Network Transformation Overview

Increase Revenue and Reduce Cost Through Network Transformation with Metaswitch

In today's battleground of greater competition for voice service, replacing legacy TDM equipment or older softswitches with a future-proof IP-based network is a business necessity for service providers. Metaswitch can help you succeed by growing subscriber revenue with services that keep the home phone relevant while dramatically reducing operational cost in your network. With 30-plus years of delivering industry-leading technology, Metaswitch is the only partner with the winning combination of a solid field-hardened voice platform and the future vision to evolve your network through the 21st century.

Why Metaswitch is the Right Choice as Your Transformation Partner

» Increased subscriber stickiness and revenue with innovative new services; business streamlining through reduced OPEX

» Comprehensive Class 4, Class 5, SIP trunking and hosted business services – all on the same application platform

» Architectural evolution to suit your needs, at the pace that's right for you – POTS / VOIP access; NGN or IMS core; ATCA, COTS or cloud / NFV

» Carrier-class scale, reliability and management, with billions of minutes of voice traffic per month at more than 650 carrier customers globally

» Smarter, faster call problem diagnosis with Metaswitch's unique always-on troubleshooting platform

» Smooth integration with your OSS / BSS and provisioning systems and worry-free migration with the level of control you desire

» Industry-leading support and program management for the lifetime of your network – 75% of our customers say our support is better than all other vendors in their network

Revenue Opportunities

While it is actually necessary to replace your ageing technology, the business case is immensely strengthened by the ability to deliver new revenue generating services. As well as delivering all the regulated calling services familiar from legacy networks, Metaswitch can help your subscribers talk When You Want, Where You Want, and How You Want through a variety of voice services available on multiple devices — from fixed-line phone to smartphone to tablet — all using the same home phone number.

• The Metaswitch MaX client lets you take your landline phone and voicemail onto your mobile device or PC, and move calls between devices. It provides clearer HD voice calls, video calling, visual voicemail and instant messaging.

• Voicemail for the whole family, shared and individual mailboxes, with a variety of notification options, and visual voicemail on your device.

• Screen messages as callers leave them, the way you did when you still had an answering machine.

• Advanced call management provides fine control of handling of incoming calls, such as routing to other devices or black-listing unwanted calls.

• Subscriber web portal provides service self-subscription and greater control of settings.

Talk to Metaswitch about bundles of features and services designed for your existing customer base as well as new markets and verticals.

Reducing and Covering Costs

There are many opportunities to reduce cost within your network as part of a transformation project. The value of each depends on your particular circumstances, but taken in total the savings are significant and can even cover the cost of your entire project.

- TDM switches are decades old and tremendously power hungry compared with both Metaswitch's ATCA-based platform and virtual host hardware. A transformation program can dramatically reduce power and cooling costs, and gain benefit from incentive and rebate programs where available.

- Reduce utilized floor space by consolidating sites (network collapse), and then re-use, lease or sell the recovered real estate.

- Lower your trunking and interconnect costs, by consolidating your network onto a smaller number of trunks, or moving to IP-based interconnect (IPX).

Talk to Metaswitch about how to maximize the cost reduction within your network.

Making It All Add Up

Metaswitch has experience transforming networks with a wide range of business case objectives, and recognizes that there is no one-size-fits-all solution for every carrier. We have a deep understanding of the challenges and the opportunities that come with a major network upgrade. Let us use our tools and expertise to work with you to build the business case up using the building blocks appropriate to your individual network and subscriber base.

What Makes Metaswitch Technology Unique?

Comprehensive Class 4 and Class 5

Metaswitch delivers a complete range of subscriber and interconnect services, providing drop-in network compatibility and full service transparency, precisely matching the functions offered by legacy networks down to the last detail.

The Metaswitch solution supports all of the local calling features residential subscribers are likely to need. These work with any kind of phone and on any type of network connection, from traditional phones connected to POTS lines to VoIP phones connected via SIP over broadband. This ensures that your subscribers enjoy the same set of local calling features and the same consistent user interface.

