Working with the Integration Framework of SAP Business One in On-Demand Environments

All Countries
Typographic Conventions

<table>
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<th>Type Style</th>
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<td><strong>Example</strong></td>
<td>Words or characters quoted from the screen. These include field names, screen titles, pushbuttons labels, menu names, menu paths, and menu options. Textual cross-references to other documents.</td>
</tr>
<tr>
<td><strong>Example</strong></td>
<td>Emphasized words or expressions.</td>
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<tr>
<td><strong>EXAMPLE</strong></td>
<td>Technical names of system objects. These include report names, program names, transaction codes, table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE.</td>
</tr>
<tr>
<td><strong>Example</strong></td>
<td>Output on the screen. This includes file and directory names and their paths, messages, names of variables and parameters, source text, and names of installation, upgrade and database tools.</td>
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<tr>
<td><strong>Example</strong></td>
<td>Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation.</td>
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<td><strong>&lt;Example&gt;</strong></td>
<td>Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system.</td>
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<td><strong>EXAMPLE</strong></td>
<td>Keys on the keyboard, for example, <code>F2</code> or <code>ENTER</code>.</td>
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Document History

<table>
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<td>1.0</td>
<td>2012-12-13</td>
<td>First version.</td>
</tr>
<tr>
<td>1.1</td>
<td>2013-02-27</td>
<td>Updates to installation procedure valid for SAP Business One 8.82 PL11.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Addition of section about checking server settings.</td>
</tr>
<tr>
<td>1.2</td>
<td>2013-04-12</td>
<td>Minor updates to the installation procedure for the integration framework of SAP Business One.</td>
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1 Introduction

This guide provides instructions for installing and configuring the integration framework of SAP Business One in on-demand environments.

Unlike an on-premise installation, in on-demand deployments, the SAP Business One client application is not installed on end-user workstations. Instead, customers use remote desktop connections to access the SAP Business One application, centrally hosted on presentation servers in a data center.

Central software components are shared across an entire on-demand landscape. A system landscape directory (SLD) service maintains a registry of all components and how they are allocated to customers. The Cloud Control Center is an interface for the SLD service that operators can use to manage an SAP Business One OnDemand landscape.

The resources in an SAP Business One OnDemand landscape are divided into service units to improve the overall manageability. A tenant represents a company database, storage, and licenses allocated to a customer to provide business functionality.

The integration framework of SAP Business One (B1i) is an optional component that enables users to use dashboards, work with mobile devices, and integrate with third-party services. Each service unit requires a dedicated B1i instance.

The integration framework consists of the following components:

- Integration Framework (B1i) Server
- SAP Business One integration DI Proxy
- SAP Business One integration EventSender
- [Optional] Packages for Mobile Solution, DATEV HR (Germany only), and Electronic Invoices (Mexico only)

You must install DI Proxy on the same machine as DI API, but you may install the other components on different machines.

The following figure provides an overview of the various components and how they work together.
2 Installing the Integration Framework of SAP Business One

This section provides instructions for installing the integration framework of SAP Business One in on-demand environments.

Prerequisites

- You have installed DI API and DI Proxy on the same machine.
- You have installed the Standard or Enterprise edition of Microsoft SQL Server 2008 R2 or 2012 on the database server.
- You have created an SAP Business One common database.
- You have configured registry key values for Hosting and SLDAddress on the machine on which DI API is installed in HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\SAP\SAP Manage.
  - For the Hosting registry key, the type must be dword and the value 00000001.
  - For the SLDAddress registry key, the type must be a string value and the value is the address of the system landscape directory.
- You have installed Adobe Flash Player 10.0 or later on the client workstations on which you want to use dashboards.

2.1.1.1 Installing SAP Business One DI API (32-bit)

Note

32-bit and 64-bit versions of DI API are available. You must install each version separately. You may install and run both versions on the same machine; however, the integration framework requires the 32-bit version.

If the SAP Business One client is not installed, use the following procedure to install the latest SAP Business One DI API.

