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What's new in Eucalyptus / EUC?

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Agenda

- Eucalyptus 2.0 code base import
- Cloud-utils
- Deployment tools

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New versions and features

- 10.04 LTS Eucalyptus based on stable 1.6 branch (1.6.2 in Lucid)
- Eucalyptus 2.0 (2010-08-24) new code base imported in 10.10 Maverick
  - Stability/Performance point-release, Back-end (CC/NC) scale improvements.
  - CLC fixes including backend database pooling and persistence improvements, SSL support.
  - euca_conf fixes including the ability to list nodes (and VMs).
  - Fixes to Walrus for specific use cases, bugs and stability, as well as beta support for the S3 server logging API, fixes to bittorrent support.
  - Storage Controller scalability improvements:
    - iSCSI support for EBS volumes, S3 versioning, virtio support for KVM hypervisors
  - Updated packages for current versions of supported distributions.
  - Closes many bugs
- Blueprint:

https://blueprints.launchpad.net/ubuntu/+spec/server-maverick-uec-eucalyptus-next

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cloud-utils

Currently in cloud-utils:

- /usr/bin/uec-publish-image
- /usr/bin/uec-publish-tarball
- /usr/bin/uec-query-builds
- /usr/bin/uec-resize-image
- /usr/bin/uec-run-instances
- /usr/bin/ec2metadata

•Blueprint: https://blueprints.launchpad.net/ubuntu/+spec/server-maverick-cloud-utils

uec-publish-image

Publish a cloud image: [OPTIONS] ARCH IMAGE BUCKET

```
ARGUMENTS
     ARCH   Target architecture, one of i386 or x86_64

     IMAGE  Target image to upload and register

     BUCKET Target bucket to publish the image to
```

```
OPTIONS
     -l|--add-launch <user_id>
          user_id can be "all", or "none"

     --dry-run
          only report what would be done

     --allow-existing
          if a image is already registered simply report as if work was done

     -o|--output <file>
          write registered id and manifest to file

     --rename <publish_path>
          publish to bucket/<publish_path>, default: bucket/<basename(image)>

     -t|--type <type>
          type is one of kernel/ramdisk/image.  if type is 'image', then:
            -k | --kernel       k : use previously registered kernel with id 'k', specify 'none' for no kernel
            -K | --kernel-file  f : bundle, upload, use file 'f' as kernel
            -r | --ramdisk      r : use previously registered ramdisk with id 'r', specify 'none' for no ramdisk
            -R | --ramdisk-file f : bundle, upload, use file 'f' as ramdisk
            -B | --block-device-mapping m : specify block device mapping in bundle

     -v|--verbose
          increase verbosity
```

uec-publish-tarball

Publish a cloud archive: [OPTIONS] TARFILE BUCKET [ARCH]

ARGUMENTS

TARFILE	Target archive
BUCKET	Target bucket
ARCH	Image architecture, optional

OPTIONS

-k | --kernel k
    Use previously registered kernel with id 'k' specify 'none' for no kernel

-K | --kernel-file f
    Bundle, upload, use file 'f' as kernel

-q | --quiet
    Be quiet, only output produced image ids

-r | --ramdisk r
    Use previously registered ramdisk with id 'r' specify 'none' for no ramdisk

