

Web Dispatcher Installation and Configuration / SSL Activation (https to http)



Applies to:

This document will be applicable for the Web Dispatcher Installation / Configuration of SSL. For more information, visit the [Landscape Design and Architecture homepage](#).

Summary

SAP web dispatcher plays a foremost role in the SAP Landscape in terms of load balancing between the application servers, hence it give immense output by considering the overall performance of the SAP system. In addition to that web dispatcher can also be used for the security concerns named as reverse proxy. The below document will be helpful in terms of installing web dispatcher in SAP landscape using bootstrap method / configuring SSL in the web dispatcher system.

Author: Vijay Kumar G

Company: Kaar Technologies India Private Limited

Created on: 04 March 2010

Author Bio



Vijay Kumar is working as a Senior NetWeaver Technolgy consultant in Kaar technologies for the last 3 years and earlier he was associated with Emientlanbs. He is having a affluent experience in terms of SAP upgrades and implementations most of the SAP component across all the platforms.

Table of Contents

Introduction	3
Action Needs to be Taken in the Application System.....	3
Phase 1: Installation of Web Dispatcher System.....	4
Step 1:.....	5
Step 2:.....	5
Registering the Windows Service	7
Phase 2: Profile Maintenance.....	7
Phase 3: SSL Configuration for Web Dispatcher	8
Related Content:	9
Disclaimer and Liability Notice.....	10

Introduction

SAP web dispatcher plays a foremost role in the SAP Landscape in terms of load balancing between the application servers; hence it helps increasing the overall performance of the SAP system. In addition to that, web dispatcher can also be used for the security concerns named as reverse proxy. The below document represents about the Installation of web dispatcher in SAP landscape (Includes the configuration of SSL in web dispatcher)

Things that needs to be considered before implementing web dispatcher

- By using web dispatcher, we can connect to any of the instances such as ABAP or Java instances
- Requires a downtime of the back end system
- Ensure the ports are opened between the web dispatcher application and the actual instance
- SSL valid certificate from third party(Only if https required)
- In one physical server, many web dispatcher instances can be installed (Using Multiple IP)
- The below method represents the concept of HTTPS (Web Dispatcher) to HTTP (BW system), and also there are certain other possibilities as well like HTTP to HTTP, HTTPS to HTTPS and also HTTP to HTTPS.

In this document, the installation and configuration of web dispatcher described in three phases, they are

- Installation of web dispatcher
- Profile Maintenance in web dispatcher / Application system
- SSL configuration for Web dispatcher

Before getting in to the phases, ensure that below technical preparations are in place.

- Minimum 4GB RAM(Depends on the Load)
- Ports needs to be opened between the web dispatcher and application instances
- SSL certificate needs to be signed / based on the PSE files (PSE file will be created at the time of configuring SSL – Only if required)
- DNS entry for the web dispatcher system

Action Needs to be Taken in the Application System

The communication between the web dispatcher and the application instance will be carried out using the message server http port; hence using the below parameters, the port will be mentioned. These parameter needs to be maintained in the Instance profile.

Below example represents the same and the number of the port used as 8169

```
ms/http_port = 8169
```

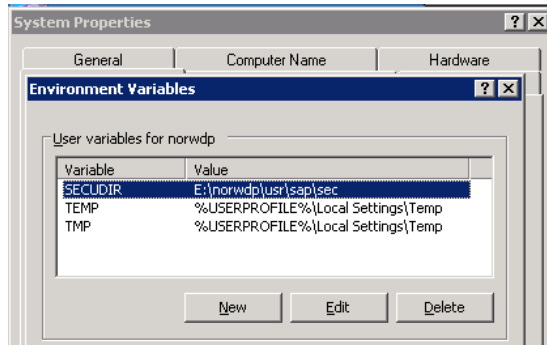
After placing the parameter in Instance profile, it required a restart of the instance for taking effect. And ensure that the ports between the web dispatcher and the SAP instances are opened.

