

Deployment Guide

**Optimizing the BIG-IP for the Siebel
Server Version 7.8 Web Tier**



Optimizing the BIG-IP and Siebel Server version 7.8 web tier configuration

F5 Networks and Siebel® Systems have created a solution for the successful delivery of version 7.8 (and 7.7) of Siebel Business Applications with F5's BIG-IP® application traffic management system version 9.1 and later. The BIG-IP system manages traffic at both the web server content and application business logic levels.

This solution allows Siebel Business Applications version 7.8 customers to protect and enhance their investments in Siebel applications by delivering maximum availability, scalability, performance and security. This allows for increased user productivity and satisfaction, while significantly reducing the total cost of ownership (TCO).

This Optimization Deployment Guide contains procedures on how to configure the BIG-IP system to optimize traffic for the Siebel web tier. For the full Siebel 7.8 Deployment Guide, see

www.f5.com/pdf/deployment-guides/siebel78app-bigip91-dg.pdf

For more information on Siebel Systems version 7.8, see

<http://www.siebel.com>. For more information on the BIG-IP system, see

<http://www.f5.com/products/big-ip/>.

Prerequisites and configuration notes

The following are prerequisites for this deployment:

- ◆ The BIG-IP system must be running version 9.1 or later. For certain advanced features described in Appendix F, you must have licensed the appropriate module.

For the Deployment Guide for versions 4.5.x and 4.6.x, see

www.f5.com/pdf/deployment-guides/siebel77-bigip45-dg.pdf.

- ◆ The Siebel Servers must be running version 7.7 or 7.8 or later.
- ◆ This document assumes you have configured the F5 BIG-IP device on the network, assigned IP addresses, and have activated the license keys. Consult the BIG-IP documentation on how to initially configure the BIG-IP device. When you are configuring the BIG-IP system, keep the following in mind:
 - In order to configure the F5 BIG-IP System for Siebel Application Servers, the administrator must have administration access into the F5 BIG-IP device.
 - Plan what network topology and IP addresses should be used for Siebel Servers. This affects the network settings of F5 BIG-IP device.
 - Plan access control and security aspects of the network. For example, determine if a firewall will be deployed in front of the Siebel Servers.

- We recommend using the BIG-IP in a redundant configuration to ensure high availability
- Configure machines that host Siebel applications and configure the TCP/IP properties for these machines. Ensure there is TCP/IP connectivity between the Load Balancer and servers.

Configuration example

In our example deployment, the BIG-IP system manages traffic at both the web server content and application business logic levels. This solution allows Siebel Business Applications version 7.8 customers to protect and enhance their investments in Siebel applications by delivering maximum availability, scalability, performance and security. Figure 1.1 shows an example configuration, with BIG-IP systems in front of both the web servers and Siebel servers. This optimization Deployment Guide focuses on the web server configuration.

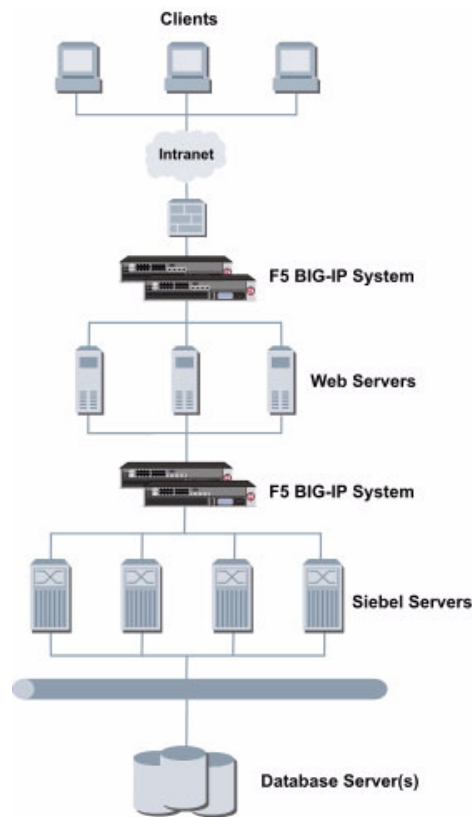


Figure 1.1 Example BIG-IP Siebel configuration

Optimizing the BIG-IP configuration for the Siebel web tier

This Deployment Guide contains procedures for configuring the BIG-IP system to optimize your Siebel web tier deployment. These optimizations include optimizing WAN connections, as well as configuration steps for Intelligent Compression and RAM caching to further optimize Siebel deployments. Each of the following procedures can be configured independently, you can choose to configure one or all of them.

In order to take advantage of these optimizations, the BIG-IP device must be running at least version 9.0 for Intelligent Compression and TCP profile modifications, and at least version 9.0.5 for the Fast Cache feature, and these modules must be licensed.

