TMA solutions

Phone and Devices QA Service and Solution Consulting

Broadest business phone and device services whether it's on premises, or in a public, private, or hybrid cloud.

SERVICES

Phones and Devices Solution Verification:
- Manual Testing
- Automation Testing
- Performance Testing

Compliance/ Interoperability Testing for Cloud PBX - VoIP phones

VoIP solution consult, planning, building and end-user training

TMA COMPETENCIES

22 Years of Experiences with VoIP solution testing

Solid understanding and long standing experiences with phone and Devices
IP Phone | Analog Phone | Digital Phone
Wireless Phone | Conference Phone

NORTEL   AVAYA   Yealink
RTX TELECOM   Polycom   Fanvil

Hand on practises on various On-premise PBX/ Open SIP PBX/ Cloud IP PBX

AVAYA   NORTEL   CISCO
broadsoft   RingCentral
netsapiens   metaswitch   3CX
FreeSWITCH   Asterisk

Mature QA framework and Process to fulfill any service request

Flexible project type: ODC or Project based or TaaS

Experienced resource pool, easy to scale

TECHNOLOGIES

Technologies

VoIP Protocols:

SIP, H.323, VoWLAN

Network protocols:

VLAN, DHCP, DNS, EAP, LLDP, LDAP, SNMP, 802.1x, 802.3af/at, 802.11ab, VPN, RADIUS, IPv6