Phase 1: Installation of Web Dispatcher System

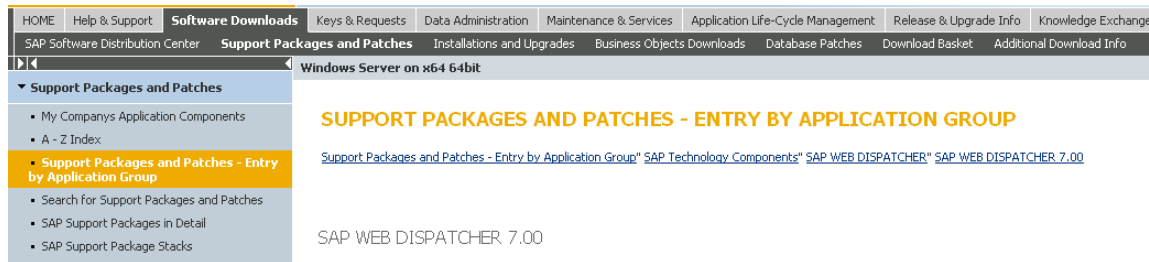
The installation of web dispatcher is possible in few modes, some of them are using Installation master and installing web dispatcher using bootstrap mode. The below document represents the bootstrap installation method

Before proceeding further ensure that SECUDIR variable is placed in the user variable. (User variable is preferable; this helps in terms of multiple web dispatchers in the same physical server), the below picture represents the same.

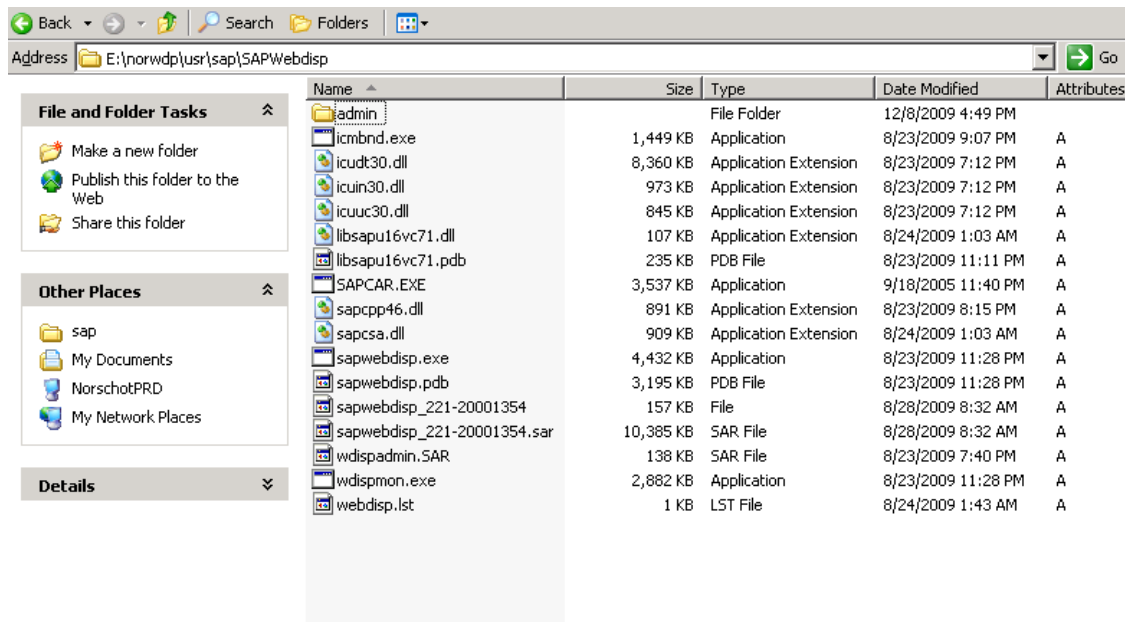
Note: There is no mandatory to maintain the same value for installing web dispatcher; the folder can be created based on system administrator convenience.



Download the SAP web dispatcher software in SMP using respective SMP id.



Once downloaded, extract the software and place it in the folder as like the below screen shot



Once it's done, the web dispatcher installation will be started and hence for easy understanding the process will be described as steps.