-R | --ramdisk-file f
    Bundle, upload, use file 'f' as ramdisk

uec-query-builds

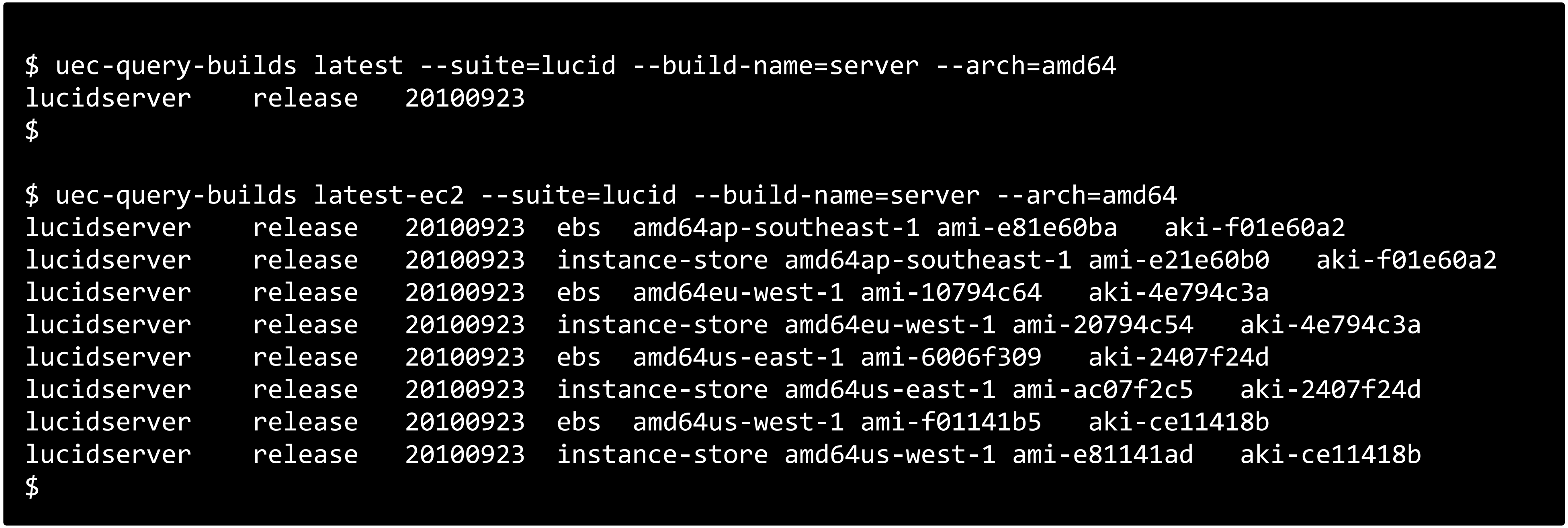
Request information about available cloud images: [modes] [options]

```
MODES
     latest
       list information about the latest build available

     is-update-available
      indicate if there is a newer build available

     latest-ec2
      list information for the latest builds on ec2
```

```
Options:
  -h, --help            show this help message and exit
  --suite=SUITE         suite to query ('hardy', 'karmic', 'lucid')
  --build-name=BUILD_NAME
                        build name ('server', 'desktop' ..)
  --stream=STREAM       stream query ('released', 'daily')
  --base-url=BASE_URL   the base url to query
  --output=FILE         write output to file, default is stdout
  --serial=SERIAL       build serial serial to use (YYYYMMDD)
  --system-suite        use output of 'lsb_release --codename --short' for
                        suite
  --config=CONFIG       yaml config file to read
  --region=REGION       the ec2 region to query
  --img-type=TYPE       the ec2 image type (one of: ebs, instance)
  --arch=ARCH           the architecture. (one of: i386, amd64)
```

uec-query-builds (continued)

Example output:



```
$ uec-query-builds latest --suite=lucid --build-name=server --arch=amd64
lucidserver    release   20100923
$

$ uec-query-builds latest-ec2 --suite=lucid --build-name=server --arch=amd64
lucidserver    release   20100923  ebs  amd64ap-southeast-1 ami-e81e60ba   aki-f01e60a2
lucidserver    release   20100923  instance-store amd64ap-southeast-1 ami-e21e60b0   aki-f01e60a2
lucidserver    release   20100923  ebs  amd64eu-west-1 ami-10794c64   aki-4e794c3a
lucidserver    release   20100923  instance-store amd64eu-west-1 ami-20794c54   aki-4e794c3a
lucidserver    release   20100923  ebs  amd64us-east-1 ami-6006f309   aki-2407f24d
lucidserver    release   20100923  instance-store amd64us-east-1 ami-ac07f2c5   aki-2407f24d
lucidserver    release   20100923  ebs  amd64us-west-1 ami-f01141b5   aki-ce11418b
lucidserver    release   20100923  instance-store amd64us-west-1 ami-e81141ad   aki-ce11418b
$
```

uec-resize-images

uec-resize-image [options] image size [output]

Resize a UEC image to a new size.

if output is given, do not modify 'image', but create new file 'output'

```
  New size is specified per resize2fs(8), e.g. "1G" for 1 gigabyte

  options:
    -v | --verbose    show command output
```

Limitations: - Works only on simple image files, not on compressed images or tarfiles
- Internally uses resize2fs

uec-run-instances

Injecting public ssh leys from Launchpad.net into instances

This script wraps around euca-run-instances, and provides an additional option:

-l | --launchpad-id id1,id2,id3 …

Uses ssh-import-lp-id provided by openssh-server

ec2metadata

Query and display EC2 metadata: [options]

--kernel-id	display the kernel id
--ramdisk-id	display the ramdisk id
--reservation-id	display the reservation id
--ami-id	display the ami id
--ami-launch-index	display the ami launch index
--ami-manifest-path	display the ami manifest path
--ancestor-ami-id	display the ami ancestor id
--product-codes	display the ami associated product codes
--availability-zone	display the ami placement zone
--instance-id	display the instance id
--instance-type	display the instance type
--local-hostname	display the local hostname
--public-hostname	display the public hostname
--local-ipv4	display the local ipv4 ip address
--public-ipv4	display the public ipv4 ip address
--block-device-mapping	display the block device id
--security-groups	display the security groups
--public-keys	display the openssh public keys
--user-data	display the user data (not actually metadata)

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Deployment / Provisioning tools

