# Installation manual SAP BusinessObjects BI4.0

(inclusive connection between SAP BW and SAP BO) (inclusive mobile configuration for iPad) on a Microsoft Windows 7 - 64-bit machine



Creator:Pieter VerstraetenTwitter:<a href="http://www.twitter.com/pverstraeten">http://www.twitter.com/pverstraeten</a>Blog:<a href="http://www.pieterverstraeten.com/blog">http://www.pieterverstraeten.com/blog</a>

Hi,

Thanks for downloading this manual on <u>www.pieterverstraeten.com</u>. Did you know that everyone can install a SAP BusinessObjects BI4.0 environment inclusive the mobile solution? Yes, today it's possible! When you're able to download the software via SAP Market Place, you can install the software on your own machine.

Download the software and read the instructions in this manual. Within a couple of hours you can enjoy your own SAP BusinessObjects BI4.0 machine!

If you have any questions or suggestions, don't hesitate to contact me!

Regards,

Pieter Verstraeten

## **Installation prerequisites**

The following installation is performed on a small server with the following specifications, make sure you have these minimum specifications:

- OS: Windows 7 64 bit
- Internal memory: 4 GB
- Harddisk capacity: 80GB

### **Downloads**

First you need to download the software, below you can find the hyperlinks to download it.

Name	Hyperlink	Vendor
Microsoft .NET Framework 3.5	http://bit.ly/LzjX8s	Microsoft
SAP BO BI4.0	http://bit.ly/hJxG4N	SAP
SAP BO Trial License Keys	http://bit.ly/RyGUfl	SAP
SAP BI Mobile	http://bit.ly/r9YtbK	SAP (App Store Apple)

The starting point is that you've installed a (virtual) machine with Windows Server 2008 64-bit inclusive the recommended updates. After this windows server installation, please install Microsoft .NET Framework 3.5.

For this installation procedure I used the installation files of FeaturePack 3.

On the next pages you'll find the installation procedures of SAP Business Objects BI 4.0. On the internet I found a lot of websites with configuration steps. I believe that it will help that the basic steps are bundled in one document. Some instructions are copied from other websites and in this manual you can find configuration steps in one document, as:

- Configure the SAP BO role in SAP BW
- Configuration between SAP BW and SAP BO (trusted connection)
- Logon with your SAP BW credentials via SAP BI Launchpad
- Use simple usernames to logon (see my post on <u>www.pieterverstraeten.com</u>) → <u>http://www.pieterverstraeten.com/blog/simpleusernames-bi4-bobj-ad-</u> <u>simpleusernameformat</u>)

After the configuration steps, I'll explain the steps how to install SAP BO mobile on the server. At the end you're able to connect with your iPad on the SAP BusinessObjects mobile server.

When you follow the instructions, you are able to install your own BI4 machine and play with WebIntelligence reports on your iPad.

Good luck with your installation!

# SAP BusinessObjects BI4.0 - installation

After downloading the BI4 installation files from service.sap.com, check the files. There must be 5 installation files:

Name 🔺	- Date modified	▼ Type	▼ Size ▼
SBOP BI PLAT 40 FP3 SERVER WIN 64B 1	8-6-2012 23:44	Application	976.563 KB
SBOP BI PLAT 40 FP3 SERVER WIN 64B 2.rar	9-6-2012 0:13	RAR File	976.563 KB
SBOP BI PLAT 40 FP3 SERVER WIN 64B 3.rar	9-6-2012 0:42	RAR File	976.563 KB
SBOP BI PLAT 40 FP3 SERVER WIN 64B 4.rar	9-6-2012 1:10	RAR File	976.563 KB
SBOP BI PLAT 40 FP3 SERVER WIN 64B 5.rar	9-6-2012 1:13	RAR File	73.355 KB

Step 1: Click on the first file, create a directory to extract all installation files. After extraction, you can start the setup from and select your language:

"C:\Software\51040831\DATA\_UNITS\BusinessObjectsServer\_win\setup.exe".

immary or any missing critical or optional prerequ illed critical dependencies must be addressed bef titional dependencies might result in some compor	instes. Fore the installa hents not instal	tion can continue, while fa ling.	iled
Prerenuisite	Type	Status	_
Information Platform Services not installed	Critical	Succeeded	_
SAP Crystal Reports Server is not installed	Critical	Succeeded	
Administrative rights	Critical	Succeeded	
BI platform server 4.x not present	Critical	Succeeded	
Microsoft .NET Framework 3.5 or higher	Optional	Succeeded	
Suppressed reboot	Critical	Succeeded	
Integrated database requirements	Optional	Succeeded	
Windows Server version	Optional	Succeeded	
64-bit operating system	Critical	Succeeded	
a prerequisite failed, please click on the failed ite	em for informat	ion on how to resolve it.	