Step 1:

Start the web dispatcher Installation

```
E:\norwdp\usr\sap\SAPWebdisp>sapwebdisp -bootstrap_
```

Step 2:

Provide the message server IP details, Port Number, SAP System number and business type

```
E:\norwdp\usr\sap\SAPWebdisp>sapwebdisp -bootstrap
SAP Web Dispatcher Bootstrap
=====

This bootstrap will perform the following steps:
1. create profile file "sapwebdisp.pfl"for SAP Web Dispatcher <if not already existing>
2. create user for web based administration in file "icmauth.txt"<if not already existing>
3. start SAP Web Dispatcher with the created profile

After the bootstrap you can use the web based administration

Generating Profile "sapwebdisp.pfl"
Hostname of Message Server (rdisp/mshost): ██████████_
```

```
E:\norwdp\usr\sap\SAPWebdisp>sapwebdisp -bootstrap
SAP Web Dispatcher Bootstrap
=====

This bootstrap will perform the following steps:
1. create profile file "sapwebdisp.pfl"for SAP Web Dispatcher <if not already existing>
2. create user for web based administration in file "icmauth.txt"<if not already existing>
3. start SAP Web Dispatcher with the created profile

After the bootstrap you can use the web based administration

Generating Profile "sapwebdisp.pfl"
Hostname of Message Server (rdisp/mshost): ██████████_
HTTP Port of Message Server (ms/http_port): 8169_
```

```
E:\norwdp\usr\sap\SAPWebdisp>sapwebdisp -bootstrap
SAP Web Dispatcher Bootstrap
=====

This bootstrap will perform the following steps:
1. create profile file "sapwebdisp.pfl"for SAP Web Dispatcher <if not already existing>
2. create user for web based administration in file "icmauth.txt"<if not already existing>
3. start SAP Web Dispatcher with the created profile

After the bootstrap you can use the web based administration

Generating Profile "sapwebdisp.pfl"
Hostname of Message Server (rdisp/mshost): ██████████_2
HTTP Port of Message Server (ms/http_port): 8169
Checking connection to message server...OK
Unique Instance Number for SAP Web Dispatcher (SAPSYSTEM): 69
HTTP port number for SAP Web Dispatcher: 69_
```

The web dispatcher is installed and it's started

```

3. start SAP Web Dispatcher with the created profile

After the bootstrap you can use the web based administration

Generating Profile "sapwebdisp.pfl"
Hostname of Message Server (rdisp/mshost): 192.168.5.100
HTTP Port of Message Server (ms/http_port): 8169
Checking connection to message server...OK
Unique Instance Number for SAP Web Dispatcher (SAPSYSTEM): 69
HTTP port number for SAP Web Dispatcher: 69
Create configuration for s(mall), m(edium), l(arge) system (default: medium): 1
Profile "sapwebdisp.pfl" generated
Authentication file "icnauth.txt" generated
Web Administration user is "icnadm" with password "30TWwZQH"
Restart sapwebdisp with profile: sapwebdisp.pfl
sapwebdisp started with new pid 1772
Web administration accessible with "http://rapwdp:69/sap/wdisp/admin/default.html"

SAP Web Dispatcher bootstrap ended (rc=0)

E:\norwdp\usr\sap\SAPWebdisp>*** SAP Web Dispatcher up and operational (pid: 1772) ***

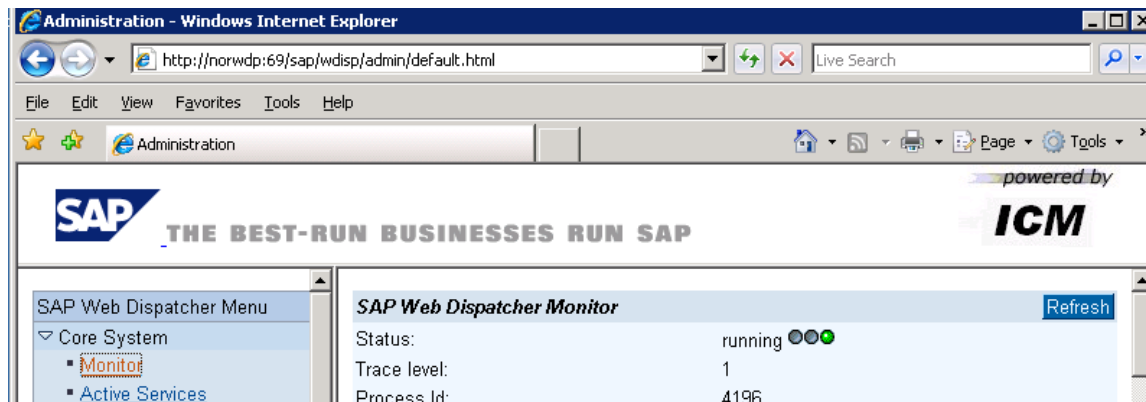
```

