oVirt Node Customization

Jan 23, 2013

Mike Burns
Software Engineer
Tech Lead for oVirt Node
Red Hat, Inc

Agenda

- Introduction
- Use Cases
- Installing plugins
- Simple Customizations
- Complex Customizations
- Plugin Review
- Design and Packaging

oVirt

Introduction

Use Cases

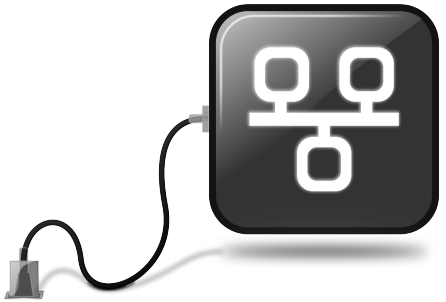
- Different Management Servers
- User/Group Management
- Custom Package Additions
- Monitoring Tools
- Additional Functionality
- Package Updates
- Vendor specific packages

oVirt

Installation and Configuration

Offline vs Online

- Most changes need to be made offline before installation
- Wait – offline? I already installed it!
- You said “Most” -- what doesn't require offline changes?
- Will I be able to do all this online in the future?



Installation

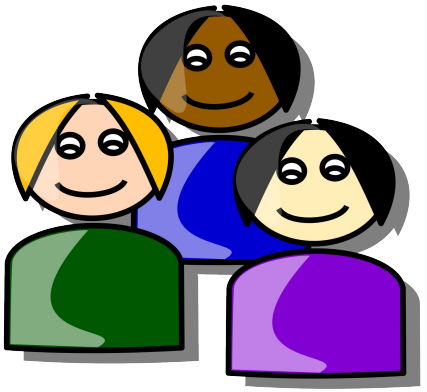
- Offline
  - ovirt-node-tools
  - edit-node
  - Takes base ISO as input
  - Produces a new ISO
  - Install new ISO on real hardware
  - Repeat edit-node commands for each new base ISO release
- Online
  - Install Base ISO
  - Make changes
  - Persist changes
  - No need to re-run on upgrade
  - Many limitations

oVirt

Simple Customizations

Simple Customizations

- Changes that don't require full RPM packaging
- edit-node tool has some built in options for simple changes
- User Passwords
- User ID's
- Group ID's
- These changes should be made on each new ISO before deployment



Other Simple Customizations

- WARNING – These may or may not work as you expect.
- Change configuration that isn't exposed on the TUI
- Persist your changes
- May work across upgrades, but not guaranteed
- Limited by the Config Partition

oVirt

Complex Customizations

Different Management Servers

- Top Level Plugin Package
- Requires various related packages needed for that Management Server
- Handles Service Enablement
- Handles Registration/Alerting Management
- Provides methods for configuring services
  - kernel command line options
  - TUI

Adding New Functionality

- Implemented as a Plugin
- Plugin RPM has correct Dependencies
- Should provide mechanism for configuring the new functionality
  - TUI screen
  - Kernel command line

oVirt

Plugins

What are Plugins?

- Preview in oVirt Node 2.5.1
- Add functionality not included in the base image
- Packaged as RPMs
- Installed offline using edit-node tool (ovirt-node-tools)
  - Start with oVirt Node ISO image
  - Run edit-node tool
  - Get a different oVirt Node ISO image
- Can install arbitrary number of plugins
  - Limits are size related. Image size needs to remain < 256MB

oVirt

Design And Packaging

Design

- Top level rpm package
- Includes all dependent RPM requirements
- [Optional] Add TUI screen config
  - /usr/lib/python*/site_packages/ovirt_config_setup
- [Optional] Add kernel command line parameters
  - List of options in a file under /etc/ovirtcommandline.d
  - Script to parse options in /etc/ovirt-config-boot.d
- %post script to do service enablement, firewall port handling, etc

Options

- --passwd=USER,ENCRYPTED_PASSWORD
  - --passwd=admin,R8QME6MiID1XQ
  - Sets admin password to ovirt
  - Generate using “openssl passwd” command
- --name=NAME
  - Name of the new ISO being created
- --output=OUTPUT
  - Directory to create the new ISO file in
- --sshkey=USER,PUB_KEY_FILE
  - Add the specified public key file to the user

Options

- [--install-plugin|--install|--install-kmod]=PACKAGE
  - Can specify multiple instances
  - Will yum install the pacakges listed
- --repo=REPO
  - Yum repo file, local yum repository, driver disk iso file
- --nogpgcheck
  - Don't verify that packages are signed during installation
- --print-*, --get-manifest*
  - Options to get information about the current iso

oVirt

Discussion and Questions

More information

- http://www.ovirt.org/get-ovirt/ (Installation guide available)
- Mailing Lists:
  - node-devel@ovirt.org
  - users@ovirt.org
- IRC: #ovirt on OFTC
- Web Site: http://www.ovirt.org
- Git Repository: git://gerrit.ovirt.org/ovirt-node.git
- Documents: http://www.ovirt.org/wiki/Special:AllPages
- Bugzilla: https://bugzilla.redhat.com (Community->oVirt)

oVirt

THANK YOU !

http://www.ovirt.org