Yardstick – Extensible testing framework

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Yardstick framework architecture

- User Interface
- Main Framework
  - Context
  - Scenario
  - Runner
  - Dispatcher
  - Plugin
  - Container Manager
- Services
Yardstick workflow
Multiple contexts

- Use Node context with ansible to config SUT
- Use Heat context to deploy VMs
New node context with Ansible support

- inventory.ini
- playbook yaml
- config roles
An example of playbook (live migration)

- hosts: localhost
  roles:
    - migrate_local_setup

- hosts: nodes
  roles:
    - backup_nova_conf
      - { role: set_nova_conf, section: "DEFAULT", key: "live_migration_flag", value: "VIR_MIGRATE_UNDEFINE_SOURCE" }
      - { role: set_nova_conf, section: "DEFAULT", key: "vncserver_listen", value: "0.0.0.0" }

- hosts: controller
  roles:
    - { role: set_nova_conf, section: "DEFAULT", key: "scheduler_default_filters", value: "NUMATopologyFilter" }
    - { role: restart_nova_service, service: "nova-scheduler" }
    - { role: restart_nova_service, service: "nova-api" }
    - { role: restart_nova_service, service: "nova-conductor" }

- hosts: compute
  roles:
    - { role: set_nova_conf, section: "DEFAULT", key: "vcpu_pin_set", value: "0,2,4,6,8,10,12,14,16" }
    - { role: restart_nova_service, service: "nova-compute" }
Multiple scenarios with variable support

- One big scenario can break to several small ones
- Scenarios can be reused and re-organized
- One scenario can pass parameters to the other

```json
scenarios:
  - type: GetServer
  - type: GetNumaInfo
  - type: GetMigrateTargetHost
  - type: GetServerIp
  - type: AddMemoryLoad
  - type: MIGRATE
  - type: CheckValue
  - type: GetServer
  - type: GetNumaInfo
  - type: CheckNumaInfo
  - type: CheckValue
  - type: StoreResult
```
A typical example — live migrate test case
Why doing this?

- Reuse and combine Roles and Scenarios
- Ansible Roles/Scenarios library
- Live migrate TC
- Cpu pinning TC
- Live migrate /w pinning TC
New GUI

• Env management
• Project management
• Task management
  • Customize test case
  • Customize test suite
• Run test case/suite
• Report management
New GUI

• Env management
• Project management
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Thank you!

Need you to use Yardstick!