Deployment Guide
Version 1.0

Deploying the BIG-IP LTM with Oracle JD Edwards EnterpriseOne

What's inside:

Document Version
1.0

Welcome to the F5 deployment guide for Oracle JD Edwards EnterpriseOne and BIG-IP 10.2.1. 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 JD Edwards EnterpriseOne deployments.

Why F5

The BIG-IP LTM provides high availability, load balancing, enhanced performance, simple scalability and high operational resiliency for Oracle JD Edwards EnterpriseOne Application deployments. In a JD Edwards One environment, the BIG-IP LTM provides intelligent traffic management and high availability by monitoring and managing connections to the WebLogic services.

In addition, the built-in performance optimization capabilities of the LTM provide faster operations to facilitate a better end-user experience. The LTM also keeps persistence records for connections to always be directed to the same server for a specified period of time, to ensure that the workflow in the JD Edwards environment is fully preserved.

For more information on Oracle JD Edwards EnterpriseOne, see *http://www.oracle.com/us/products/applications/jd-edwards-enterpriseone/index.html*

For more information on the F5 BIG-IP LTM, see *http://www.f5.com/products/big-ip/product-modules/local-traffic-manager.html*

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	10.2.1
JD Edwards EnterpriseOne	9.0/8.98.4
Oracle WebLogic Server	10.3.2

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

Prerequisites and configuration notes

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

- You must have administrative access to the BIG-IP web-based Configuration utility.
- You must have administrative level privileges to the JD Edwards EnterpriseOne servers, for editing configurations and stopping/starting services.
- Optional: You must have a valid SSL certificate and key if you going to offload SSL to the BIG-IP LTM.

Configuration example

In this deployment guide, we provide guidance on configuring the BIG-IP LTM for intelligent traffic management and high availability for JD Edwards EnterpriseOne environments.

The following is a simple, logical diagram of our configuration.

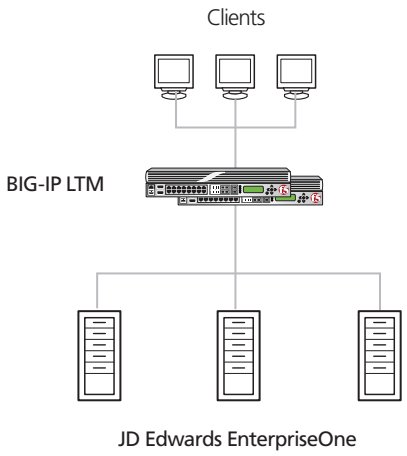

Figure 1: *Logical configuration example*

Preparation Worksheet

Before beginning the configuration, it is helpful to gather some information, such as IP addresses and certificate/key information. This worksheets contains the information that is helpful to have in advance. You might find it useful to print the table and then enter the information. We provide a blank worksheet, and then one completed with our examples.

➲ **Note:** *Although we show space for nine pool members, you may have more or fewer members in your pool*

IP Addresses	Pool Members	Health monitor	Certificate and Key?
Virtual server IP address: Service Port:	WebLogic Server IPs:Port 1: 2: 3: 4: 5: 6: 7: 8: 9:	URI required for accessing the JD Edwards deployment (**/jde/index.jsp** by default): User name for a JD Edwards account [1]: Associated password:	Only required if offloading SSL onto the BIG-IP [2]. Certificate: Key:

[1] *We strongly recommend creating a user account specifically for this monitor*
[2] *If offloading SSL, you must have imported a valid certificate and key on to the BIG-IP system before beginning the configuration. See the Online help or product documentation for more information*

