Deploying the BIG-IP LTM with Oracle Endeca

Welcome to the F5 deployment guide for Oracle® Endeca and the BIG-IP system. This guide shows administrators how to configure the BIG-IP Local Traffic Manager (LTM) for directing traffic, ensuring application availability, improving performance and providing a flexible layer of security for Oracle Endeca deployments.

Products and applicable versions

Product	Version
BIG-IP LTM	10.1 - 10.4 11.1 - 11.4
Oracle Endeca Information Discovery	2.4
Deployment guide version	1.0

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

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

Contents

Prerequisites and configuration notes

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

- You must have administrative access to the BIG-IP LTM web-based Configuration utility.
- You must have administrative access to the Endeca Information Discovery Servers.
- You must have the appropriate DNS and NTP network services configured.
- This guide assumes you have already initially configured the BIG-IP system with Interfaces, VLANs, Self-IPs, and IP Routes, and that the LTM is installed, licensed, and running in your network. For basic LTM configuration and installation instructions, please consult the appropriate F5 documentation.
- Note that Endeca Information Discovery Services are usually added to an existing Oracle application, such as E-Business Suite. Please consult the appropriate F5 and Oracle documentation for installing and configuring the application software if needed. See *http://www.f5.com/products/documentation/deployment-guides.view.solutions.base-application.oracle.html*.

Overview of Oracle Endeca

This section contains an overview of Oracle Endeca, including Information Discovery.

Endeca Information Discovery

Oracle Endeca Information Discovery is a data discovery platform that guides people to better decisions on diverse and changing data. It is based on a patented hybrid search-analytical database, and gives IT a centralized platform to rapidly deploy interactive analytic applications, and keep pace with changing business requirements while maintaining information governance.

Oracle Endeca Server

The Oracle Endeca Server software provides the query engine that serves as the foundation for all front-end applications utilizing it. The software includes the Oracle Endeca Server, which is the management facility for administering the Endeca data stores. Front-end applications built on top of the Oracle Endeca Server can answer end-user queries and provide business analytics information to the front-application's users.

Configuration example

Using F5 with an Endeca Cluster provides an Enterprise class architecture which can provide for increased throughput and capacity, and enhanced availability of query processing. Endeca Servers can be added as needed to increase computing power and improve application response time.

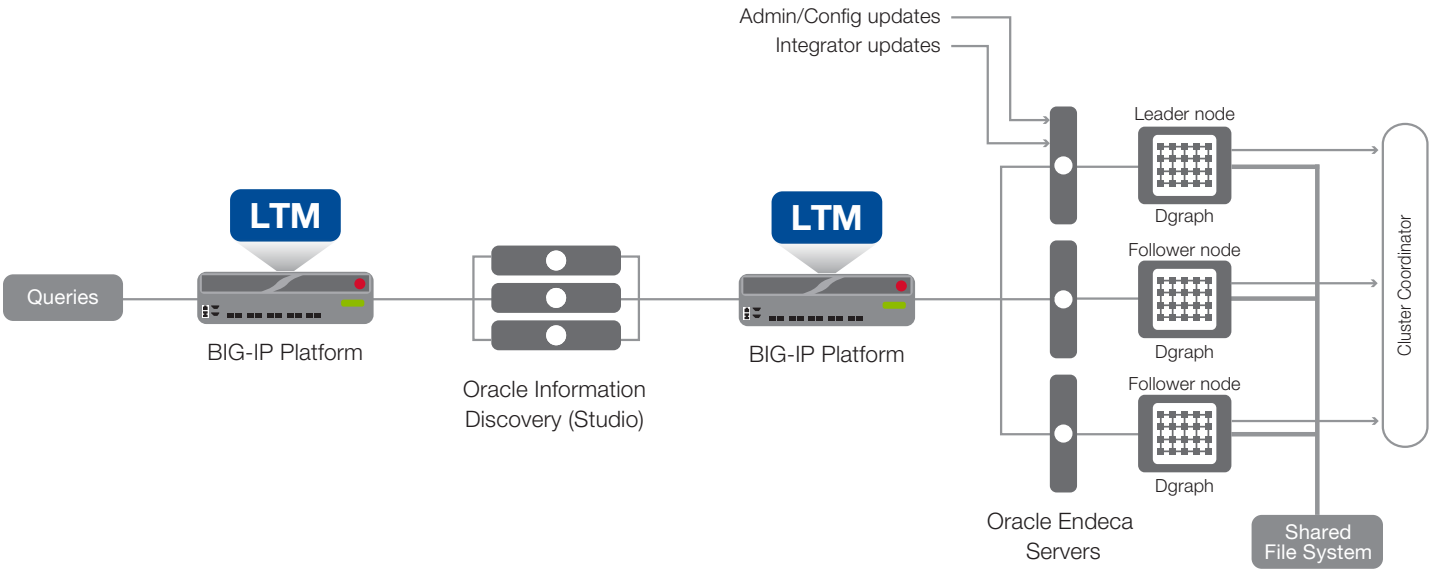

Figure 1: *Logical configuration example*

Configuring the BIG-IP LTM for Oracle Endeca

Use the following tables for guidance on configuring the BIG-IP system for the Oracle Endeca. These tables contains any non-default setting you should configure as a part of this deployment. Settings not contained in the table can be configured as applicable. For specific instructions on configuring individual objects, see the online help or product manuals.