Procedure

To install SAP Business One DI API (32 bit), do the following:

1. In the SAP Business One installation zip-file, open the …\Packages\DI API folder, and then double-click setup.exe.
   The SAP Business One DI API InstallShield Wizard starts.
2. In the Setup Type window, select the Custom checkbox.
3. In the Select Components window, deselect the DI API previous versions checkbox. To begin the installation, choose the Next button.

2.1.1.2 Configuring TCP/IP Protocols for Database Servers

If you are using Microsoft SQL Server 2008, you must ensure that the database TCP/IP protocol is enabled.

⚠️ Caution
In Microsoft SQL Server 2008, the TCP/IP protocol is disabled by default.

Procedure

1. Enable the TCP/IP protocol in Microsoft SQL Server:
   1. In Windows, choose Start → All Programs → Microsoft SQL Server 2008 → Configuration Tools → SQL Server Configuration Manager.
   2. In the SQL Server Configuration Manager window, expand SQL Server 2008 Network Configuration, and then choose Protocols for MSSQLSERVER.
   3. Right-click TCP/IP, and select Enable.
   4. Go to SQL Server 2008 Services and restart SQL Server (MSSQLSERVER).

   Note
MSSQLSERVER is the default instance of MSSQL. If named instances have been installed, these have different names.

2. Set the IP port in Microsoft SQL Server:
   1. In Windows, choose Start → All Programs → Microsoft SQL Server 2008 → Configuration Tools → SQL Server Configuration Manager.
   2. In the SQL Server Configuration Manager window, expand SQL Server 2008 Network Configuration and choose Protocols for <instance name>.
   3. To open TCP/IP Properties, double-click TCP/IP, or right-click TCP/IP, and then select Properties.
   4. On the IP Addresses tab, in the IPALL area, leave the TCP Dynamic Ports field blank and enter, for example 1433, in the TCP Port field.

   Note
If you are using SQL Server named instances, ensure each instance uses a different TCP/IP port and, during the installation of the integration framework, enter the server name as <server name> rather than the <server name>\instance name.
2.1.1.3 Performing Installations

Procedure

1. In the SAP Business One installation zip-file, open the ...\Packages\B1 Integration Component\Technology folder, and then double-click setup.exe.

2. In the Choose Destination Folder window, specify a location where you want to install the integration framework of SAP Business One.

3. In the Change Admin Password window, enter and confirm a password for the B1iadmin account, which you use to log on to the integration framework.

4. In the Enter Database Information window, select the version of Microsoft SQL Server that you are using from the dropdown list, and then specify the following:
   - Database Server – The name of the database server on which you want to create the integration framework database (B1if).
   - Database Port – The port number. The default port is 1433. To specify a Microsoft SQL Server instance, enter the specific port number assigned to that database instance.
   - Database Name – The name of the integration framework database.
   - Database Username – The user name of a database administrator account.
   - Password – The password for the database administrator account.
5. In the **Enter SAP B1 Information** window, select the **On Demand** radio button, and then specify the following:

   - **B1 SLD Host** – The SLD service host, with the format `http(s)://<SLD Host name or IP>:<SLD Port>/sld/sld<service number>.svc`

     - Example
       - If you are using SAP Business One OnDemand 1.0 SP02, the HTTPS protocol, and the port is 443, enter `https://1.54.9.61:443/sld/sld0100.svc`.
       - If you are using SAP Business One OnDemand 1.0 SP02, the HTTP protocol, and the port is 8080, enter `http://1.54.9.61:8080/sld/sld0100.svc`.

   - **B1 SLD User** – The user name of a Cloud Operator account for communication between the B1i service and SLD service.

   - **B1 SLD Password** – The password for the Cloud Operator account.

   - **DI API JCo LIB path** – The location of the SAP Business One DI API (32-bit) program file. If you previously installed SAP Business One DI API (32-bit) in the default location, the location is `...\SAP\SAP Business One DI API\JCO\Lib`.

   - **Domain User** – The user name of a database administrator account that you want to use to log onto the DI Proxy service.