Step 2: Check that all requirements have the status "Succeeded". Click Next and accept the license agreement.

SAP BusinessObjects BI pl	atform 4.0 FP3 setup	
User Information		
Please type your name and	your product key to proceed.	
Full Name:	Windows User	
Organization:		
Product Keycode:	xxxx-xxxx-xxxx-xxxx	
	Back Next	Cancel

Step 3: Please insert your license key. A temporary license key can be downloaded from service.sap.com

5AP BusinessObjects BI platform 4.0 FP3 setup	
Choose Language Packs	
A language pack allows a user to interact with the product in a specific language.	
Czech	
Danish	
✓Dutch	
✓English	
Finnish	
French	
German	
Hungarian	
Italian	
Japanese	
Korean	
Norwegian	
Polish	
Portuguese	
Romanian	
Russian	_
Simplified Chinese	-
All Languages	
Back Next C	ancel

Step 4: Select your language. Click Next.

SAP BusinessObjects BI pla	tform 4.0 FP3 setup
Choose Install Type	
Select one of the options bel	ow.
© Full	Install a complete SAP BusinessObjects BI platform system
O Custom / Expand	Choose the application features you want to install, or add servers to an existing SAP BusinessObjects BI platform system.
C Web Tier	Install only the Web Tier features.
	Back Next Cancel

Step 5: Select the option "Full" for a complete installation. Click Next.



Step 6: Choose your destination folder. The standard directory is "C:\Program Files (x86)\SAP BusinessObjects". Click Next.



Step 7: Select the first option, we want to use the standard database delivered with SAP BusinessObjects BI4.0. Click Next.



Step 8: Because we don't have an application server, we need to install Tomcat. Select the first option and click Next.

5AP BusinessObjects BI platform 4.0 FP3 setup
Configure Version Management
Select a version control system for version management
• Install and use Subversion
C Use an existing version control system. You will need to manually configure version management to use your existing version control system after installation.
Back Next Cancel

Step 9: Select the first option "Install and use Subversion". Click Next.



Step 10: For a standard installation, I select the proposed values. The node name is the name of your computer. Click Next.

SAP BusinessObjects BI platform 4.0 FP3 setup	_ 🗆 🗙
Configure Central Management Server (CMS)	
Enter a port number for the CMS	
CMS Information	
CMS Port 5400	
Back Next Ca	ncel

Step 11: select the standard port 6400. Click Next.

etup 💶 🔲
strator account, and a value for the CMS Cluster
*****
*okokatokokok
*****
*okokakakokok
Back Next Cancel

Step 12: Define passwords for the Administrator account and the CMS Cluster Key. Remember your passwords!!! Click Next.

Configure Microsoft SOL Server 2008 Exc	oress
Microsoft SQL Server 2008 Express will be insta administrator and CMS user accounts below.	illed to store data. Specify the password for the
SQL Server Instance Name	BOE140
SQL Server administrator account	
User	sa
Password	****
Confirm password	*****
SAP BusinessObjects BI platform user accoun	t
User	boeuser
Password	*****
Confirm password	****

Step 13: Create passwords for the SQL server administrator and de boeuser account. I use the same passwords for all. Click Next.

SAP BusinessObjects BI platform 4.0 FP3 s	setup 💶 🗖 🗙
Configure Tomcat	
Enter the port information for the Tomcat app	olication server.
Port Information	
Connection Port	3080
Shutdown Port	8005
Redirect Port	8443
	Back Next Cancel

Step 14: Define the standard ports. Remember that port 8080 sometimes will used for a proxy port! Click Next.

SAP BusinessObjects BI platform 4.0 FP3 setup	
Configure HTTP Listening Port	
Enter the HTTP listening port for connecting to WACS and/or RESTful Web Services.	
Listening Port Information	
HTTP Listening Port 6405	
Back Next Ca	ncel

Step 15: Use de default values. Click Next.