Endeca Information Discovery Services (Studio) configuration table

BIG-IP object	Non-default settings/Notes		
Health Monitor (*Local Traffic-->Monitors*)	***Name***	Type a unique name.	
	Type	**TCP**	
	Interval	**30**	
	Timeout	**91**	
Pool (*Local Traffic -->Pools*)	***Name***	Type a unique name.	
	Health monitor	Add health monitor above	
	Slow Ramp Time[1]	**120**	
	Load Balancing Method	**Least Connections (member)** recommended	
	Address	IP address of the Endeca Studio server	
	Service Port	**8090** (default) Repeat Address and Port for all members	
Profiles (*Local Traffic-->Profiles*)	***HTTP*** (*Profiles-->Services*)	Name	Type a unique name.
		Parent Profile	**http**
	TCP WAN (*Profiles-->Protocol*)	Name	Type a unique name.
		Parent Profile	**tcp-wan-optimized**
		Idle Timeout[2]	**1800**[2]
	TCP LAN (*Profiles-->Protocol*)	Name	Type a unique name.
		Parent Profile	**tcp-lan-optimized**
		Idle Timeout[2]	**1800**[2]
	Persistence (*Profiles-->Persistence*)	Name	Type a unique name.
		Persistence Type	**Cookie**
Virtual Server (*Local Traffic-->Virtual Servers*)	***Name***	Type a unique name.	
	Destination Address	IP address for the virtual server (servers use this address to access Endeca via the BIG-IP system)	
	Service Port	**80**	
	Protocol Profile (Client)[1]	Select the TCP WAN profile you created above	
	Protocol Profile (Server)[1]	Select the TCP LAN profile you created above	
	HTTP Profile	Select the HTTP profile you created above	
	SNAT Pool	**Auto Map** (SNAT is recommended. If you expect more than 64,000 concurrent connections per server, use a SNAT Pool[3] instead of Auto Map)	
	Default Pool	Select the pool you created above	
	Default Persistence Profile	Select the **Cookie** persistence profile you created above	

[1] *You must select* **Advanced** *from the* **Configuration** *list for these options to appear.*

[2] *If you have changed the Endeca Server "Maximum Idle Time", you should make the BIG-IP TCP profile Idle Timeout value match or be slightly larger. See the Endeca Server Admin Guide for more information:* http://docs.oracle.com/cd/E35976_01/server.740/es_admin/toc.htm#Increasing%20the%20maximum%20idle%20time

[3] *For more information on SNAT Pools, see the BIG-IP documentation*

Endeca Server configuration table

BIG-IP object	Non-default settings/Notes		
Health Monitor (*Local Traffic-->Monitors*)	***Name***	Type a unique name.	
	Type	**HTTP**	
	Interval	**30**	
	Timeout	**91**	
	Send String	Use the following syntax: **http://[host]:[port]/admin?op=ping** Where 'host' is the FQDN of the Server, and 'port' is the TCP port where the Endeca process is running For example: **endeca1.example.com:7770/admin?op=ping**	
Pool (*Local Traffic -->Pools*)	***Name***	Type a unique name.	
	Health monitor	Add health monitor above	
	Slow Ramp Time[2]	**120**	
	Load Balancing Method	**Least Connections (member)** recommended	
	Address	IP address of the Endeca Studio server	
	Service Port	**7770** (default) Repeat Address and Port for all members	
Profiles (*Local Traffic-->Profiles*)	***HTTP*** (*Profiles-->Services*)	Name	Type a unique name.
		Parent Profile	**http**
	TCP WAN (*Profiles-->Protocol*)	Name	Type a unique name.
		Parent Profile	**tcp-wan-optimized**
		Idle Timeout[3]	**1800**[2]
	TCP LAN (*Profiles-->Protocol*)	Name	Type a unique name.
		Parent Profile	**tcp-lan-optimized**
		Idle Timeout[3]	**1800**[2]
	Persistence (*Profiles-->Persistence*)	Name	Type a unique name.
		Persistence Type	**Cookie**
Virtual Server (*Local Traffic-->Virtual Servers*)	***Name***	Type a unique name.	
	Destination Address	IP address for the virtual server (servers use this address to access Endeca via the BIG-IP system)	
	Service Port	**80**	
	Protocol Profile (Client)[2]	Select the TCP WAN profile you created above	
	Protocol Profile (Server)[2]	Select the TCP LAN profile you created above	
	HTTP Profile	Select the HTTP profile you created above	
	SNAT Pool	**Auto Map** (SNAT is recommended. If you expect more than 64,000 concurrent connections per server, use a SNAT Pool[4] instead of Auto Map)	
	Default Pool	Select the pool you created above	
	Default Persistence Profile	Select the **Cookie** persistence profile you created above	

[1] *The LTM HTTP health monitor is specified in the Oracle Endeca Commerce Performance Tuning Guide, version 6.4.1. See http://docs.oracle.com/cd/E40176_01/MDEX.641/pdf/PerfTuningGuide.pdf*

[2] *You must select* **Advanced** *from the* **Configuration** *list for these options to appear.*

[3] *If you have changed the Endeca Server "Maximum Idle Time", you should make the BIG-IP TCP profile Idle Timeout value match or be slightly larger. See the Endeca Server Admin Guide for more information: http://docs.oracle.com/cd/E35976_01/server.740/es_admin/toc.htm#Increasing%20the%20maximum%20idle%20time*

[4] *For more information on SNAT Pools, see the BIG-IP documentation*

References

- Endeca Information Discovery and Endeca Server documentation:
  http://docs.oracle.com/cd/E35976_01/index.htm
- Endeca Cluster Overview:
  http://docs.oracle.com/cd/E35976_01/server.740/es_admin/toc.htm#Cluster%20overview
- Endeca Maximum Idle Time configuration:
  http://docs.oracle.com/cd/E35976_01/server.740/es_admin/toc.htm#Increasing%20the%20maximum%20idle%20time
- Endeca Commerce Performance Tuning Guide:
  http://docs.oracle.com/cd/E40176_01/MDEX.641/pdf/PerfTuningGuide.pdf

Document Revision History

Version	Description	Date
1.0	New guide	08-13-2013

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