马哥教育

Operations

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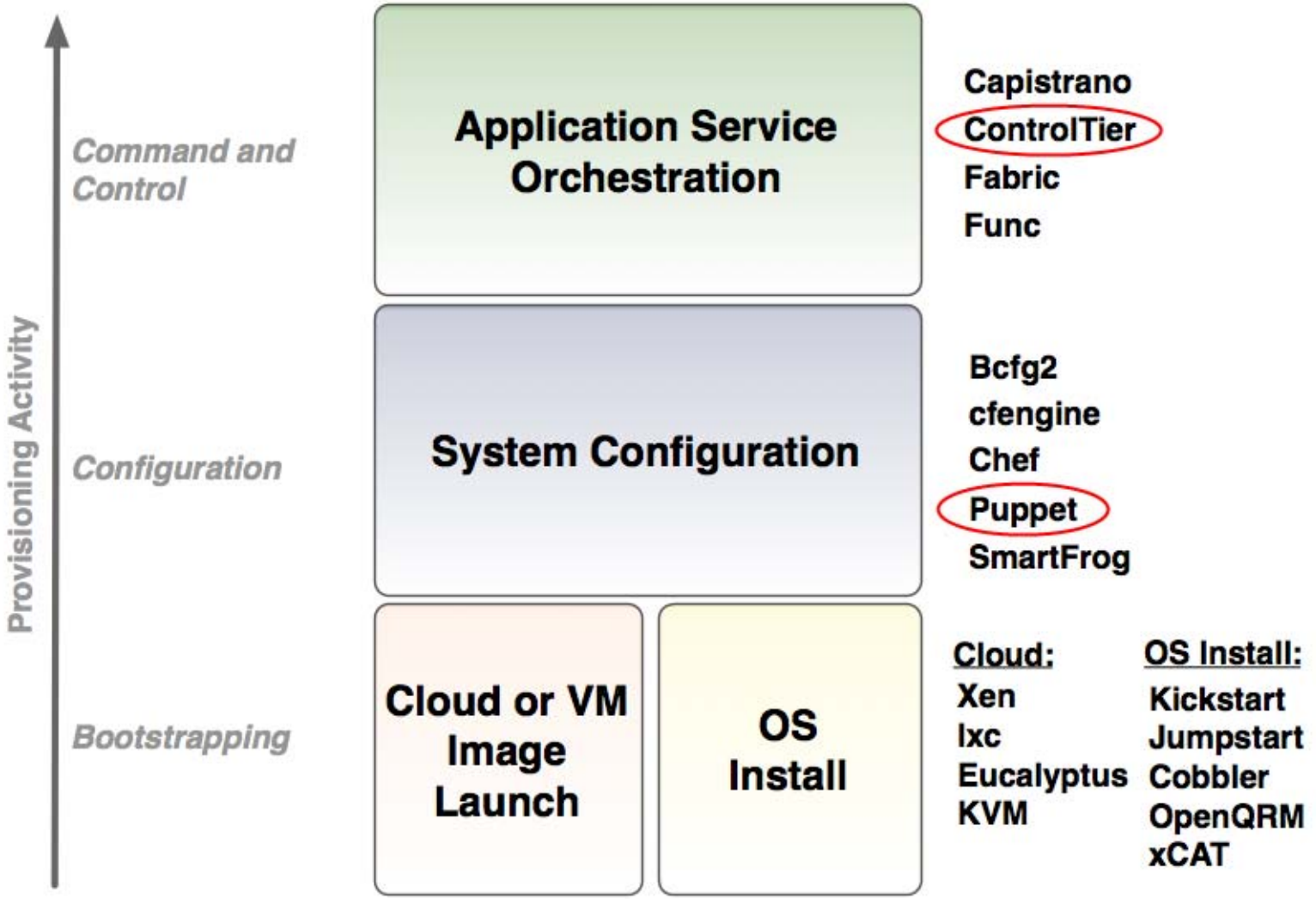
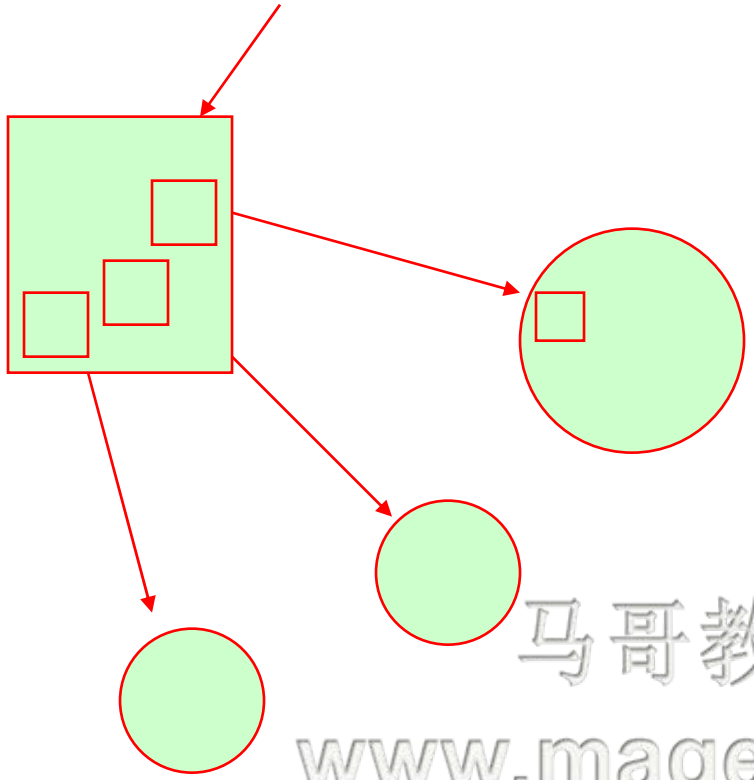

