

# Upgrading to Ubuntu Server Edition 10.04 LTS

OSCON 2010

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# what is an LTS?

Released every two years

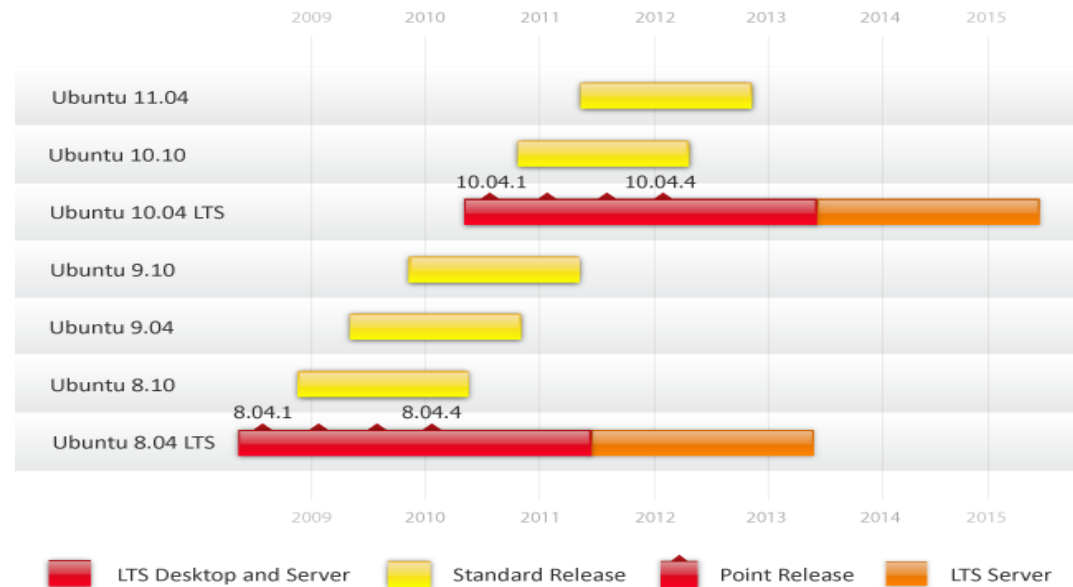
5 years of security and maintenance updates

Direct upgrade path from LTS to LTS release

Deployment platform for millions of users

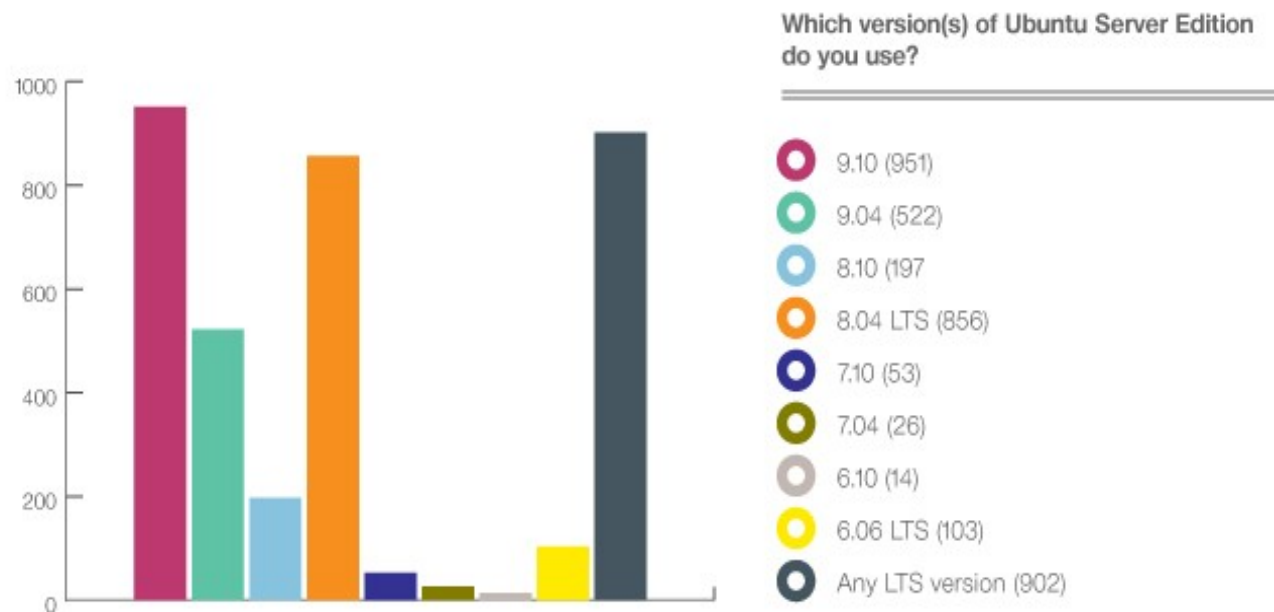
Preferred platform for business users

Target Platform for ISVs



# LTS is the deployment platform

- 10.04 LTS is the third LTS release
- All delivered to predictable schedule
- 50% of Ubuntu in use is on some version of LTS



