





# All about .au

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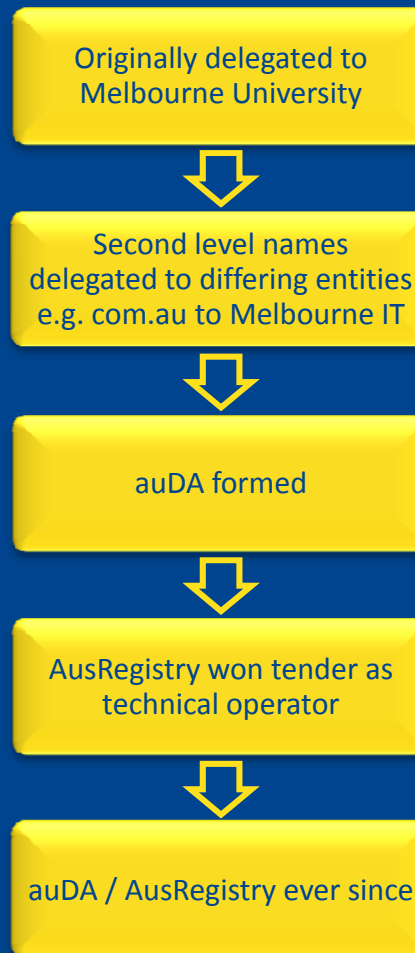
# AusRegistry International

- Located in Melbourne, Australia
  - Involved in Domain Name Industry since 1999
  - ICANN Accredited Registrar since 2000
  - .au Registry Operator since 2002
- Domain Name Registry Services
  - Registry Systems and Software Provider
  - Consultancy Services
  - Our software and consultancy services have been used by several other TLDs including some soon to be IDN enabled ccTLDs

