AEB Engines

Printing from an AEB Engine

AEB

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1 Options for printing from an AEB Engine

You can print directly from the application in the following *AEB Engines*:

- *Carrier Connect*
- *EMCS Filing*
- *Export Filing* and *Import Filing*
- *Logistics Cost Management*
- *Supplier Declaration Exchange*

1.1 With the AEB Service Agent

The local component *AEB Service Agent* is needed to access local resources such as printers from your browser. With the *AEB Service Agent,* you can then print from your AEB application in the browser.

You have two options for using the Service Agent:

- **AEB Service Agent without installation:** This option involves restarting the *AEB Service Agent* in each session with the active consent of the user. The application (JavaScript) that connects to the *AEB Engine* is then downloaded for one-time use each time.

- **AEB Service Agent with installation:** This option does not require the user's consent, but it does involve a one-time setup. The *AEB Service Agent* then connects with the *AEB Engine* automatically using the protocol type *aebserviceagentv1//.* The technical effect of installing the *AEB Service Agent* is that the protocol type is associated with a launcher in your default program directory (for example: C:\Program Files (x86)\AEB\ServiceAgent). If the script in the browser calls this protocol type with the appropriate parameters, the launcher starts the *AEB Service Agent* automatically and logs on using a single sign-on token. Make sure that this process is not blocked by antivirus software or the like.

💡 More information: *Using the AEB Service Agent without installation* (▶ page 3)

💡 More information: *Using the AEB Service Agent with installation* (▶ page 4)

1.2 With the AEB Cloud Printing Server

The primary function of the *AEB Cloud Printing Server* is to prepare the locally installed printers on the host system so that they are available as output devices (printers) to the application. The *AEB Service Agent* functions here as a service on a print server or on a separate server where the printers are installed or mapped.

You can print using the *AEB Cloud Printing Server* as an alternative to the *AEB Service Agent*:

- When you print using the *AEB Service Agent,* a launcher installed on each client is started and initialized by the browser.

- In contrast, when you print using the *AEB Cloud Printing Server,* a Windows service on the server keeps an agent running at all times, and this agent launches a special cloud agent instance.

Communication with the *AEB Engine* goes through the usual http/https connection and works internally with the *AEB Service Agent.*

💡 Printing with the *AEB Cloud Printing Server* is a good solution in Citrix environments where the *AEB Service Agent* is not allowed to write to temporary directories.

💡 More information: *Using the AEB Cloud Printing Server* (▶ page 7)

Advantages of printing with the AEB Cloud Printing Server

- All printers are managed centrally and should be mapped to an *AEB Engine*.

- Setup and testing are generally simpler, since each printer is only configured once and no further setup is typically needed for additional workstations or users.

- This option is a good solution in Citrix environments where the *AEB Service Agent* is not allowed to write to temporary directories.

Disadvantages of printing with the AEB Cloud Printing Server

- Printers connected locally to a workstation via USB still require local installation.

1.3   With print job agent in Carrier Connect

🔧   Requirement: *AEB Service Agent* or *AEB Cloud Printing Server*

The *print job agent* is a print queue within *Carrier Connect*. It is also used to assign print jobs to a workstation. This makes it possible for a user to generate print jobs for another workstation, for example.

The *print job agent* of the workstation to which the print job is assigned recognizes the print job and passes it from *Carrier Connect* via the *AEB Service Agent* to the locally installed printer (Windows) or via the *AEB Cloud Printing Server* to printers of the printing server. The *print job agent* can also be used to identify the associated print job and the attached business object in the event of an error.

≫   Printing documents from a host system such as SAP® requires first starting the *print job agent*. This can be done from directly within the SAP® system.

💡   More information: *Using the print job agent for Carrier Connect* (▶ page 8)

1.4   With PDF Print

You can also print PDF documents from the *AEB Engine* using Adobe Reader® or a PDF plug-in in your browser.

💡   More information: *Printing from the AEB Engine using PDF Print* (▶ page 9)

2 Using the AEB Service Agent without installation

≫ Contact your IT department if you do not have the necessary authorizations.

