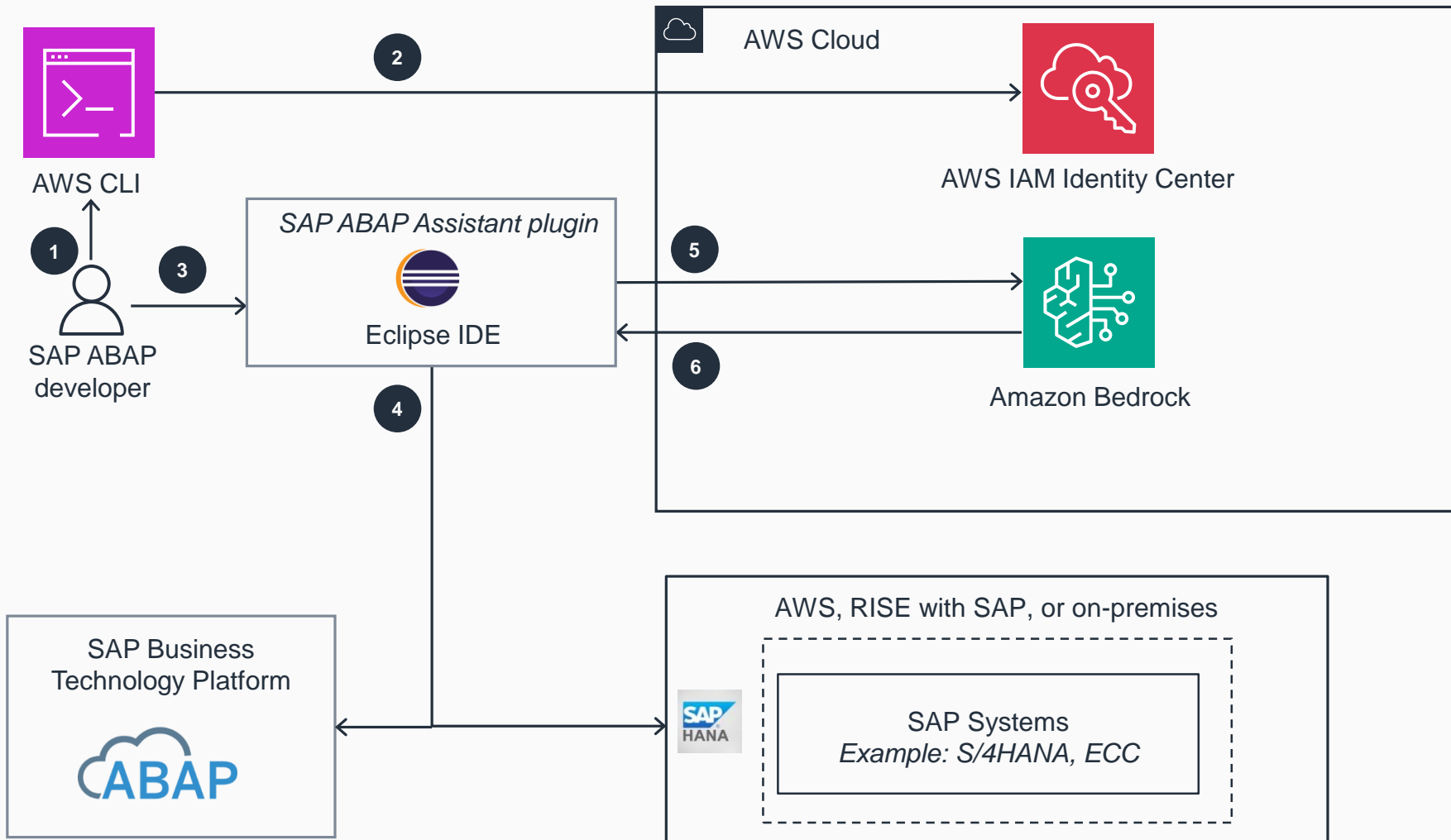


Guidance for Improving Application Development Productivity with the SAP ABAP Assistant on AWS

ABAP Assistant with AWS IAM Identity Center

This architecture diagram shows how SAP ABAP developers can improve their productivity by using the SAP ABAP Assistant in conjunction with Amazon Bedrock and AWS IAM Identity Center to generate SAP ABAP code and documentation.



