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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?)
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 - Systems
- 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>

```
# 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!

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Example: Importing a DVD

Import a DVD:

```
# cobbler import --name=RHEL5 --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

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

Install a machine to a given profile

```
# 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:

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

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

```
# 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

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