



Ubuntu Server Edition:

An overview of technologies

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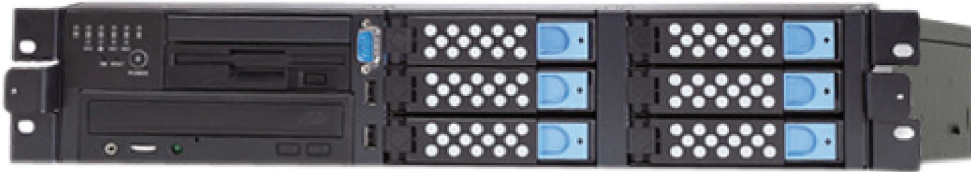
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What is Ubuntu?



- Server LTS (Long Term Support) launched in June 2006
- Ideal high volume, low cost server deployment
- Supports APT for seamless upgrade (LTS to LTS)
- Quick install profiles – Web, Mail, Database, DNS, LAMP
- Class leading virtualization support

Agenda

How do we differ from Debian?

Technology choices

- AppArmor
- KVM
- Upstart
- UFW
- The best guest OS
- Likewise-open

What's coming?

- Identity Management
- Enterprise Enablement
- Virtualization
- Configuration Backend

The Ubuntu Server Team

How to get involved?

How do we differ from Debian?



Ubuntu

- Predictable life-cycle
- Enterprise integration
- Software partners
- Support & certification
- Hardware certification

