

Overview

The MetaSwitch CA9000 series marries industry-leading price/performance servers with full-featured Call Agent software that implements traditional Class 4 and Class 5 functions as well as next-generation session control for IP Multimedia Subsystem (IMS) deployments.

Within the IMS architecture, the MetaSwitch Call Agent performs the role of Serving Call Session Control Function (S-CSCF), Class 4/5 PSTN Services Application Server (IMS-AS), and Media/Signaling Gateway Control Function (MGCF).

Scalability

The CA9000 series delivers sufficient processing power for up to 1.3 million busy hour call attempts, supporting up to 250,000 subscribers for each pair of call agents. If required, additional servers can be added to scale to networks of millions of users.

Broad Protocol Support

The MetaSwitch Call Agent supports a broad range of legacy and next generation access, device control, trunking and signaling protocols, with FCC-compliant E911 and CALEA for VoIP users. This is key to enabling an unparalleled set of applications, from traditional Class 4/5 switching to voice over broadband and IP Centrex.

In addition, support of the CableLabs Network-based Call Signaling (NCS) protocol enables the CA9000 series to be deployed as a call management server (CMS) in PacketCable 1.0/2.0 networks.

Carrier-Grade Reliability and Geographic Redundancy

CA9000 series Call Agents are deployed in a mated pair of primary and secondary servers. A sophisticated redundancy schema ensures seamless failover in the event of software or hardware failure.



By locating primary and secondary call agent servers in geographically separate locations, a completely redundant network, resilient even to the loss of an entire central office, can be achieved.

Powerful Class 4 Capabilities

A wide range of Class 4 applications are supported by the MetaSwitch Call Agent, including access/end-office tandem, packet tandem (routing of calls over an IP backbone), A-link consolidation (STP), calling-card services, and LNP tandem (enabling non-LNP capable switches to meet local number portability requirements).

Rich Class 5 Feature Set

Whether replacing a legacy Class 5 switch or introducing new services, a complete set of subscriber features is central to the service provider's business. MetaSwitch meets carrier requirements, including powerful hosted business services, and advanced residential features including integration with IPTV, all configurable via an easy-to-use Web portal.

Management and Operations

All CA9000 Series Call Agent servers are fully supported by the MetaView NMS, allowing configuration via an easy-to-use graphical user interface.

External billing / mediation systems are easily integrated since the CA9000 series generates industry-standard AMA-format (GR-1100) Call Detail Records, accessed by secure FTP.



CA9000 Series Call Agent Specifications

► SYSTEM ARCHITECTURE (CA9024)

- NEBS Level 3 server with two Dual-Core 2.33GHz Xeon processors
- Power: -48V DC, 650W
- 8x1000baseT redundant Ethernet interfaces

► PHYSICAL

- Height: 5.2" (13.3 cm, 3U)
- Width: 16.9"W (42.9cm)
- Depth: 20" (50.8 cm)
- Weight: 36.8 lbs (16.7 kg)
- Mounting options: fittings for 19" or 23" racks
- Operating temperatures: 0°C to 50°C
0°C to 55°C short term (up to 96 hours)
- Operating humidity: 5% to 85%, 5% to 90% short-term (up to 96 hours)
- Maximum operating altitude: 9800' (3000m)

► SCALABILITY AND RELIABILITY (CA9024)

- up to 1,300,000 Busy Hour Call Attempts (BHCA)
- up to 250,000 subscribers
- GR-512-CORE (99.999% availability)
- 1:1 server redundancy with fault-tolerant software architecture; calls preserved on failover

► PROTOCOLS

- H.248 / Megaco for access/trunk gateway control
- SIGTRAN (M2UA/IUA) for SS7/ISDN gateway control
- Media Gateway Control Protocol (MGCP) 1.0bis
- Session Initiation Protocol (SIP) v2
- IMS ISC interface for feature servers
- TDM trunks (GR-303, T1, MF, PRI) via media gateway
- PacketCable Network-based Call Signaling (NCS)
- Voicemail services via SMDI, TCAP, SIP

► RESIDENTIAL SERVICES INCLUDE:

- Call forwarding (unconditional, busy, selective, fixed)
- Call rejection (anonymous or selective)
- Automatic recall (AR) and callback (AC)
- Call waiting (with or without caller ID)
- Caller ID / calling name (delivery and blocking)
- Home intercom and off-premise extension
- Simultaneous ring
- Find-me / follow-me (configurable via CommPortal)
- Hot line / warm line
- Message center (audible and visual message waiting)
- Speed calling (1 or 2 digit)
- Priority call (distinctive ringing on calling number)
- Teen line (distinctive ringing on called number)
- Reminder call (one-time and repeating schedule)
- Toll restriction
- Three-way calling (with ringback)
- Caller ID screen popup via IPTV middleware
- Fully Web-configurable via CommPortal

► OPERATOR AND *II SERVICES

- ANI presentation
- Busy line verification
- Operator override / recall
- Release controlling party
- Reverse make busy
- Ringback
- Call hold / Called party hold
- Nomadic VoIP 911 routing

► BUSINESS STATION FEATURES INCLUDE:

- Handsets: IP or analog phones (via GR-303 or ATA)
- Station-to-station intercom dialing
- Flexible dialing plans (including 9+ or assume-9)
- Multiple Appearance Directory Numbers
- Line hunting / ACD
- Do not disturb
- Message waiting lamp (SIP and analog)
- Attendant console (line state monitoring)
- Call park / retrieve
- Directed call pickup
- Short codes (group and personal)
- Account codes (mandatory and optional)
- Internal/external caller ID presentation
- Distinctive ringing for internal/external calls
- Click-to-dial, Outlook integration and incoming call handling via CommPortal
- Business group administration via CommPortal

► BUSINESS TRUNK SERVICES INCLUDE:

- T1 CAS/E&M or ISDN-PRI trunks to digital PBXs
- SIP trunks to IP PBXs
- DID's with caller ID supported on all trunk types
- Simulated facility groups

► CLASS 4 / TANDEM FEATURES INCLUDE:

- 1-800, CNAM lookup via TCAP or IP (optional caching)
- Account codes (validated / non-validated)
- ANI screening (black/white list)
- Authorization codes / calling cards
- Automatic alternate routing/re-routing
- Call gapping and automatic congestion control
- Customizable intercept announcements
- LNP tandem
- Multi-variate translations and routing on parameters including source address, destination address, ANI II digits, remote exchange, trunk group, operator call, call type, LCR, MF 0ZZ code, date/time/day-of-week, carrier ID, exchange type, subscriber group, line class code, subscriber routing attributes, user defined translations
- Route verification testing

► BILLING AND MANAGEMENT

- Bellcore AMA GR-1100 CDRs retrieved via sftp
- SNMP, CORBA and XML interfaces for alarms, system management and access to subscriber database
- Comprehensive statistics and low-level diagnostics
- Management of multiple chassis via MetaView NMS or integration with third-party OSS

Specifications subject to change without notice. Contact your local sales representative or go to www.metaswitch.com/specs for current feature and availability information.