The following procedures apply to the Siebel web server configuration on the BIG-IP system. These procedures assume that you do not already have these objects (such as a pool and virtual server) configured on the BIG-IP device. If you already have these objects configured, you can modify (or create, in the case of the HTTP profile with compression and caching) the appropriate object using the optimization settings in the following procedures.

◆ Note

The following procedures show one way to optimize the Siebel configuration that has been tested by F5 using the Gomez real world testing service, and shown to give the greatest improvement. These procedures and the specific values given in some steps should be used as guidelines, modify them as applicable to your configuration.

Creating the HTTP health monitor

The first step is to set up a health monitor for the Siebel web servers. This procedure is optional, but very strongly recommended.

To configure a health monitor from the BIG-IP Configuration utility

1. On the Main tab, expand **Local Traffic**, and then click **Monitors**.
The Monitors screen opens.
2. Click the **Create** button.
The New Monitor screen opens.
3. In the **Name** box, type a name for the Monitor.
In our example, we type **siebel_web**.
4. From the **Type** list, select **http**.
The HTTP Monitor configuration options appear.

5. In the Configuration section, in the **Interval** and **Timeout** boxes, type an Interval and Timeout. We recommend at least a 1:3 +1 ratio between the interval and the timeout (for example, the default setting has an interval of **5** and an timeout of **16**). In our example, we use a **Interval** of **30** and a **Timeout** of **91**.
6. Click the **Finished** button.
The new monitor is added to the Monitor list.

General Properties	
Name	siebel_web
Type	HTTP
Import Settings	http
Configuration: Basic	
Interval	30 seconds
Timeout	91 seconds
Send String	GET /

Figure 1.2 Health monitor configuration settings

Creating the pool

The next step is to create a pool for the Siebel web servers.

◆ Important

This procedure is only necessary if you do not already have a pool for the web servers.

To create the web server pool from the Configuration utility

1. On the Main tab, expand **Local Traffic**, and then click **Pools**.
The Pools screen opens.
2. Click the **Create** button.
The New Pool screen opens.
3. In the **Name** box, name the pool something meaningful, such as **siebelweb_pool**.
4. Select the health monitor you just created in the *Creating the HTTP health monitor* section, and click the Add (<<) button. In our example, we select **monitor_siebel**.
5. In the **Resources** section, choose the desired load balancing method from the **Load Balancing Method** list.

6. In the New Members section, repeat the following steps for each web server.
 - a) Make sure that the **New Address** button is selected.
 - a) In the **Address** box, type the physical IP of the machine where **siebsrvr** will be running.
 - b) In the **Service Port** box, type **80**, or select HTTP from the list.
 - c) Leave the other fields at their default settings, and click the **Add** button to add the machine to the pool.
 - d) Repeat these steps for any additional web servers.
7. Leave the other options at the default settings, or configure as applicable for your network, and click the **Finished** button.

Figure 1.3 Configuring the BIG-IP pool for the Siebel web servers

Creating a new TCP profile

The next step in this section is to create a new TCP profile. This TCP profile is used for the web tier virtual server, and contains settings to optimize the traffic.

If you already have a TCP profile for the web tier virtual server, modify the profile with the settings in the following procedure.

To modify the TCP profile for optimization

1. On the Main tab, expand **Local Traffic**, and then click **Profiles**. The Profiles screen opens.
2. On the menu bar, from the **Protocol** menu, select **TCP**. The TCP Profiles screen opens.
3. Click the **Create** button. The New TCP Profile screen opens.
4. In the **Name** box, type a name for the profile. In our example, we type **siebelweb_tcp**.
5. In the **Parent Profile** list, make sure that **tcp** is selected.
6. In the Settings section, locate **Proxy Buffer Low**, and click a check in the Custom box on the far right. In the Proxy Buffer Low box, type **131072**.
7. In the **Proxy Buffer High** section, click a check in the Custom box, and in the Proxy Buffer High box, type **131072**.
8. In the **Send Buffer** section, click a check in the Custom box, and in the Send Buffer box, type **65535**.
9. In the **Receive Window** section, click a check in the Custom box, and in the Receive Window box, type **65535**.
10. Click the **Finished** button.

