ByteMobile Element Manager

Comprehensive Centralized Solution Management

Rapidly deploy, manage and operate multiple ByteMobile® network elements supporting the Adaptive Traffic Management Solution with centralized and simplified control, configuration, maintenance and upgrades.

The ByteMobile Element Manager is a server application with a web-based graphical user interface (GUI). The application supports FCAPS (fault, configuration, accounting, performance, security) − the ISO Telecommunications Management Network model and framework for network management.

The result is reduced operational complexity and lower overall cost of Adaptive Traffic Management Solution deployed across multiple network sites.

**Key features of ByteMobile Element Manager include:**

The Reporting Dashboard generates a number of standardized reports, including:

- Centralized software upgrade and policy manager – configures and automates software upgrades and installs policy rules for fine-grained control of data traffic
- Multi-level user security – offers multiple levels of user access with different access parameters for each level; access is available both locally at the server and remotely through an Internet connection
- Third-party interface – integrates with telco industry-standard, third-party operations support systems (OSS)
- The ByteMobile Element Manager provides common GUI based interface to orchestrate all ByteMobile network elements.
ByteMobile Element Manager Web-Based GUI Functions
The ByteMobile Element Manager web-based GUI provides a comprehensive, easy-to-use, visual interface to simplify configuration and administration of ByteMobile network elements in a mobile network.

Fault Management
Fault management tracks software alarm conditions within ByteMobile network elements and other events involving configuration changes, the general system, hardware, processes and performance statistics.

Configuration Management
Configuration management provides centralized configuration for critical functions such as networking, core operations, SNMP (simple network management protocol) trap receivers and policy management across ByteMobile network elements. Operators can configure:

- Control interfaces related to administrative and configuration control for the ByteMobile Adaptive Traffic Management Solution
- Data interfaces related to configuration of the network interfaces that connect the ByteMobile Adaptive Traffic Management Solution
- Network management interfaces associated with SNMP
- Subscriber management interfaces associated with RADIUS
- Policy manager for creating policies and rules
- Application-level services such as traffic rules classification, video optimization, adaptive web optimization, TCP (transmission control protocol), auto-update, KPI (key performance indicator) reporting, media caching and diagnostics for lab trials

Figure 2: The tree view identifies all active policies.
Performance Management
Performance management provides real-time measurements regarding system resource utilization, aggregate data traffic, the performance of subscriber management applications and application-layer services on ByteMobile network elements:

- System resource utilization – measurements for each installed module, including system-wide CPU (central processing unit), memory and storage utilization for both control and application modules deployed in smart capacity solutions
- Aggregate data traffic – information on data bytes and error counts from the data path for subscriber-facing and Internet-facing functions
- Subscriber management applications – information on the performance of RADIUS and session database applications on ByteMobile network elements
- Application-layer services – information on the performance of HTTP services, proxy services, video optimization, media caching and adaptive video and web optimization

Security Management
Security management allows operators to view and monitor all currently active sessions; view, add and delete accounts; change passwords; and view and configure security settings. Access security to the ByteMobile Element Manager is enhanced by Role based access control as well as complex password rules and an audit log of all user transactions. Access can be locally authenticated by the ByteMobile Element Manager or remotely via the operator RADIUS server.

Topology Management
Topology management enables the system administrator to view and monitor ByteMobile network elements and configure parameters related to ByteMobile Element Manager. Topology management is the default view for users accessing the system.
Maintenance

Operators can also use the ByteMobile Element Manager to perform software upgrades for all the ByteMobile network elements. The maintenance view provides:

- Release number and date for the software currently running
- Status of an in-progress upgrade or of the most recent upgrade
- History of release image downloads

System Requirements

ByteMobile Element Manager has the following minimum system requirements:

<table>
<thead>
<tr>
<th>Operating System</th>
<th>Red Hat Enterprise Linux 6.3 or later version</th>
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</thead>
<tbody>
<tr>
<td>Java</td>
<td>Oracle JDK 1.6 update 26 or later; Open JDK is not recommended.</td>
</tr>
<tr>
<td>Python</td>
<td>Python 2.6</td>
</tr>
<tr>
<td>Hardware Platform</td>
<td>Intel Xeon Processor E5-2670 or better</td>
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<tr>
<td></td>
<td>SAS/SATA Controller with RAID 0,1,5 with Dual Connectors</td>
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<tr>
<td></td>
<td>Clock Speed: 2600 MHz or faster</td>
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<tr>
<td></td>
<td>Cache: 20MB or faster</td>
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<tr>
<td></td>
<td>Memory: 32GB or faster</td>
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<tr>
<td></td>
<td>Storage: 600 GB or better</td>
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<tr>
<td></td>
<td>Network: Dual-port Gigabit Ethernet Controller</td>
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<tr>
<td></td>
<td>(Intel or Broadcom preferred)</td>
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<td></td>
<td>Optical Drive</td>
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<tr>
<td>User Interface</td>
<td>Internet Explorer 8 or later version, or Firefox 7 or later version</td>
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About Citrix

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