

**How-to Guide  
SAP NetWeaver '04**



**How to...  
Enable SAP BW  
Web  
functionality  
after a new  
SAP BW  
installation**

**Version 1.00 – May 2004**

**Applicable Releases:  
SAP NetWeaver '04  
(SAP BW 3.5)**

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# 1 Business Scenario

You have just completed the technical installation of SAP BW 3.x. You wish to enable BW web functionality for your users and administrators to use. This functionality could include:

- Development and deployment of BW Web Applications
- XML data loads via the HTTP/SOAP interface
- Display and maintenance of BW documents
- Display of BW MetaData in a Web Browser

## 2 Introduction

The following steps enable you to perform the initial configuration of the SAP BW System to enable BW web functionality. This will enable you and your BW users to use web browser for all BW functions. It should be noted that these steps are the required minimum needed to enable these features.

Additional steps are required for more advanced features such as Single sign-on, implementation of SSL, customized web logon screens, etc. These advance features are documented in the online help documentation (<http://help.sap.com>) or in other How-To guides or Whitepapers available from the SAP Service Marketplace (<http://service.sap.com/BW>).

The How-to also provides simple steps to test your configuration from both a web browser and from the BW system itself and ensure its correctness.

### 3 The Step By Step Solution

The following guide outlines the steps required to enable SAP BW web functions. This will entail the checking of the host names, configuration of the Application server instance profile parameters, and testing of the configuration.

#### 3.1 Checking and configuring the host name

1. SAP BW web applications require that the URLs generated contain the fully qualified host name.

Without fully qualified host names, URLs may be re-directed incorrectly, or session information is incorrectly associated resulting in loss of statefulness or repeated logins:

Example:

http://host123:<port>/sap/BW... ❌

http://host123.sap.com:<port>/sap/BW...



2. Check your application servers host name. On each of your application servers execute the following function module:

Transaction: **SE37**

Function module:

**RSBB\_URL\_PREFIX\_GET**

Execute single test.

3. Remove the default Message Server parameter selection. Click 'Execute'

The screenshot shows two SAP screens. The top screen is 'Function Builder: Initial Screen' with the function module 'RSBB\_URL\_PREFIX\_GET' selected. The bottom screen is 'Test Function Module: Initial Screen' showing test parameters for the function group 'RSMENU' and function module 'RSBB\_URL\_PREFIX\_GET'. The 'Upper/lower case' checkbox is unchecked. A table below shows import parameters and their values.

Import parameters	Value
I_HANDLERCLASS	CL_RSR_WWW_HTTP
I_PROTOCOL	
I_MESSAGESEVER	

4. The resulting output will detail the host name as determined by BW. The parameter E\_URL\_SERVER denotes the host name.

The host name must be fully qualified like the example.

If it is correct proceed to the next section (3.2).

If it is not fully qualified continue with this section.

### Test Function Module: Result Screen

Import parameters	Value
I_HANDLERCLASS	CL_RSR_WWW_HTTP
I_PROTOCOL	
I_MESSAGESEVER	

Export parameters	Value
E_URL_PREFIX	http://cdph1242.ph1.sap.corp:1080
E_URL_PATH	/sap/bw/BEx
E_URL_PROTOCOL	http
E_URL_SERVER	cdph1242.ph1.sap.corp
E_URL_PORT	1080
E_SUBRC	0

5. Perform the following check (in order!) to configure the correct fully qualified host name. Retest after each change with the above function module.

Note: BW will have to be stopped & restarted after applying any changes identified below:

1. Check your DNS entry
2. Check your hosts file (e.g. /etc/hosts file)
3. Consult SAP note 434918 for more options (and potentially use the parameter icm/host\_name\_full)
4. If you plan to use addition security hardware/software options like reverse proxies please consult SAP note 561885

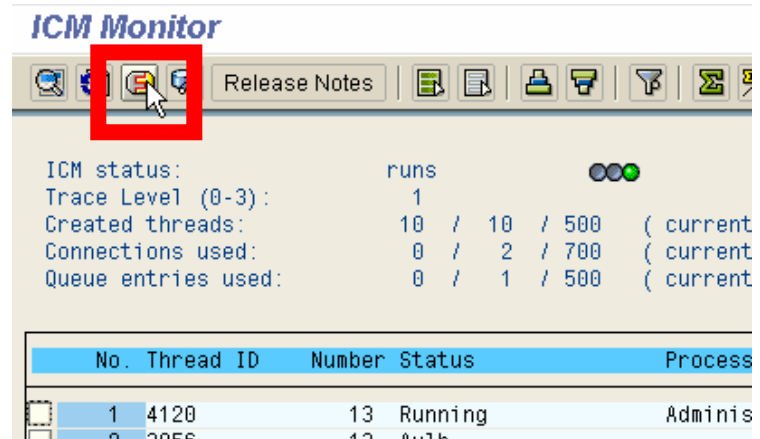
### 3.2 Configure the BW Systems listening ports and web protocols (HTTP)