Provisioning Activity
Command and Control
Configuration
Bootstrapping
Application Service Orchestration
System Configuration
Cloud or VM Image Launch
OS Install
Capistrano
ControlTier
Fabric
Func
Bcfg2
cfengine
Chef
Puppet
SmartFrog
Cloud:
Xen
lxc
Eucalyptus
KVM
OS Install:
Kickstart
Jumpstart
Cobbler
OpenQRM
xCAT

master/agent

- master



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- ControlTier是基于"对目标进行操作（Activity）"的工具
- Puppet则是基于"定义目标状态"的工具

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cobbler

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- primitives
  - distro
  - profile
    - kickstart
  - system

  - distro → profile → system (optional) 主要目的：配置网络接口
  - pxe, default
    - label

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Introduction to Cobbler

- A build and deployment system
  - The primary functionality of cobbler is to simplify the lives of administrators by automating repetive actions, and to encourage reuse of existing work through the use of templating
  - Cobbler also provides a tool (koan) for simplifying virtualization deployments
- Component
  - cobbler
  - cobbler_web

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Cobbler Primatives

- Distros
- Profiles and Sub-Profiles
- Systems
- Repos
- Images
- Management Classes
- File Resources
- Package Resources

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Managing Services With Cobbler

- TFTP
- rsync
- DHCP
- DNS

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Cobbler Commands

- Import
- Sync
- Reposync
- Build ISO
- Command Line Search
- Replication
- Validate Kickstart
- ACL Setup