Framework

Robot Automation Framework

Jsystem Automation Framwork

TMA Automation Framework

Programming

- Groovy
- Perl
- Python
- Bash/Shell
- Java

Testing Tools

- **Testing tools:** HP QC, Atlassian Suite (JIRA, Confluence, Crucible, Zephyr, Bamboo, BitBucket), Wireshark, TCPdump, SSH/Putty, Colasoft Packet Play, SmartBits, SIPp, LDAP Browser, MIB Browser, Tera Term, Mincom, Syslog viewer.
- **Security tool:** Nessus, OWASP, NMAP, BurpSuit, Accunetix, Kali Linux (Linux penetration testing tools)
- **Automation Tools and Frameworks:** JSystem, Robot, Selenium, OpenCV, Tessaract OCR, GL Vquad, Jenkins, Git, GitLab, Sonarqube, Crucible, Gerrit, adb, UI Automator
- **Nerworking Interoperability testing:**
  1. **IP Networking Testing:** SNMP, LDAP, LLDP/DNS/DHCP, EAP, 802.1X, VPN, IPv4/IPv6, HTTP/HTTPs, ICMP, ICMPv6, UDP/TCP, SSL/TLS, ARP, SSH, SCP, SLA, SCEP, OCSP, FIPS, QoS, NAT, SNTP, VLAN, RTP/SRTP, RTCP/SRTCP, WML, TFTP, FTP
  2. **Connectivity Testing:** USB, Bluetooth, NFC, RS232
  3. **VoIP Related Testing:** SIP, H.323, Audio/Video Codecs, WebRTC, TTY, VPAT, DECT, VoWLAN
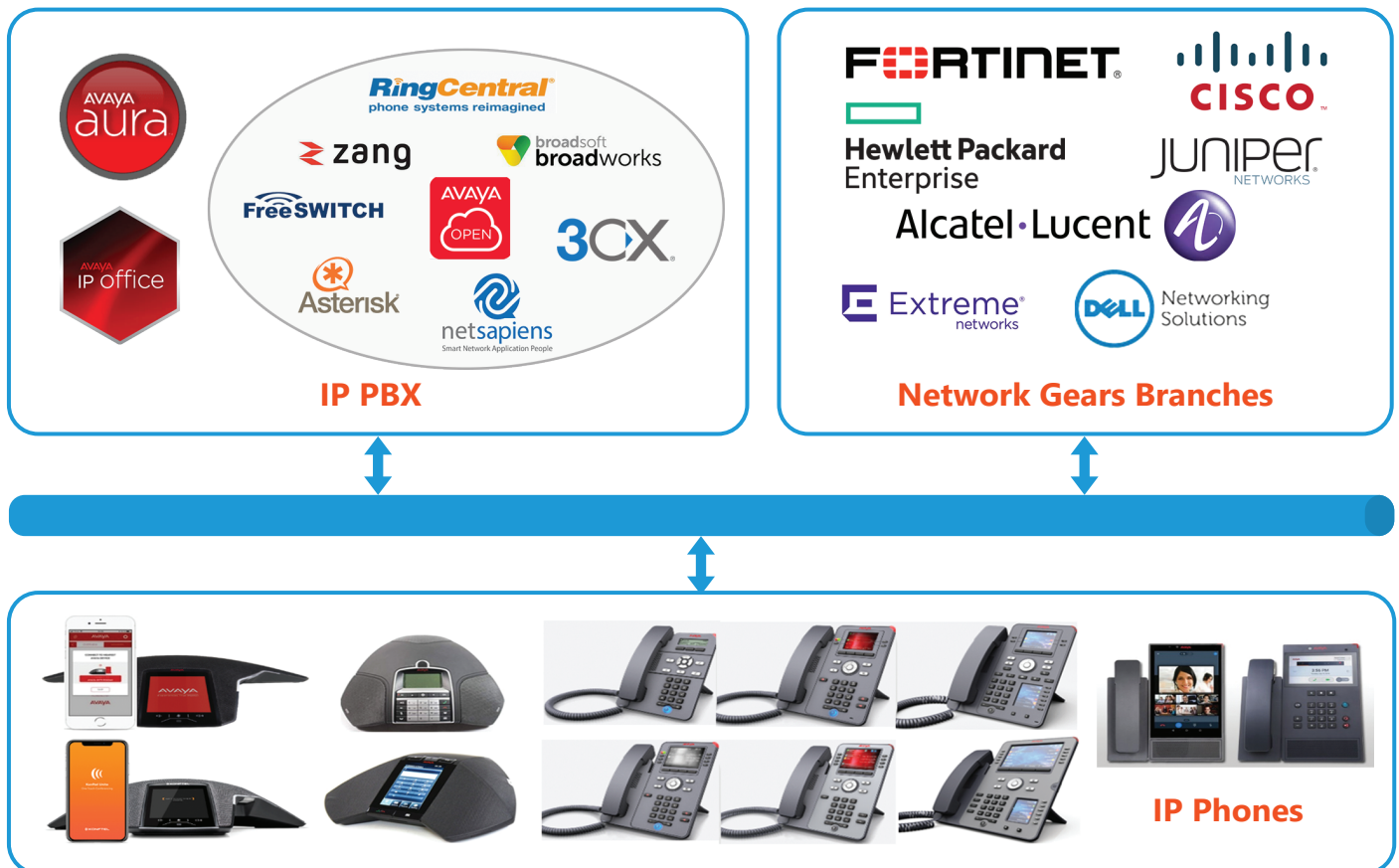
Platforms