- For security purposes, BW is delivered with HTTP configured to listen at port 0 (zero). This port is invalid or a restricted port. Thus providing additional security against unauthorized access.

We must configure the ports we wish to use and the protocol that each port will utilize.

The current configuration can be viewed via transaction SMICM -> click on the services icon.

HTTP port 0 in this case (the default after installation)



No.	Protocol	Service Name/Port	Host Name
1	HTTP	0	cdph1242.ph1.sap.cor
2	SMTP	0	cdph1242.ph1.sap.cor

- To enable HTTP communication, the ICM (Internet Communication Mgr) must be configured to accept HTTP request at a pre-determined port. Additionally, an ICM server port must be defined, and pointed to the correct plug-in for the specified protocol (HTTP in this case)

Example: On a Windows 2000 OS

Parameter Name	Parameter value
icm/min_threads	10
icm/max_conn	700
rdisp/start_icman	true
icm/server_port_0	PROT=HTTP,PORT=1080
icm/plugin_0	PROT=HTTP,PLG=D:\usr\sap\WMD\...

The following instance profile parameters should be set (on each application server):  
**icm/server\_port\_0**  
**icm/plugin\_0**

Examples of parameter settings:  
 (Windows OS based system)

icm/server\_port\_0 = PROT=HTTP,PORT=1080  
 icm/plugin\_0 = PROT=HTTP,  
 PLG=F:\usr\sap\

- After saving, checking, and activating all modified profiles, the BW system should be stopped and restarted.

- Checking your HTTP server host and port settings

Function module

“RSBB\_URL\_PREFIX\_GET” can also be executed to check your new settings.

Section 3.1 details how to execute this function module.

Ensure the message server parameter is not checked!

The result should be like the screenshot provided.

Notice the fully qualified application server host and HTTP port that are used as default for all BW web applications (inc. URLs for BEx Web Application Designer, SAP Easy Access Menu, BW Web Item Role Menu, BEx Browser, etc).

Import parameters	Value
I_HANDLERCLASS	CL_RSR_WWW_HTTP
I_PROTOCOL	
I_MESSAGESEVER	

### Test Function Module: Result Screen

Test for function group RSMENU  
Function module RSBB\_URL\_PREFIX\_GET  
Upper/lower case

Runtime: 17,450 Microseconds

Import parameters	Value
I_HANDLERCLASS	CL_RSR_WWW_HTTP
I_PROTOCOL	
I_MESSAGESEVER	

Export parameters	Value
E_URL_PREFIX	http://cdph1242.ph1.sap.corp:1080
E_URL_PATH	/rsap/bw/bex
E_URL_PROTOCOL	http
E_URL_SERVER	cdph1242.ph1.sap.corp
E_URL_PORT	1080
E_SUBRC	0

## 3.3 Activate the delivered ICF (Internet Communication Framework) BW Services

- The ICF services required by SAP BW are delivered inactive for security purposes. All the services needed by SAP BW are delivered preconfigured. All that is required is activation!

- Activate the BW ICF Services.

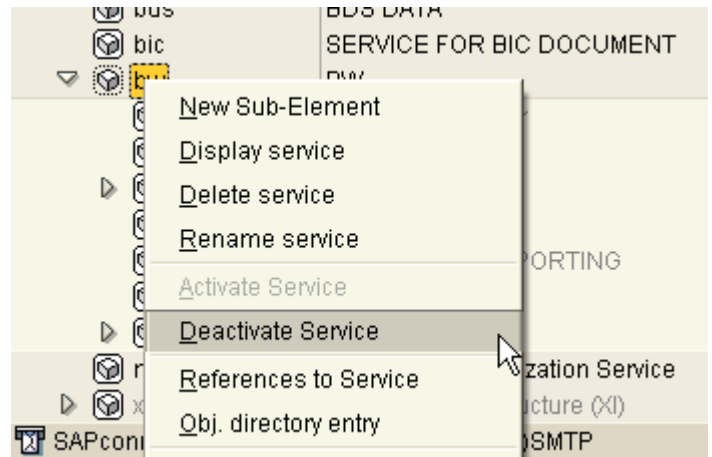
Start transaction SICF.