Metaswitch meets the needs of local, access and long-distance tandem switching, and provides a complete solution for updating legacy core voice networks to VoIP.

Solution Scalability and Resilience

Metaswitch offers cost-effective options from the very small to the truly huge. A common, rich feature set is offered across the whole range of supported scale, from the integrated softswitch for a few thousand subscribers up to a distributed geo-redundant next-gen or IMS network supporting 15 million subscribers and handling 30 million BHCA.

The switching core and gateway are based on a fault-tolerant architecture with redundant application instances deployed in hot standby configuration, meeting 99.999% availability. All of this is backed up with the option of geographic redundancy and emergency standalone support, protecting your service from disruption caused by network or even site-level failure.

Wide-Ranging Deployment Options

Next-Generation Network or IMS

Metaswitch supplies the complete package of Class 4 and Class 5 components to interface with an IMS core. For carriers not ready for the move to IMS, Metaswitch can deliver traditional telephony services based on a next-generation VoIP core, with a later phased migration path to IMS if desired. Metaswitch's IMS solution eases the transition from classic TDM public switched networks to the global standard for packet telephony systems. It is anchored by a PSTN Emulation Subsystem (PES), which enables an IMS network to precisely emulate local calling features and to communicate with legacy access networks and circuit and packet switched networks.

Preserve POTS Access or Migrate to VOIP

Carriers can leave their subscribers' home installations untouched, and simply migrate their copper terminations to new access equipment attached to the Metaswitch core network.

Alternatively, they can use broadband infrastructure (either existing or being deployed, whether traditional DSL or FTTN) to migrate to VoIP. This can ease deployment of advanced services such as HD voice and video, and open up the possibility of upselling additional lines without the need for new cabling. Critically, it can also reduce the ongoing cost of delivering residential telephony by eliminating the analog and TDM infrastructure associated with POTS.

Whichever route a carrier takes, the Metaswitch Mosaic partner program covers a wide range of partner devices, which are actively tested and certified by Metaswitch or the device vendor.

Future-Proofing Your Investment

Virtualization and Cloud

A network built on Metaswitch technology equips you for the migration to the virtualized network of the future. Products are available now on COTS and ATCA hardware and also in VMware and OpenStack virtualized environments as part of a push across the Metaswitch portfolio to full Network Functions Virtualization. Carriers' investments are protected by seamless interoperability between hardware and virtual instances of Metaswitch products, and by services to migrate to virtual platforms.

Carrier-Grade Operations and Management

The MetaView suite provides a single comprehensive management system, including a common platform for operations, administration, maintenance and provisioning, combined with proactive and reactive analytics, and interfaces for readily integrating with carriers' existing OSS and BSS platforms. Carriers can quickly and easily deploy classic telephony services or innovative new multimedia applications with the confidence that comes from carrier-class availability and always knowing what's going on in their networks, including the feedback provided by network-wide proactive voice quality monitoring.

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For hosted business services, this is further enhanced by zero-touch provisioning of CPE such as SIP desk phones, allowing carriers to get their business customers up and running with the minimum of effort.

Always-On Diagnostics—All Traffic, All of the Time

Finding problems in VoIP networks, across multiple elements and network hops, is hard. MetaView makes this easier, with the revolutionary Service Assurance Server (SAS), providing always-on diagnostics – all traffic, all of the time – so you can find the problem without the trouble of reproducing it. Information provided includes the protocol exchanges such as might be available from network probes, but critically it covers application logic decision points, lifting the lid on not just what happened but why, in Metaswitch and third-party equipment. All of this is exposed via a powerful CSR-facing GUI for rapid processing of trouble tickets, starting with an overview and allowing progressive drilling-down into details.