AP BusinessObjects BI platform 4.0 FP3 s	setup	_ 🗆 X
Configure Subversion		
Subversion will be installed and used as the ve Provide the port and user name for Subversio	ersion control system for version mana <u>c</u> n.	ement.
Subversion Repository Information		
Repository Name	LCM_repository	
Repository Port	3690	
- Subversion repository user Information		
Repository User	LCM	
Repository Password	30Kelenteskokelek	
Confirm Password	*****	
	Back Next C	ancel

Step 16: Use the default port and create a password for the LCM repository. Click Next.

Configure Connectivity Solution Manager Diagnostics (SMD) Agent. Enable connectivity to SMD Agent. SMD Agent Connectivity Configure connectivity to SMD Agent. You will be prompted for information. Configure connectivity to SMD Agent.	5AP BusinessObjects BI platform 4.0 FP3 se	etup	_ 🗆 🗙
Enable connectivity to SMD Agent. SMD Agent Connectivity C Configure connectivity to SMD Agent. You will be prompted for information. C Do not configure connectivity to SMD Agent.]	Configure Connectivity Solution Manage	r Diagnostics (SMD) Agent.	
SMD Agent Connectivity C Configure connectivity to SMD Agent. You will be prompted for information. C Do not configure connectivity to SMD Agent.	Enable connectivity to SMD Agent.		
SMD Agent Connectivity Configure connectivity to SMD Agent. You will be prompted for information. Control configure connectivity to SMD Agent.			
C Configure connectivity to SMD Agent. You will be prompted for information.	SMD Agent Connectivity		
C Configure connectivity to SMD Agent. You will be prompted for information.			
for information.	~ Configure connectivity to	SMD Agent. You will be prompted	
C Do not configure connectivity to SMD Agent.]	for information.		
	Do not configure connect	ivity to SMD Agent.	
Back Next Cancel		Back Next Ca	ncel

Step 17: Do not configure the connectivity to the SMD agent. Click Next.

SAP BusinessObjects BI platform 4.0 FP3 setup	_ 🗆 X
Introscope Integration	
Enable connectivity to Introscope Enterprise Manager.	
Introscope Integration	
<ul> <li>Integrate connectivity to Introscope Enterprise Manager. You will prompted for information.</li> </ul>	be
$\ensuremath{\mathfrak{S}}$ Do not integrate connectivity to Introscope Enterprise Manager.	
Back Next Can	cel

Step 18: Use the default option. Click Next.



Step 19: Now the installation progress can be started. Confirm this screen by clicking Next and the installation will start. This process can take one or two hours. Please have patience ;-)



Step 20: 50 minutes later... installation has finished. Please read the post installation steps and click Next and Finish.



Step 21: A new map with the name "SAP BusinessObjects BI platform 4" is created in the start menu. From these shortcuts, you can start the Central Management Console and the BI Launchpad. Please test these shortcuts.

# **Configure the SAP BO role in SAP BW**

If you want to synchronize your SAP BW users to SAP BusinessObjects, you'll need to create a separate role in transaction PFCG.

Role Ma	Role Maintenance								
0 0 🔒	I a <sup>2</sup> → Transactions								
Role	Comp. Role								
Name	CRYSTAL_ENTITLEMENT								
Views 🖌	下译图 Show Documentation								

Step 1: Create a new role with the name "CRYSTAL\_ENTITLEMENT".