Navigate to default\_host -> sap -> bw.

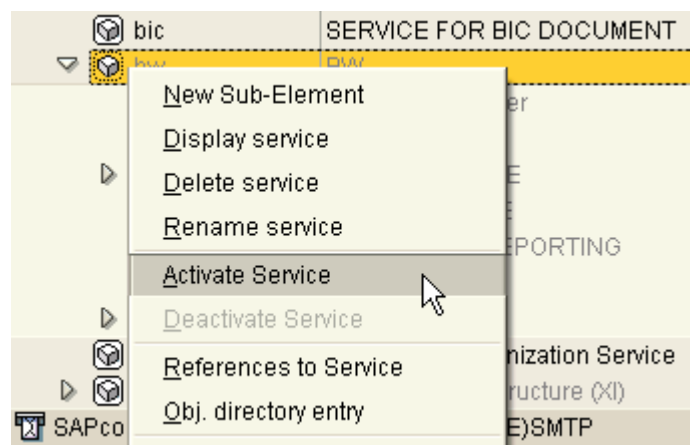
Tip: This next step may be appear counterintuitive. We are deactivating a node on the level above the required object so we can use the mass activate option for all sub-nodes.

Virt.Hosts / Services	Docu.
default_host	VIRTUAL DEFAULT HOST
Customer	Customer services
sap	SAP NAMESPACE; SAP IS OBLIGED NOT T...
option	RESERVED SERVICES AVAILABLE GLOBA...
public	PUBLIC SERVICES
bc	BASIS TREE (BASIS FUNCTIONS)
bds	BDS DATA
bic	SERVICE FOR BIC DOCUMENT
<b>bw</b>	<b>BW</b>
BEx	Business Explorer
ce_url	CALL URL
doc	BW DOKUMENTE
dr	DRAG & RELATE
Mime	MIME IN WEB REPORTING
ps	PAGE STORAGE
xml	XML SERVER
meData	meData synchronization Service

12. Right click on the 'bw' entry.  
Click on 'Deactivate service'.  
Confirm the deactivation.

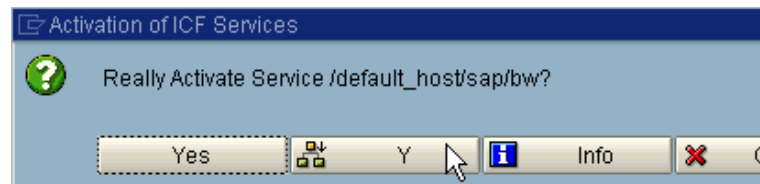


13. Right click on the 'bw' entry again.  
Click on 'Activate service'.



In the confirmation dialog, select the option to activate all sub-nodes below the 'bw' node in the hierarchy.

**Note:** You may be asked for a transport to record the change.





14. Ensure ALL the subcomponents are active [Black, not grey].  
Expand the hierarchy under the 'bw' node.

Component	Description
bw	BW
BEx	Business Explorer
ce_url	CALL URL
doc	BW DOKUMENTE
browser	BW DOCUMENT BROWSER
hier	BW DOCUMENTS FOR HIERARCHIES
mast	BW DOCUMENTS FOR MASTER DATA
meta	BW DOCUMENTS FOR METADATA
metadata	BW METADATA DOCUMENTATION INCLU...
tpl	BW DOCUMENTS FOR WEB TEMPLATES
tran	BW DOCUMENTS FOR TRANSACTION DA...
dr	DRAG & RELATE
Mime	MIME IN WEB REPORTING
ps	PAGE STORAGE
xml	XML SERVER
cwm	BW METADATA REPOSITORY: SWITCH ME...
soap	soap
xmla	xmla
fault	APPLICATION ERROR XMLA

### 3.4 Configuring ICM and BW web applications to use a message server

15. If you have multiple application servers, you should implement additional parameters so you have options to load balance web communications and not hard code BW web application URLs to one host and port.