- 1 The SAP ABAP developer installs **AWS Command Line Interface (AWS CLI)** version 2 on either a Windows or Mac operating system. Additionally, the developer configures the **AWS CLI** to authenticate with the **AWS IAM Identity Center** using the `aws configure sso` command.
- 2 With the **AWS CLI**, the developer authenticates with the **IAM Identity Center** by running the `aws sso login --profile <profile-name>` command.
- 3 The developer downloads the provided SAP ABAP Assistant plugin, installs it, and then configures the plugin within the Eclipse integrated development environment (IDE).
- 4 The developer must authenticate and establish connections between the Eclipse IDE and one or more SAP systems that are hosted either within an **Amazon Virtual Private Cloud (Amazon VPC)**, on-premises, or in the SAP Business Technology Platform (BTP) ABAP environment.

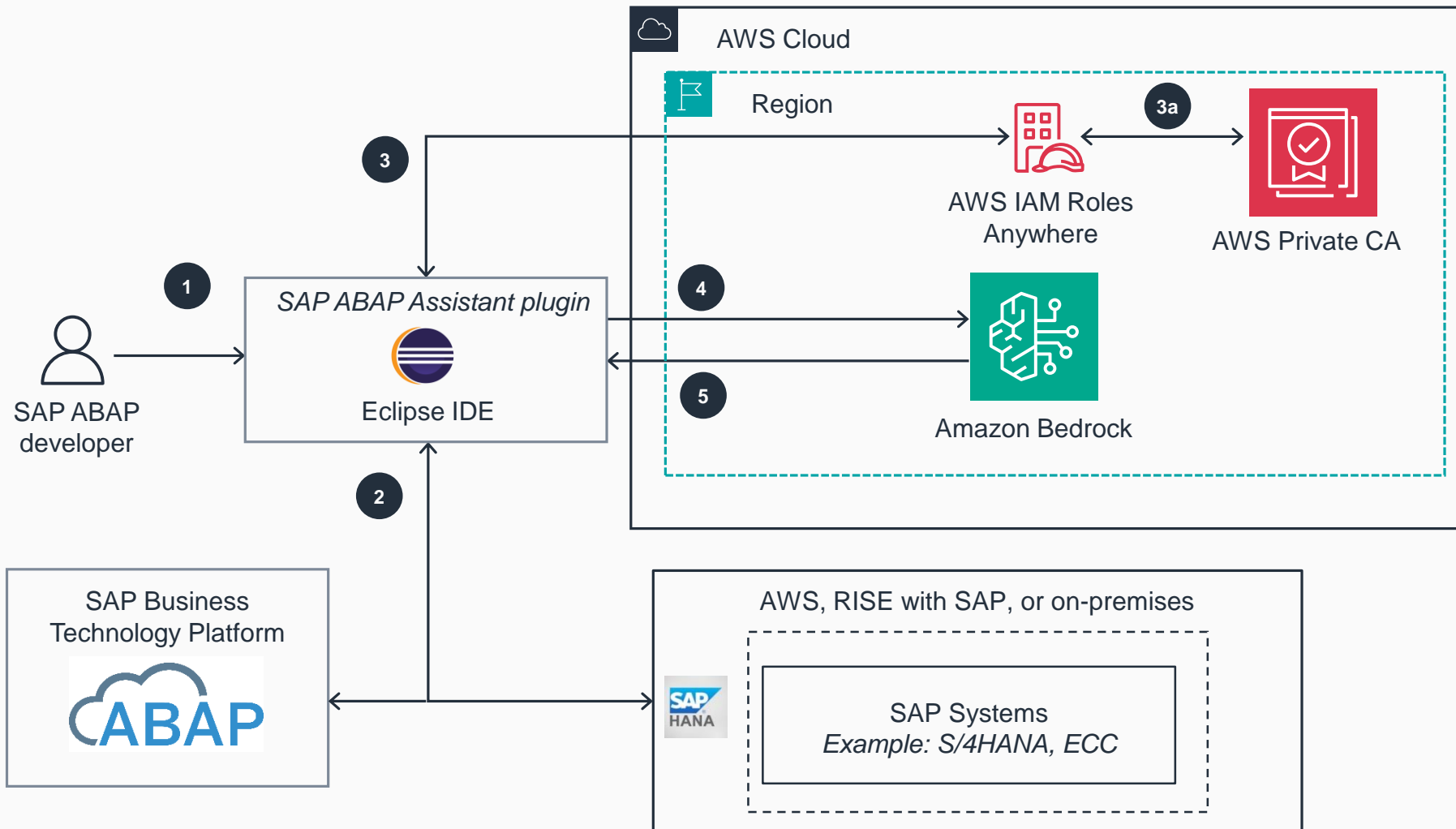
Within the Eclipse IDE, the developer opens an ABAP program and selects a specific block of ABAP code for which documentation needs to be generated. To initiate the code generation process, the developer writes a prompt in simple English within the ABAP program. The developer then invokes the SAP ABAP Assistant plugin using the "Ask Bedrock" menu option available in the Eclipse IDE.
- 5 The SAP ABAP Assistant plugin sends a request with the selected prompts or ABAP code to **Amazon Bedrock**, a fully managed service that offers a choice of high-performing foundation models. **Amazon Bedrock** then uses large language models (LLMs), such as the Anthropic Claude model, to generate the corresponding ABAP code or documentation.
- 6 The SAP ABAP Assistant plugin returns the generated response back to the ABAP editor in the case of code generation and displays the generated documentation within the console of the Eclipse IDE. The developer is then responsible for validating the generated code and, if necessary, modifying it to align with the specific use case requirements.



