions (or workflows)

Workflows

- Allows for more complicated things than simple actions

- Stackstorm uses OpenStack Mistral as primary workflow definition

Packs

- Atomic unit of extensibility in Stackstorm

- Can contain actions, sensors, rules, workflows, etc.

Demo

Extensibility and Community

- Pack Exchange - https://exchange.stackstorm.org/

- Growing Community - https://stackstorm.com/#community

  - Slack is free to join, and very active

Get Started!

- Documentation - https://docs.stackstorm.com/

- Slides, demo, YAML files - https://github.com/mierdin/st2-intro