Check the same using the below URL and ensure that in the application instance, ITS services are published internally. (Note: Ensure the ITS consistency)

http://hostname:69/sap/bc/gui/sap/its/webgui?sap-system-login-basic_auth=X&sap-client=100&sap-language=EN

Replace the hostname and port number of the web dispatcher; it will automatically take you to the application instance.

The below picture represents the web dispatcher page




You can start the web dispatcher by issuing a command `sapwebdisp -bootstrap`

Registering the Windows Service

Up to this stage, web dispatcher is installed and not registered as windows service, hence it recommends to register this as windows service – So that it does not required to restart every time using command prompt.

For registering this as windows service, we need to configure the below settings.

Download NTSCMGR from service market place and place it web dispatcher folder

	325 KB	Application	4/28/2003 9:07 PM	A
---	--------	-------------	-------------------	---

```

E:\>cd \norwdp\usr\sap\SAPWebdisp
E:\norwdp\usr\sap\SAPWebdisp>ntscmgr install sapwebdispBNP -b E:\norwdp\usr\sap\SAPWebdisp\sapwebdisp.exe -p "service pf=E:\norwdp\usr\sap\SAPWebdisp\sapwebdisp.pfl
CreateService SUCCESS
  
```

The service will be successfully registered in the service (Check the same in services.msc)

Phase 2: Profile Maintenance

SAPWEBDISP.PFL plays a main role in the web dispatcher instance.

With respect to SSL parameters and important web dispatcher parameters are as follows, ensure everything in place with appropriate value

```

icm/server_port_0 = PROT=HTTP, HOST=Hostname with FQDN, PORT=80
icm/server_port_2 = PROT=HTTPS, HOST = Hostname with FQDN, PORT=443
# SAP Web Dispatcher Web Administration
icm/HTTP/admin_0 = PREFIX=/sap/wdisp/admin,DOCROOT=./admin,AUTHFILE=icmauth.txt
icm/HTTPS/verify_client = 0
wdisp/add_client_protocol_header = true
# SAP Web Dispatcher Web Administration
wdisp/ssl_encrypt = 0
DIR_INSTANCE = E:\usr\sap\sec
ssl/ssl_lib = E:\usr\sap\SAPWebdisp\sapcrypto.dll
ssl/server_pse = E:\usr\sap\sec\NORWDA.pse
# Accessibility of Message Servers
rdisp/mshost = IP
ms/http_port = 8169
  
```

The below screen shot represents the typical example of SAP web Dispatcher profile

```
SAPSYSTEM = 69
# add default directory settings
DIR_EXECUTABLE = .
DIR_INSTANCE = E:\usr\sap\sec
ssl/ssl_lib = E:\usr\sap\SAPwebdisp\sapcrypto.dll
ssl/server_pse = E:\usr\sap\sec\NORWDA.pse
# Accessibility of Message Servers
rdisp/mshost =
ms/http_port = 8169
# SAP web Dispatcher Parameter
wdisp/auto_refresh = 120
wdisp/max_servers = 100
wdisp/shm_attach_mode = 6
# configuration for large scenario
icm/max_conn = 16384
icm/max_sockets = 16384
icm/req_queue_len = 6000
icm/min_threads = 100
icm/max_threads = 250
mpi/total_size_MB = 500
mpi/max_pipes = 21000
#maximum number of concurrent connections to one server
wdisp/HTTP/max_pooled_con = 2000
wdisp/HTTPS/max_pooled_con = 2000
# SAP web Dispatcher Ports
icm/server_port_0 = PROT=HTTP, HOST=Hostname with FQDN, PORT=80
icm/server_port_2 = PROT=HTTPS, HOST = Hostname with FQDN, PORT=443
# SAP web Dispatcher web Administration
icm/HTTP/admin_0 = PREFIX=/sap/wdisp/admin, DOCROOT=../admin, AUTHFILE=icmauth.txt
icm/HTTPS/verify_client = 0
wdisp/add_client_protocol_header = true
# SAP web Dispatcher web Administration
wdisp/ssl_encrypt = 0
```