   - **Domain Password** – The password for the database administrator account.
6. In the **Activate Scenario Packages** window, you can do the following:
   - To activate support for the SAP Business One mobile solution, select the **Activate support for SAP Business One Mobile solution** checkbox.
     
     For more information, see *Setting Up the Mobile Scenario in Integration Component* in the `<product_folder>\Documentation\B1 Integration Component` folder of the product DVD.
   
   - To activate payroll support (DATEV/HR package, Germany only), select the **Activate payroll support (Germany only)** checkbox, and then set the destination folder for incoming files and outgoing files.
     
     For more information about activating payroll support later, see *Leitfaden zur Personalabrechnung mit DATEV HR* (German only) in the `<product_folder>\Documentation\B1 Integration Component` folder of the product DVD.
   
   - To activate support for electronic invoices (Mexico only), select the **Activate support for electronic invoices (Mexico only)** checkbox.
7. In the **Installation Complete** window, choose the **Done** button.
3 Configuration

This section provides instructions for configuring the integration framework of SAP Business One in on-demand environments. The configuration process consists of the following main steps:

1. Check server settings
2. Configure the EventSender
3. Assign the integration framework instance to a service unit
4. Configure the integration framework
5. Enable support for dashboards in SAP Business One
6. Enable access for mobile devices
7. Configure mobile device settings

3.1 Checking Server Settings

After installing the integration framework of SAP Business One in an on-demand environment, check the server settings to ensure that they are correct.

Procedure

To check the server settings, do the following:

1. Log on to the integration framework using the B1iadmin account.
2. In the administration user interface of the integration framework, choose Maintenance → Cfg B1 OnDemand.
3. Ensure that the application displays the correct information for the following fields; otherwise, correct the information as follows:
   - **Server URL** – The address of the SLD, with the format http(s)://<SLD Host>.
   - **Port** – The number of the port for communication with the SLD service.
     - For the HTTP protocol, the default port is 80.
     - For the HTTPS protocol, the default port is 443.
   - **Base Service** – Displays /sld/sld<service number>.svc, where the service number corresponds to the version of SAP Business One OnDemand that you are using.
     - Example: For SAP Business One OnDemand 1.0 SP01 PL00, the base service is /sld/sld0100.svc.
4. In the **Password** field, enter the password to access the SAP Business One OnDemand service.
5. In the **Name of B1i Server** field, enter a name for this integration framework instance.
6. To register the integration framework in the SLD, in the **Actions** area, choose the **Register** button.
7. To check whether the application successfully registered the integration framework in the SLD, choose the Monitor button.

   Note

   If you are using HTTPS as the web protocol the SLD uses for connections, ensure that you configure the machine on which the integration framework is installed to trust the certificate that the SLD uses for authentication.

3.2 Configuring EventSender

EventSender facilitates communication between SAP Business One and the integration framework. During the setup process, EventSender creates the tables in the common database in which events are recorded. When running, EventSender periodically retrieves events and sends them to the B1i server using HTTP/HTTPS requests.

Procedure

To configure EventSender, do the following:
1. In Windows, choose Start → All Programs → Integration Solution for SAP Business One → SAP Business One EventSender → Setup.

   The EventSender setup window appears.

2. In the Connect to SAP Business One window, enter the information for the database instance of the service unit that contains the integration framework.
3. In the **Configure EventSender Parameters** window, leave the default values for the monitor settings, and then choose the **Next** button.

4. In the **Configure B1i Parameters** window, ensure that the port number in the B1i **Server Port** field is the same as the port that the B1i server uses for communication. The default port number is **8080**.

5. In the **Choose the Company Databases** window, leave the default settings for all company databases, and then choose the **Next** button.
6. In the **Summary Information** window, choose the **Finish** button to complete the setup process.

### 3.3 Assigning Integration Framework Instances to Service Units

After installing the integration framework of SAP Business One, you can use the Cloud Control Center to assign integration framework instances to service units in an on-demand landscape. Each service unit requires a dedicated B1i instance.