Parameter Name	Parameter value
icm/min_threads	10
icm/max_threads	500
icm/max_conn	700
rdisp/start_icman	true
icm/server_port_0	PROT=HTTP,PORT=1080
ms/http_port	2000
rdisp/mshost	cdph1242

The following instance profile parameters should be set on each application server or in the start profile:

ms/http\_port  
rdisp/mshost

**Note:** After setting this parameter all BW URLs are now saved with the message server host and message server port as default. For more information please see the online help (<http://help.sap.com>)

16. After saving, checking, & activating all modified profiles, the system should be stopped & restarted.

Examples of parameter settings:

ms/http\_port = 2000

rdisp/mshost = <msg svr host>

**Note:** The message servers' port number must be unique!

17. Checking your Message server host and port settings

- Execute Function module “RSBB\_URL\_PREFIX\_GET” to check your new settings.  
(Section 3.1 details how to execute this function module)

Ensure the message server parameter is checked!

The result should be like the screenshot provided.  
Notice the message server host and port are now used as default for all web applications!

Import parameters	Value
I_HANDLERCLASS	CL_RSR_WWW_HTTP
I_PROTOCOL	X
I_MESSAGESEVER	X

Import parameters	Value
I_HANDLERCLASS	CL_RSR_WWW_HTTP
I_PROTOCOL	X
I_MESSAGESEVER	X

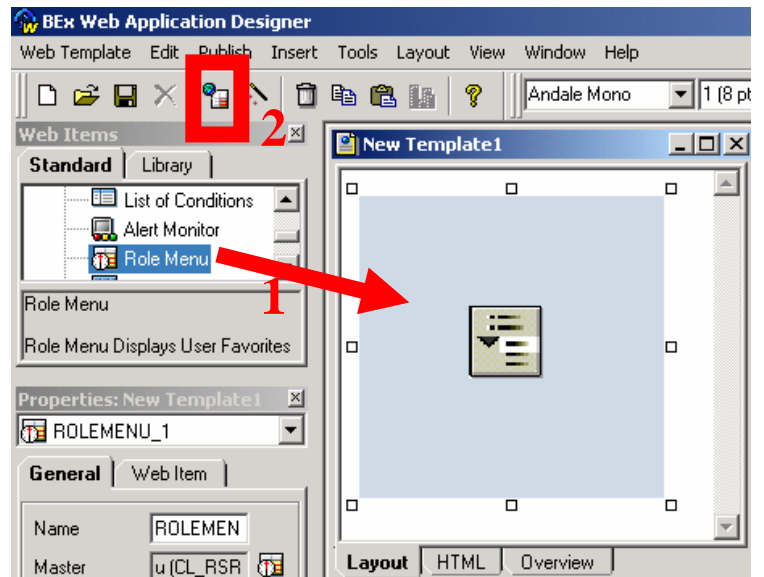
  

Export parameters	Value
E_URL_PREFIX	http://cdph1242.ph1.sap.corp:2000
E_URL_PATH	/sap/bw/rlx
E_URL_PROTOCOL	http
E_URL_SERVER	cdph1242.ph1.sap.corp
E_URL_PORT	2000
E_SUBRC	0

18. Testing your Message server host and port settings in action!

- Start the BEx Web Application Designer and logon
  1. Create a simple web template by dragging the role menu item into the New Template area
  2. Click on the ‘execute in browser’ button
  3. Save your test template.

In the resulting browser window you should see the initial URL created with the message server host and port and then it redirected to the real application server host and port.



### 3.5 Test your configuration by executing a test URL

19. Test the configuration by calling the default query template from your web browser.

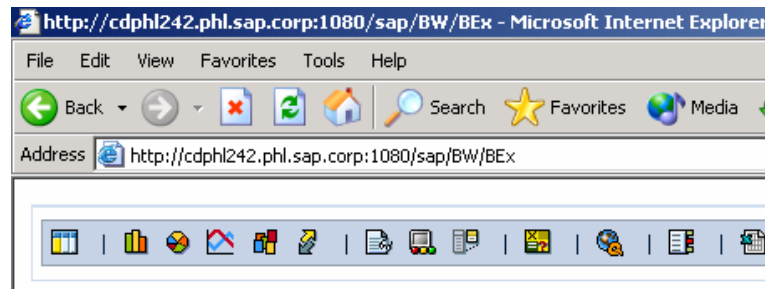
Open your web browser.

Enter the URL:

`http://<full hostname>:<http port>/sap/BW/BEx`

After a logon request you should receive the screen on the right.

Assumption: Your user has the correct authorizations!



20. If you have defined a message server host and port.  
Retest your URL replacing the host name with the Message server host and the HTTP port with the message server port.

