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Provisioning with Cobbler, Red Hat
What Is Cobbler?

- An Install Server
  - More about that later
- A Philosophy
  - Simple, Flexible, Modular Software
  - Shared Management Tools, Developed Together And Openly
Cobbler

- Abstracts out:
  - Hardware installations
    - PXE, media, reinstallations
  - Virtualization (koan)
    - Xen, qemu/KVM, VMware
- Provides easy setup and importing of your media/mirrors
- Integrates Kickstart templating/generation w/ samples
- Tracks your in-progress installations
- Provides hands off management glue for:
  - DHCP, DNS, yum, etc
The Cobbler Objects

- Distros
  - Profiles
    - (Subprofiles?)
    - (Subprofiles?)
    - Systems
  - (Subprofiles?)
- Repos
What's New Right Now

- Latest Stable Release is 1.0.X
  - Maintained separate from “devel” branch (1.1.X)
- Supports
  - Fedora, EL-4+ (on Server), EL-3+ on Client
- Key features
  - Integrated BIND support now complements ISC dhcpd
  - Fully dynamic kickstart generation (less need to “sync”)
  - Security/web improvements
  - Create portable net-install media for PXE-less shops
  - Lots of minor features/RFEs
Setup:

Configure /etc/yum.repos.d to use EPEL

- [http://fedoraproject.org/wiki/EPEL](http://fedoraproject.org/wiki/EPEL)

# yum install cobbler
# vi /etc/cobbler/settings (server, manage_dhcp, manage_dns)
# vi /etc/cobbler/modules.conf (for web app)
# cobbler check
Time For Examples!

...
Example: Importing a DVD

Import a DVD:
# cobbler import --name=RH5 --mirror=/mnt/dvd (or rsync://)

See what we have in the configuration:
# cobbler distro list

- RHEL5-i386
- RHEL5-i386-xen
Example: Bare-metal, PXE

Change the kickstart for a profile

```bash
# cobbler profile copy --name=RHEL5-i386 --newname=RHEL5-i386-xen --kickstart=/var/lib/cobbler/kickstarts/mytemplate.ks
```

Install a machine to a given profile

```bash
# cobbler system add --name=acmelabs --mac=AA:BB:CC:DD:EE:FF --profile=RHEL5-i386
```
Example: Bare-metal, no PXE

No DHCP?

# cobbler buildiso

Take this to your machine and netinstall as if you had PXE.

Kickstart rendering is still 100% dynamic
Example: Virtualization

on the master server, increase the profile's RAM requirements:

```bash
# cobbler profile edit --name=RHEL5-i386-xen --virt-ram=1024
[and other options...]
```

on the remote, create a virtual machine using that profile:

```bash
# koan --server=cobbler.example.org --list-profiles
# koan --server=cobbler.example.org --profile=RHEL5-i386-xen
--virt
```
Cobbler Also Has A Web Interface

- Does ~90% of what the command line can do
  - And growing...
- Configurable authn/authz fits your org's requirements
  - Works with kerberos, LDAP, or config files
    - (this means FreeIPA is supported)
    - (or whatever else you use can be made to work!)
  - Optional “ownership” module for complex workflows
- Comes in black
Integration and Customization Options

- Command line
- Triggers
  - Add, remove, install, sync
- Modules
  - Write your own authz, authn, serialization, or even command line options
- Python API
  - Examples: api.py, cobbler itself, Wiki
- XMLRPC API (cross-language support!)
  - Examples: remote.py, CobblerWeb.py
  - See also /etc/cobbler/modules.conf
The Future

- Next few releases
  - Wider OS/distro support
  - Continual inclusion of ideas/patches from you
  - Web app improvements/usability
  - World domination (tell your friends)
- Future
  - Red Hat Satellite support expected Q1 2009
  - Provisioning server for other applications (TBA)
More Info?  How to Get Involved?

For documentation, source, Wiki, and lots of resources, see http://cobbler.et.redhat.com

Mailing list is et-mgmt-tools@redhat.com, you'll need to subscribe to post, links on the web site.

#cobbler on irc.freenode.net (IRC), join today and say Hi :)

The future is up to you!  Share your ideas!
Q&A