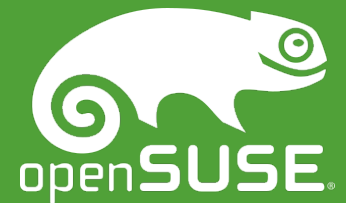


openQA

state of the *union* project

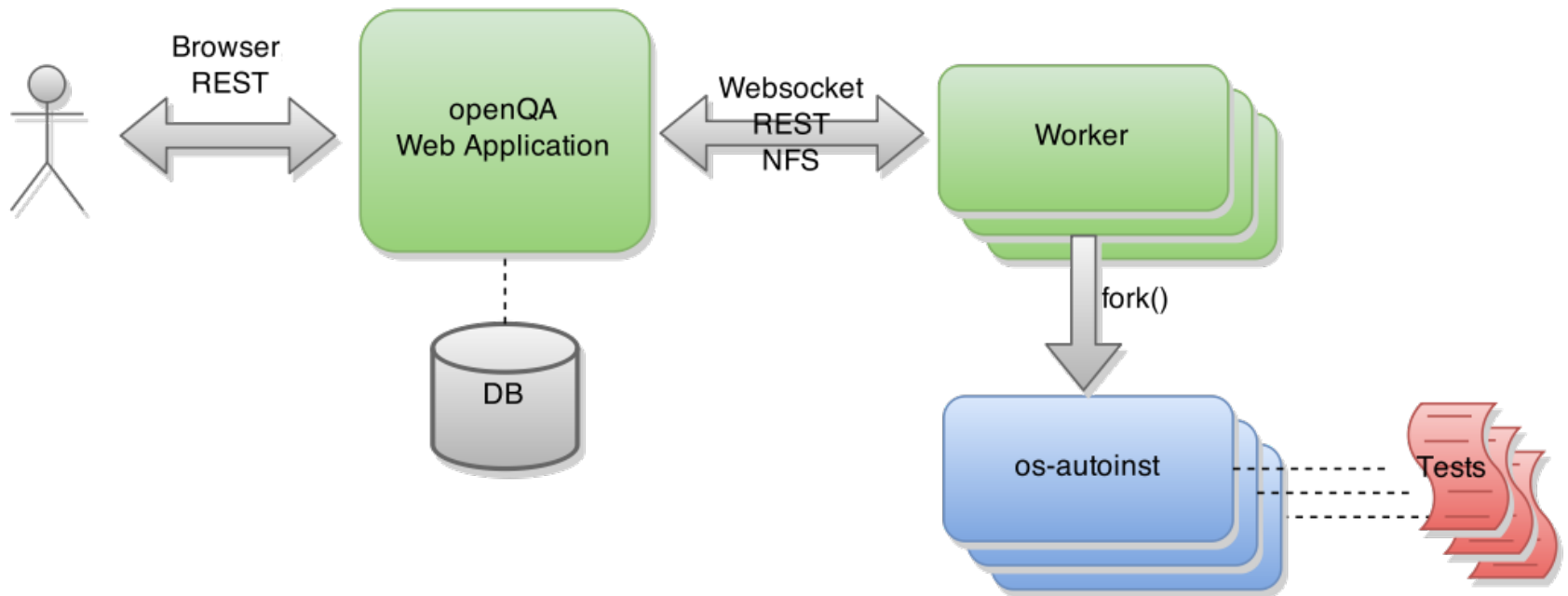
Ondrej Holecek /aaannz/
oholecek@suse.com



openQA

- automated testing tool
 - full stack testing (from installation to applications)
 - tests “human codepath” (VNC I/O)
 - virtual and real SUTs (QEMU VMs, IPMI, s390)
 - powerful reporting (logs, screenshots, video)
- <https://os-autoinst.github.io/openQA/>
- <https://openqa.opensuse.org/>
- <https://build.opensuse.org/project/show/devel:openQA>

architecture



tests

- test code
 - testapi (openQA DSL */perl/*)
 - <https://github.com/os-autoinst/os-autoinst-distri-opensuse>
- needles
 - reference images + metadata
 - <https://github.com/os-autoinst/os-autoinst-needles-opensuse>
- nothing is installed on SUT

What's new - frontend

The background features a complex geometric pattern of overlapping shapes. A large teal shape is on the left, a blue shape is at the bottom left, and a green shape is on the right. These shapes are separated by white, angular lines that create a sense of depth and movement.

landing page

Test result overview

This page lists 46 automated test-results from the last 96 hours.