Debian

- Packaging
- Application choice
- Updates
- Stability & quality

Package deployment and maintenance

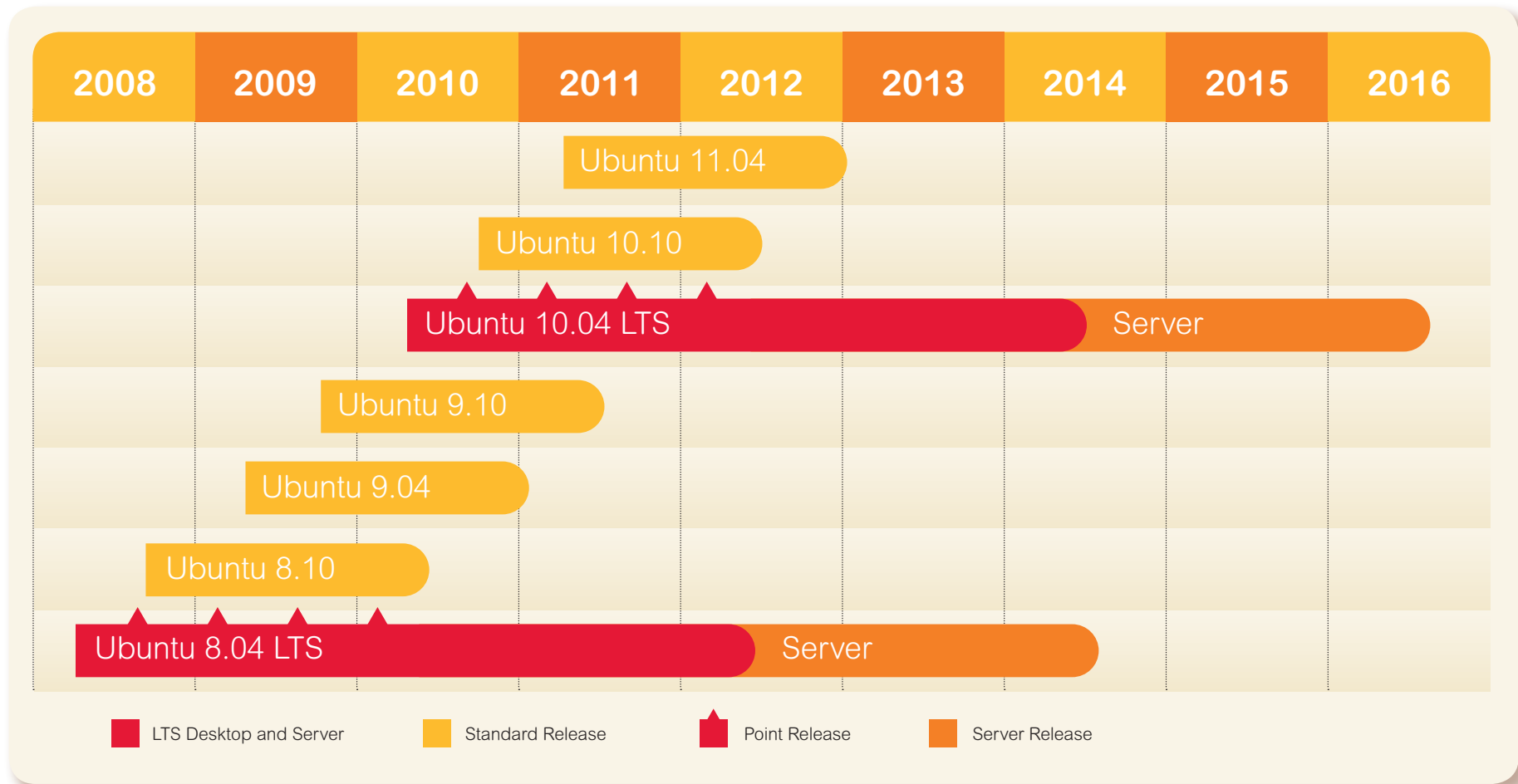
Debian Packaging

- Handles package files **and configuration**
- Allows for **tight integration** of different packages
- Permit updates of running services
- Tight and documented quality and policies
- Excellent dependency control

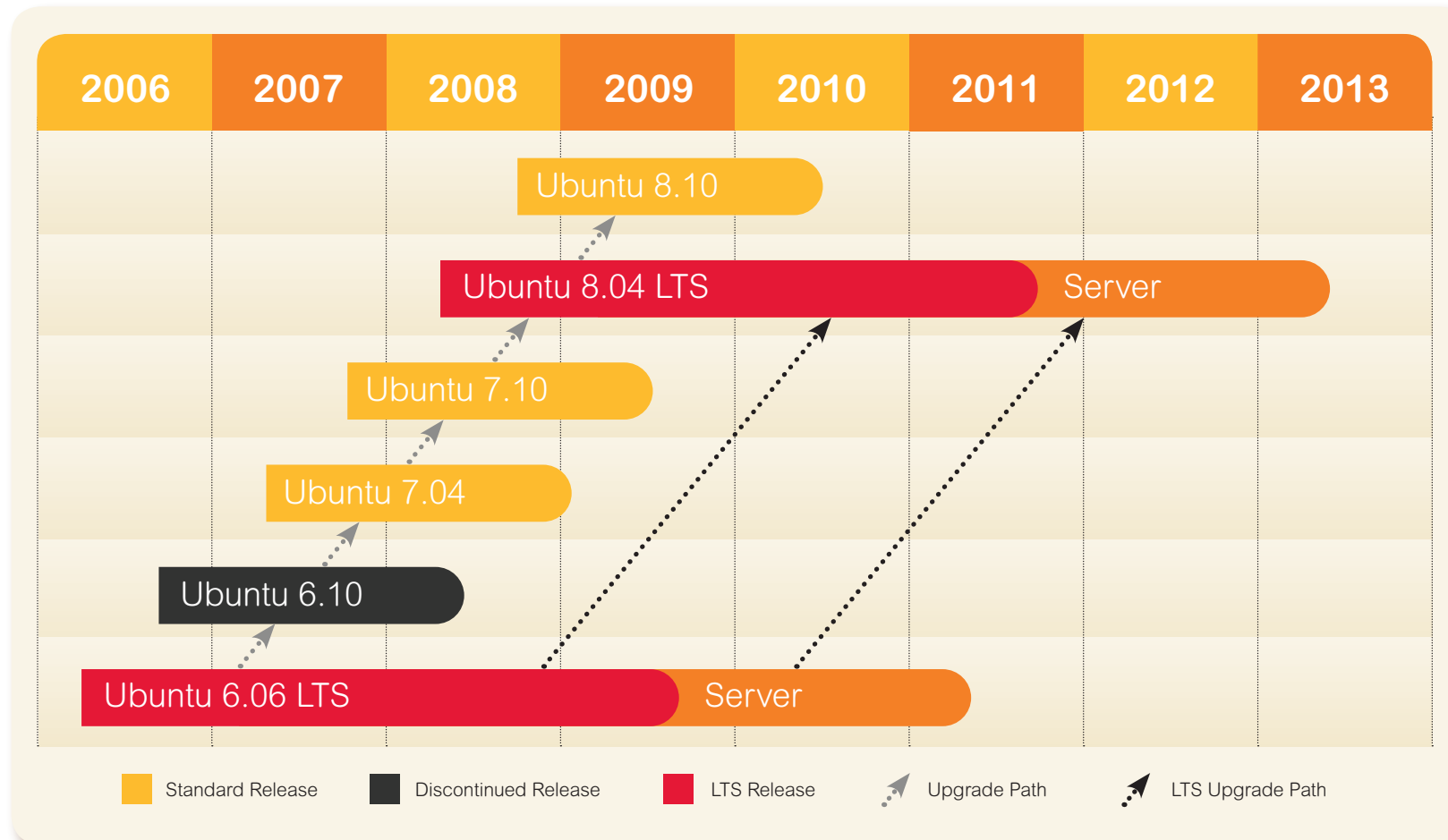
The APT (advanced packaging tool) package management system

