

EMC Ionix Multicast Manager

Part of Ionix IT Operations Intelligence

Take charge of next-generation multicast services management

The Big Picture

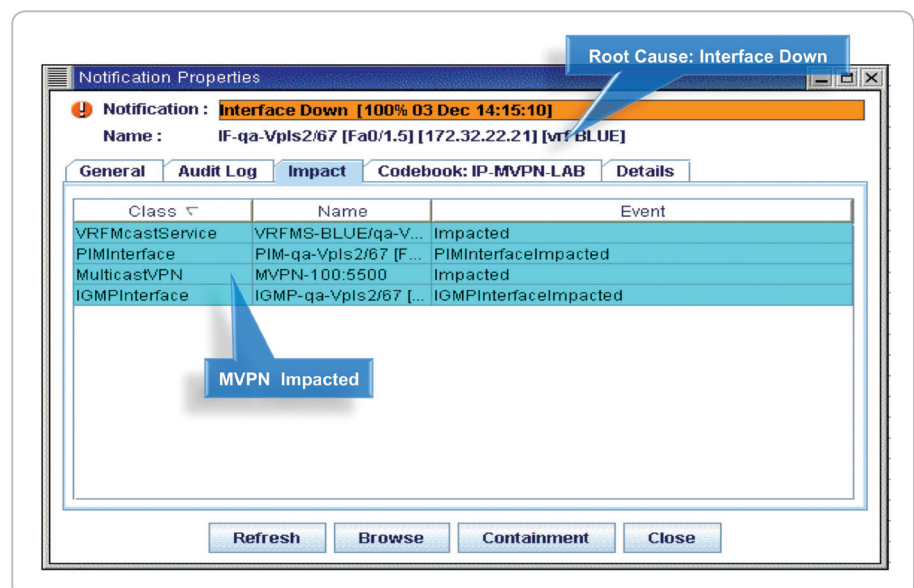
- Enables network operations staff to monitor and manage next-generation multicast environments, freeing network engineering resources from daily management tasks
- Enables users to track the stability and performance of multicast services
- Speeds mean-time-to-repair of multicast services through deep discovery and visualization of the topology, and by correlating issues in the multicast infrastructure with problems in the IP network

IP multicast is an important capability for many advanced network services, including finance, education, corporate communications, and packet video distribution. To this point, network engineering teams have typically been responsible for rolling out multicast services from the lab to production deployments. As these installations scale, engineering needs to transition this responsibility to network operations personnel to ensure that multicast services can be managed in a cohesive way with the rest of the IT infrastructure.

Taking management of multicast services to the next level

EMC® Ionix™ Multicast Manager gives operations personnel critical intelligence that enables them to discover, visualize, and monitor multicast services to deliver the highest levels of service to end users and speed time-to-repair when issues arise. Multicast Manager provides a unique tool for discovering and visualizing the multicast entities and behaviors in a network. Users can view membership of multicast groups, layout of multicast trees, active sessions, and protocol entities—and understand how these relate to the underlying IP network.

Like all Ionix solutions, Multicast Manager leverages the EMC Ionix Common Information Model™ to model the entities in its network domain and EMC Codebook Correlation Technology™ to pinpoint the root cause of the alarms it receives. The unique cross-domain correlation capability enables Ionix to correlate multicast domain events with network connectivity failures, diagnosing the physical network failure as the root cause, and multicast failures as effects of that root-cause problem.



Example of MVPN (Multicast VPN) outage

Ionix Multicast Manager functionality

Working with EMC Ionix IP Availability Manager and EMC Ionix Service Assurance Manager, Multicast Manager performs the following functions:

- Uses IP Availability Manager to automatically populate the initial multicast topology
- Discovers and supports devices running various multicast protocols, including PIM-SM, PIM-SSM, PIM-DM, PIM-SD, IGMPv1/v2/v3, MSDP, ANYCAST, and AUTO RP
- Discovers multicast entities including Designated Routers (DR), Rendezvous Points (RP), Bootstrap Routers (BSR), Sources, IGMP Receiving sub-networks, Multicast Groups, and mapping agents
- Visualizes multicast trees overlaying the IP network
- Discovers and monitors Multicast VPN environments that conform to draft-rosen-vpn-mcast-06.txt
- Rendezvous Point redundancy discovered and monitored
- Supports L3 Multicast discovery and monitoring in Cisco and Juniper environments
- Monitors routers in the receiving IGMP sub-networks for DR changes
- Collects and monitors traffic statistics and notifies threshold crossings on a per-group basis to monitor for silent sources or lack of traffic over a multicast route
- Notifies threshold crossings on a per-group basis to monitor for over-utilization in a segment of the multicast route
- Performs impact analysis to diagnose the affect of L2/L3 and physical failures on multicast entities—for example, failure of the Rendezvous Point router will cause Multicast Manager to notify that all Multicast Groups served by this RP are affected
- Performs its monitoring non-intrusively using standard SNMP MIBS, avoiding non-scalable telnet or inline snooping

About EMC

EMC Corporation is the world's leading developer and provider of information infrastructure technology and solutions that enable organizations of all sizes to transform the way they compete and create value from their information. Information about EMC's products and services can be found at www.EMC.com.



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To learn more about how EMC Ionix Multicast Manager and other EMC Ionix management solutions bring value to your business and IT operations, contact your local EMC or EMC Ionix sales representative, or visit our website at www.EMC.com/ionix.