96 h filter ignore boring results

link	distri↕↕	type↕↕	arch↕↕	build↕↕	extra↕↕	testtime↕↕	OK↕↕	unk↕↕	fail↕↕
testing	openSUSE	DVD	i586	0315	kdedevel	2011-09-30 13:05			
testing	openSUSE	NET	x86_64	0315	11.4kde64dup	2011-09-30 13:05			
testing	openSUSE	NET	x86_64	0315	gnomedevel	2011-09-30 13:05			
 	openSUSE	NET	x86_64	0315	kdeplaygrounddevel	2011-09-30 12:53	16	11	
 	openSUSE	NET	x86_64	0315	xorgdevel	2011-09-30 11:42	2	19	1
 	openSUSE	DVD	i586	0315	11.4gnome32zdup	2011-09-30 11:19	12	6	2
 	openSUSE	DVD	i586	0315	11.4gnome32dup	2011-09-30 11:15	2	12	1
 	openSUSE	NET	i586	0315	xfce	2011-09-30 11:09	1	12	1
 	openSUSE	DVD	i586	0315	btrfs	2011-09-30 10:14	15	11	
 	openSUSE	DVD	i586	0315	11.3zdup	2011-09-30 09:46	5	16	4
 	openSUSE	DVD	x86_64	0315	xfcedevel	2011-09-30 09:21	2	10	1
 	openSUSE	DVD	i586	0315	xfce	2011-09-30 08:34	9	4	2
 	openSUSE	KDE_LiveCD	x86_64	0315	live	2011-09-30 08:25	4	16	2
 	openSUSE	DVD	i586	0315	kerneldevel	2011-09-30 08:24	10	15	1
 	openSUSE	DVD	x86_64	0315	11.2dup	2011-09-30 08:12	14	11	1
 	openSUSE	KDE_LiveCD	x86_64	0315	usbboot	2011-09-30 07:27	2	17	4
 	openSUSE	NET	i586	0315	11.3dup	2011-09-30 07:14	1	20	1
 	openSUSE	NET	x86_64	0315	btrfs	2011-09-30 06:16	11	13	3


landing page

openQA Login

Welcome to openQA

Life is too short for manual testing!

[Learn more >](#)



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openSUSE Leap

Build0200 (5 days ago)	<div style="display: flex; justify-content: space-between;"><div style="width: 80%;"><div style="width: 28px; height: 10px; background-color: green; display: inline-block;"></div> 28 passed</div><div style="width: 12%;"><div style="width: 6px; height: 10px; background-color: red; display: inline-block;"></div> 6 failed</div></div>
Build0198 (6 days ago)	<div style="display: flex; justify-content: space-between;"><div style="width: 80%;"><div style="width: 30px; height: 10px; background-color: green; display: inline-block;"></div> 30 passed</div><div style="width: 12%;"><div style="width: 5px; height: 10px; background-color: red; display: inline-block;"></div> 5 failed</div></div>
Build0196 (7 days ago)	<div style="display: flex; justify-content: space-between;"><div style="width: 80%;"><div style="width: 30px; height: 10px; background-color: green; display: inline-block;"></div> 30 passed</div><div style="width: 12%;"><div style="width: 5px; height: 10px; background-color: red; display: inline-block;"></div> 5 failed</div></div>

openSUSE Leap Staging Projects

Build68.3 (a day ago)	<div style="display: flex; justify-content: space-between;"><div style="width: 40%;"><div style="width: 4px; height: 10px; background-color: green; display: inline-block;"></div> 4 passed</div><div style="width: 60%;"></div></div>
Build29.1 (about 10 hours ago)	<div style="display: flex; justify-content: space-between;"><div style="width: 15%;"><div style="width: 2px; height: 10px; background-color: orange; display: inline-block;"></div> 2 unfinished</div><div style="width: 85%;"></div></div>
Build14.2 (3 months ago)	<div style="display: flex; justify-content: space-between;"><div style="width: 60%;"><div style="width: 4px; height: 10px; background-color: green; display: inline-block;"></div> 4 passed</div><div style="width: 35%;"><div style="width: 3px; height: 10px; background-color: red; display: inline-block;"></div> 3 failed</div></div>