A service unit is a collection of the software components, servers, and storage required to provide access to a full SAP Business One installation. All SAP Business One components in a single service unit have the same version and add-ons. A single service unit can contain multiple tenants with similar requirements.

#### Procedure

To assign an integration framework instance to a service unit, do the following:

1. In the Cloud Control Center, choose **Landscape Management → Service Units**, and then select the service unit to which you want to assign the integration framework instance.

2. On the **Software Components** tab of the **Service Unit Details** area, choose the **Register** button.

3. In the **Select Software Component** window, select the **Integration Component** radio button, and then select the integration framework instance from the dropdown list.

   **Note**

   In the Cloud Control Center, you can view information about all registered integration framework instances in an on-demand landscape by choosing **Landscape Management → Integration Components**.

4. Choose the **Register** button.
The integration framework periodically retrieves a list of the tenants assigned to the service unit, creates the corresponding system entries, and synchronizes the required tenant information.

- To specify the synchronization interval, log on to the integration framework using the B1i admin account, and then choose Maintenance → Cfg B1 On Demand → SetTimer.
- To manually synchronize tenant information, log on to the integration framework using the B1i admin account, and then choose Maintenance → Cfg B1 On Demand → Sync.

### 3.4 Configuring the Integration Framework

The B1i framework enables SAP Business One to exchange data with external systems, dashboard integration, and mobile device access.

**Procedure**

To configure the integration framework, do the following:

1. Log on to the integration framework using the B1i admin account.
2. In the administration user interface of the integration framework, choose SLD → B1i Server → <Tenant Name>.

   **Note**

   If the tenant is not visible, choose Maintenance → Cfg B1 On Demand, and then choose the Sync button. To view information in the log, choose the Monitor button.

3. In the main area, choose the Edit button.
4. In the B1DI section of the Connectivity List (Active) area, do the following:

   - **b1Server** – Ensure that this field displays the host name of the database server holding the database instance assigned to the service unit.
   - **licenseServer** – Ensure that this field displays the host name of the license server assigned to service unit that contains the tenant.
   - **dbUser** – Leave this field empty.
   - **dbPassword** – Leave this field empty.
   - **userName** – Enter B1i.
   - **password** – Do not change the data in this field as the application automatically generates a random secure password.

   **Caution**

   The application uses the automatically generated password for direct DI connections. If you change this password, you must also change the password for the B1i system user account in SAP Business One and ensure that both passwords are consistent.

   - **jcoPath** – The location of the SAP Business One DI API (32-bit) program file. If you previously installed SAP Business One DI API (32-bit) in the default location, the location is ...\Program Files (x86)\SAP\SAP Business One DI API\JCO\LIB.
   - **diProxyhost** – Ensure that this field displays the host name of the server on which you installed DI Proxy.
5. In the JDBC section, do the following:
   - **url** – Ensure that the value for `integratedSecurity` is `false`. To do so, the string in this field must include the text `integratedSecurity=false`.
   - **username** and **password** – Enter your database credentials.
     Choose the Save button.
6. In the BIDI and JDBC sections, choose the Test Connection buttons.
7. In the left navigation pane, choose SBO-COMMON, and then in the JDBC section, do the following:
   - **url** – Ensure that the value for `integratedSecurity` is `false`. To do so, the string in this field must include the text `integratedSecurity=false`.
   - **username** and **password** – Enter your database credentials.

### 3.4.1 Troubleshooting Integration Framework Configuration

The following table lists errors that you may encounter after choosing the Test Connection buttons in the previous section, the causes, and the solutions.

<table>
<thead>
<tr>
<th>Error</th>
<th>Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Com.sap.b1i.xcellerator.RejectedExceptionXCE041 Whole Adaptor-Pool currently is deactivated.</td>
<td>The integration framework is currently processing data.</td>
<td>Wait a few minutes, and then choose the Test Connection buttons again.</td>
</tr>
</tbody>
</table>

### 3.5 Enabling Dashboards

Dashboards present an easy-to-understand visualization, such as a bar or pie chart, of transactional data from the SAP Business One database. Depending on the dashboard, data can be presented either as a time-specific static snapshot or as a refreshable visualization.