In our example the URL would be:

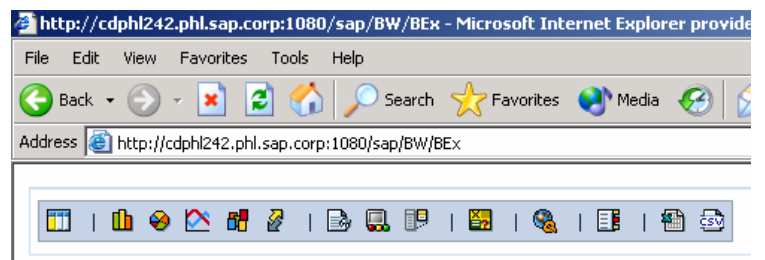
`http://cdphl242.phl.sap.corp:2000/sap/BW/BEx`

Note that the message server will automatically redirect the HTTP request to an available/defined application server.

Example: see screenshots ->



Message server redirects to...



## 4 Appendix

This section details potential errors when the web configuration is not successful or a step has been omitted, and steps to remedy the situation.

Assumption:

Your web browser is configured correctly and you are using a Web Browser supported by SAP BW.

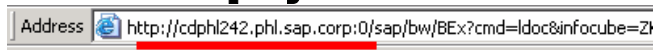
### 4.1 Troubleshooting ‘Page cannot be displayed’ error

When executing the BEx web application URL, you receive the ‘Page cannot be displayed’ error.

- Check the URLs host and port number.
- The Host should be fully qualified
- The port should be a valid port

In our example, the port is not valid.

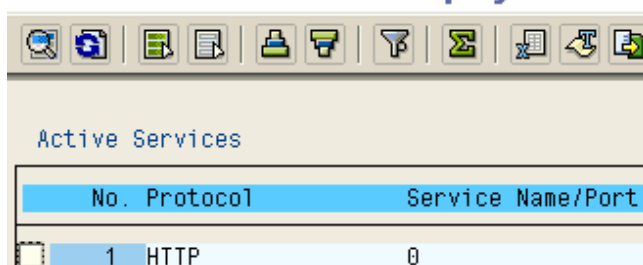
- You can check your application server setting using transaction SMICM. Click on the services button and view the setting
- Port 0 (zero) is not a valid port
- Reconfigure your ICM instance profile configuration as detailed in section 3.2
- Remember this should be configured on all application servers where web application will execute. All changed application servers should be stopped and restarted.



#### The page cannot be displayed

The page you are looking for is currently unavailable. The Web site might be experiencing technical difficulties, or you may need to adjust your browser settings.

#### ICM Monitor - Service Display



No.	Protocol	Service Name/Port
1	HTTP	0

### 4.2 Troubleshooting the ‘Page cannot be displayed’ error (continued)

When executing the BEx URL test, you receive the ‘Page cannot be displayed’ error

- the host and port are correct (as in the screenshot)
- Note: You do not get the logon screen for the system.

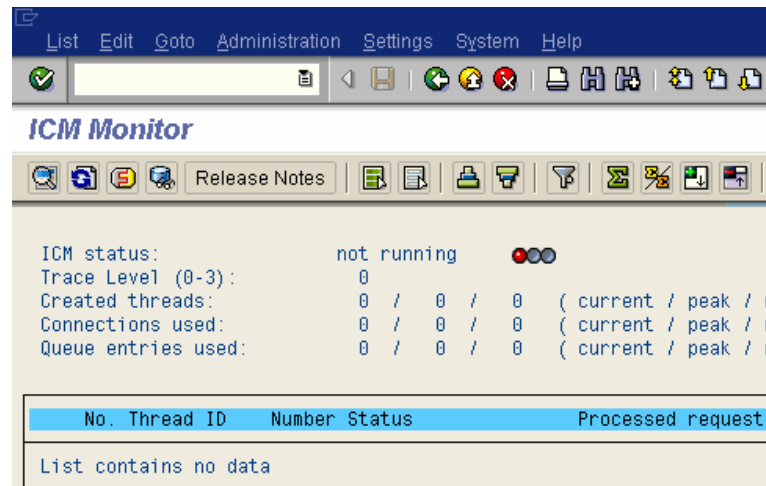


#### The page cannot be displayed

The page you are looking for is currently unavailable. The Web site might be experiencing technical difficulties, or you may need to adjust your browser settings.

Check that the Internet communication Manager (ICM) is running.