- One tool for all services and applications
- Fast and reliable updates
- Fully controllable (locally or remotely)
- Applies to partner applications
- Can be used for in house applications

Maintenance and Support



Upgrade paths



Technology Choices

Security

AppArmor

Mandatory Access Control made simple

- Application containment
- Rules are easy to write and maintain
- Contained by default:
 - CUPS
 - Bind
 - MySQL
 - slapd (Open LDAP)
- Simple to troubleshoot

Uncomplicated FireWall

Firewalling should not be complicated

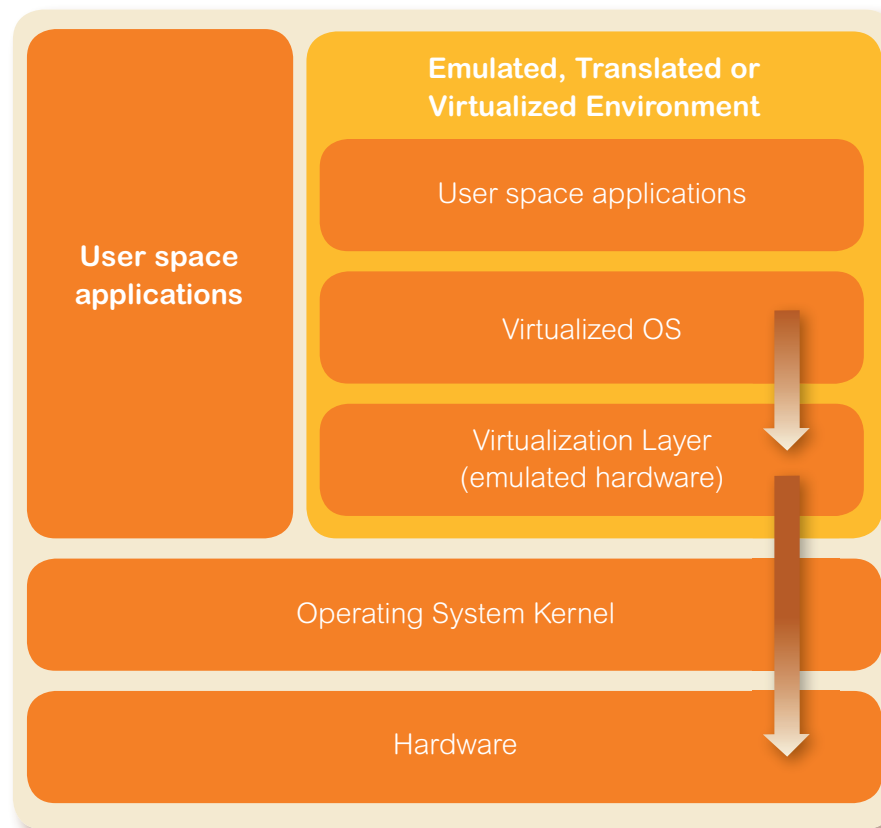
- Iptables are too complex for most users needs
- Complexity is a risk as it limits auditability
- UFW is a CLI frontend to reduce Iptable complexity
 - `ufw [--dry-run] [delete]`
`allow|deny PORT[/protocol]`
 - `ufw [--dry-run] [delete]`
`allow|deny [proto protocol]`
`from ADDRESS [port PORT]`
`to ADDRESS [port PORT]`
- Currently defining application level rules