IP Addresses	Pool Members	Health monitor	Certificate and Key?
Virtual server IP address: **192.0.2.101** Service Port: **443**	WebLogic Server IPs:Port 1: **10.10.10.101:7003** 2: **10.10.10.102:7003** 3: **10.10.10.103:7003** 4: **10.10.10.104:7003** 5: **10.10.10.105:7003** 6: **10.10.10.106:7003** 7: 8: 9:	URI required for accessing the JD Edwards deployment (**/jde/index.jsp** by default): **/jde/index.jsp** User name for a JD Edwards account: **JDE** Associated password: **password**	Only required if offloading SSL onto the BIG-IP. Certificate: **JDE-SSL** Key: **JDE-SSL**

Configuring the BIG-IP LTM for HTTP traffic (no SSL offload)

Use the following table for guidance on configuring the BIG-IP LTM for JD Edwards EnterpriseOne using HTTP with no SSL offload. This table contains any non-default setting you should configure as a part of this deployment. Unless otherwise specified, settings not mentioned in the table can be configured as applicable for your configuration.

Give each object a unique name. We recommend using names that are prefaced by "JDE-" such as JDE-monitor.

Tip → *For specific instructions on configuring individual objects, see the online help or product documentation. Also see Configuring optional iRules on page 6.*

BIG-IP object	Non-default settings/Notes		
Health Monitor	***Type***	**HTTP**	
	Interval	**60**	
	Timeout	**180**	
	Send String	**GET /jde/index.jsp \r\n** [1]	
	Receive String	**<html>**	
	User Name	Type the user name, if appropriate. We use **JDE**	
	Password	Associated password, if appropriate. We use **password**	
Pool	***Health monitor***	Add health monitor above	
	Slow Ramp Time	**120** (must select Advanced for this option to appear)	
	Load Balancing Method	**Least Connections (node)** recommended	
	Address	WebLogic server IP address	
	Service Port	**7003** (default) Repeat Address and Port for all members)	
Profiles	***HTTP***	Parent Profile	**http**
	TCP WAN	Parent Profile	**tcp-wan-optimized**
		Idle Timeout	**1800**
	TCP LAN	Parent Profile	**tcp-lan-optimized**
		Idle Timeout	**1800**
	Persistence (Cookie)[2]	Persistence Type	**Cookie**
	Persistence (Source Address)	Persistence Type	**Source Address Affinity**
	OneConnect	Parent Profile	**oneconnect**
Virtual Server	Destination Address	IP address (clients use to access JD Edwards via BIG-IP)	
	Service Port	**80**	
	Profiles	Add select each profile you created above from the appropriate list. Source Address Affinity is the Fallback Persistence method.	
	SNAT Pool	Automap (recommended; with more than 65,000 users, use SNAT Pool)	
	iRules	Optional. See *Configuring optional iRules on page 6*	
	Default Pool	Select the pool you created above	

[1] *If you changed from the default JD Edwards URI, replace /jde/index.jsp with that URI.*
[2] *See Using an iRule to persist WebLogic connections on JSessionID on page 6. If using this iRule, the Persistence Type is Universal, you must enable Match Across Services, and then select the iRule.*

➲ **Important:** *For SSL offload, we assume you have already obtained a valid SSL certificate/key pair and imported it onto the BIG-IP system. For more information on certificates and keys, see the BIG-IP documentation.*

Configuring the BIG-IP LTM for HTTPS traffic (SSL offload)

Use the following table for guidance on configuring the BIG-IP LTM to offload SSL for JD Edwards EnterpriseOne. This table contains any non-default setting you should configure as a part of this deployment. Unless otherwise specified, settings not mentioned in the table can be configured as applicable for your configuration.

Give each object a unique name. We recommend using names prefaced by "JDE-".