Phase 3: SSL Configuration for Web Dispatcher

Creation of PSE

```
E:\norwdp\usr\sap\sec>sapgenpse
Usage: sapgenpse [-h] <command> [-h] [sub-options] ...

Using default SAPCRYPTOLIB library name "sapcrypto.dll"
Platform: Microsoft Win64 (XP-64/W2K3) AMD64/x86_64/x64 (ntamd64)
Versions: SAPGENPSE = 1.5.24 p121 (Mar 6 2009)
           SAPCRYPTOLIB = 5.5.5.C p126 (Mar 6 2009) MT-safe

Environment variable $SECUDIR is defined:
"E:\norwdp\usr\sap\sec"

DLL search path defined by environment variable
PATH=C:\WINDOWS\system32;C:\WINDOWS;C:\WINDOWS\System32\Wbem;E:\jdk1.4.2_16-
x64\bin;E:\usr\sap\SAPWebdisp;C:\usr\sap\SAPWebdisp

E:\norwdp\usr\sap\sec>sapgenpse get_pse -p NORWDPPRD.pse -r NORWDPPRD.req "CN=
XXXXXXXXXX, OU=XXXXXXXXXX, O=XXXXXXXXXX, C=NL"
Please enter PIN:
Please reenter PIN:

E:\norwdp\usr\sap\sec>_
```

Generate the PSE file and also the certificate requests, once the certificate request in place send the certificate request to the third party (example VeriSign or some other third party for signing the request). Once you get the valid response, import the certificate as mentioned in the below screen shot

```
E:\norwdp\usr\sap\sec>sapgenpse import_own_cert -p NORWDPPRD.pse -c nXXXXXXXXXX
XXXXXXXXXX.p7b -x abc
CA-Response successfully imported into PSE "E:\norwdp\usr\sap\sec\NORWDPPRD.pse"
```

Once the certificate is imported, server credentials needs to be created and the below screen shot represents the same.

```
E:\norwdp\usr\sap\sec>sapgenpse seclogin -p NORWDPPRD.pse -o norwdp
running seclogin with USER="norwdp"
creating credentials for user "RAPWDP\norwdp"...
Please enter PIN:
Adjusting credentials and PSE ACLs to include "RAPWDP\norwdp"...
Oh, you supplied your own name explicitly ... ok.
E:\norwdp\usr\sap\sec\cred_v2 ... ok.
E:\norwdp\usr\sap\sec\NORWDPPRD.pse ... ok.
Added SSO-credentials for PSE "E:\norwdp\usr\sap\sec\NORWDPPRD.pse"
"CN=XXXXXXXXXX, OU=Instant SSL, O=XXXXXXXXXX, O=XXXXXXXXXX, ST
=XXXXXXXXXX, L=XXXXXXXXXX, SP=Nord-Brabant, postalCode=XXXXXXXXXX, C=NL"
```


Related Content:

[SAP Web Dispatcher](#)

[Configuring the SAP Web Dispatcher to Support SSL](#)

[SAP Web Dispatcher](#)

For more information, visit the [Landscape Design and Architecture homepage](#).

Disclaimer and Liability Notice

This document may discuss sample coding or other information that does not include SAP official interfaces and therefore is not supported by SAP. Changes made based on this information are not supported and can be overwritten during an upgrade.

SAP will not be held liable for any damages caused by using or misusing the information, code or methods suggested in this document, and anyone using these methods does so at his/her own risk.

SAP offers no guarantees and assumes no responsibility or liability of any type with respect to the content of this technical article or code sample, including any liability resulting from incompatibility between the content within this document and the materials and services offered by SAP. You agree that you will not hold, or seek to hold, SAP responsible or liable with respect to the content of this document.