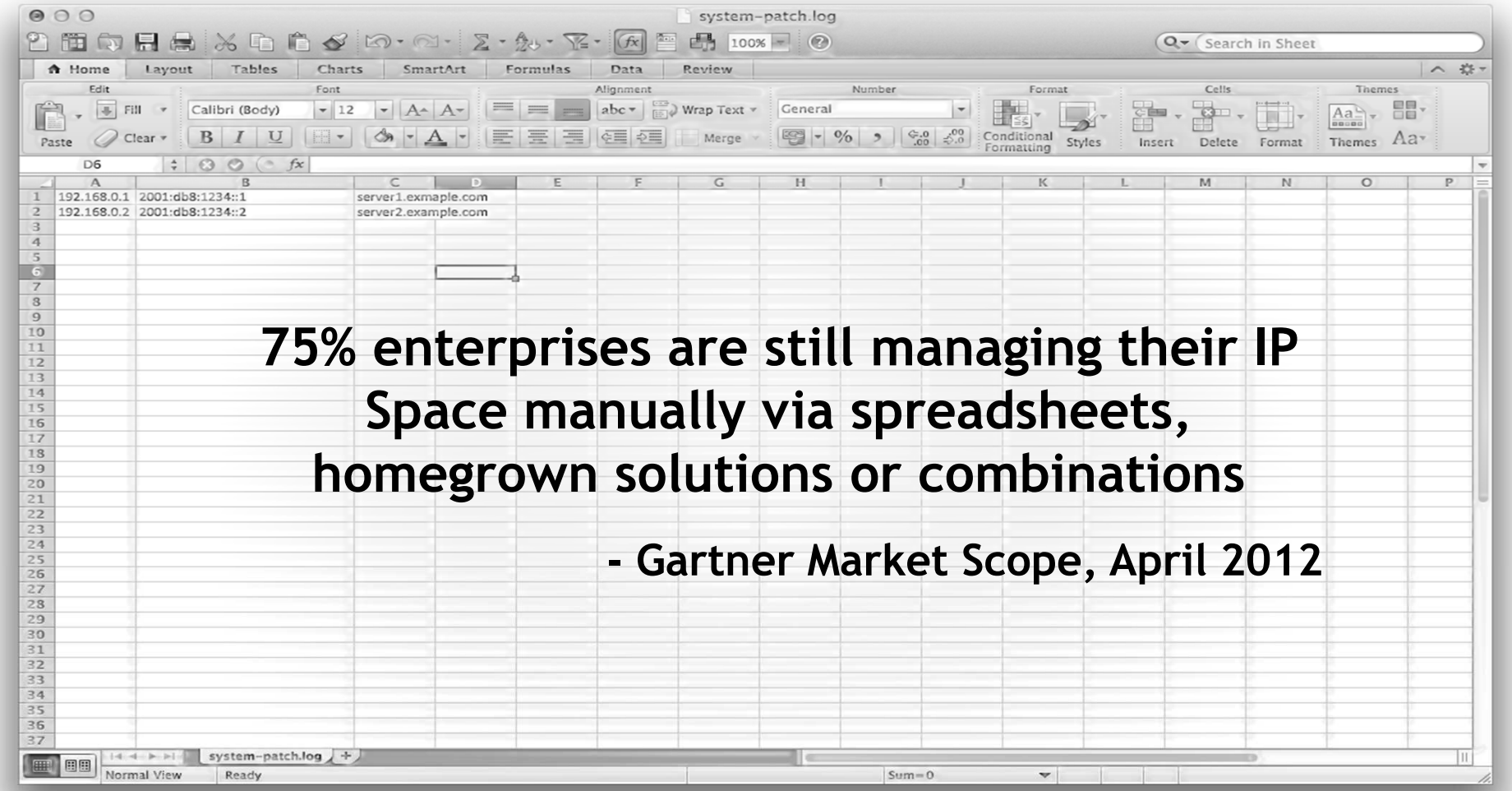
VitalQIP
WorkShop Tampere 2014

June 2014

1 The new challenges: Why we need QIP?

Everything needs an IP and a DNS entry: Critical Services

IPAM Market: The dynamic enterprise challenges

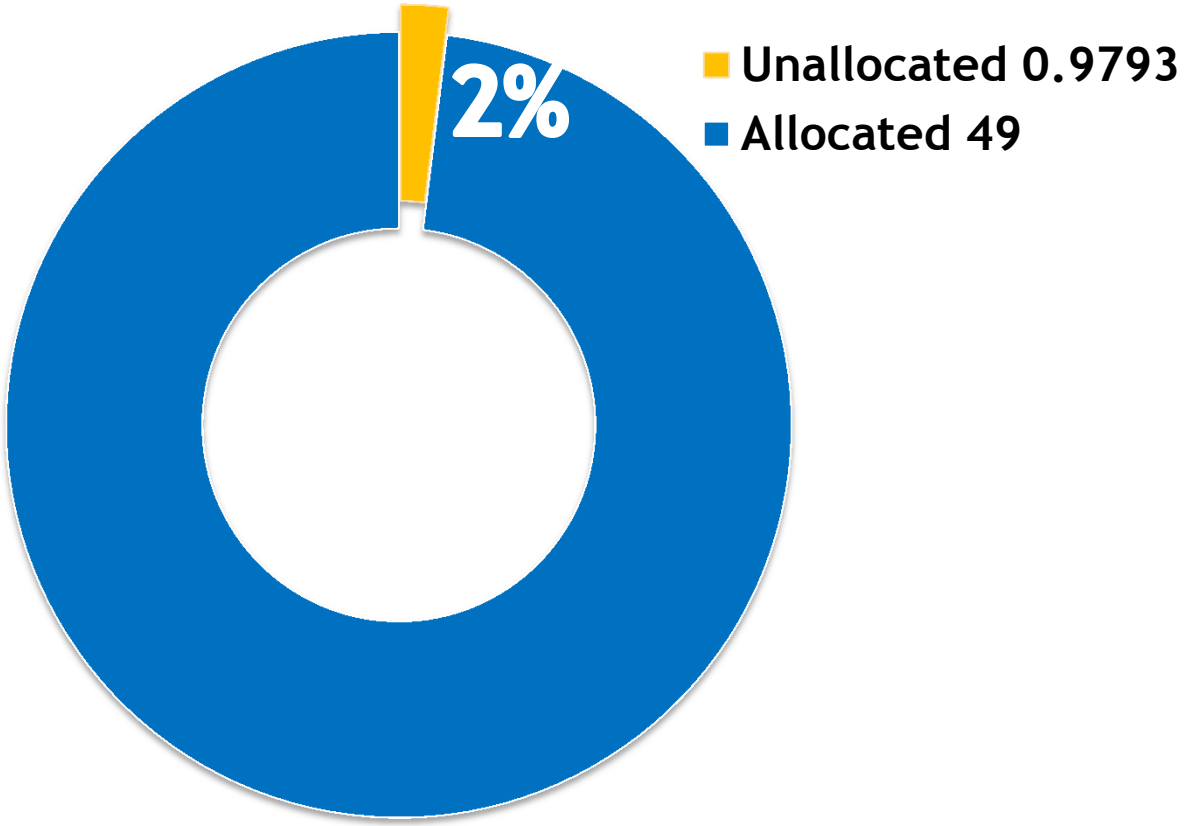


75% enterprises are still managing their IP Space manually via spreadsheets, homegrown solutions or combinations

- Gartner Market Scope, April 2012

RIPE NCC

14 Sep 2012 — News: RIPE NCC Begins to Allocate IPv4 Address Space From the Last /8
It is now imperative that all stakeholders deploy IPv6 on their networks to ensure the continuity of their online operations and the future growth of the Internet. (Source: RIPE)



RIPE IPv4 Exhaustion 14-Sep-2012

2 VitalQIP Overview

Introduction: VitalQIP overview

1993 – First to market: IPv4 IPAM Solution

20 years of experience in IPv4 Address Management, DNS & DHCP for Major Carriers & Large Enterprises

2005 – First to market: IPv6 IPAM Solution

8+ years of experience in IPv6 Address Management, IPv6 Forum member, IPv6 Standards contributions (BBF, IETF), Fully IPv6 capable networking portfolio

2012 – 2nd Generation IPv6 IPAM Solution

8+ years of experience in IPv6 Address Management leads to release of VitalQIP 8.0 designed to customers real world requirements for IPv6.