openSUSE Tumbleweed

Build20151003 (about 14 hours ago)	<div style="display: flex; justify-content: space-between;"><div style="width: 50%;"><div style="width: 53px; height: 10px; background-color: green; display: inline-block;"></div> 53 passed</div><div style="width: 20%;"><div style="width: 38px; height: 10px; background-color: orange; display: inline-block;"></div> 38 unfinished</div><div style="width: 15%;"><div style="width: 18px; height: 10px; background-color: red; display: inline-block;"></div> 18 failed</div></div>
Build20151002 (a day ago)	<div style="display: flex; justify-content: space-between;"><div style="width: 80%;"><div style="width: 97px; height: 10px; background-color: green; display: inline-block;"></div> 97 passed</div><div style="width: 12%;"><div style="width: 12px; height: 10px; background-color: red; display: inline-block;"></div> 12 failed</div></div>
Build20150927 (7 days ago)	<div style="display: flex; justify-content: space-between;"><div style="width: 80%;"><div style="width: 94px; height: 10px; background-color: green; display: inline-block;"></div> 94 passed</div><div style="width: 12%;"><div style="width: 15px; height: 10px; background-color: red; display: inline-block;"></div> 15 failed</div></div>

openSUSE Tumbleweed AArch64

Build20150919 (10 days ago)	<div style="display: flex; justify-content: space-between;"><div style="width: 100%;"><div style="width: 2px; height: 10px; background-color: red; display: inline-block;"></div> 2 failed</div></div>
-----------------------------	--

openSUSE Tumbleweed PowerPC

Build20151003 (a day ago)	<div style="display: flex; justify-content: space-between;"><div style="width: 40%;"><div style="width: 8px; height: 10px; background-color: green; display: inline-block;"></div> 8 passed</div><div style="width: 60%;"><div style="width: 8px; height: 10px; background-color: red; display: inline-block;"></div> 8 failed</div></div>
---------------------------	--

What's new - backend

The background features a large teal arrow pointing right, which is part of a larger geometric pattern. To the right of the teal arrow is a white horizontal bar. Below the teal arrow is a blue arrow pointing right. To the right of the blue arrow is a green arrow pointing right. The overall design is composed of various shades of green and blue, with white lines separating the shapes.

networking

- QEMU user mode network

networking

- QEMU user mode network
- TAP devices
- VDE (Virtual Distributed Ethernet)
- Open vSwitch

test dependencies

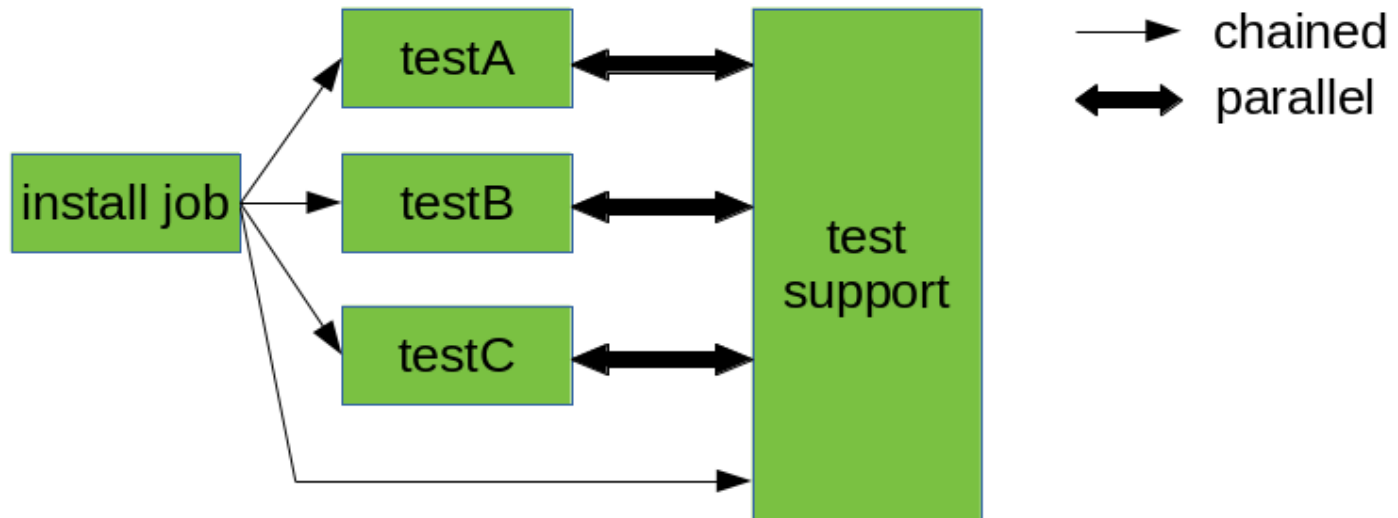
- chained dependency */serial/*
 - test suite run time optimization
 - asset reuse

