Reduce the Cost of Managing Your Application Delivery Infrastructure

With the tremendous increase in application traffic in virtually every organization, enterprise Application Delivery Networking deployments are becoming larger throughout the business, across data centers, and over international boundaries. As these deployments expand, gaining visibility and manageability over multiple devices is critical to efficiently and cost-effectively managing the IT infrastructure.

F5® Enterprise Manager™ significantly reduces the cost and complexity of managing multiple F5 devices. You gain a single-pane view of your entire application delivery infrastructure and the tools you need to automate common tasks, ensure optimized application performance, and improve budgeting and forecasting to meet changing business needs. Enterprise Manager is available as a physical or virtual edition.

**Key benefits**

**Ensure optimized performance**
Get an up-to-date, comprehensive view of application traffic and device performance. Set thresholds and alerts to react quickly to changing network conditions and user demands.

**Reduce TCO through automation**
Use a single interface to automate common operational tasks for your F5 devices, reducing total cost of ownership and OpEx.

**Improve budgeting and forecasting**
Use 160 customizable metrics to gain complete visibility into your application delivery infrastructure over time and improve planning and budgeting for future projects.

**Troubleshoot more effectively**
Quickly isolate application performance and traffic management problems to minimize the effect on your business.

**Gain flexibility**
Deploy according to your business needs with the flexibility of physical and virtual Enterprise Manager editions.
Application Performance and Statistics

Gain a full picture of your application performance across the entire F5 infrastructure with the Centralized Analytics Module, available through purchase of an add-on license. Analytics provides real-time application performance statistics such as response time, network latency, and other application relevant statistics.

Performance Monitoring Module

The Performance Monitoring Module, included on the Enterprise Manager 4000 physical and virtual editions, offers advanced visibility and reporting tools that give you highly detailed information you can use to further optimize your F5 devices.

Detailed device and object statistics

The Performance Monitoring Module collects not only device statistics but also statistics for objects configured on the device such as virtual servers, pools, and nodes. Using jQuery® to efficiently communicate with F5 devices and collect individual statistics, the Performance Monitoring Module provides more than 160 metrics. Administrators can configure the frequency of collection from 30 seconds to 300 seconds. Customizable graphs present detailed information, and each metric can be associated with a threshold and alert.

Customizable thresholds and alerts

You can use customizable thresholds and alerts in Enterprise Manager to react quickly to changing network conditions and user demands. Alert methods include:

- SNMP trap to remote server
- Email containing alert details
- Syslog event to remote server

Open database architecture

The Performance Monitoring Module collects data and stores it on the MySQL database in Enterprise Manager. This database is open for external databases to access and back up the data, along with external reporting services such as SQL Server Reporting Services, Crystal Reports, and other external reporting services. You can also collect and store data in an external MySQL database, providing additional flexibility for administrators to allocate larger storage.

Automated reporting

Gain visibility into the performance of your BIG-IP LTM environment and easily share this information with others in your organization with automated reports. You can easily schedule recurring report emails from Enterprise Manager.
Complete Device Visibility

Enterprise Manager provides a real-time status of all your F5 application delivery devices in a single interface.

Device inventory and control

Enterprise Manager keeps critical device information in a central location. You can easily find platform information, software versions, serial numbers, and registration keys for all of your supported F5 devices, and you can view and select between installed software versions.

Historical data

Enterprise Manager collects device and traffic statistics and stores this data for historical analysis and trending. You can use this information to establish a baseline of normal performance and operations and leverage graphs and alerts to isolate problems that occur in the environment.

Effective capacity planning

With Enterprise Manager, you get granular visibility into which applications are increasing in traffic pattern or reaching thresholds as well as which devices are reaching capacity. You can analyze this data historically through a capacity planning report to maintain sufficient capacity.

Service contract end date information

Current service contract expiration information is readily available in Enterprise Manager. As part of a comprehensive device inventory, you can use this information to effectively plan for renewals so devices will be up to date for support. Enterprise Manager also includes customized alerts to notify users in advance of expiration.

SSL performance

A convenient report is available to monitor the performance of SSL transactions. With the industry requirement to migrate to 2048-bit SSL keys, capacity planning for your current hardware is critical.

Centralized and Automated Management

Enterprise Manager gives you tools to select, stage, and automate common operational tasks, helping you reduce total cost of ownership and operating expenses for your F5 devices.

Customizable configuration templates

With Enterprise Manager, you can create and store or stage a set of templates that contain device profiles, configurations settings, iRules® definitions, and much more. You can create new templates by simply selecting an existing template, modifying it, and pushing out the changes, or you can build entirely new templates. When a new device is ready to join the environment, you can simply push the template out and the new box is configured based on your standards without worrying about errors or deviation from your established standards. Enterprise Manager templates ensure that your customers receive consistent service while you scale your Application Delivery Network infrastructure to handle growth.
Distributed configuration management

Enterprise Manager can distribute administrative functions across customized roles. Configuration changes can be entered and staged by one set of administrators, and then be deployed by another set. Limited administrative control can be extended to a larger group of administrators that have less familiarity with F5 devices.

Staged configuration templates

With Enterprise Manager, you can create configuration templates prior to a maintenance window and stage them for future implementation. This frees up the administrator to complete the configuration and testing in advance. During the maintenance window, an operations engineer with a lower level of access to the BIG-IP system can then deploy the templates.