The screenshot shows the configuration interface for a TCP profile. The 'General Properties' section includes the profile name 'siebelweb_tcp' and the parent profile 'tcp'. The 'Settings' section is divided into 'Default' and 'Custom' columns. The following settings are configured with custom values and checked in the 'Custom' column:

Setting	Value	Custom
Reset On Timeout	Enabled	<input type="checkbox"/>
Time Wait Recycle	Enabled	<input type="checkbox"/>
Delayed Acks	Enabled	<input type="checkbox"/>
Proxy Maximum Segment		<input type="checkbox"/>
Proxy Options		<input type="checkbox"/>
Proxy Buffer Low	131072 bytes	<input checked="" type="checkbox"/>
Proxy Buffer High	131072 bytes	<input checked="" type="checkbox"/>
Idle Timeout	300 seconds	<input type="checkbox"/>
Time Wait	2000 seconds	<input type="checkbox"/>
Fin Wait	5 seconds	<input type="checkbox"/>
Close Wait	5 seconds	<input type="checkbox"/>
Send Buffer	65535 bytes	<input checked="" type="checkbox"/>
Receive Window	65535 bytes	<input checked="" type="checkbox"/>
Keep Alive Interval	1800 seconds	<input type="checkbox"/>
Maximum Syn Retransmissions	4	<input type="checkbox"/>
Maximum Segment		<input type="checkbox"/>

Figure 1.4 Configuring the TCP profile

Creating an HTTP profile that includes caching and compression

◆ Note

The following procedure is specific to HTTP traffic, and is only applicable if your configuration contains a BIG-IP system directing traffic to the Siebel web servers (see Figure 1.1).

In this procedure, we create an HTTP profile, which is where the Intelligent Compression and Fast Cache configuration options are located. You must have licensed these modules on your BIG-IP system. If you have not licensed the modules, you will not see the options described in the procedures. Fast Cache is only available in version 9.0.5 and later.

To create a new HTTP profile based on the default HTTP profile

1. On the Main tab, expand **Local Traffic**.
2. Click **Profiles**.
The HTTP Profiles screen opens.
3. In the upper right portion of the screen, click the **Create** button.
The New HTTP Profile screen opens.
4. In the **Name** box, type a name for this profile. In our example, we type **siebelweb_optimized**.
5. From the **Parent Profile** list, ensure that **HTTP** is selected.
6. In the Settings table, from the **Response Chunking** section, click a check in the Custom box. From the list, select **Unchunk**. This allows for more efficient caching and compression (see Figure 1.5)

Note: This setting automatically is set to Unchunk when the RAM cache is enabled.

General Properties		
Name	siebelweb_optimized	
Parent Profile	http	
Settings Custom		
Basic Auth Realm	<input type="text"/>	<input type="checkbox"/>
Fallback Host	<input type="text"/>	<input type="checkbox"/>
Header Insert	<input type="text"/>	<input type="checkbox"/>
Header Erase	<input type="text"/>	<input type="checkbox"/>
Response Chunking	Unchunk	<input checked="" type="checkbox"/>
OneConnect Transformations	<input checked="" type="checkbox"/> Enabled	<input type="checkbox"/>
Redirect Rewrite	None	<input type="checkbox"/>
Maximum Header Size	32768 bytes	<input type="checkbox"/>
Pipelining	Enabled	<input type="checkbox"/>
Insert XForwarded For	Disabled	<input type="checkbox"/>
LWS Maximum Columns	80	<input type="checkbox"/>
LWS Separator	<input type="text"/>	<input type="checkbox"/>
Maximum Requests	0	<input type="checkbox"/>

Figure 1.5 Configuring the general properties of the HTTP profile

7. In the Compression table, from the **Compression** row, click a check in the Custom box, then select **Enabled** from the list.
8. In the Content list section, configure the settings as applicable for your deployment. In our example, we left the settings at the default level.
9. In the **Compression Buffer Size** section, click a check in the Custom box. In the **Compression Buffer Size** box, type **131072**
10. In the **gzip Compression Level** section, click a check in the Custom box. From the list, select a level of compression suitable to your configuration. For most compression, select **9 - Most Compression (Slowest)**.
11. In the **gzip Memory Level** section, click a check in the Custom box. From the list, select **16** kilobytes.
12. In the **gzip Window size** section, click a check in the Custom box. From the list, select **64** kilobytes.
13. In the **HTTP/1.0 Requests** section, click a check in the Custom box. Click a check in the box to enable HTTP/1.0 requests (see Figure 1.6).