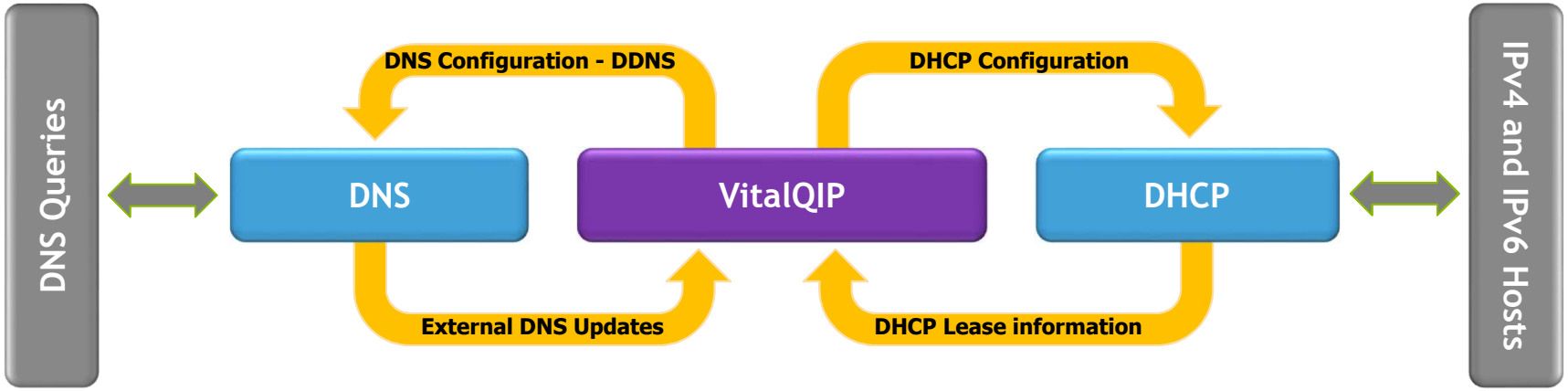
2014 – First DHCPv6 Failover Solution

Customer requirement delivered by Alcatel-Lucent. Multi-threaded, Carrier-grade. Naturally.

COPYRIGHT © 2012 ALCATEL-LUCENT. ALL RIGHTS RESERVED.
ALCATEL-LUCENT — INTERNAL PROPRIETARY — USE PURSUANT TO COMPANY INSTRUCTION

Introduction: VitalQIP overview

Provides full IP address lifecycle management from providing DHCP leases to clients to updating DNS Servers



DHCP = Automated configuration and management of DHCP servers supplying IP addresses and options to the IPv4 and IPv6 clients

DNS = Automated configuration of Domain Name System Servers with address-to-name and name-to-address resource records for IPv4 and IPv6 clients

VitalQIP = Central IPAM Repository serving as the foundation of DHCP and DNS management
Facilitates allocation of IPv4 & IPv6 address space to subnets, devices, users, locations

COPYRIGHT © 2012 ALCATEL-LUCENT. ALL RIGHTS RESERVED.
ALCATEL-LUCENT — INTERNAL PROPRIETARY — USE PURSUANT TO COMPANY INSTRUCTION

VitalQIP Offer Overview

VitalQIP

Hardware Appliances

QIP500

QIP700

QIP1210

QIP1210-RAID

QIP6000

Software Appliances

Software Appliance ISO image
Appliance installation on a Red Hat Enterprise Linux x64 compatible system