Proceed as follows to set up the system configuration:

1. Allow https access to the AEB data center (https://rz3.aeb.de/* or 194.175.186.9 : Port 443) or, for on-premise installations, to your own system environment where the *AEB Engine* is installed.
2. Check whether you need to allow access under your firewall settings as well. If your firewall is configured at the program level, add the following to the allowed programs:
   a) AEBServiceAgent_nodejs.exe
   b) AEBServiceAgentLauncherAdHoc.exe
3. Check whether the proxy settings allow communication with the AEB data center.
4. The *AEB Service Agent* uses the internet settings defined at the operating system level. Go to *Settings – Network & Internet* and add the URL of your *AEB Engine* (for example: https://rz3.aeb.de/prod1aae/) to the list of trusted sites. For on-premise installations, do the same for the URL of the *AEB Engine.*

Now it is possible to use the *AEB Service Agent* on an ad hoc basis.

Proceed as follows to check the system configuration:

1. Open the *AEB Engine* in an AEB-supported browser.
2. Use your login data (client/user/password) to sign on.
3. Add a new printer (*Office – Master data – Printers – New*).
4. In the *AEB Service Agent* dialog box, select *Download one-time application*.
5. Then run the "AEBServiceAgentLauncherAdHoc.exe" application.
6. The popup window closes automatically when everything has been properly configured and is working correctly. You can then see your local printers in the web app.

   ⚲ You can open the Task Manager to check whether the *AEB Service Agent* (AEBServiceAgent_nodejs.exe) is running.

7. When you are finished adding printers, click the X to close the printers window (*Office – Master data – Printers*).

3 Using the AEB Service Agent with installation

3.1 Implementing the system configuration for the AEB Service Agent

» Contact your IT department if you do not have the necessary authorizations.

Proceed as follows to set up the system configuration:

1. Allow https access to the AEB data center (https://rz3.aeb.de/* or 194.175.186.9 : Port 443) or, for on-premise installations, to your own system environment where the *AEB Engine* is installed.
2. Check whether you need to allow access under your firewall settings as well. If your firewall is configured at the program level, add the following to the allowed programs:
   a) AEBServiceAgent_nodejs.exe
   b) AEBServiceAgentLauncherAdHoc.exe
3. Check whether the proxy settings allow communication with the AEB data center.
4. The *AEB Service Agent* uses the internet settings defined at the operating system level. Go to *Settings – Network & Internet* and add the URL of your *AEB Engine* (for example: https://rz3.aeb.de/prod1aae/) to the list of trusted sites. For on-premise installations, do the same for the URL of the *AEB Engine*.

💡 You can set up a permanent installation of the *AEB Service Agent* if you don't want users to have to download the *AEB Service Agent* for each use. This requires administrator rights – specifically, read and write access to the C:\ drive.

🔧 **Notes when running on Citrix or terminal servers:** If you're installing the *AEB Service Agent* on a Citrix or terminal server, define an additional system or environment variable AEB_SERVICEAGENT_FOLDER containing the installation path. This ensures that all users have read and write access to the folder named in the environment variable AEB_SERVICEAGENT_FOLDER.

3.2 Installing the AEB Service Agent (users)

🔧 The installer for the launcher needs to be installed once with administrator rights.

» This option is available only if you have administrator rights for your computer. If not, please consult your system administrator. The *AEB Service Agent* is digitally signed with the AEB certificate. Your IT department can check and approve the origin of this component for security purposes at any time.

🔧 Problems may occur in Citrix environments. For assistance, please refer to: *Installing the AEB Service Agent (IT admins)* (▶ page 4)

Proceed as follows:

1. Click the link in the dialog box to download manually, or go to https://rz3.aeb.de/prod1cai/ prod1cai_node1/agent/AEBServiceAgentSetup.msi. To download manually, select the option *Download installer*.
2. Download the file (AEBServiceAgentSetup.msi) and launch to begin the installation, which runs in the background.
3. Then close and reopen the browser.