test dependencies

- chained dependency */serial/*
- parallel dependency
 - HA, client-server services
 - beware minimal worker count!

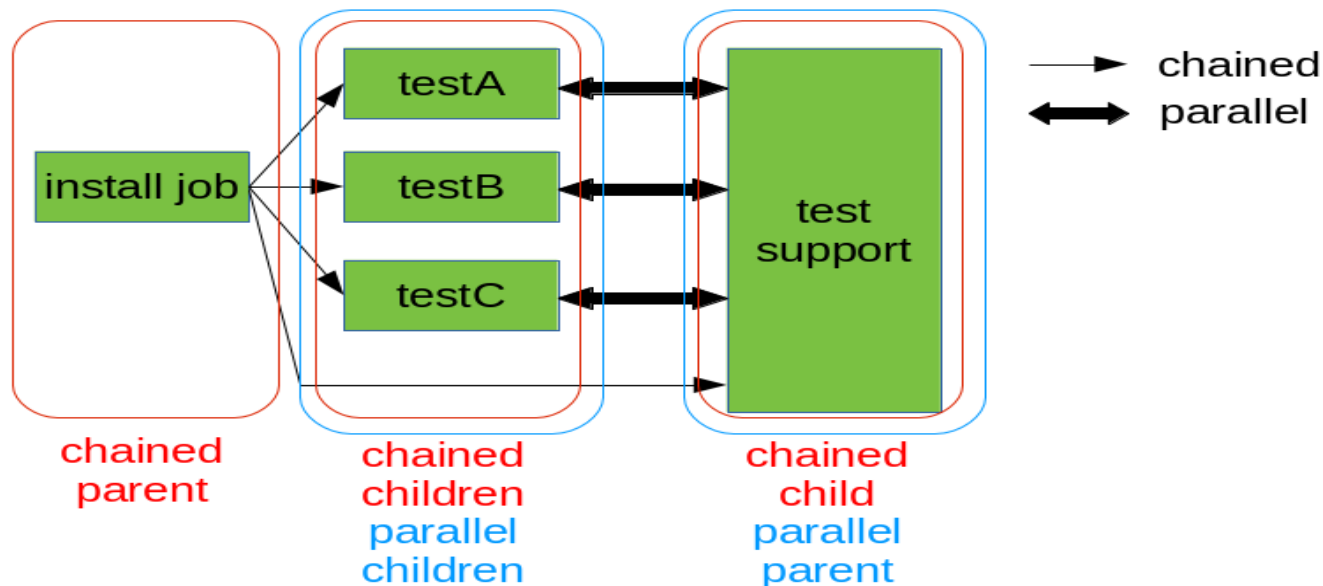
test dependencies

- chained dependency */serial/*
- parallel dependency
- combination of both



test dependencies

- chained dependency */serial/*
- parallel dependency
- combination of both
- concept of child and parent job



multi-machine tests

- mmapi
 - querying child/parent job state
- lockapi
 - synchronization primitive

asset creation

- assets = test resources
 - ISO, HDD image, REPO, files

asset creation

- assets = test resources
 - ISO, HDD image, REPO, files
- successful test job can generate new HDD asset
 - using test variables:
PUBLISH_HDD_\$(i)
STORE_HDD_\$(i)