# How does Ubuntu 10.04 deliver?

- **Direct upgrade path for Ubuntu 8.04 LTS and Ubuntu 9.10 users**
  - No need to rip and replace, in place upgrades
- **Stability and security enhancements for LTS including:**
  - Five years of security and maintenance updates free to all users
  - AppArmor security by default on key packages
  - Kernel hardening (memory protection, module loading blocking, address space layout randomisation)
  - Uncomplicated Firewall extended to all common services
  - Encrypted Home and Private directories

# Virtualization enhancements

- Building up on Libvirt and KVM for simple deployment and management KVM now supports:
  - KSM memory aggregation
  - Live migration of virtual machines
- Automated and fast image creations with VMBuilder
- Ubuntu as Virtual Machine (VM) supported for VMWare, Xen, KVM, Virtualbox, EC2 and UEC

# Cloud enhancements

- UEC as well as EC2 and UEC images are included in five years of free security and support updates
- Minimal installation profile for minimum footprint VMs optimised for EC2 and UEC
- Ubuntu EC2 images can be booted from EBS
- Multi-language AWS library support
- Easily customised and frequently refreshed images at boot time for super flexibility using cloud-init
- Puppet, a configuration management framework, can be used to mass control instances from their start

# Storage and Management

- **Advanced storage capabilities built in, including**
  - RAID support from the installer
  - iSCSI and multipath support and booting
- **Simpler to mass deploy and manage**
  - Puppet integration from the installer and in the cloud
  - Version control configuration changes (integrated with Puppet), provides history and accountability
  - Many new and improved installation profiles
  - Built-in package mirroring and network installation tools
  - Improved management from Canonical's Landscape

# Major packages added or updated

- CouchDB
- Puppet
- Eucalyptus
- Django 1.1
- OpenJDK6
- Tomcat 6
- MySQL 5.1
- ClamAv
- SpamAssassin
- Samba 3.4
- Python 2.6
- Nagios 3
- Ruby
- PowerNap
- PHP 5.3
- KVM 1.84
- Libvirt 0.7.5
- RabbitMQ 1.7

# Ubuntu 10.04 committed ISVs



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# Avatar rendered on Ubuntu



Weta is the special effects house behind Avatar, King Kong and Lord of the Rings.

## Weta Infrastructure

The Weta 'Render Wall' enables virtual worlds and real actors to be joined in real time.

- ~35,000 cores
- ~5000 Blades
- 104 TB RAM
- Ubuntu Server Edition
- 100+ Graphics artists



So, how do I upgrade?

# type

```
sudo apt-get update
```

```
sudo apt-get upgrade
```

```
sudo do-release-upgrade
```

# Questions?

no

the world is not that simple :)

unfortunately...

# cases

- On bare metal
- Virtualized
- In a IaaS infrastructure (cloud)

# step 1: plan

- **Read:**
  - <https://help.ubuntu.com/community/UpgradeNotes>
  - <https://wiki.ubuntu.com/LucidLynx/ReleaseNotes>
- **Time:** never count on the best case
- **When:** not just before flying off
- **What:**
  - list all the workloads that matter
  - list any service not installed with ubuntu's package manager
- **Criticality:** evaluate for each workloads
- **Backup plan:** what will you do if all as failed?
- **Test plan:** how will you check that all worked?

## step 2: backup

- We (should) all have a backup strategy in place, but that's a good time to **verify the states of your backups**
- Now is the best time to use **snapshotting** capabilities of your platform

# step 3: do-release-upgrade

- **Execute:**

```
sudo apt-get update
sudo apt-get upgrade
sudo apt-get install update-manager-core
edit /etc/update-manager/release-upgrades and set
Prompt=1ts
sudo do-release-upgrade
```

- **Check** carefully what's going to be removed
- **Note** what are the dpkg questions you encounter

- **Logs**

```
/var/log/dpkg.log
/var/log/dist-upgrade/
/var/log/apt
```

# step 4: check

- Verify your configuration files
  - All the question you noted in step 3
  - Any files listed through

```
sudo find /etc -name *.dpkg*
```
- Use `diff` to make sure that your site specific changes are kept
- Edit `/boot/grub/menu.lst` and change the default boot kernel to the newly installed 10.04 kernel.

# step 5: reboot and test

- Reboot
- Apply your test plan
- Fix anything that does not deliver nominally

