Deployment Guide

Document version 1.0

What's inside:

Deploying the BIG-IP LTM with IBM Cognos Insight

Welcome to the F5 Deployment Guide for IBM® Cognos Insight. This document provides guidance for deploying the BIG-IP Local Traffic Manager (LTM) with IBM Cognos. The BIG-IP LTM brings high availability, SSL offload, and TCP optimizations to IBM Cognos solutions.

IBM Cognos provides the ability to analyze data through business intelligence software. Cognos is deployed on servers in a variety of architectures, but all require high availability and can benefit from the inclusion of optimization in TCP and SSL.

For more information of IBM Cognos Insight see:
http://www-01.ibm.com/software/analytics/cognos/insight/

For more information on the F5 BIG-IP LTM, see *http://www.f5.com/products/big-ip*

Why F5

F5 and IBM have a deep technology partnership that spans the entirety of the F5 product line and IBM's software pillars. By combining F5 with IBM Information Intelligence software such as Cognos, customers gain the benefits of the F5 and IBM partnership. While this deployment guide highlights the most common deployment scenario, F5 and IBM can always work with customers to test more advanced deployments.

In this deployment guide we describe how to load balance IBM Cognos with F5 BIG-IP LTM. This solution brings the following key benefits:

- High availability and better uptime for mission critical applications such as IBM Cognos.
- Offload SSL from your Cognos Web Tier to reduce the number of required front-end servers and provide a faster end-user experience.
- Optimize TCP connections on a per-user basis to both reduce the overhead on the Web Tier as well as provide the best possible end-user experience.
- Enable better visibility through BIG-IP Analytics.

To provide feedback on this deployment guide or other F5 solution documents, contact us at *solutionsfeedback@f5.com*

Products and versions tested

Product	Version
BIG-IP LTM	11.1 HF-2 (applies to 11.x)
IBM Cognos Insight 10.1.0	10.1.0

Important: *Make sure you are using the most recent version of this deployment guide, found at http://www.f5.com/pdf/deployment-guides/ibm-cognos-insight-dg.pdf.*

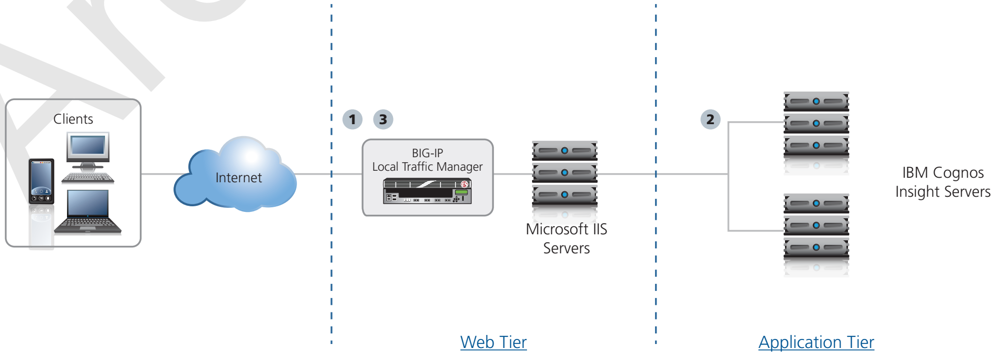
Prerequisites and configuration notes

The following are general prerequisites and configuration notes for this guide:

- You must have a Cognos implementation with web servers deployed.
- You must have a BIG-IP system with Local Traffic Manager (LTM) provisioned.
- If you are using the BIG-IP system to offload SSL, we assume you have already obtained an SSL certificate and key and it is installed on the BIG-IP LTM system. When you configure the iApp, you are asked for the SSL Certificate and Key you imported for this configuration.

Configuration example and traffic flows

In this deployment guide, we cover the scenario of optimizing Cognos with the BIG-IP system load balancing the Microsoft IIS Servers to provide offload as well as high availability. The following diagram shows a logical configuration example.



1. Traffic enters the BIG-IP LTM, which is configured to perform health monitoring on the Application tier.
2. Traffic is balanced across the application tier.
3. The traffic is then returned back to the user (and optionally through the web tier) through the BIG-IP LTM.

Configuring the BIG-IP system for IBM Cognos

Use this section for configuring the BIG-IP LTM for IBM Cognos Insight. The following table contains a list of LTM objects along with any non-default settings you should configure as a part of this deployment. Settings not mentioned in the table can be modified as applicable for your configuration. For instructions on configuring individual objects, see the online help or manuals.