asset creation

- assets = test resources
 - ISO, HDD image, REPO, files
- successful test job can generate new HDD asset
- manual upload of file assets
 - using testapi
 - upload_asset()

remote workers

- scaling out
- s390, ppc, x86 workers under one OpenQA
- REST & WebSockets communication
- shared storage (r/o)
 - tests assets
 - outsource integrity assurance

worker classes

- differentiating workers
 - worker class (worker property) needs to match worker class (test variable)
- describes HW capabilities
 - CPU arch, available memory, ...
- custom configuration
 - network

worker classes – for test development

- using common openQA admin node
- use local worker
 - custom worker class (e.g. “my_worker”)
 - don't use shared storage or you will break tests for others
 - manually sync assets
- run developing tests with custom worker class

preforking – going multiprocess

- scaling up
- WebUI/API
- standalone WebSockets server
- standalone Scheduler
- DBus IPC
 - org.opensuse.openqa.Scheduler
 - org.opensuse.openqa.WebSockets

extensions (WIP)

- enable/disable various codepaths
 - configured in openqa.ini
 - out-of-tree extension support
- interface
 - register(\$reactor)
 - listen for Mojolicious events for callbacks
- DBus IPC as first (in-tree) openQA extension

database support

- SQLite
- PostgreSQL
- MySQL/MariaDB

authentication plugins

- build-in
 - openID 2.0
 - iChain
 - Fake
 - for development and demo purposes only!
- plugin interface
 - auth_login, auth_logout, auth_configure

background tasks /GRU/

- results maintenance
 - compacting screenshots
 - erasing old results and assets
- “source service” for ISO images
 - tests with ISOURL test variable

future

- libvirt
- real HW testing without IPMI
- integration with other tools
- better scheduler

contacts

- IRC

freenode #opensuse-factory

- email

opensuse-factory@opensuse.org

- issues

<https://progress.opensuse.org/projects/openqav3/>

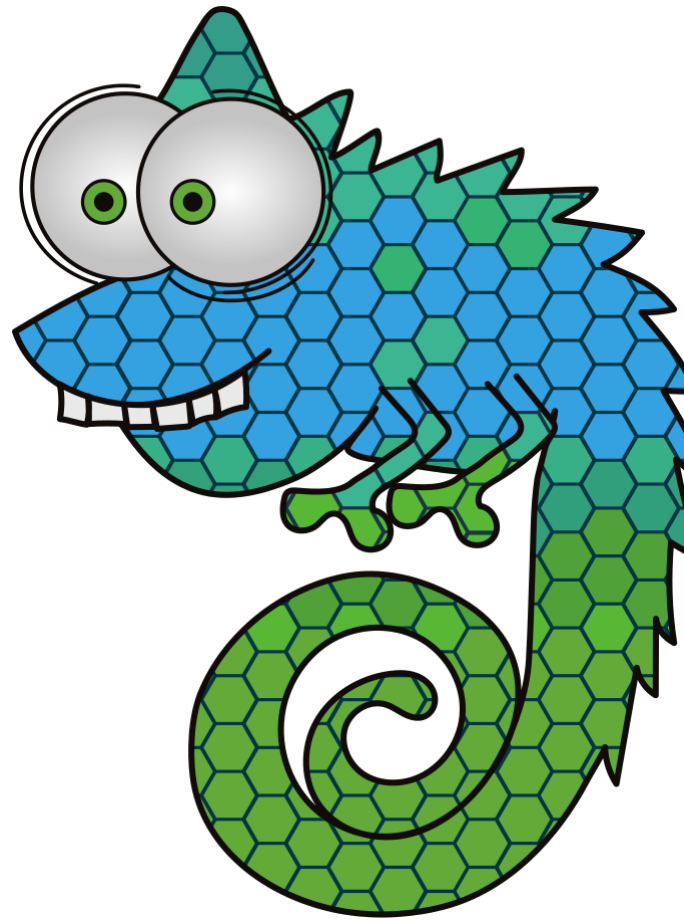
- code

<https://github.com/os-autoinst/openQA>

<https://github.com/os-autoinst/os-autoinst>



Questions?



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www.opensuse.org



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Credits

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