**Procedure**

To enable users to work with dashboards in SAP Business One, do the following:

1. In Windows, choose **Start → Control Panel → Internet Options**.
   - On the Advanced tab of the Internet Properties window, deselect the Do not save encrypted pages to disk checkbox under Security.
2. Use an account with superuser privileges to log on to SAP Business One.
3. From the SAP Business One **Main Menu**, choose **Administration → System Initialization → General Settings**.
4. On the Cockpit tab, select the **Enable Cockpit at Company Level** checkbox, and then select the **Enable Dashboard Widget** checkbox.
5. Choose the Update button.
3.6 Enabling Access for Mobile Devices

The SAP Business One mobile application allows users to check on inventory and customers, access reports, receive alerts, and process approvals. The mobile application also provides users with realtime access to their SAP Business One data so they can easily navigate, respond to, and trigger remote processes.

**Prerequisite**

You have assigned a B1i license to each user for whom you want to enable mobile device access.

**Procedure**

To enable users to access SAP Business One using their mobile devices, do the following:

1. Use an account with power user or superuser privileges to log on to SAP Business One.
2. From the SAP Business One Main Menu, choose Administration → Setup → General → Users.
3. In the Users – Setup window, specify the following for each user to whom you want to grant mobile device access:
   - **Mobile User** – Select this checkbox to enable mobile device access for the user.
   - **Mobile Phone** – Enter the user’s mobile phone number.
   - **Mobile Device ID** – Enter the device identification number of the user’s mobile device.

   **Note**
   
   On iOS devices, you can find the mobile device ID under Settings → General → About → WLAN Address.

   - **Password** – Specify a password for the user.

4. Choose the **OK** button.

3.7 Configuring Mobile Device Settings

After you have enabled access for mobile devices, users must configure the necessary settings on their devices to access SAP Business One.
Procedure

To configure the mobile device settings, do the following:

1. On an iOS device, open Settings → Business One.
2. In the Web Service area, enter the hostname or IP address and port number of the B1i server in the Server field.
   
   Example
   10.59.9.13:8443
3. In the Logon Settings area, specify the following:
   - Company DB – Enter the name of the company database assigned to the tenant to which the user belongs.
   - User Code – Enter the user code of the SAP Business One User. This is the same as the user code in the User – Setup window in SAP Business One. Alternatively, you can enter the domain user name, using the format <domain>\<user name>.
   
   Caution
   When you log on to the SAP Business One mobile application, ensure you enter the user code and password or domain credentials, according to the specified settings.
   - Phone Num – Enter the mobile phone number of the mobile device. This is the same as the mobile phone number in the User – Setup window in SAP Business One.
4. Log on to the B1i framework using the B1i admin account.
   Choose SLD → WSforMobile, and then ensure that the SrvIP field displays the database server that holds the database instance assigned to the service unit.
4 Moving Integration Framework Instances to Other Service Units

This section provides instructions for moving an integration framework instance to another service unit, or assigning a different integration framework instance to a service unit.

Procedure

To move an integration framework instance to another service unit, do the following:

1. In the Cloud Control Center, unregister the integration framework instance from the service unit to which it is assigned.
   For more information, see SAP Business One OnDemand Administrator’s Guide.
2. Log on to the B1i framework using the B1iadmin account.
3. In the administration user interface of the integration framework, choose Maintenance → Cfg B1 OnDemand.
   Choose the Sync button.
4. On the SLD tab, ensure that the application has removed all SAP Business One companies that were previously assigned to the integration framework instance; otherwise, remove them manually.
   Select the entry for the common database (SBO-COMMON), and then choose the Delete button.
5. In the corresponding common database, delete all entries in the SLSP and SLSPP tables.
6. In the Cloud Control Center, register the integration framework instance to a new service unit.
   - Check the server settings to ensure that they are correct. For more information, see Checking Server Settings.
   - Configure the B1i framework. For more information, see Configuring the B1i Framework.