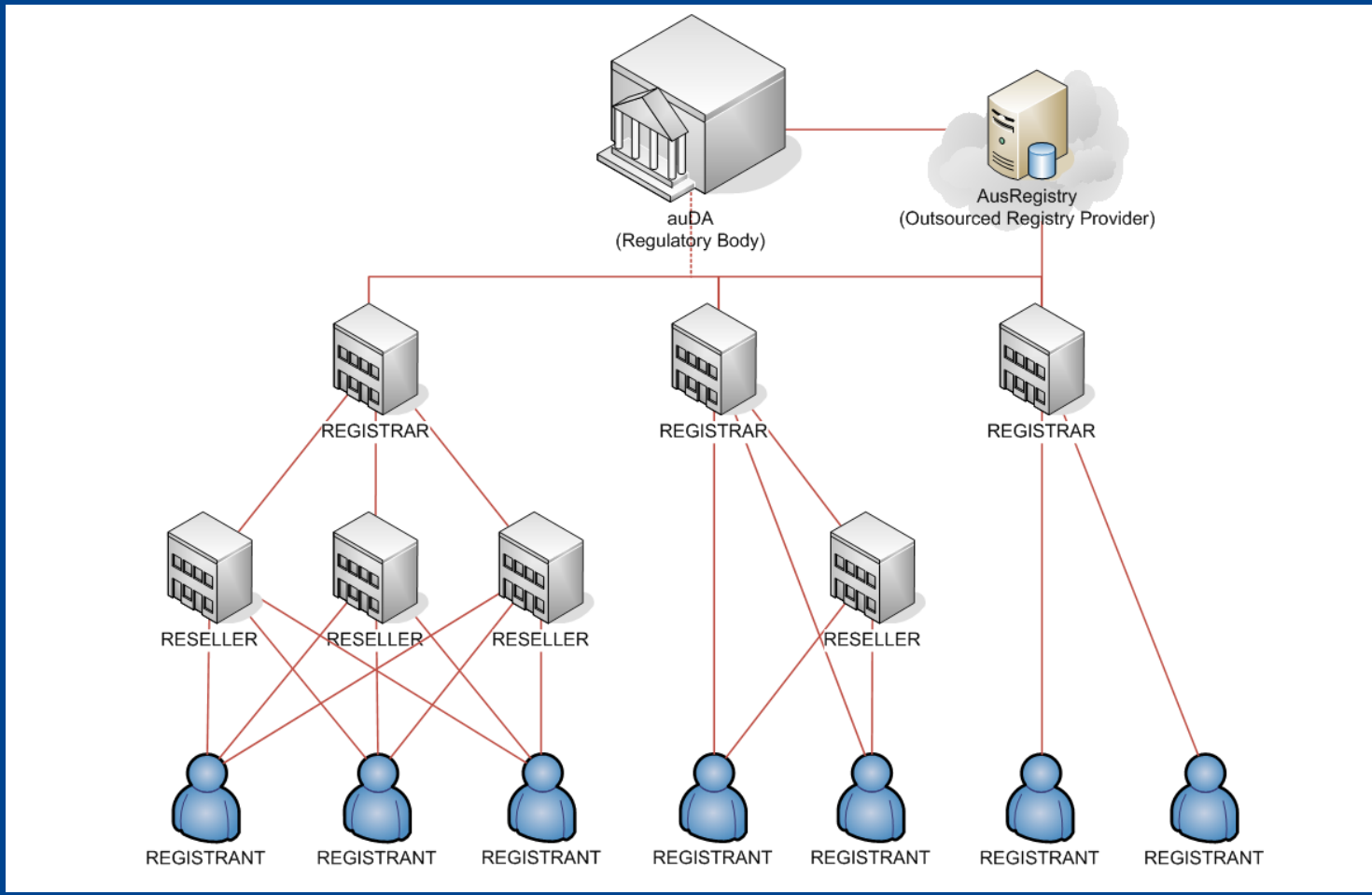
# An overview of .au



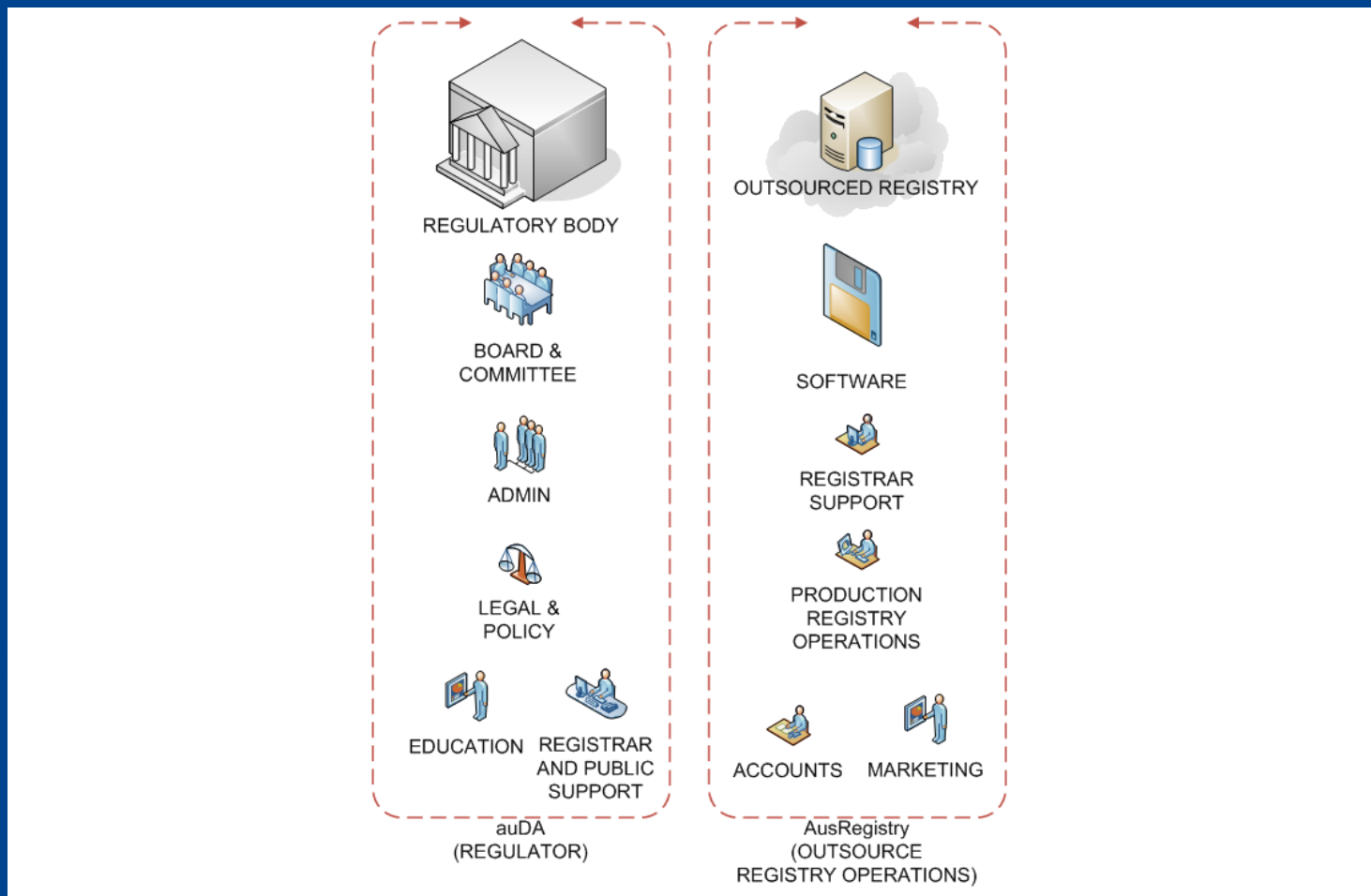
# A brief History of .au



# The Industry Model



# The Industry Model





# Growth of au

- 2002 - 250,000 names
- 2009 - > 1.4 million
- Continued growth of ~25% a year

# Our Registry System

- Standard Registry/Registrar model
- EPP Registration System
- Web Interface (Registry Portal)
- WHOIS
- DNS
- Etc.

# Design Principals

- High availability (100% uptime)