💡 The next time you log in to an *AEB Engine* and initialize the launcher, which happens during printing activities, you now have access to all local printers and the *AEB Service Agent* dialog box is closed.

💡 For instructions on checking the system configuration, see *Checking the system configuration for the AEB Service Agent* (▶ page 6).

3.3 Installing the AEB Service Agent (IT admins)

🔧 The installer for the launcher needs to be installed once with administrator rights.

≫ This option is available only if you have administrator rights for your computer. If not, please consult your system administrator. The *AEB Service Agent* is digitally signed with the AEB certificate. Your IT department can check and approve the origin of this component for security purposes at any time.

Technical background information

The *AEB Service Agent,* in its installed version, consists of two parts:

- **Launcher:** The launcher is installed under C:\Program Files (x86)\AEB\ServiceAgent. Its runtime task is to correctly launch the Agent with the forwarded data.

- **Agent:** The agent is the actual "connection software" that establishes an https connection to the *AEB Engine* with the data it receives in order to report the local printers to the *AEB Engine* and then accept print jobs for each user.

How it works

- The installer uses the registry key *Computer\HKEY_LOCAL_MACHINE\SOFTWARE\Classes \aebserviceagentv1* to associate the launcher with the protocol type *aebserviceagentv1//*, which is called through the web interface. The launcher receives an SSO (single sign-on token), which is then forwarded to the agent. The launcher re-downloads the agent the first time the launcher is started or after an update.

- The agent is downloaded from the server once and again during the typically quarterly updates (in addition to the regular startup) and is stored by default under *%AppData%\Roaming\AEB\ServiceAgent*. This requires write access. If this is not allowed because you're writing under C:/ (as in Citrix environments), you can define another path with an environment variable AEB_SERVICEAGENT_FOLDER.

🔧 Write access on this path is absolutely essential.

Technical notes on installation

- Requirements:
  - The installation requires local administrator rights. Begin by implementing the defined system configuration: *Implementing the system configuration for the AEB Service Agent* (▶ page 4)
  - All users must have routine access to *C:\Program Files (x86)\AEB\ServiceAgent* for the launcher to start automatically. Make sure there are no conflicts with antivirus programs.
  - All users must have routine access to *C:\Users\XXX\AppData\Roaming* for the agent to start automatically. Make sure there are no conflicts with antivirus programs.

- The MSI installation file can be run on the user instances through an installation repository.

🔧 **Notes for Citrix environments or environments without write access to C:/:** If you are not able or allowed to write under C:/ (as in Citrix environments), you can define another path with an environment variable AEB_SERVICEAGENT_FOLDER. This only controls the path of the agent (typically *%AppData% \Roaming\AEB\ServiceAgent*) but not that of the launcher (*C:\Program Files (x86)\AEB\ServiceAgent*). Write access to this directory for every user is absolutely essential.

Proceed as follows to install the AEB Service Agent:

1. Download the installation file from https://rz3.aeb.de/prod1cai/prod1cai_node1/agent/ AEBServiceAgentSetup.msi. We'll update this source as needed. No fixed interval is planned.
2. Add the installation file to your installation repository. This is particularly helpful for rollouts across multiple physical Windows machines and in virtual Windows environments (terminal and Citrix servers).
3. Run the installation on the clients.

💡 You can check the system configuration: See *Checking the system configuration for the AEB Service Agent* (▶ page 6)

3.4 Checking the system configuration for the AEB Service Agent

Proceed as follows to check the system configuration:

1. Open the *AEB Engine* in an AEB-supported browser.
2. Use your login data (client/user/password) to sign on.
3. Add a new printer (*Office – Master data – Printers – New*).
4. In the *AEB Service Agent* dialog box, select *Download one-time application*.
5. Then run the "AEBServiceAgentLauncherAdHoc.exe" application.
6. The popup window closes automatically when everything has been properly configured and is working correctly. You can then see your local printers in the web app.

    💡 You can open the Task Manager to check whether the *AEB Service Agent* (AEBServiceAgent_nodejs.exe) is running.

