SOFTWARE
PRODUCT BRIEF

Unified Fabric Manager (UFM®) - SDN Appliance

Extend to Managing Scale-Out Data Center Networks

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Mellanox Unified Fabric Manager for Software Defined Networks (UFM-SDN) appliance enables data center operators to efficiently provision, monitor and operate large-scale compute and storage data center interconnect infrastructures. UFM elminates the complexity of fabric management, while also providing deep visibility into traffic and optimizing fabric performance.

SCALE-OUT FABRIC MANAGEMENT WITH UNIFIED FABRIC MANAGER

Today's data centers require advanced management platforms that help to both, maximize the utilization of the underlying infrastructure, as well as optimize the health and performance of the applications running on it.

UFM eliminates the complexity that traditionally comes with fabric management. It provides deep visibility into fabric traffic and health in addition to making the needed correlation between the fabric and the services it provides. Also, as an appliance form factor, the UFM-SDN delivers these capabilities out-the-box, reducing server management and software installation hassles, while also improving operating system dependability.

FABRIC VISIBILITY & CONTROL

UFM includes an advanced granular monitoring engine that provides real time access to health and performance, switch and host data, enabling:

- Real-time identification of fabric-related errors and failures.
- Insight into fabric performance and potential bottlenecks.
- Preventive maintenance via granular threshold-based alerts.
- SNMP traps and scriptable actions.
- Correlating monitored data to application/service level enabling quick and effective fabric analysis.

SOLVING TRAFFIC BOTTLENECKS

Fabric congestion is difficult to detect when using traditional management tools, resulting in unnoticed congestion and fabric underutilization. UFM's unique congestion tracking feature quickly identifies traffic bottlenecks and congestion events spreading over the fabric. This feature enables accurate problem identification and quick resolution of performance issues:

- Quickly identifies traffic issues, topology inefficiencies and non-optimal node placement.
- Allows administrator to improve fabric topology and configuration.
- Enables increased performance and higher fabric utilization.

HIGHLIGHTS

- Reduces complexity of fabric management
- Provides in-depth visibility into traffic and health information
- Eliminates fabric congestion and hot spots
- Supports SDN programmable fabrics
- Generates preventive maintenance and "soft degradation" alerts
- Quickly troubleshoots any connectivity problem
- Integrates and streamlines fabric information into your IT systems
- Delivers an out-of-the box, O/S agnostic experience

† For illustration only. Actual products may vary.

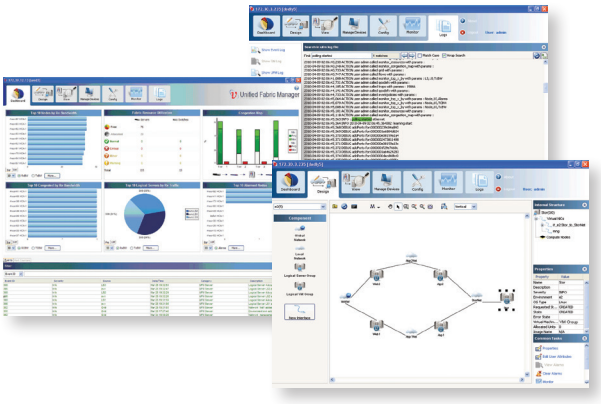

Figure 1. Sample Screenshots

SIMPLIFYING FABRIC DEPLOYMENT AND OPERATIONS

UFM's central management console streamlines the effort and complexity involved with bring-up and day-to-day fabric maintenance tasks, significantly lowering downtime and making UFM the ultimate management tool for the most demanding data center environments

- Advanced fabric health diagnostics delivers a clear picture of fabric and link health across the fabric and greatly smoothens deployment and maintenance windows.
- Asset management enables effective tracking of fabric devices and ports, from the smallest to the largest 10Ks of nodes clusters.
- Group operations such as switch firmware updates are enabled via a single mouse click.
- Failovers are seamlessly handled, and transparent to both the user and the applications running on the fabric.

THE SDN APPROACH

UFM uses an SDN architecture and service oriented approach to manage the fabric, while other device-oriented tools involve only local device logic.

- UFM's intelligent, end-to-end fabric policy engine correlates application-defined needs to the underlying physical infrastructure. The engine also enables programmable configuration of routing policy, connectivity, and QoS across the fabric.
- UFM utilizes Mellanox advanced silicon capabilities to effectively control "managed" as well as "externally managed" devices in a central, programmable manner.
- UFM's monitoring engine enables the correlation of monitored data and fabric events to the logical layer, thus providing the end-user with valuable business-oriented information about the fabric, in an easy- to-consume way.

UFM'S SDN MODEL ADVANTAGES

- Detaches the fabric logic from the local device logic, enabling high flexibility in device deployment.
- Enables both quick policy changes and remediation.
- Simplifies integration in cloud and dynamic environments that require service oriented logic.
- Provides a high level of SLA tracking and alerting.

INTEGRATION WITH EXISTING DATA CENTER MANAGEMENT TOOLS

UFM provides an open and extensible object model to both describe data center infrastructure and conduct all relevant management actions. In addition, UFM's API enables integration with leading job schedulers, cloud and cluster managers.

Specifications

UFM-SDN Appliance	Managed Devices	Managed Hosts
Xeon E5-2620 Dual CPU 2.1GHZ	UFM manages all Mellanox QDR, FDR and EDR products	Architecture: x86_64, Itanium, PowerPC
32GB RAM		OFED 1.5.3. and above
2 X 1TB 7200 RPM HDD SW RAID Mirrored		HCA: Mellanox ConnectX-3 and above
2 X 750W Power Supplies (1+1)		
Dual port VPI EDR/100GbE Adapter		

Part Numbers and Descriptions

OPN	Description	Max. Managed Nodes
MUA9402E-2SF-100	UFM-SDN Appliance 100	100
MUA9402E-2SF-250	UFM-SDN Appliance 250	250
MUA9402E-2SF-500	UFM-SDN Appliance 500	500
MUA9402E-2SF-1K	UFM-SDN Appliance 1000	1000
MUA9402E-2SF-2K	UFM-SDN Appliance 2000	2000
MUA9402E-2SF-4K	UFM-SDN Appliance 4000	4000

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