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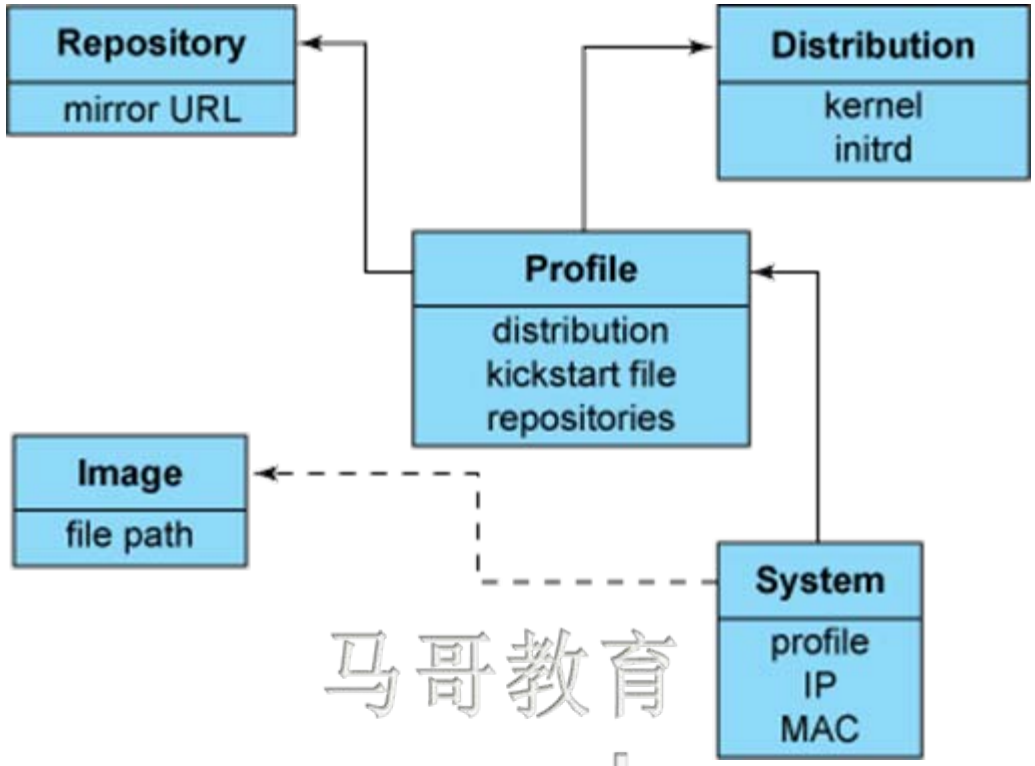

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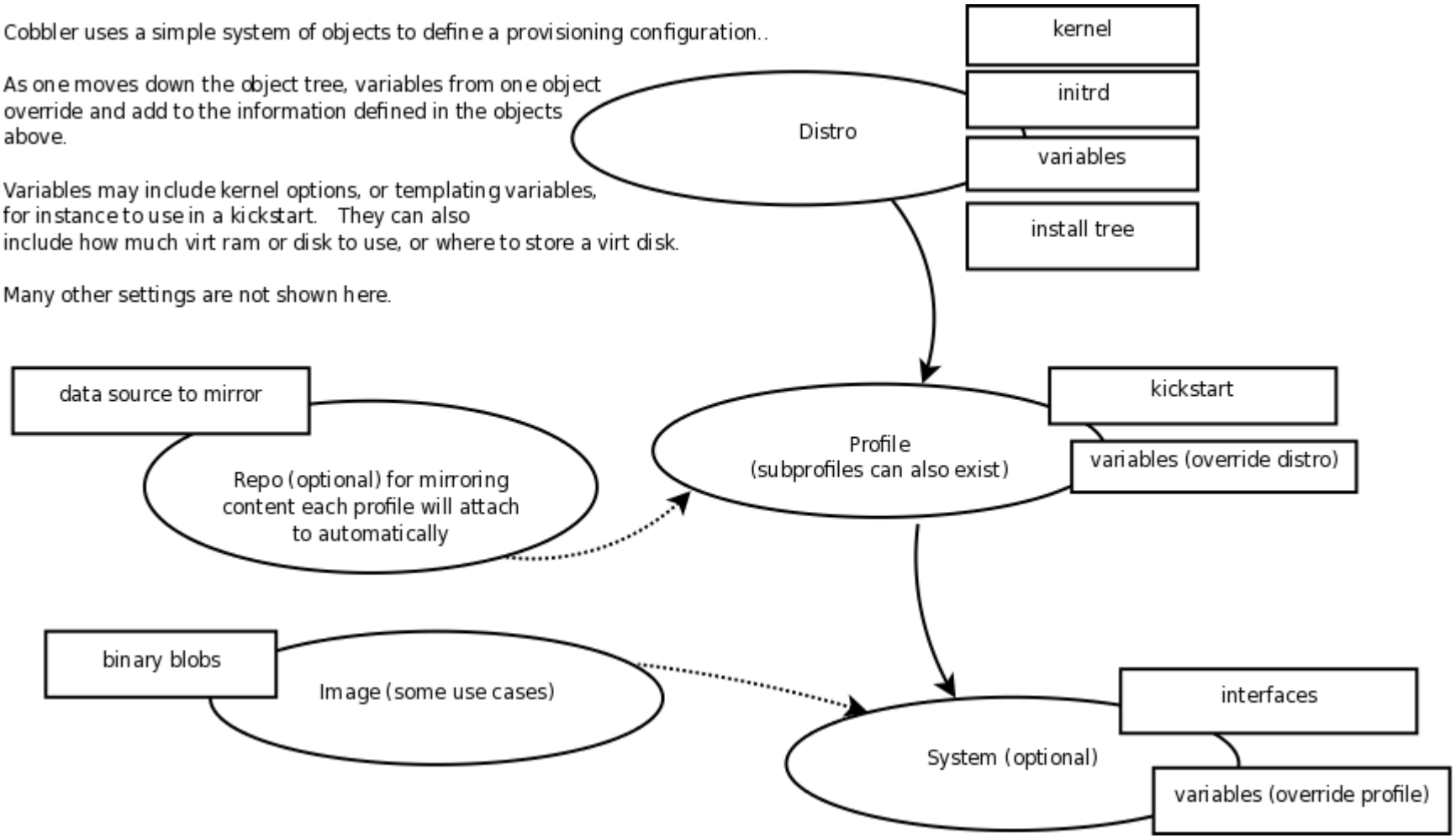
Cobbler uses a simple system of objects to define a provisioning configuration..