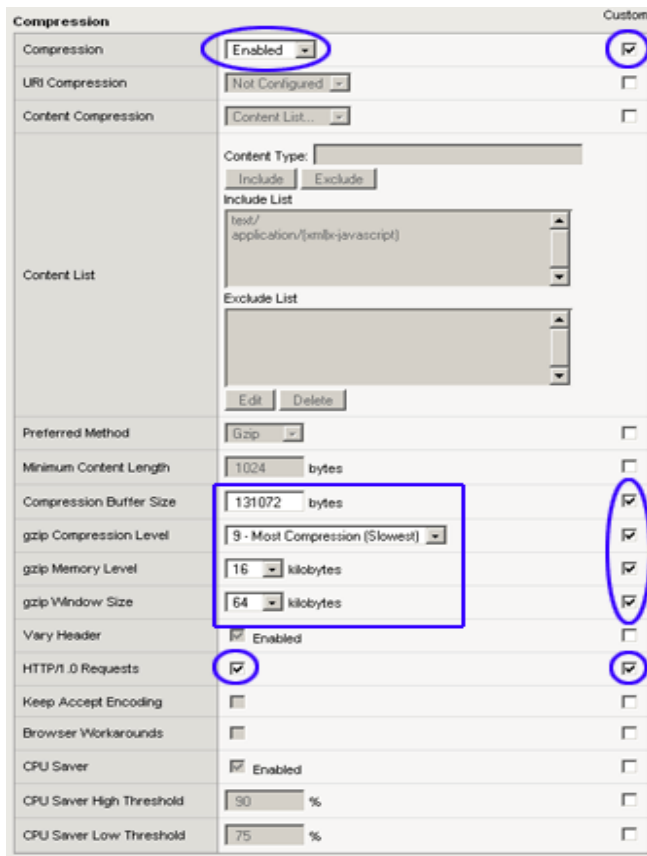


Figure 1.6 Configuring the Compression options on the HTTP profile

14. In the RAM Cache table, click a check in the Custom boxes for all the settings except Maximum Entries, URI Caching, Ignore Headers, and Aging Rate.
15. In the Ram Cache section, select **Enabled** from the list.
16. In the Maximum Cache Size section, type **10** in the box.
17. In the Maximum Age section, type **86400** seconds.
18. In the Minimum Object Size section, type **0**.
19. In the Maximum Object Size section, type **2000000** bytes.
20. In the Insert Age Header section, select Disabled from the list (see Figure 1.7).
21. Click the **Finished** button.

RAM Cache		Custom
RAM Cache	Enabled	<input checked="" type="checkbox"/>
Maximum Cache Size	10 megabytes	<input checked="" type="checkbox"/>
Maximum Entries	10000	<input type="checkbox"/>
Maximum Age	86400 seconds	<input checked="" type="checkbox"/>
Minimum Object Size	0 bytes	<input checked="" type="checkbox"/>
Maximum Object Size	2000000 bytes	<input checked="" type="checkbox"/>
URI Caching	Not Configured	<input type="checkbox"/>
Ignore Headers	All	<input type="checkbox"/>
Insert Age Header	Disabled	<input checked="" type="checkbox"/>
Aging Rate	9	<input type="checkbox"/>

Cancel Repeat Finished

Figure 1.7 Configuring the Cache settings on the HTTP profile

Creating an iRule

In Siebel environments that are both utilizing the High Interactive Client and employing compression on the BIG-IP system, an additional iRule needs to be configured on the BIG-IP system. This iRule ensures that ActiveX client traffic is not handled the same way as the rest of the HTTP traffic.

◆ Important

*This procedure is only necessary if you are using the Siebel High Interactive Client **and** are using compression on the BIG-IP system. If you are not using both these functions, you do **not** need to follow this procedure.*

To create the iRule

1. On the Main tab, expand **Local Traffic**.
2. Click **iRules**.
The iRules screen opens.
3. In the upper right portion of the screen, click the **Create** button.
The New iRule screen opens.
4. In the **Name** box, type a name for this iRule.
In our example, we use **siebel_activex**.

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5. In the Definition box, copy and paste the following iRule:

```
when HTTP_REQUEST {  
  if { [HTTP::method] eq "POST" && not [HTTP::header exists "Accept"] } {  
    HTTP::disable  
  }  
}
```

6. Click the **Finished** button.

Creating a virtual server

If you do not already have a virtual server for the web servers, the final step is to create a virtual server for these servers. If you already have a virtual server for the Siebel web servers, you should modify that virtual server to use the profiles and iRule you created in the preceding procedures.

To create the virtual server from the Configuration utility

1. From the Main tab, expand **Local Traffic**, and then click **Virtual Servers**. The Virtual Servers screen opens.
2. Click the **Create** button. The New Virtual Server screen opens.
3. In the **Name** box, type a name for the virtual server.
4. In the Destination section, in the **Address** box, type the virtual IP that maps to the pool.
5. In the **Service Port** box, type 80 or select HTTP from the list.
6. In the **Configuration** section, select **Advanced** from the list.
7. In the **Client** and **Server Protocol Profile** sections, select the name of the profile you created in the *Creating a new TCP profile* section from the lists. In our example, we select **siebelweb_tcp** from each list.
8. From the HTTP profile list, select the name of the HTTP profile you created in the *Creating an HTTP profile that includes caching and compression* section. In our example, we select **siebelweb_optimized**.
9. In the **Resources** section, in the **iRules** area, select the iRule you created in the preceding procedure from the **Available** box, and click the Add (<<) button to enable the iRule. In our example, we select **siebel_activex**.
10. From the **Default Pool** list, select the name of the pool you created in the *Creating the pool* section. In our example, we select **siebelweb_pool**.
11. Click the **Finished** button. The Siebel web tier is now optimized.