Simplified upgrades of F5 devices

Simplify upgrades using a centralized wizard that takes into account dynamic properties of your environment such as high availability state and specific version contingencies. This helps reduce the potential for errors during the upgrade process. Software upgrade packages can be proactively staged on the target device through the wizard as well. By allowing the staging of the software before the maintenance window, the time required to upgrade the device during the maintenance window is significantly reduced.

Integration with BIG-IP iHealth service

F5 BIG-IP® iHealth® integration enables you to proactively manage the health of all your BIG-IP devices. By automating the diagnostic process and checking for known issues and common mistakes, Enterprise Manager can help you stay current with F5 best practices and optimize your ADN infrastructure.

Automatic configuration backup

Enterprise Manager can automatically back up valuable configuration files, including license information, on a daily, weekly, or customized schedule. You can store multiple configurations per device.

Single and multi-device configuration comparison (diff config)

By making it easy for you to try different network configurations, Enterprise Manager helps you troubleshoot issues in the environment. You can make temporary network changes, compare the changes, and then safely roll back to previous configurations from the archive at any time. Enterprise Manager provides quick recovery from configuration errors and provides safeguards when reconfiguring devices. In addition, you can compare configurations across two BIG-IP devices, which enables you to verify configurations in a high availability pair, across different data centers or staging and production environments.

BIG-IP ASM security policy deployment

Using a centralized wizard in Enterprise Manager, you can deploy BIG-IP Application Security Manager (ASM) policies across multiple BIG-IP ASM devices without accessing each individual device. This saves administrators significant time and effort in dynamic environments where security policies can change frequently.
Centralized SSL management

SSL certificates can be centrally stored and managed with Enterprise Manager. You can configure certificate expiration alerts to avoid the expense and disruption associated with expired certificates.

Node management

Enterprise Manager gives you the ability to centrally manage not only your BIG-IP devices but also virtual servers, pools, pool members, and nodes. Using the node management feature, you can leverage Enterprise Manager’s search functionality to find the objects and place them in an object container. Once these objects have been identified, you can select one of the following actions: enable, disable, or force offline.

Authorization for node management

The administrative partitions that are available in BIG-IP Local Traffic Manager (LTM) are inherited by Enterprise Manager, so you can use the same permissions to ensure that users have the appropriate access.
## Enterprise Manager Platforms

Enterprise Manager is available as a physical, appliance-based device, shipped on a dedicated, enterprise-grade platform, or as a virtual edition for VMware environments.

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### Physical Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>4000 Series</th>
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</thead>
<tbody>
<tr>
<td>Processor</td>
<td>Quad core CPU</td>
</tr>
<tr>
<td>Memory</td>
<td>8 GB</td>
</tr>
<tr>
<td>Gigabit Ethernet CU Ports</td>
<td>8</td>
</tr>
<tr>
<td>Gigabit Ethernet Fiber Ports (SFP):</td>
<td>4 optional LX, SX, or copper</td>
</tr>
<tr>
<td>Typical Consumption</td>
<td>175 W (110V input)</td>
</tr>
<tr>
<td>Dimensions</td>
<td>1.75” H × 17” W × 21” D (per unit)</td>
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<tr>
<td></td>
<td>1U industry standard rack-mount chassis</td>
</tr>
<tr>
<td>Weight</td>
<td>20 lbs. (one power supply)</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>32° to 104° F (0° to 40° C)</td>
</tr>
<tr>
<td>Relative Humidity</td>
<td>10 to 90% @ 40° C, per Telcordia</td>
</tr>
<tr>
<td></td>
<td>GR-63-CORE 5.1.1 and 5.1.2</td>
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<tr>
<td>Safety Agency Approval</td>
<td>UL 60950 (UL1950-3)</td>
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<td>CSA-C22.2 No. 60950-00 (bi-national standard with UL 60950)</td>
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<td>CB TEST CERTIFICATION TO IEC 950</td>
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<td>EN 60950</td>
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<td>Electromagnetic Emissions</td>
<td>EN55022 1998 Class A</td>
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<td>Certifications/Susceptibility Standard</td>
<td>EN55024 1998 Class A</td>
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<td>FCC Part 158 Class A</td>
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<td>VCCI Class A</td>
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### Recommended Host System Requirements

| Hypervisor                  | VMware vSphere Hypervisor 4.0, 4.1, and 5.0  
|                            | Citrix XenServer 5.6        
|                            | Microsoft Hyper-V for Windows Server 2008 R2 |
| Processor                  | 2–4 CPU cores              |
| Memory                     | 2–8 GB RAM                 |
| Network Adapters           | 2–8 network interfaces     |
| Disk Space                 | 250 GB hard drive          |

It is highly recommended that the host system contain CPUs based on AMD-V or Intel-VT technology.
F5 Services

F5 Services offers world-class support, training, and consulting to help you get the most from your F5 investment. Whether it's providing fast answers to questions, training internal teams, or handling entire implementations from design to deployment, F5 Services can help you achieve IT agility. For more information about F5 Services, contact consulting@f5.com or visit f5.com/services.

More Information

Enterprise Manager supports all TMOS-enabled F5 devices in the BIG-IP product family. To learn more about Enterprise Manager, use the search function on F5.com to find these and other resources.

Datasheet

BIG-IP Modules

BIG-IP iHealth

Product overview

Enterprise Manager

White paper

Application Delivery Network Platform Management

Case study

Rackspace Hosting