Change role: Authorizations			
🔄 🖺 🚱 🗊 🛃 Selection criteria 🔹 Manually 🖄 Open	🔃 Changed 🛛 🕀 Maintained Orga	anizational levels 🖺 🚺 Information	
Maint.: 0 Unmaint. org. levels 0 ope	n fields, Status: Unchanged		
CRYSTAL_ENTITLEMENT			
COO Manually Cross-application Authorization	Objects AAAA	В	
COC COC Authorization Check fo	r RFC Access	S_RFC	
G COO L Manually Authorization Check f	or RFC Access	- T-B172000400	
	16		5 C-175777
* / Name of RFC to be protected	/CRYSTAL/SECURITY, BDCH, BDL5, 1	PRGN_J2EE, RFC1, SDIFRUNTIME, STPA, SUN	<> RFC_NAME
* Ø Type of RFC object to be prote	FUGR		RFC_TYPE
GOO Manually Basis: Administration	BC_/	A	
- COO 🔂 🧟 Manually Authorization for file	access	S_DATASET	
COO 🔂 Manually Authorization for fil	e access	T-B172000400	
* 🖉 Activity	33, 34		ACTVT
* / Physical file name * / Program Name with Search Help	* *		FILENAME
Annually User Master Maintenanc	e: User Groups	5_USER_GRP	
🖵 🗁 👀 CO 🖬 Manually 🛛 User Master Maintenan	ce: User Groups	T-B172000400	
* 🖉 Activity	*		ACTVT
🗕 🧨 🥢 User group in user master main	*		CLASS

Step 2: Create authorizations in the role CRYSTAL\_ENTITLEMENT.

#### Name of RFC to be protected:

/CRYSTAL/SECURITY BDCH BDL5 PRGN\_J2EE RFC1 SDIFRUNTIME STPA SUNI SUSO SUUS SUUS SUUS SU\_USER, SYST

Step 3: Add the role "CRYSTAL\_ENTITLEMENT" to your SAP BusinessObjects users.

# **Configuration between SAP BW and SAP BO (trusted connection)**

In the previous chapter I explained how to installed SAP BusinessObjects BI 4.0. The next step is to connect your SAP BW environment to SAP BusinessObjects. Read the next instructions to connect your system successful. These screenshots are original from the SAP© wiki.sdn.sap.com website (Thanks to Sinisa Knezevic).

This article will explain how to generate the keystore file and the certificate. In the below example the keystore file name is **keystore.p12** and the certificate file name is **cert.der**. The keystore file **keystore.p12** has to be imported in BI4.0 CMC on SAP Authentication Option tab. The certificate file **cert.der** has to be imported in SAP BW with STRUSTSSO2 transaction. **palmtree** in the below example is host name of machine where BI4.0 running. **mywin** in the below example is alias name that you can name the way you want.

#### Step 1: Generate keystore and certificate

Run PKCS12Tool program to generate keystore

PKCS12Tool Windows location: <INSTALLDIR>\SAP BusinessObjects Enterprise XI4.0\java\lib (Windows command line example: "C:\Program Files (x86)\SAP BusinessObjects\SAP BusinessObjects Enterprise XI 4.0\win64\_x64\sapjvm\bin\java" -jar PKCS12Tool.jar -alias mywin -storepass admin1 dname CN=palmtree )



#### The keystore is generated at this location

😂 C:\Program Files (x86)\SAP BusinessObjects\SAP BusinessObjects Enterprise XI 4.0\java\lib 💶 🔲 🗙							
<u>File Edit View Favorites Tools Help</u>							
🔇 Back 🔹 🕥 🖌 🏂 Search 🌔 Folders 🕼 🌶 🗙 🎽 🛄 -							
Address 🛅 C:\Program Files (x86)\SAP BusinessObjects\SAP BusinessObjects Enterprise XI 4.0\java\lib 💌 🎅 Go							
Folders ×	Name	Size	Type 🔺				
🖃 🧰 lib 🔺	🖓 keystore.p12	2 KB	Persc				
🕀 🔂 🖂 🗐 🛨	🔤 cert.der	1 KB	Secur				
🕀 🔂 bobi-sld-ds	📄 biarengine_conv_audit.prope	1 KB	PROF				
	biarengine_webisamples.prop	1 KB	PROF				
	📄 🖭 setupConfiguration.xml	5 KB	XML C				
	visualdifference.jar	141 KB	Exect 💌				

#### Generate certificate with keytool

Enter keystore password which is defined in the previous step. (In this example the password is: admin1)

(Windows command line example: "C:\Program Files (x86)\SAP BusinessObjects\SAP BusinessObjects Enterprise XI 4.0\win64\_x64\sapjvm\bin\keytool" -exportcert -keystore keystore.p12 -storetype pkcs12 -file cert.der -alias mywin )



#### Step 2: Import SAP BO BI4.0 certificate into SAP BW

Binary import cert.der into SAP BW with STRUSTSSO2 Log into SAP BW and run transaction STRUSTSSO2