Guidance for Improving Application Development Productivity with the SAP ABAP Assistant on AWS

ABAP Assistant with IAM Roles Anywhere

This architecture diagram shows how SAP ABAP developers can improve their productivity by using the SAP ABAP Assistant in conjunction with Amazon Bedrock and AWS IAM Roles Anywhere to generate SAP ABAP code and documentation.



- 1 The SAP ABAP developer downloads the provided SAP ABAP Assistant plugin, then installs and configures the plugin in Eclipse IDE.
- 2 The SAP ABAP developer authenticates and connects one or more SAP systems hosted in **Amazon VPC**, on-premises, or the SAP Business Technology Platform (BTP) ABAP environment to Eclipse IDE. The developer opens an ABAP program in Eclipse IDE and selects a block of ABAP code for which the documentation has to be generated. For code generation, the developer writes a prompt in simple English in the ABAP program. The developer invokes SAP ABAP Assistant plugin using the “Ask Bedrock” menu in Eclipse IDE.
- 3 The SAP ABAP Assistant plugin sends a request to **AWS Identity and Access Management (IAM) Roles Anywhere** to generate temporary credentials using X.509 certificate issued by **AWS Private Certificate Authority (AWS Private CA)**.
- 3a **IAM Roles Anywhere** works by bridging the trust model of **AWS Identity and Access Management (IAM)** and public key infrastructure (PKI). The model connects the role, the **IAM Roles Anywhere** service principal, and identities encoded in X.509 certificates, that are issued by a certificate authority.
- 4 The SAP ABAP Assistant plugin sends a request with the selected prompts or ABAP code to **Amazon Bedrock** to call LLMs hosted by **Amazon Bedrock**, such as the Anthropic Claude model to produce ABAP code or documentation.
- 5 The SAP ABAP Assistant plugin returns the response back to the ABAP editor in case of code generation or displays documentation in a console in Eclipse IDE. The developer will validate the generated code and, if required, modify it to the specific use case.