Virtual Appliances

vmware®

riverbed™

Traditional Software

redhat® LINUX

Windows®

solaris™

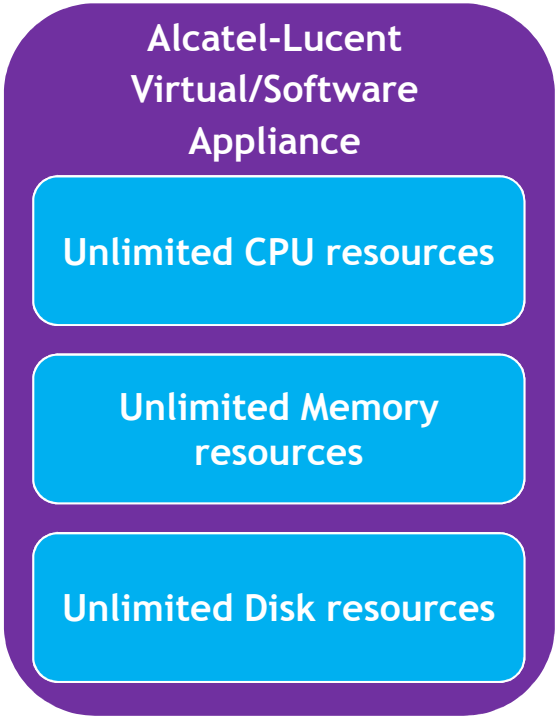
MOST FLEXIBLE SOLUTION ON THE MARKET

AT THE SPEED OF IDEAS™

Alcatel·Lucent

COPYRIGHT © 2012 ALCATEL-LUCENT. ALL RIGHTS RESERVED.
ALCATEL-LUCENT — INTERNAL PROPRIETARY — USE PURSUANT TO COMPANY INSTRUCTION

Unrestricted Virtualization



When deploying an Alcatel-Lucent virtual appliance the resources you provide to the virtual host are limited only by the resources available to the host, we do not artificially lock down virtual resources

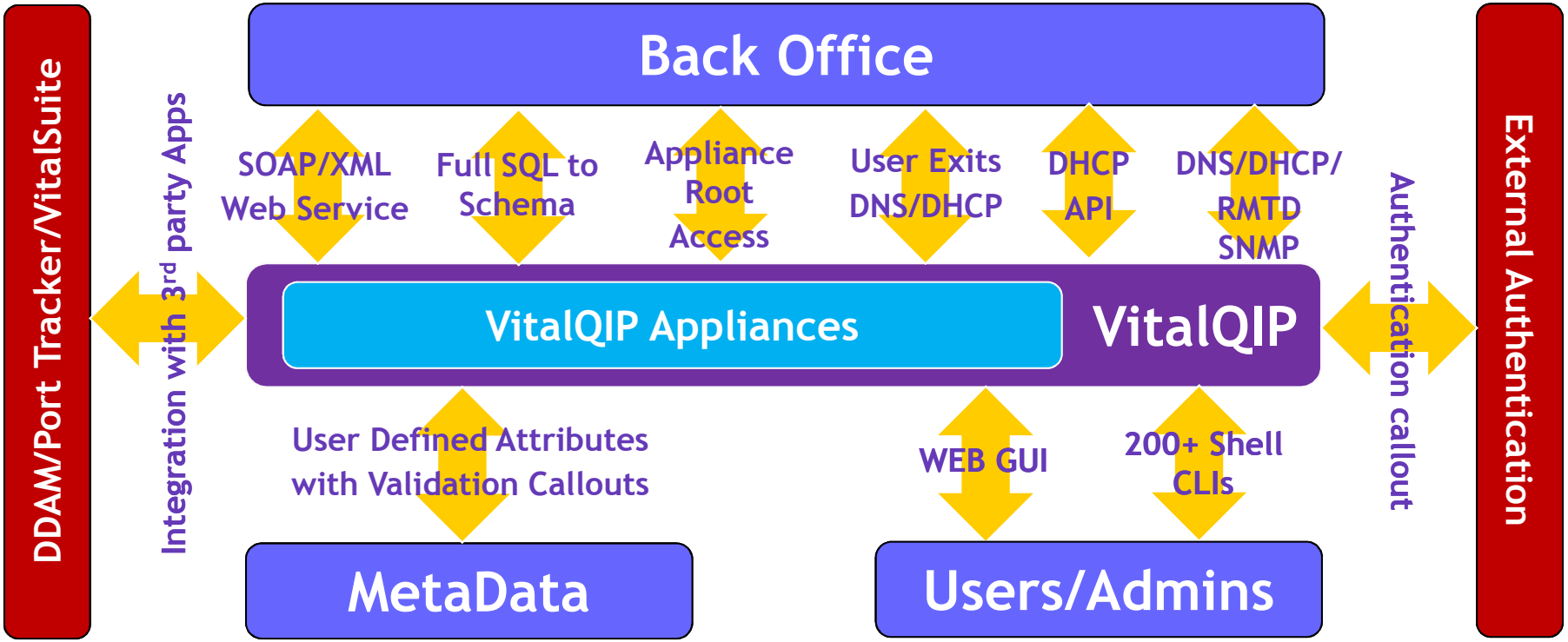
When deploying a software appliance on your physical hardware, the choice of hardware is your own, only x64 Red Hat compatibility is a requirement