Make sure that cert.der is imported Binary into System PSE



Add the certificate to the certificate list

Click button "Add to Certificate List"

Check certificate list to make sure it is in the list ("CN=palmtree" in below example)



Add the certificate to ACL

Click button "Add to ACL" to add the certificate to the Access Control List Enter System ID - This System ID will be used in BI4.0 CMC for setup of SAP SSO Service Enter Client - Client has to be 000

Add Entry to Single	Sign-On Acce	ss Control List	×
System ID	PALM		
Client	000		
Owner	CN=palm	tree	
Issuer	CN=nalm	itree	
Serial Number	16DE1DE	EAB4CE6E019F482FC5	0548975
× ×			
Trust Manager for Sin	gle Sign-On	with Logon Ticket	
System PSE     SNC SAPCrybolib     SSL server Standard     SSL client SSL Client (Anonyr     SSL client SSL Client (Standa     SSL client WSSE Web Service     WYS Security Standard     WYS Security Cline System En     WYS Security WS Security Keys	Veri. PSE	Ch=RW, OU=BESVM1b, O=SAP Ch=RWeiss, OU=BESVM1a, O=C Ch=paimtree Password	<u>\$80, C=CA</u> :0N\$751, C=CA A V
Ø File	Certificate		
	Owner	CN=palmtree	
	Issuer	CN=palmtree	
	Serial Number	16DE1DEAB4CE6E019F482FC50	11 10 0000 01 16 00
	Check Sum	DB:71:D0:9B:1C:7C:D8:F2:9A:E4:	FE:BB:57:E2:95:DD
		Add to Certificate List	Add to ACL
	Logon Ticket		
		Access Control List (ACL) System (CL Certificate Owner S152VM000 CN=TEJ SAPBGCOS DI ODV IPALM 000 CN=paimtree	•

Save all changes.

Step 3: Setup of SAP SSO Service in SAP BO BI4.0 CMC

intitlement Systems	
Entitlement Systems Role In	port   SNC Settings   Options   User Update
Logical system name R61CU	VT600 💌
System R61 Client 800	Disabled
Load balancing	Application host
Message Server	Application Server papgymwin041.dhcp
Logon Group	System Number 00
L. L	Jser name BI40
	Password
	Language en
	Language en

Log into the Central Management Console as administrator. Go to authentication  $\rightarrow$  SAP. Page Entitlement systems. Enter your SAP system details.



Import the role CRYSTAL\_ENTITLEMENT.



Check if the SAP Authentication is enabled.

Options							
Max concurrent connections per purters	10						
have concurrent connections per system	Choose File to U	pload					
Number of uses per connection	Look in	keystore		-	0.1		
Users		100		_		-	_
Role for imported user		Cert.der					
Concurrent users	My Recent						
O Named users	Documents						
Attribute Binding Options							
Import Full Name and Email Address	Desktop						
Is set priority of SAP attribute binding relative to other a	My Documents						
SAP SSO Service							
System ID PALM							
Ito key store file has been uploaded.	My Computer						
Select a key store me to oppose the file must be in pkcs#1	2 fo						
Browse			-			-	-
Kun Chan Damand	My Network Places	File pame:	keystore.p12			그 !	Q
Key Store Password		Files of type:	All Files (".")			⊻.	Ca
Private Key Password							_

#### Import keystore keystore.p12 file

The message No key store file has been uploaded indicates no previous uploads

options	
Max. concurrent connections per system	10
number of uses per connection	5
Users	
Role for imported user	
<ul> <li>Concurrent users</li> </ul>	
C Named users	
Attribute Binding Options	
Import Full Name and Email Address	
3 Set priority of SAP attribute binding	g relative to other attribute bindings
SAP SS0 Service	
I. System ID	PALM
No key store me nas occur uproaceo.	
Select a key store file to upload. The file i	must be in pkcs#12 format. The keys contained in the file
C-ldownloadelkeystoreli Browse	
le manunanahalamieh Diamaa	
Key Store Password	
Key Store Password Private Key Password	·····
Key Store Password Private Key Password Private Key Alias	·····

Setup Key Store/Private Key password, Private Key Alias and System ID System ID is PALM in this example. It has been defined when certificate is imported in SAP BW. (In below example the password is the same for both . It is admin1)



Update the roles and aliases. When you live this screen and go to Users & Groups, you'll see the SAP BW users who have the role "CRYSTAL\_ENTITLEMENT".

