

MGC Cluster

Carrier-grade Class 4 Softswitch for large Next Generation Networks



- 99.999 % availability without a single point of failure
- Geographically distributed redundancy
- Supports up to 10,000,000 Busy Hour Call Attempts (BHCA)
- Advanced and programmable call routing engine
- Any-to-any protocol interworking including all major NGN and TDM protocols
- Controls media gateways with MGCP and/or H.248 (Megaco)

Product overview

The TELES Media Gateway Controller (MGC) Cluster is one of the strongest C4 softswitches available in the market. It delivers outstanding scalability, optimum performance, and high availability. It's no surprise that the MGC Cluster is the TELES flagship product.

Flexibility

TELES cluster technology divides the system architecture into independent and scalable function elements. These cluster elements are separated into call control and protocol entities. Highly sophisticated load-sharing algorithms and high availability features allow a linear up-scaling of the cluster elements.

Best-in-class performance

The TELES MGC Cluster reaches ultra-high performance levels. Designed for high peak loads and short call duration applications, the architecture is best suited for ultra-high performance and for services driven by calls per second.

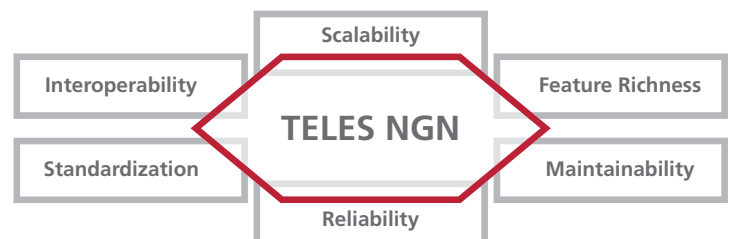
Cost-effective scalability and reliability

The cost-effectiveness and unmatched scalability of this technology allows cluster elements to be independently scaled and geographically distributed. The result is a Media Gateway Controller with carrier-grade availability that is suitable for large-scale global deployments.

Comprehensive system management capability

The TELES MGC Cluster can be remotely managed, configured, and deployed using the included Element Management System (EMS). With full FCAPS (Fault-, Configuration-, Accounting-, Performance-, and Security-Management) compliance, the EMS delivers enhanced operation capabilities and reduces time and effort typically required to manage your Next Generation Network.

In addition, for service providers who have already invested in large umbrella management systems, the TELES MGC Cluster offers open interfaces for provisioning, alarming, and billing.



MGC Cluster

CAPABILITIES

Scalability	Max. simultaneous calls: 175,000
Performance	Max. 10,000,000 BHCA
Redundancy	physical and geographical redundancy
Supported MGW VoIP codecs	G.711 (A-law, μ -law), G.723.1 (5.3k, 6.3k), G.726 (16k, 24k, 32k, 40k), G.729, G.729A, G.729B, G.729AB, T.38, GSM, Clear Channel Silence Suppression and/or Echo Cancellation on a per call basis
Advanced	RADIUS Support (RFC2865, RFC2866, RFC2869, CISCO Vendor Specific Attributes (VSAs), TELES VSAs) Fax and modem detection and transport (bypass, transparent or relay) SIP-ISUP (SIP-I/T) inter working (ITU-T Q.1912.5-Profile C, RFC3372, RFC3398, RFC3204) Dial-In support for CISCO Media gateways (digital/analog) via MGCP
Routing policies	Policy-based call routing (destination/originating party, peering partner, bearer service) Advanced, intelligent call routing (complex routing rules, multilevel routing function, Least Cost Routing, fully programmable routing flow by using regular expressions) Establish your own routing services by using a RADIUS interface
Enhanced billing options	Extensive online or offline Call Detail Records RADIUS accounting CDR mediation device for existing billing system adaptation
Interoperability	Media gateways: CISCO (AS53xx, AS54xx, AS58xx Series) AudioCodes (Mediant 2000/3000/5000/8000) Signaling gateways: TELES Signaling Gateway AudioCodes (Mediant 2000/3000/5000/8000)

PROTOCOLS

Control protocols	MGCP, H.248 (Megaco)
VoIP	SIP, SIP-I/T, H.323v4
PSTN SS7	MTP3 (ITU-T Q.704) ISUP (ITU-T Q.761–Q.764 (V1 Blue Book, V2 White Book, V3)), Q.767 international interconnection ETSI (ETS 300 356-1: 92, 95, 98), ISUP more than 35 national variants ANSI (Telecordia Technologies Specification (Chapters: T111.3, T111.4, T113.3))

PSTN ISDN	EDSS1 User Side: ITU-T (Q.931), ETSI (TBR4, ETS 300 125, ETS 300 102, ETS 300 315) EDSS1 Network Side: ITU-T (Q.931), ETSI (ETS 300 102, ETS 300 317) QSIG (basic call (bc)), ETSI (ETS 300 172) 5ESS (basic call (bc)), Telecordia/Bellcore (TR41459)
SIGTRAN	SCTP (RFC2719, RFC2960, RFC3309) M2UA (RFC3331) M3UA (RFC4666) IUA (RFC4233)

SYSTEM MANAGEMENT

OAM by Java based GUI
CLI (command line interface via SSH)
SNMPv2 (RFC3418)
Standard MIBs
Private MIBs

HARDWARE SPECIFICATIONS

Carrier-grade reliability and availability based on NEBS3 certified hardware architecture.

Physical Parameters	
Enclosure	Sun Netra X4200 M2 Server, 19" 2U
Dimensions (HxWxD)	89 mm x 442 mm x 508 mm
Weight	Approx. 16 kg (36 lbs)
Power	1+1 Power supply units 100–240 VAC, 550 W, dual feed, -48 VDC option available Hot-swap and redundant
System disk	1+1 RAID1 SAS disk, 146 GB, Hot-swap and redundant
Network Interface	2 (1+1) Redundant 100/1000 Mbps Ethernet ports
Management interface	1 TIA/EIA-232-F asynchronous RJ45 port (serial) 1 100 Mbps Ethernet port
Environment Conditions	
Temperature, operating	5°C to 40°C (41°F to 104°F)
Temp., non-operating	-40°C to 70°C (-40°F to 158°F)
Humidity, operating	5% to 85%, non-condensing
Humidity, non-operating	up to 93%, non-condensing, 40°C (104°F)
Regulatory Compliance	
Emissions and Immunity	EMC Directive 89/336/EC EN55022, EN61000-3-2, EN61000-3-3, EN55024
Telecommunications	EN300-386: Telecordia SR3580 NEBS Level 3
Environmental	EN300 019-2-1,2,3, Class 1,2,2.3,3.1E
Seismic	GR-63-CORE
Electrical Safety	LVD Directive 2006/95/EC UL/CSA-60950-1, EN60950-1, IEC60950-1 CB Scheme with all country deviations, IEC825-1, 2, and CFR21 part 1040

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