User-Delegated Access with Cognito and 3-Legged OAuth flow with Google

Introduction

In this Lab, we will focus on implementing Outbound Auth using 3-Legged OAuth (3LO) in AgentCore. We'll demonstrate this OAuth authorization code grant flow by configuring an agent to securely access user's Google Calendar events through AgentCore's authentication system. You will learn how to set up 3-Legged OAuth to handle user consent and interaction, enabling your agent to retrieve calendar events and access Google Calendar resources that require explicit user permission.

High-Level Architecture
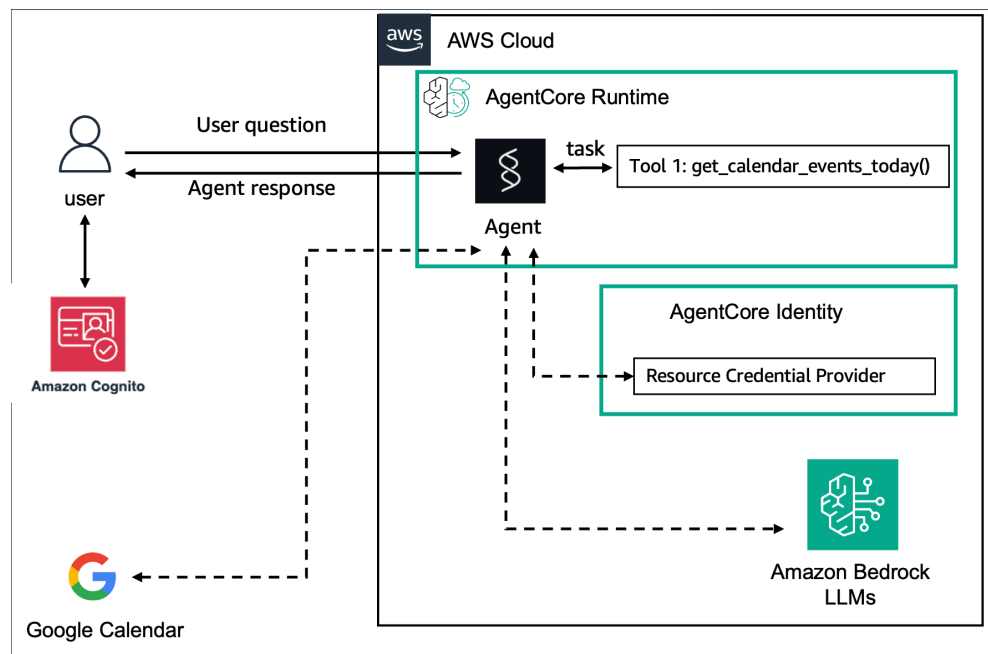
Architecture Flow:

1. **User Initiation**: User makes a request that requires access to a protected resource (Google Calendar events, user data, etc.)
2. **Authorization Redirect**: The Agent/System redirects the user to the Google authorization server
3. **Authorization Code Return**: After successful authentication, Google returns an authorization code
4. **Token Exchange**: The application exchanges the authorization code for access and refresh tokens
5. **Resource Access**: Using the access token, the application can now access the user's Google Calendar to retrieve events
6. **Response Processing**: Calendar data from Google is processed and results are returned to the user

Framework-Agnostic Implementation

AgentCore Outbound Auth works with multiple agentic frameworks

Try it out

At an AWS Event

If you are following the workshop via workshop studio, now go to JupyterLab in SageMaker Studio. In the JupyterLab UI navigate to `03-AgentCore-identity/05-Outbound_Auth_3lo/runtime_with_strands_and_egress_3lo.ipynb`

Self-paced

Here's a notebook that lets you try out the above: Outbound Auth with Google 3LO Example 🔗.

🔗 Congratulations!

You have successfully implemented Outbound Auth for your AgentCore Runtime agent using user-delegated access with Cognito and 3-legged OAuth flow with Google. You learned how to:

ⓘ Event ends in 18 hours 28 minutes.   ✕

Your completed implementation demonstrates how AgentCore Identity simplifies secure external service integration while maintaining the highest security standards.

Previous   Next