Improving IBM Tivoli Maximo with the F5 BIG-IP System

Maximo, IBM's asset management package, is designed to handle the most demanding installations. Often, the most demanding environments require multiple Maximo servers to manage the assets placed into the system. Because of Maximo's industry-leading capabilities, it is used in the world's largest and most demanding IT environments, such as global mining, drilling, aircraft, and supply chain operations—so users are often remote from the Maximo servers.

While Maximo is a market-leading solution, there is only so much that software can do for high availability, security, remote access, and performance. The F5® BIG-IP® system, a Ready for Tivoli certified architecture for making Maximo installations secure, fast, and available, can resolve the issues that degrade Maximo's performance.

Complex Systems

Maximo is a highly flexible system that utilizes all three application tiers to help you manage your inventory. Depending on the configuration of the Maximo installation, the required architecture can be daunting. Adding to this already complex environment, users are often remote and sometimes working over a connection whose bandwidth is constrained. Because the Maximo system contains information about an organization's property, and because for remote clients the Maximo interface must be exposed to the Internet, security must also be a consideration.

The F5 BIG-IP system provides a variety of products to help make your Maximo system more secure, fast, and available under even the most daunting deployment scenarios.

With BIG-IP® Local Traffic Manager™ (LTM), Maximo benefits from high availability, basic TCP acceleration, SSL offload from your servers, and intelligent load distribution with a variety of algorithms to choose from.

Adding BIG-IP® WebAccelerator™ to BIG-IP LTM improves the performance of web browsing to pages hosted on Maximo servers.

By symmetrically deploying BIG-IP® WAN Optimization Manager™ (WOM) on BIG-IP LTM devices, remote branches that have multiple users can benefit from even more acceleration and encryption.

Finally, adding BIG-IP® Access Policy Manager™ (APM) provides increased security with endpoint inspection (prior to connecting to Maximo), single sign-on (SSO), and a full SSL VPN for users to connect securely to the network hosting the Maximo installation.

Key features

- **High Availability**—The BIG-IP system uses pools of servers to keep your application available if one server goes offline

- **Security**—The BIG-IP system offers site-to-site encryption for remote offices and SSL termination, offload for all services, and secure remote access

- **Acceleration**—On both the server and client sides, the BIG-IP system accelerates communications with a variety of technologies

- **Single Sign-On**—SSO and endpoint inspection are available on the BIG-IP platform, increasing security while improving the user experience

Key benefits

- **Performance Improvements**— Both real and perceived performance can be enhanced via compression, deduplication, intelligent browser referencing, and TCP optimizations

- **Access Control**—Integrated access control enables the BIG-IP system to control access before the user is granted a connection to the server; all popular AAA mechanisms are supported

- **Remote Location Improvements**— A BIG-IP WOM device in both the data center and a remote office greatly improves that office's security and access control

Maximo Asset Management Total Transaction Time (average): Satellite use case
(2 Mbps, 300 ms latency, 0.25% packet loss)

Scenario	Baseline	With BIG-IP LTM + WebAccelerator	With BIG-IP LTM + WebAccelerator + WOM
First Visit (No browser cache)	108.12 seconds	80.98 seconds	59.38 seconds
Repeat Visit (Browser cache)	85.19 seconds	45.80 seconds	30.36 seconds
Maximo 2 MB upload	54.22 seconds	19.35 seconds	2.52 seconds

Maximo use case with BIG-IP WebAccelerator, BIG-IP WOM, and BIG-IP LTM running over a satellite connection.

The BIG-IP system offers the following Maximo-related services:

- BIG-IP LTM uses load balancing, SSL offload, health monitoring, and performance optimizations to improve both local and remote client performance.

- BIG-IP WebAccelerator includes asymmetric optimizations such as caching, PDF linearization, and HTTP compression to improve the performance of both local and remote clients.

- BIG-IP WOM uses encrypted tunnels and deduplication to increase performance at remote offices.

- BIG-IP APM extends your AAA mechanism to Maximo users in whatever locale they reside. It also allows for authentication off-server, so that attackers never get to the server they hope to compromise, unless they have valid credentials. Finally, by securely caching passwords and presenting them to Maximo, BIG-IP APM can make the process of server failover seamless to users.
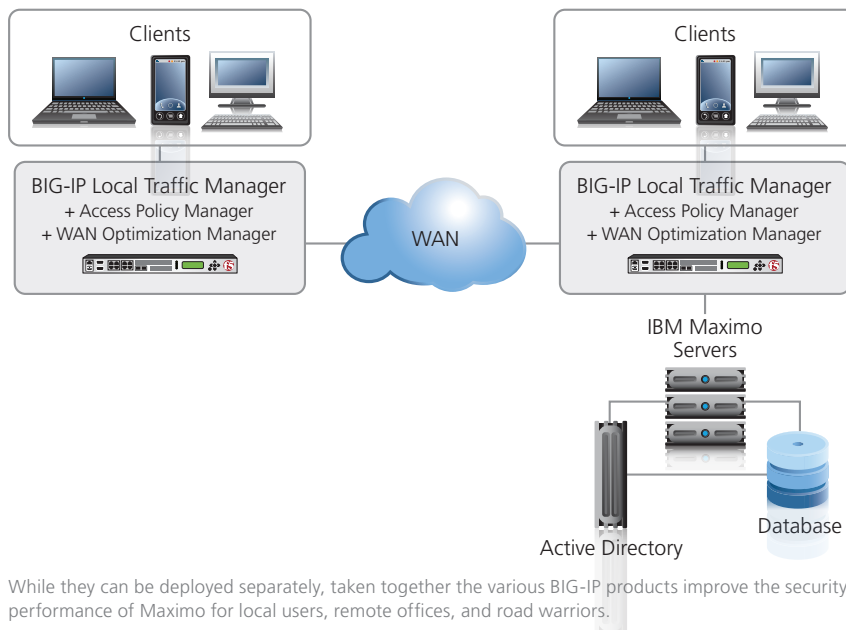
While they can be deployed separately, taken together the various BIG-IP products improve the security and performance of Maximo for local users, remote offices, and road warriors.

Learn more

For more information about BIG-IP solutions for Maximo, please see the following resources or use the search function on f5.com.

Product pages

BIG-IP Local Traffic Manager

BIG-IP WebAccelerator

BIG-IP WAN Optimization Manager

BIG-IP Access Policy Manager

Deployment Guide

Deploying F5 with IBM Tivoli Maximo

Application Ready Solution Guide

IBM Tivoli Application Ready Solution Guide