Migration Capabilities and Expertise

Metaswitch has vast experience and an excellent track record in replacing local exchange switches, and has successfully cut over a wide range of legacy switches (e.g. DMS-10, DMS-100, 5ESS, DCO, EWSD, GTD-5, AXE, Mitel and Redcom) as well as softswitches (e.g. CS2000, Telcordia, BroadSoft, CopperCom and Taqua) and voicemail platforms (e.g. AnyPath, Octel, Movius, Surgemail, and Glenayre). Our expert Professional Services team has developed a wide range of techniques and tools to ensure smooth seamless migrations – and their value is proven by the numbers. More than 99.9% of lines are migrated without any problems reported to carrier customer care or operations staff.

Migration covers trunk and subscriber cut-over, voice mail, and OSS integration. Special techniques are available for smooth and seamless transition of SS7 signaling links. Metaswitch also provides migration assistance with the necessary field services work such as the move of fiber optic cables, digital cross connects, night of cut migration support, and switch decommission and removal.

In addition to planned transformations, the team has proved its worth in a number of high-pressure situations. Ask for details of emergency switch replacements we have carried out.

Let Metaswitch Help

Transforming the heart of your business is not a simple task. But Metaswitch has experience with carriers of all types and sizes, around the world. We have helped make their transition to a new network infrastructure both viable and successful. Let us apply our world-class staff, resources, and technology to solving your transformation challenges, and help move your business into a new era of success and stability.

Specifications

Call Services

- CLASS services
- Hosted business communication
- SIP trunking
- Tandem / class-4
- Advanced call management services
- Voice-mail, visual voice-mail, video mail
- Voice-mail speech to text
- Live message screening
- Easy Attendant and Premium Attendant
- Music on Hold
- Conferencing
- HD Voice and Video calling
- Subscriber GUI portal (CommPortal)

Scalability

- Up to 15 million subscribers and 30 million BHCA
- Media gateway: 90,000 concurrent calls from 13U chassis

Reliability

- GR-512-CORE (99.999% availability)
- Redundant resource blades and shelf managers in ATCA chassis
- Redundant, hot-swappable user cards, power supplies and fans
- Fault-tolerant software architecture with calls preserved on resource blade failover
- 1+1 APS for optical TDM

Network Management

- SNMP for alarms
- CORBA for provisioning
- SQL database for statistics and reporting
- Management of multiple chassis via MetaView NMS or integration with third-party OSS

Connectivity

- Gigabit Ethernet with separation of traffic
- Copper and optical TDM

Migrations Services

- Automated migration tools
- Trunk and subscriber migration
- Flexible access options
- SS7 transparency during migration
- Proven reliability and accuracy

Industry Standard Protocols

- IP: SIP v2 | H.248 v1 / v2 | MGCP v1bis | PacketCable NCS | SIGTRAN (M3UA, M2UA, IUA)
- TDM: T1 CAS | SS7 (ANSI, ITU-T, ETSI plus national variants) | ISUP | ISDN PRI (ETSI, NI-2, Lucent and Nortel variants) | GR-303 | TR-08 | V5.2 | MF | Ground start, loop start, E&M
- IPv4 and IPv6
- Codecs: G.711 | G.726 | G.729AB | AMR | G.722.2 (AMR-WB) | EVRC | EVRC-B | iLBC | GSM-HR | GSM-FR | GSM-EFR | T.38 fax | clearmode

Compliance and Approvals

- Bellcore NEBS Level 3: Standard (GR-63-CORE), Verizon TEEER VZ.TPR.9205, ATIS 0600015, AT&T TP.76200
- Environmental: ETSI EN 300 132, EN6100-4-5, EN 300 753, EN 300019
- Safety: UL 1950-1, IEC 60950-1, ETSI EN 60950-1, CAN/CSA C22.2 60950-1-07
- Electromagnetic compatibility: FCC Part 15 Class A, ICES-003, EN 55022, ETSI EN 300 386, VCCI V3, CISPR22, AS/NZS CISPR22
- Lawful intercept: CALEA TIA J-STD-025A / T1.678, ETSI TS 101 331, ES 201 158, TS 101 671
- EU RoHS compliant

Other Professional Services

- Legacy switch maintenance
- Switch grooming / clean-up
- Network collapse
- Project management
- Network design / review
- Targeted engineering resource for specific projects