- Geographically distributed redundancy
- Ease of maintenance
- Industry standard platforms
- High performance
- Equal access
- Standards Compliant

# Best of Breed Components

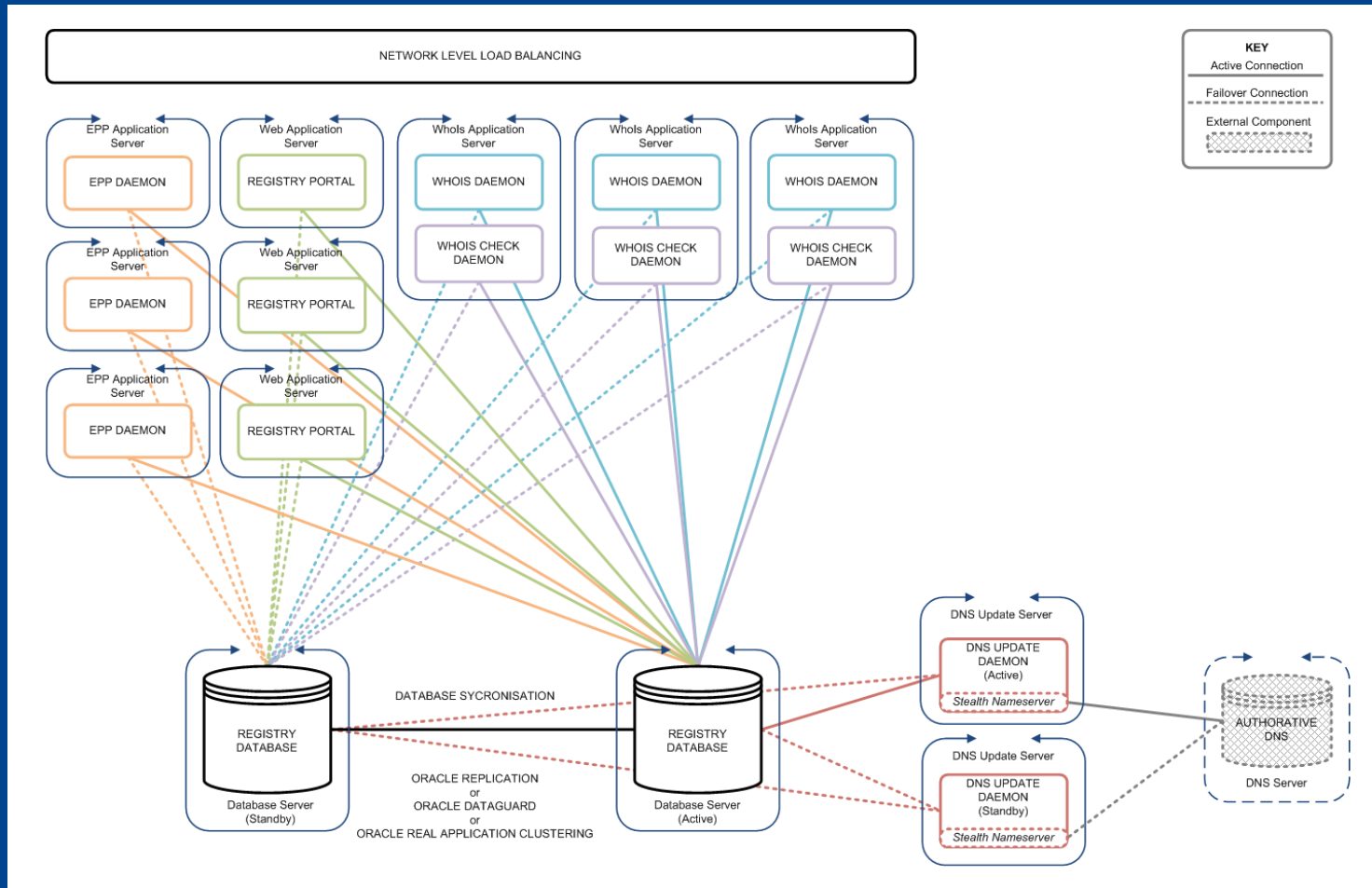
- Hardware
  - Intel x86\_64 hardware
  - IBM SAN storage
  - Cisco & F5 networking equipment
- Software
  - Redhat Enterprise Linux
  - Oracle Database
    - Unsurpassed high availability options
  - BIND DNS
  - Sun Java Systems Web Server