7. When you are finished adding printers, click the X to close the printers window (*Office – Master data – Printers*).

4 Using the AEB Cloud Printing Server

4.1 Implementing the system configuration for the AEB Cloud Printing Server

Implement the following system configuration:

- Dedicated *Windows Print Server*, Windows Server 2012 R2, Windows Server 2016, Windows Server 2019: each as Standard, Enterprise or Datacenter edition and with GUI
- Main memory:
  - At least 1–2 GB
  - Plus at least 30 MB for each simultaneous user of print functions
- Processor: at least 2 GHz Dual Core CPU
- Free hard disk space for installation: at least 5 GB
- Set up the Windows user account to be used for the AEB Cloud Printing Server service on the Windows Print Server. Also grant this user rights for RDP login on the Windows Print Server.
- The user account / service requires access to the link to the AEB application, usually rz3.aeb.de.
- The link to the AEB application must be added to the list of trusted sites in Internet Explorer.
- Operating systems are generally supported only until the end of the manufacturer's extended support period.

4.2 Your contact for installation of the AEB Cloud Printing Server

Reach out to your AEB representative for questions about the installation of the *AEB Cloud Printing Server*.

5 Using the print job agent for Carrier Connect

5.1 Implementing the system configuration for the AEB Service Agent

In *Carrier Connect*, add the licensed module "Shipping order import" for each client: *Office – User administration – Clients – Clients*, open the client, *Licensed modules – New – Shipping order import* (I_DLSHIPMENTIMPORTLICENSEROLE – OK).

🔧 To use the *print job agent* in *Carrier Connect*, you need either the *AEB Service Agent* or the *AEB Cloud Printing Server*.

5.2 Activating the print job agent

💡 You can activate the *print job agent* either from SAP® or directly in *Carrier Connect*.

Proceed as follows to activate the print job agent from SAP®:

1. Open the *AEB cockpit* in your SAP® system.
2. Select the product *Carrier Connect*.
3. On the *Applications* sheet, click *print job agent*. The *print job agent* opens and runs in the background.
4. To display the *print job agent*, right-click the CC icon in the menu bar and select *Display*.
5. Continue with the instructions below to activate the *print job agent* in *Carrier Connect*.

Proceed as follows to activate the print job agent in Carrier Connect:

1. In the print job agent widget on the Desktop, activate the *print job agent.*
   » You will automatically be prompted to either install the *AEB Service Agent* permanently or download it once.
2. If you have not already done so, define a workstation under *Settings – Define workstation*.
3. *Start* the *print job agent*.
» When the *print job agent* is running, the incoming print jobs assigned to the current workstation are processed.
» The *print job agent* must be started at each workstation where you wish to have labels printed. Further information on setting up printers and workstations can be found in the *Carrier Connect* documentation.

6 Printing from the AEB Engine using PDF Print

You have two options for printing PDF documents.

6.1 PDF print from the AEB Engine using Adobe Reader

You can print PDF documents by previewing them in your browser:

- Download and save the PDF file.
- Then open the file in Adobe Reader and print it there.

6.2 PDF print from the AEB Engine using the browser

You can print PDF documents by previewing them in your browser and printing them using your browser's PDF reader plug-in.

🔧 Since this plug-in is installed locally, it can use the Windows printing functions (including driver settings).

6.3 Editing PDF documents from the preview (users)

If you use the preview option to print a document, the new window will include various options for further editing.

》 In this case, it is not necessary to install the *AEB Service Agent*, since you can print from your local folders afterwards.

You can edit documents using the following functions:

- The *Edit* button lets you modify the content automatically transferred from your processes. Click *Save & close* when you are finished entering data.
- If you are printing from the preview, use the *Download* button.
- Use the drop-down menu at the bottom of the screen to determine which layers of the PDF should be printed.
- If you want to print the content without the form background, select *PDF/a data only*.
- Clicking the *Printed* button indicates that a document will subsequently be given a checkmark next to *Printed* in your overviews.

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