We provide a single unlimited/unlocked ISO image, we do not artificially limit the performance of our virtual appliances unlike our competitors virtualised solutions which are limited to specific hardware resources per image and rate limited to specific performance levels

Virtualized or Software appliances from Alcatel-Lucent are not performance/resource restricted

COPYRIGHT © 2012 ALCATEL-LUCENT. ALL RIGHTS RESERVED.
ALCATEL-LUCENT — INTERNAL PROPRIETARY — USE PURSUANT TO COMPANY INSTRUCTION

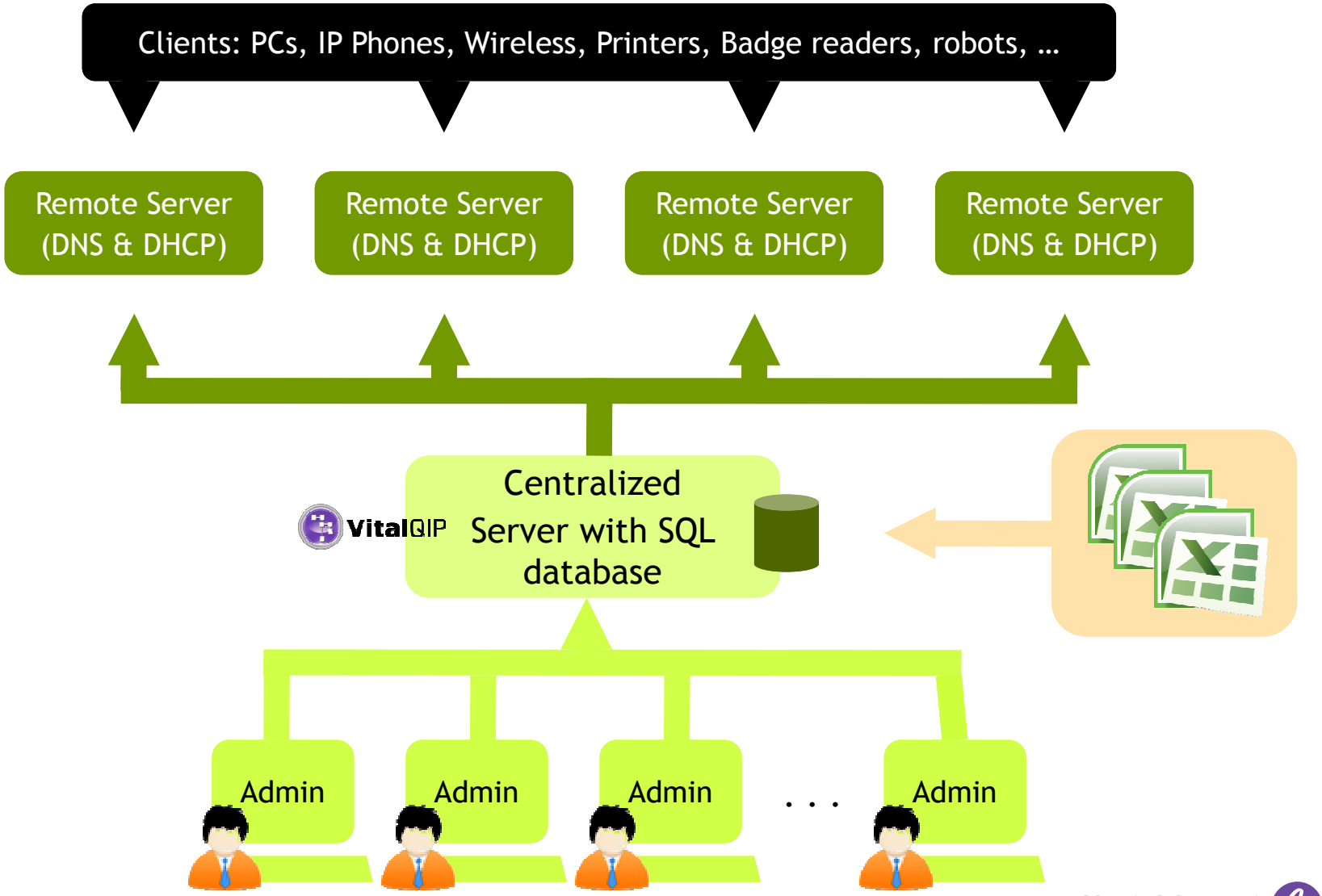
Open Architecture



COPYRIGHT © 2012 ALCATEL-LUCENT. ALL RIGHTS RESERVED.
ALCATEL-LUCENT — INTERNAL PROPRIETARY — USE PURSUANT TO COMPANY INSTRUCTION

3 The new IP management generation

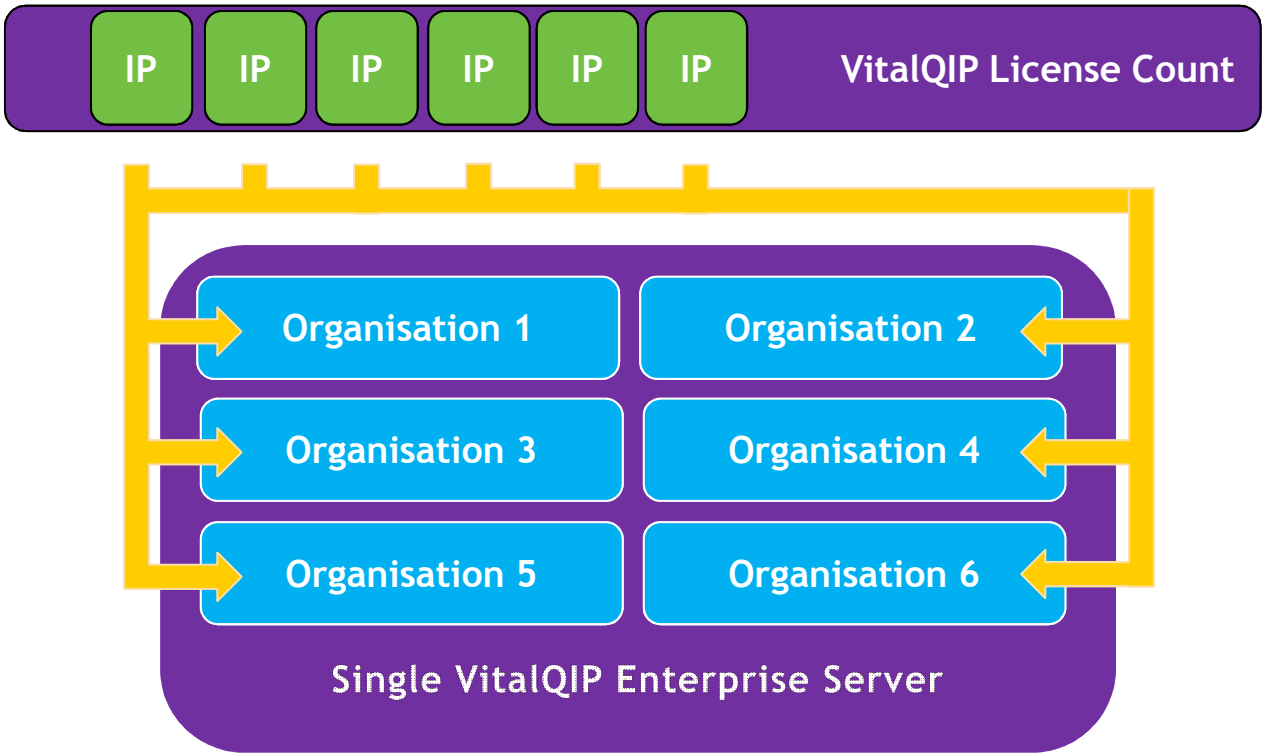
QIP Overall Solution design



Multi-tenancy via Organizations

VitalQIP

Single VitalQIP Enterprise Server, multiple unique organisations
VitalQIP license can be finely split over each organisations