# Best of Breed Registry Software

- Been developed and improved for over 9 years
- Developed In-house
  - C++ Registry daemons
  - Java Web Application Portal
  - Toolkits in Java, Perl and C++
  - Optimised for Linux
  - Optimised for Oracle
- Now used by other Registries world wide and is available to be licensed



# The Registry System



## Some other stats

- 30 accredited Registrars
- Maintaining consistently 70+ EPP connections
- Process over 5 million EPP transactions a day
  - Average over 57 EPP TPS
  - On par with .info and .biz
  - ~ 90% are read only

A few specific examples...

# Registry Website

- Accounts & Users Permission Model
  - Also applies to EPP
- Real Time Reporting direct from production data
- Full Audit History
- Comprehensive Help Documentation

# Full use of EPP Poll mechanism

- Non-sponsor actions reported via poll message
  - Expiry
  - Updates due to hosts being removed
  - Transfers
  - Registry initiated operations
- Poll Message formats well defined, parseable and supply object data as required



# WHOIS Access Controls

- Port 43 WHOIS, Real time dynamic query limiting
  - Black listing results in being blocked at the firewall
  - Ability to give specific users larger than normal limits (but not necessarily unlimited)
  - Monitoring of queries by ‘known’ addresses grouped together to allow ‘Please Explain’ emails to be sent
- Configurable output for each interface
- CAPTCHA protection for web based WHOIS Interface
- Unicode enabled

# WHOISCheck

- WHOIS based, port 43 domain name availability check
- Unlimited, helps resellers of Registrars
- Very fast, easy to understand
- Works with IDNs in DNS or User form
- Functionality available since 2002

# IPv6

- All Registry Services are available via IPv6
  - WHOIS
  - EPP
  - Registry Portal
  - DNS
- WHOIS Black Listing Mechanism is IPv6 aware
- Registry three factor authentication can use IPv6 addresses

# Extensions to EPP

- Several Extensions to EPP
  - DNSSEC (IETF standard)
  - ENUM (IETF standard)
  - .au extensions (additional information and new commands)
  - AR extensions (adding new commands)
  - IDN Extensions

# DNS

- Pioneered dynamic updating of DNS zone files back in 2001
- Instant, real-time DNS updates to all production name servers
- Fastest Registration to resolution times



# DNSSEC

- Dynamic updating of DNSSEC signed zone files
- Dynamic key roll-over, no need to take zone offline to change keys and resign
- Fully automated process
- Will be going live later in the year

# Upcoming products

# indigi.au

- Allow indigenous Australians to register domain names in their native languages
  - uluru.indigi.au
  - kata-tjuta.indigi.au
- Working with linguists to investigate further

# Secure Domain – The Problem

- Registrars have complete control over the domains they sponsor
- Can be a serious security hole, especially for larger organisations such as financial institutions and governments
- Registrars, who are not implicitly held to security standards, are at risk
- Recent case
  - New Zealand MSN, April 2009

# Secure Domain – The Solution

- All Registry transactions for secure domains will require an authentication token
- This token will be held by the Registrant
- This mean Registrars cannot make changes to the domain without the token that is held by the Registrant



# Secure Domain

- Build public awareness about the inherent security of these names
- Flagged in WHOIS as secure so that browsers can verify that the domain being accessed is in fact secured
- Becomes another link in the chain of determining the legitimacy of a website

# Secure Domain - Roadmap

- Secure domains can co-exist with normal domain names in the same zone
- Zones may also be created which only contain secure domains – bank.au



The TLD Specialists



.who

오렌지

.where

.why

.ausregistry

.when

.fonts

.light

.pet

.auteur

.dance

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.which

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