BIG-IP Object	Non-default settings/Notes		
Health Monitor (*Main tab-->Local Traffic -->Monitors*)	***Name***	Type a unique name	
	Type	**HTTP**	
	Interval	**30** (recommended)	
	Timeout	**91** (recommended)	
	Send String	**GET /tm1web/TM1WebLogin.aspx HTTP/1.1\r\nHOST: <yourhostname>\r\nConnection: close\r\n\r\n** [1]	
	Receive String	**Service Unavailable**	
	Reverse	**Yes**	
Pool (*Main tab-->Local Traffic -->Pools*)	***Name***	Type a unique name	
	Health Monitor	Select the monitor you created above	
	Load Balancing Method	Choose **Least Connections (Member)**	
	Address	Type the IP Address IIS server nodes	
	Service Port	**80** (repeat Address and Service Port for all nodes)	
Profiles (*Main tab-->Local Traffic -->Profiles*)	***HTTP*** (*Profiles-->Services*)	Name	Type a unique name
		Parent Profile	**http**
		Redirect Rewrite[2]	**All**[2]
	HTTP Compression (*Profiles-->Services*)	Name	Type a unique name
		Parent Profile	**wan-optimized-compression**
	Web Acceleration (*Profiles-->Services*)	Name	Type a unique name
		Parent Profile	**webacceleration**
	TCP WAN (*Profiles-->Protocol*)	Name	Type a unique name
		Parent Profile	**tcp-wan-optimized**
	TCP LAN (*Profiles-->Protocol*)	Name	Type a unique name
		Parent Profile	**tcp-lan-optimized**
	Persistence (*Profiles-->Persistence*)	Name	Type a unique name
		Persistence Type	**Cookie**
	OneConnect (*Profiles-->Other*)	Name	Type a unique name
		Parent Profile	**oneconnect**
	Client SSL[2] (*Profiles-->SSL*)	Name	Type a unique name
		Parent Profile	**clientssl**
		Certificate	Select the appropriate Certificate
		Key	Select the associated Key
Virtual Server (*Main tab-->Local Traffic -->Virtual Servers*)	***Name***	Type a unique name.	
	Address	Type the IP Address for the virtual server	
	Service Port	**443** if offloading SSL, **80** if not offloading SSL	
	Protocol Profile (client)[2]	Select the WAN optimized TCP profile you created above	
	Protocol Profile (server)[2]	Select the LAN optimized TCP profile you created above	

[1] Replace red text with the host name of your IIS server; for example: CORP. The String must be entered on a single line.
[2] Only necessary if you are offloading SSL on the BIG-IP LTM

BIG-IP Object	Non-default settings/Notes	
Virtual Server (*Main tab-->Local Traffic -->Virtual Servers*)	***OneConnect Profile***	Select the OneConnect profile you created above
	HTTP Profile	Select the HTTP profile you created above
	HTTP Compression profile	Select the HTTP Compression profile you created above
	Web Acceleration profile	Select the Web Acceleration profile you created above
	SSL Profile (client)[1]	Select the Client SSL profile you created above
	SNAT Pool	**Automap**[2]
	Default Pool	Select the pool you created above
	Persistence Profile	Select the cookie persistence profile you created above

[1] Only necessary if you are offloading SSL
[2] Create a SNAT pool if you expect more than 64,000 simultaneous connections.

This completes the configuration.

Next Steps

Now that you've completed the BIG-IP system configuration for IBM Cognos, here are some examples of what to do next.

Adjust your DNS settings to point to the BIG-IP system

After the configuration is completed, your DNS configuration should be adjusted to point to the BIG-IP virtual server for Cognos. For example, you would change the DNS entry for the Cognos URL (such as http://cognos.example.com), to point to the BIG-IP LTM virtual server IP address you configured in this guide.

Using F5 Analytics for testing, troubleshooting and measuring performance

You can gather useful statistics about the performance of the BIG-IP LTM by creating a custom **Analytics** profile and applying it to the LTM virtual server. Analytics are made available as part of the Application Visibility Reporting (AVR) module, which allows you to view statistics specific to your Cognos implementation. AVR is available on all BIG-IP systems v11 and later, however you must have the AVR provisioned for this option to appear.

Note that this is only for Application Visibility Reporting, you can always view object-level statistics from the BIG-IP without provisioning AVR. Enabling Analytics may adversely affect overall system performance. If you choose to enable Analytics, we recommend gathering statistics for a set time period, such as one week, and then disabling Analytics while you process the data.

If you plan on using AVR for analytics, we recommend creating a custom Analytics profile. To create a new profile, from the Main tab, expand **Local Traffic**, select **Profiles** and then click **Analytics**. Click **New** and then add the Cognos virtual server. Configure the rest of the profile as applicable for your configuration. Learn more about Analytics by reading the LTM Analytics Implementations guide, found on Ask F5:
http://support.f5.com/kb/en-us/products/big-ip_ltm/manuals/product/bigip_analytics_implementations_11_0_0.html

Document Revision History

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