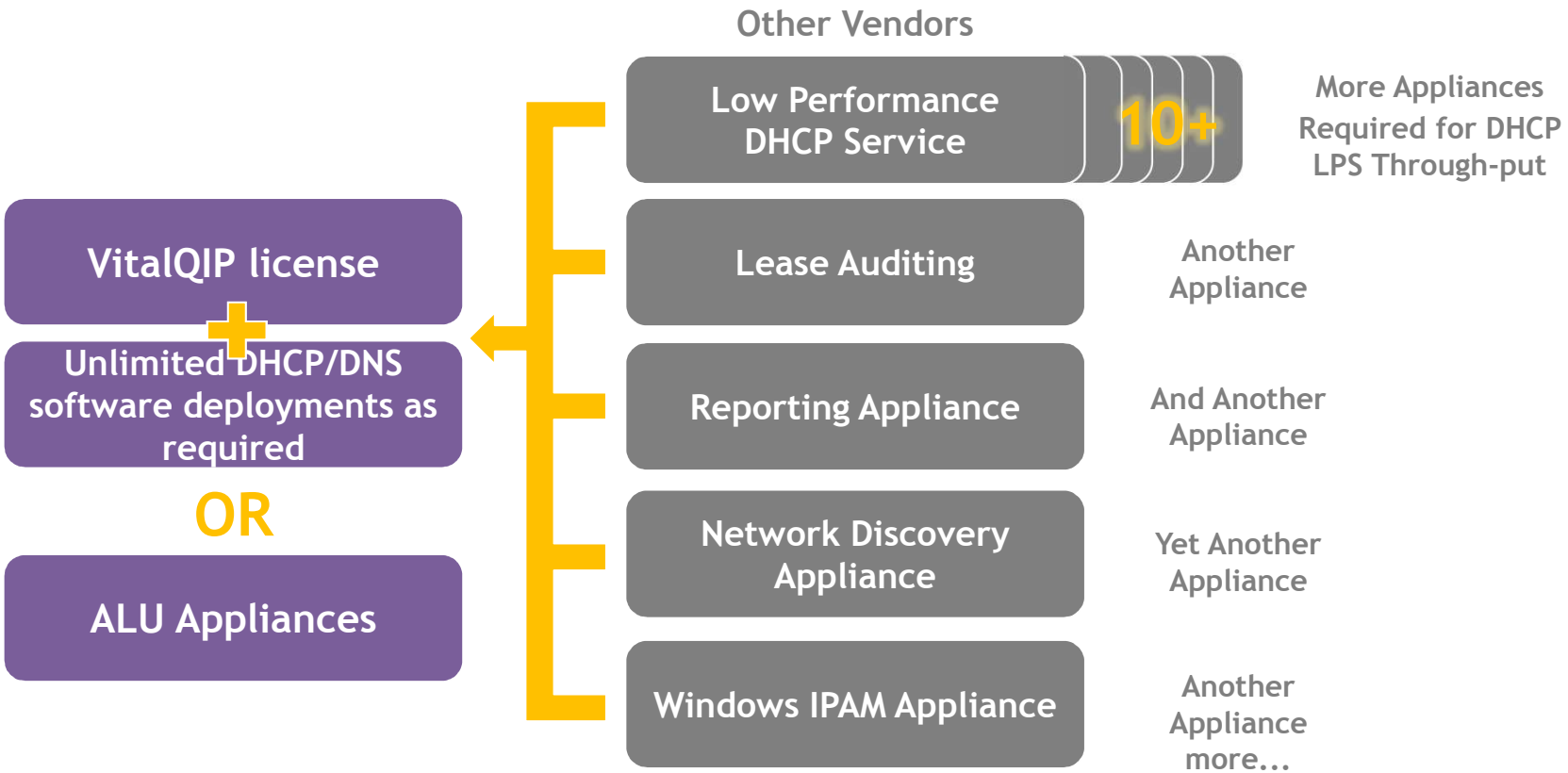
COPYRIGHT © 2012 ALCATEL-LUCENT. ALL RIGHTS RESERVED.
ALCATEL-LUCENT — INTERNAL PROPRIETARY — USE PURSUANT TO COMPANY INSTRUCTION