New documentation for UEC Provisioning

https://help.ubuntu.com/community/UEC/Provisioning

- Router https://help.ubuntu.com/community/UEC/Provisioning/DD-WRT
- Mirror: https://help.ubuntu.com/community/UEC/Provisioning/Mirror (ubumirror)
- TFTP: https://help.ubuntu.com/community/UEC/Provisioning/TFTP
- PXE: https://help.ubuntu.com/community/UEC/Provisioning/PXE
- WoL: https://help.ubuntu.com/community/UEC/Provisioning/WakeOnLan
- Web Interface provisioning: https://help.ubuntu.com/community/UEC/Provisioning/WebUI

Missing/Postponed: DHCPD, Web Interface branding

uec-provisionning-webui

Simple steps:

1) Install the package
```
$ sudo apt-get install uec-provisionning-webui
```

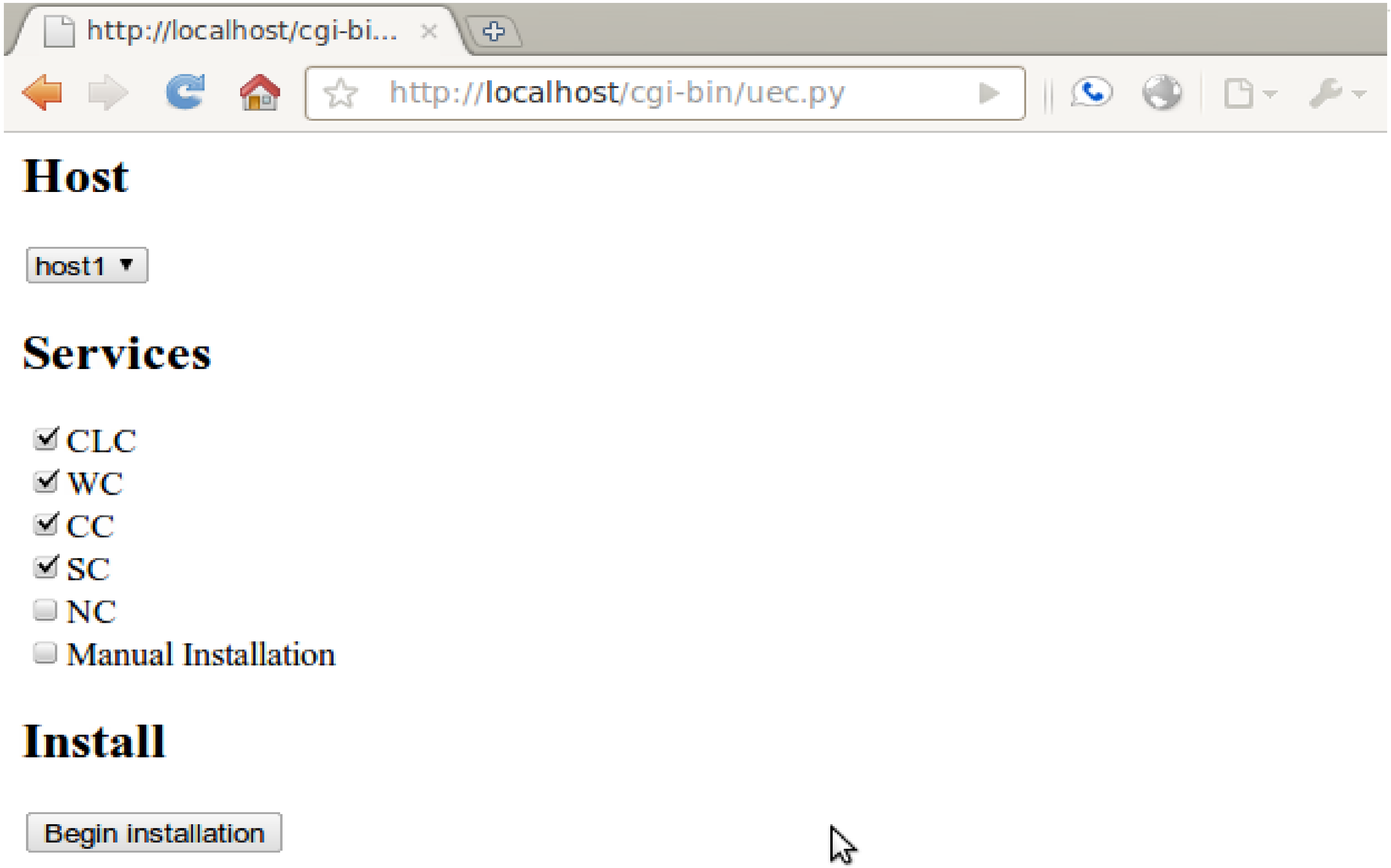
2)Add your host susceptible to UEC preseeding to the file:
/etc/uec-provisioning/hosts.cfg

3) Power off the target host(s) after enabling WoL
https://help.ubuntu.com/community/UEC/Provisioning/WakeOnLan

4) Point your browser to http://localhost/cgi-bin/uec.py

5) Select components and start install

Uec-provisionning-webui (screenshot)



Host

host1 ▾

Services

- ☑ CLC
- ☑ WC
- ☑ CC
- ☑ SC
- □ NC
- □ Manual Installation

Install

Questions?