Virtualization

KVM

The most efficient and maintainable open source virtualization technology

- No special kernel required
- Any AMD-V or Intel-VT based servers can run it out of the box
- Can be managed remotely
- Includes Virt-IO optimisation for supporting OS



JeOS

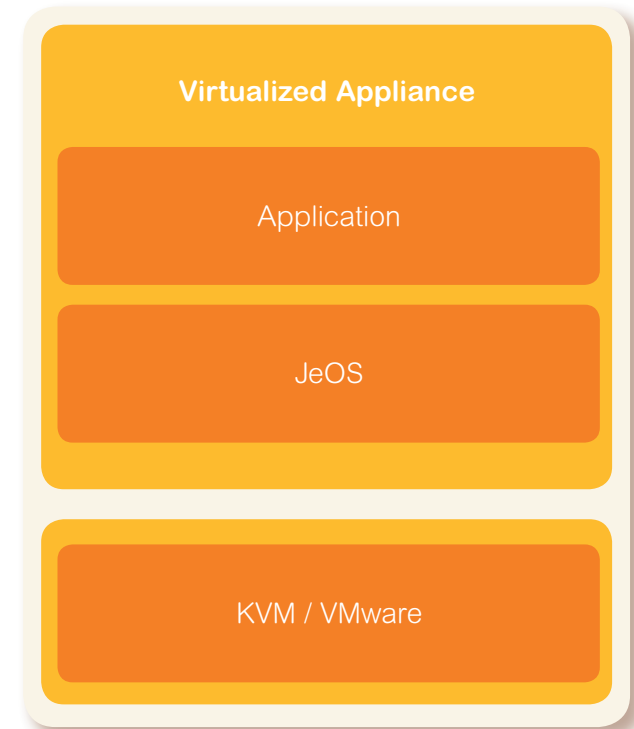
Best Guest OS

- Clearly leading the virtualized OS future
- 100MB ISO, 300MB installed footprint, 64MB RAM footprint
- Create focused and secure appliances
- Create virtual appliances that need less maintenance

Build custom JeOS on demand with Ubuntu's VMBuilder

- Builds a VM image in a minute
- Easy to include in a standard build process for ISV's
- A simple to replicate process in clusters (on demand or HPC)

Optimized for KVM and VMware



AD Integration

Integrating an Ubuntu server in an Active Directory domain is now as simple as calling a single command (Likewise-open)

Likewise-open:

- Single command integration into AD environment
- Replaces winbind's complexity
- Redirects authentication to AD
- Caches authentication for higher reliability

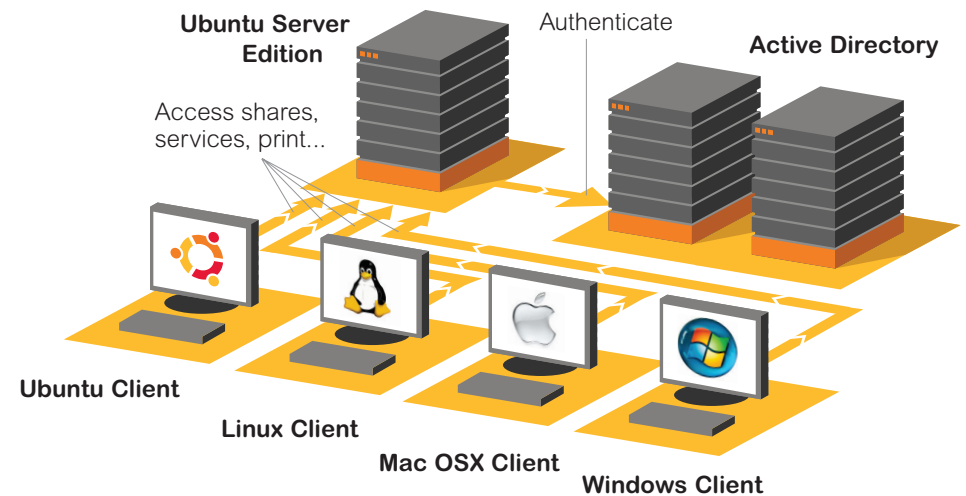


Figure 1 – Seamless authentication integration

What's coming?