IPAM Replacement ROI

VitalQIP

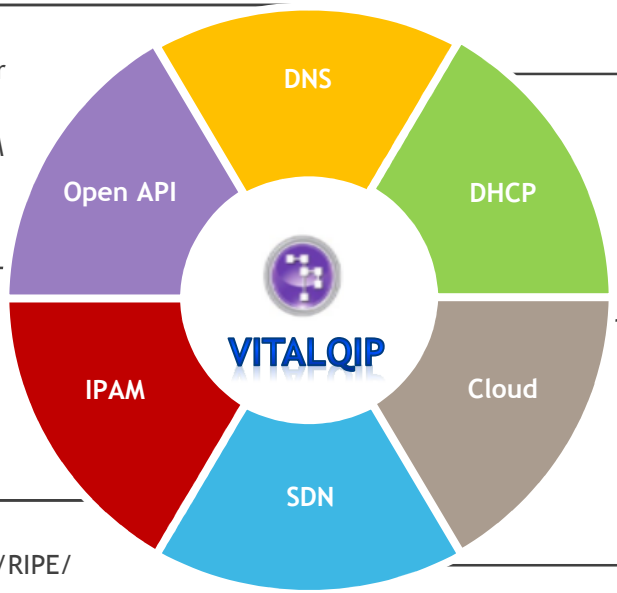
Consider ALL costs

Core functionality integrated not an additional extra



COPYRIGHT © 2012 ALCATEL-LUCENT. ALL RIGHTS RESERVED.
ALCATEL-LUCENT — INTERNAL PROPRIETARY — USE PURSUANT TO COMPANY INSTRUCTION

(D)NS (D)HCP (I)PAM SOLUTION



DNS

- ALU VitalQIP DNS server
- Any Bind based DNS server
- Microsoft DNS Server
- DNSSEC, DNS Views, ENUM
- DNS64

DHCP

- ALU VitalQIP DHCP Server
- Microsoft DHCP Server
- One to one DHCP failover with Heartbeat and lease file replication

Open API

- Soap/XML open API
- API tool kit
- Robust set of CLI's
- Virtual Integration

Cloud

- Multi-Tenant Platform
- Massively-scalable, Shared Services on Single Architectures.
- Unrestricted Virtualized Services (CPU/DISK/MEMORY)

IPAM

- Internet Registries
  - ARIN/APNIC/AFNIC/RIPE/ AfriNIC
- Network, Subnet and Object Management
- IPv4/IPv6 support

SDN

- Elasticity
- DNS and DHCP support for SDN SW
- Dynamically assign a new virtual machine an IP address, assign a DNS name then propagate to DNS servers for accessibility from the network.

COPYRIGHT © 2014 ALCATEL-LUCENT. ALL RIGHTS RESERVED.

SUMMARY

Control Speed
- Centrally manage IP address space, DNS, ENUM and DHCP servers Plan your IP space then simply push server configuration files to distributed DHCP/DNS servers and Appliances

Accuracy
- VitalQIP ensures accurate, properly formatted configuration files are pushed to DNS and DHCP servers to keep IP services available

Delegation
- VitalQIP enables delegation of responsibility with administrator profiles and granular control of user permissions

Security
- VitalQIP provides access controls, SSL communications, DNSSEC, and GSS-TSIG to prevent DNS cache poisoning

Scalability
- Carrier class with proven scalability (millions of IP addresses)

Evolution
- VitalQIP delivers 1 major releases/year, continuing to support latest standards/technologies including IPv6 and appliance based solutions

COPYRIGHT © 2014 ALCATEL-LUCENT. ALL RIGHTS RESERVED.

VitalQIP myynti ja tukipalvelut:

netnordic

Timo Mannonen

timo.mannonen@netnordic.com

p. 020 7459 691

COPYRIGHT © 2014 ALCATEL-LUCENT. ALL RIGHTS RESERVED.

Alcatel·Lucent Enterprise

QUESTIONS?

COPYRIGHT © 2014 ALCATEL-LUCENT. ALL RIGHTS RESERVED.

enterprise.alcatel-lucent.com

COPYRIGHT © 2014 ALCATEL-LUCENT. ALL RIGHTS RESERVED.