- **VoIP solutions:**
  - SIP-enabled Avaya Aura Unified Communications
  - Open SIP systems: Asterisk, 3CX, Freeswitch, Broadsoft, Netsapiens, RingCentral
- Network devices (Layer 2 & 3) from multiple vendors – Nortel/Avaya, Cisco, Acatel, Dell, Jupiter, Extreme

CASE STUDIES

Avaya IP Phones (Deskphones, Conference Phones, Collaboration Phones) testing

Testing service

Functional testing | System/solution level testing | Performance testing | Security testing

IP PBX

Network Gears Branches

IP Phones

Features Cover

- VoIP based-features & networking & security vulnerability testing
- Interoperability testing on mutiple platforms: SIP-enabled Avaya Aura Unified Communications, OpenSIP systems: Asterisk, 3CX, Freeswitch, Broadsoft, Netsapiens, RingCentral
- Nerworking Interoperability testing: SNMP, LDAP, LLDP/DNS/DHCP,802.X, VPN, IPv4/IPv6, USB, Bluetooth, NFC, OmniSound
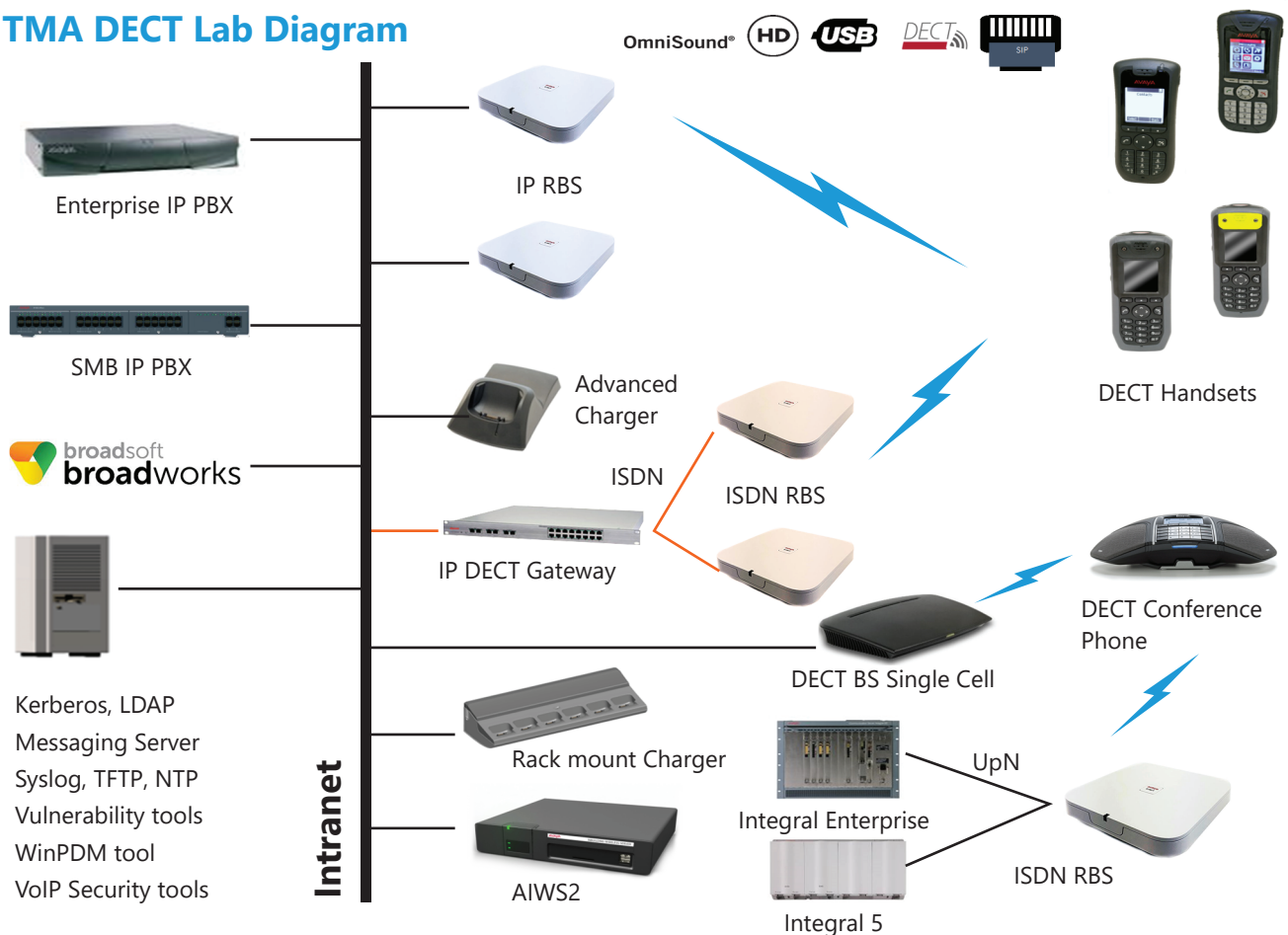
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CASE STUDIES

Konftel/Ascom/RTX Wireless Phones Testing

Testing service

Functional testing | System/solution level testing | Performance testing | Security testing

TMA DECT Lab Diagram

OmniSound® HD USB DECT SIP

Enterprise IP PBX

IP RBS

SMB IP PBX

Advanced Charger

broadsoft **broad**works

ISDN

ISDN RBS

IP DECT Gateway

DECT Handsets

Kerberos, LDAP
Messaging Server
Syslog, TFTP, NTP
Vulnerability tools
WinPDM tool
VoIP Security tools

Intranet

Rack mount Charger

DECT BS Single Cell

DECT Conference Phone

Integral Enterprise

UpN

ISDN RBS

AIWS2

Integral 5

Features Cover

- Connection to IP-PBX via LAN
- Roaming and handover
- DECT GAP/CAP radio interfaces
- H.323 over IP
- SIP over IP
- Over the air synchronization
- Alarm, Push to talk, Messaging
- VoWLAN solution against various IP PBX platforms