As one moves down the object tree, variables from one object override and add to the information defined in the objects above.

Variables may include kernel options, or templating variables, for instance to use in a kickstart. They can also include how much virt ram or disk to use, or where to store a virt disk.

Many other settings are not shown here.



Distros

- The first step towards installing systems with Cobbler is to add a distribution record to cobbler's configuration
  - If there is an rsync mirror, DVD, NFS, or filesystem tree available that you would rather **import** instead
    - The purpose of "cobbler import" is to set up a network install server for one or more distributions
  - Imported mirrors also save time during install since they don't have to hit external install sources

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Profiles & Sub-Profiles

- A profile associates a distribution to additional specialized options, such as a kickstart automation file
- Profiles are the core unit of provisioning and at least one profile must exist for every distribution to be provisioned
- A profile might represent, for instance, a web server or desktop configuration
  - In this way, profiles define a role to be performed

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Systems

- System records map a piece of hardware (or a virtual machine) with the cobbler profile to be assigned to run on it
  - This may be thought of as chosing a role for a specific system
  - If provisioning via koan and PXE menus alone, it is not required to create system records in cobbler, though they are useful when system specific customizations are required
  - One such customization would be defining the MAC address
  - If there is a specific role inteded for a given machine, system records should be created for it

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- System commands have a wider variety of control offered over network details
  - In order to use these to the fullest possible extent, the kickstart template used by cobbler must contain certain kickstart snippets (sections of code specifically written for Cobbler to make these values become reality)
  - Compare your kickstart templates with the stock ones in /var/lib/cobbler/kickstarts if you have upgraded, to make sure you can take advantage of all options to their fullest potential

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Repos

- Repository mirroring allows cobbler to mirror not only install trees ("cobbler import" does this for you) but also optional packages, 3rd party content, and even updates
- Mirroring all of this content locally on your network will result in faster, more up-to-date installations and faster updates
- If you are only provisioning a home setup, this will probably be overkill, though it can be very useful for larger setups (labs, datacenters, etc)

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Images

- Cobbler can help with booting images physically and virtually, though the usage of these commands varies substantially by the type of image
- Non-image based deployments are generally easier to work with and lead to more sustaintable infrastructure

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Thank You!