For specific instructions on configuring individual objects, see the online help or product documentation. Also see *Configuring optional iRules on page 6.*

BIG-IP object	Non-default settings/Notes	
Health Monitor	***Type***	**HTTP**
	Interval	**60**
	Timeout	**180**
	Send String	**GET /jde/index.jsp \r\n** [1]
	Receive String	**<html>**
	User Name	Appropriate user name. We use **JDE**
	Password	Associated password. We use **password**
Pool	***Health monitor***	Add health monitor above
	Slow Ramp Time	**120** (must select Advanced for this option to appear)
	Load Balancing Method	**Least Connections (node)** recommended
	Address	WebLogic server IP address
	Service Port	**7003** (default) Repeat Address and Port for all members)
Profiles	***HTTP***	Parent Profile: **http**
		Request Header Insert: **WL-Proxy-SSL:true**
	TCP WAN	Parent Profile: **tcp-wan-optimized**
		Idle Timeout: **1800**
	TCP LAN	Parent Profile: **tcp-lan-optimized**
		Idle Timeout: **1800**
	Client SSL	Parent Profile: **clientssl**
		Certificate/Key: Select the Certificate and Key you imported
	Persistence (Cookie)[2]	Persistence Type: **Cookie**
	Persistence (Source Address)[2]	Persistence Type: **Source Address Affinity**
	OneConnect	Parent Profile: **oneconnect**
Virtual Server	Destination Address	IP address (clients use to access JD Edwards via BIG-IP)
	Service Port	**443**
	Profiles	Add select each profile you created above from the appropriate list. Source Address Affinity is the Fallback Persistence method.
	SNAT Pool	Automap (recommended; with more than 65,000 users, use SNAT Pool)
	iRules	Optional. See *Configuring optional iRules on page 6*
	Default Pool	Select the pool you created above

[1] *If you changed from the default JD Edwards URI, replace /jde/index.jsp with that URI.*
[2] *See Using an iRule to persist WebLogic connections on JSessionID on page 6.* *If using this iRule, the Persistence Type is Universal, you must enable Match Across Services, and then select the iRule.*

Configuring optional iRules

The following two iRules are optional, but can be helpful in certain scenarios.

Using an iRule to mask the root context

When accessing the EnterpriseOne application, you may want to mask the root context, and provide a simpler way for users to access the application. When the user types the URI to access the EnterpriseOne application, the following BIG-IP iRule automatically appends the context root to the base URI. For example, if you type *http://jdedwards.example.com*, the iRule would send *http://jdewards.example.com/jde/EiMenu.maf* to the server.

Create an iRule on the BIG-IP LTM using the following code (omitting the line numbers).

```
1   when HTTP_REQUEST {
2     if {([HTTP::uri] == "/") } {
3       HTTP::uri "/jde/E1Menu.maf"
4     }
5   }
```

Use the following procedure to add the iRule to the virtual server.

To add the iRule to the virtual server

1. On the Main tab, expand **Local Traffic** and then click **Virtual servers**.
2. From the **Virtual Server** list, select the name of the virtual server you created for JD Edwards earlier in this guide.
3. On the Menu bar, click **Resources**.
4. In the iRules section, click **Manage**.
5. From the **Available** list, select the iRule you just created and then click the Add (<<) button.
6. Click the **Finished** button.

Using an iRule to persist WebLogic connections on JSessionID

Most WebLogic servers keep track of a particular user session using a JSessionID as either a cookie or as a parameter appended to a URI. In some cases, you may want to persist these connections through the BIG-IP using the WebLogic JSessionID instead of the recommended Cookie persistence profile.

The iRule is available on DevCentral:
http://devcentral.f5.com/wiki/default.aspx/iRules/Weblogic_JSessionID_Persistence.html

As mentioned in the article, you must use a Universal persistence method, enable Match Across Services, and then add the iRule to the persistence profile (and not the virtual server).

Document Revision History

Version	Description
1.0	New deployment guide

F5 Networks, Inc. 401 Elliott Avenue West, Seattle, WA 98119 888-882-4447 www.f5.com

F5 Networks, Inc.
Corporate Headquarters
info@f5.com

F5 Networks
Asia-Pacific
apacinfo@f5.com

F5 Networks Ltd.
Europe/Middle-East/Africa
emeainfo@f5.com

F5 Networks
Japan K.K.
f5j-info@f5.com