# Login with your SAP BW credentials in BI Launchpad

When launching the SAP BI Launchpad, you are not able to logon with your SAP BW credentials. In the next steps you will learn how to enable this option.

Aanmelden b	oii Bl-startpunt		н
Harmeraen	n sarpan		
Voeruw	aebruikersaeaeve	ns in en klik op Aanmelden.	
(Neem cor	ntact op met de syste	embeheerder als u twijfelt over uw accountg	jegevens.)
	Systeem:	INSTALL:6400	
	Gebruikersnaam:		
	Wachtwoord:		

Step 1: Go to the SAP BI Lauchpad (url: <u>http://localhost:8080/BOE/BI</u>). There is no option to choose the login authentication.

	Central Configuration Manager				_ 🗆 🗵
]	😂 🛍 😭 🕑   🕨 🗉 🗉 🖦 🛃	$ 3 \times  6 $	6 6 0	😻 😰 Computer Name: install 🔽 English	•
				,,	
	Display Name	Version	Status	Description	
	Apache Tomcat 6.0.24	2.0.6.0	👩 Stopped		
	BW-publicatieservice_BOE140BWPublisher	14.0.3.613	👩 Stopped	Hiermee wordt een groep Crystal Report-uitgevers beheerd	
	🗐 Server Intelligence Agent (INSTALL)	2.0.6.0	👩 Running	Manages BusinessObjects Enterprise Servers	
			-		

Step 2: Stop Tomcat application server

Step 3: Go to the directory:

"C:\Program Files (x86)\SAP BusinessObjects\Tomcat6\webapps\BOE\WEB-INF\config\custom".

Open notepad and enter the following text "authentication.visible=true", save your file as "Bllaunchpad.properties". Don't save it as a textfile!!!

anmelden	bij Bl-startpunt	~ 1
Voer uw	gebruikersgegevens in en klik op Aanmelden.	
(Neem co	ntact op met de systeembeneerder als u twijfeit over uw accountge	egevens.)
	Systeem: INSTALL:6400	
	SAP-systeem: BWD	
	SAP-client: 100	
	Gebruikersnaam: administrator	
	Wachtwoord:	
	Verificație: SAP	

Step 4: Restart Tomcat application server and start the BI Launchpad. Now you can choose your own verification type.

# How to enable SAP BI mobile for iPad

In the next steps you will learn how to configure SAP BI mobile for iPad. First you need to install an application on the server. The next step is configure your iPad to access the server. When you want to access the server with your iPad, be sure that you are on the same network! In my case I need to logon via VPN.



Step1: Download SAP BI mobile from the Apple App Store and install this application on your iPad.



Step 2: Stop Tomcat application server

Step 3: Copy the file "MobileBIService.war"

From directory: "C:\Program Files (x86)\SAP BusinessObjects\Mobile 14\Server" Into directory: "C:\Program Files (x86)\SAP BusinessObjects\Tomcat6\webapps". Restart Tomcat application server.

# BusinessObjects BI4.0

Pad 🔶 🖽	19:55	15 % 🗉	
	Settings		
Settings	Connections		
Connections	Server Details for mobile t	bi4	
Network Options	Name	mobile bi4	
Viewing Options	Server LIBI	http://102.169.0.110-9090	
🛕 Logs	OUT OT L	114.0.7152.100.0.110.0000	
About	CMS Name	install:6400	
	Authentication	Enterprise	
	Default		
	Access Detail		
	User Name	administrator	
	Following policies are in effect for enhanced security: Passwords cannot be saved. Data cannot be stored for offline use.		
	Save	Reset Share	
		*	

Step 4: Configure your iPad:

NAME	: Mobile BI4.0
Server URL	: http:// <ipadres boserver="">:8080</ipadres>
CMS Name	: <servername>:6400</servername>
Authentication	: Enterprise or SAP
User Name	: <your bi4="" username=""></your>
Password	: <your bi4="" password=""></your>

!Be sure that the ports 8080 and 6400 are open in your firewall!

# Now you have your own SAP BusinessObjects BI4.0 environment with SAP BI mobile for iPad!