**Identity
Management**

**Enterprise
Enablement**

Virtualization

**Configuration
Backend**

What's coming?

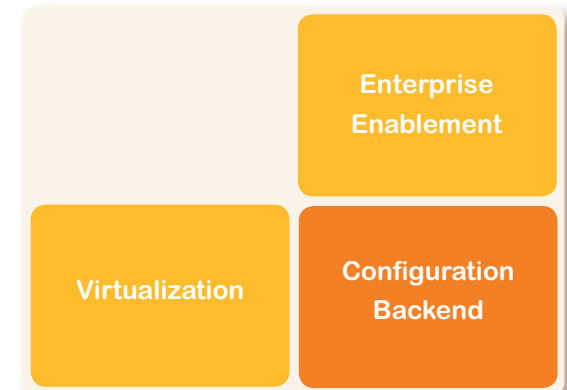
Identity Management

OpenLDAP

- Use cn=config mode for simpler multi-server deployments
- Default DIT and schema definition to simplify deployments

Service integration

- Main services provided with LDAP configuration
- Kerberos simpler to integrate



What's coming?

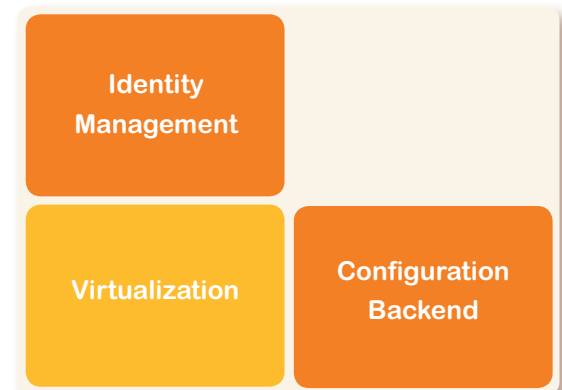
Enterprise Enablement

Storage Area Network

- Fiber Channel and InfiniBand enablement process
- Main vendors to participate

Server Management

- CIM integration
- IPMI improvements



What's coming?

Virtualization

Improving the guest

- XEN guest support
- More KVM optimisations
- VMware certification for 8.04 LTS

and the Host

- Cobbler to manage deployments
- New VMBuilder:
 - Python based
 - Multi distribution
 - Usable as a library
 - Optional web based front end

Identity
Management

Enterprise
Enablement

Configuration
Backend

What's coming?

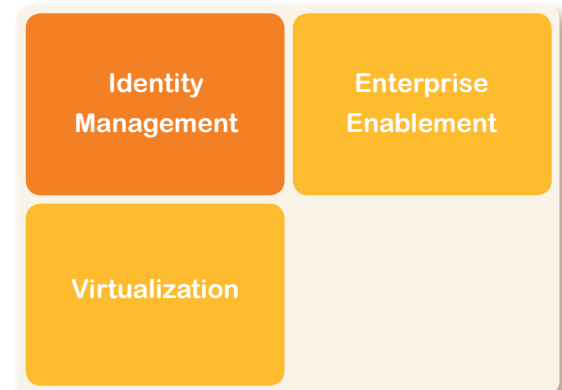
Configuration Backend

Why?

- Current GUI overwrites manual changes to configuration files
- It is against Debian policy for one package to modify another's configuration

A backend is a requirement to provide a sane way to modify conf files

- Community effort around Augeas
- Currently working hard on adding lenses for various conf files from main (all help is welcome)
- eBox community getting ready to switch to Augeas
- Text based GUI coming as well



How to get involved?

Ubuntu Server Mailing List

<https://lists.ubuntu.com/mailman/listinfo/ubuntu-server>

Ubuntu Server IRC channel

#ubuntu-server on Freenode

Joining the team

Apply on <https://launchpad.net/~ubuntu-server>

Team wiki

<https://wiki.ubuntu.com/ServerTeam/GettingInvolved>

Contact information



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