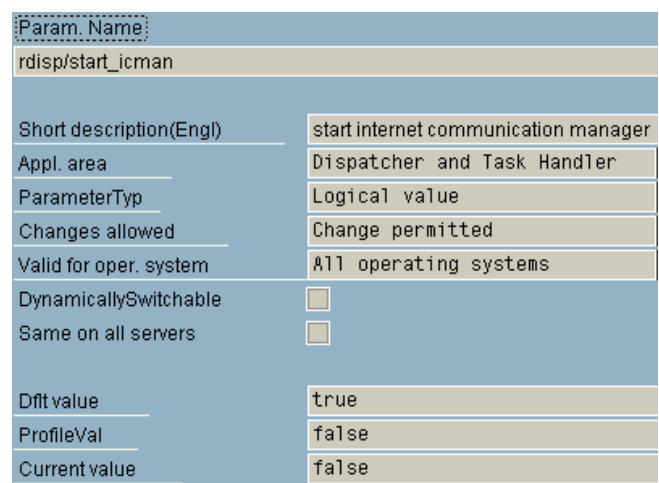
- Start Transaction SMICM.  
Is the ICM Status RED (as shown in the screenshot?)



If ICM status is RED.

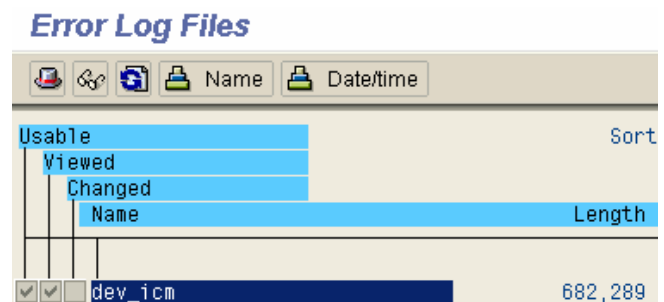
- Using transaction RZ11  
Check the instance profile parameter rdisp/start\_icman.
- If the value is 'false' (as in the screenshot)  
Using transaction RZ10, change the value to 'true'.  
Save and activate the instance profile.  
Stop and start the BW application server

Note: Default value is 'true'



- If the value is 'true'.  
Check the system log (transaction SM21) for errors  
Check the ICM process log (transaction ST11)

Correct any errors identified.  
Stopping & restarting the BW system will probably be necessary



### 4.3 Troubleshooting the 'Page cannot be displayed' error when using a message server

When executing the BEx web application URL, you receive the 'Page cannot be found' error and the URL is referencing the message server host and port (port 2000 in our screenshot example).



In the instance profile check that the message server port is not the same as the ICM HTTP port

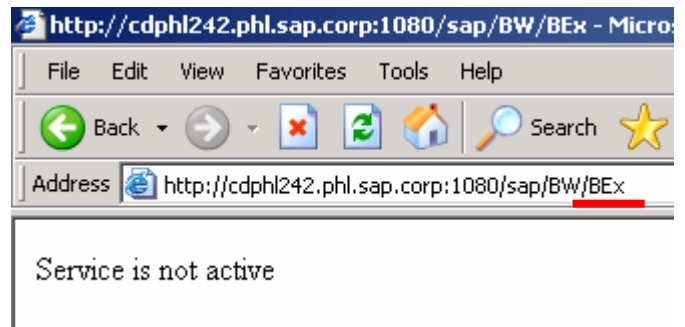
Check that at least one of your application servers has ICM process running.

Note: All application servers that have ICM running should be correctly configured.

See trouble shooting section 4.2 for diagnosis and correction.

## 4.4 Troubleshooting 'Service not active error'

When executing the BEx URL test, you receive the 'Service is no Active' error (as in the screenshot).



One or more of the BW ICF Services is not active.

Please re-activate the service as described in Section 3.3

Note: Maintaining the service and saving the changes requires activation. Changes are not activated automatically.

## 4.5 Further information

For more information on BW Web applications, ICM and ICF configuration, and instance profile parameters please see the SAP online help database (<http://help.sap.com>).

Additional information can be found in SAP notes under the component: BW-BEX-ET-WEB

Additional How-to papers related to BW Web application can be found on the SAP Service Marketplace alias BW (<http://service.sap.com/BW>) site under the 'Service & Implementation' section.

[www.sdn.sap.com/irj/sdn/howtoguides](http://www.sdn.sap.com/irj/sdn/howtoguides)