Google Cloud

End to end (E2E) testing

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Three types of E2E testing

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Modular testing in Conversational Agents

Definition

Modular testing focuses on individual flows within the agent in Conversational Agents. It tests the functionality and logic of specific flows without considering the entire agent's context.

Scope

- Limited to specific flows within the agent.
- It focuses on the internal logic and responses within a single flow.

Purpose

- To validate the logic and performance of individual flows.
- Ideal for testing specific features or updates in isolation.

Process

Involves testing a flow from its start to its end, including the handling of intents, fulfillment, and transitions within the flow.

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Focused Journey tests simulate specific user paths through a system using controlled inputs and responses, isolating features for targeted testing.

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These tests center on a single feature, critical process, or limited set of interactions within a user journey.

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- Provide early feedback on specific journeys, even with incomplete systems.
- Isolate problems within workflows for targeted debugging.

Process

1. Select a user journey.
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- Targeted feedback for critical features.
- Isolation from other system issues.
- Wider scenario coverage due to ease of setup
- Faster to execute.

Considerations

- Mock accuracy: The test's validity depends on how well your simulations replicate real-world dependencies and responses.
- Maintenance: Simulators and mocks need to be updated as the system or its dependencies evolve.

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Definition

Full stack testing is the most comprehensive stage of end to end testing.
Every aspect of the agent design from intent recognition to systems integration testing is covered in this stage.

Scope

Encompasses all layers of the technology stack involved in the customer journey including integration with backend fulfillment systems.

Purpose

The final stage of testing by the agent development team to ensure the agent is ready for User Acceptance Testing by the customer and ultimately production launch.

Process

- Combine all of the test cases for all CUJ's handled by the agent.
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Advantages

- Improved user experience.
- Enhanced overall software quality.
- Ensures agent is ready for user acceptance testing and production launch upon customer sign off.

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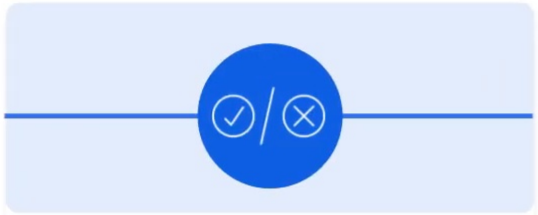
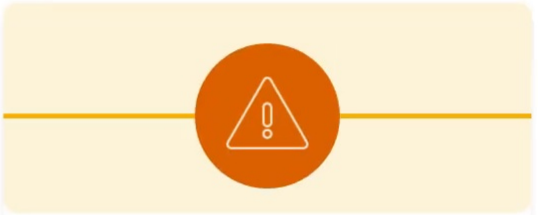


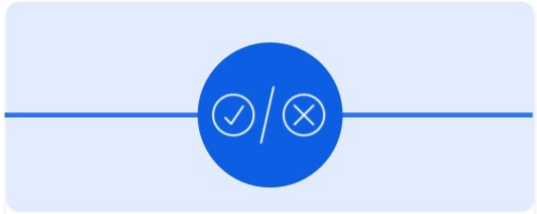
No-match

No-input



Webhook failures

Understanding fallback scenarios



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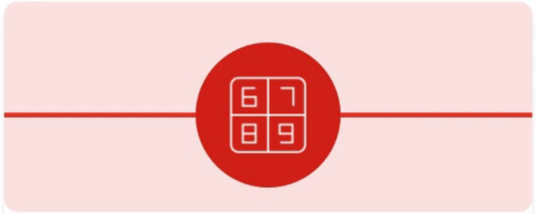

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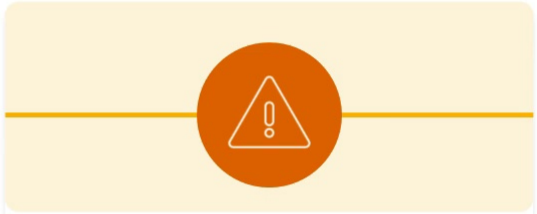

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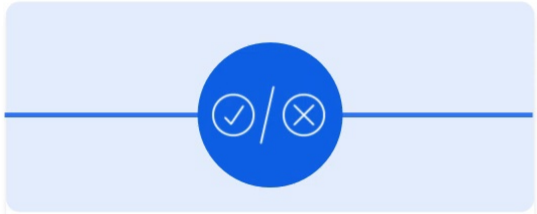

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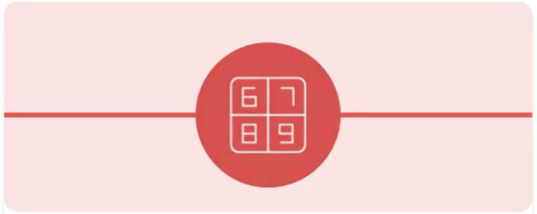

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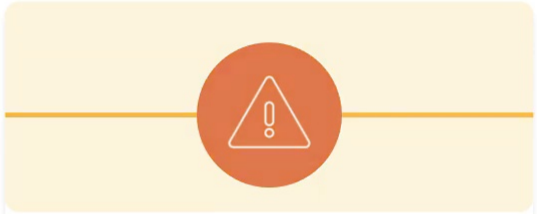

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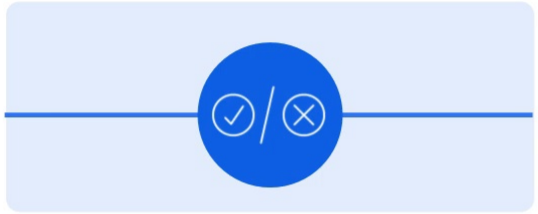

No-match

No-match scenarios occur when a user's input does not match any of the defined intents in your agent.

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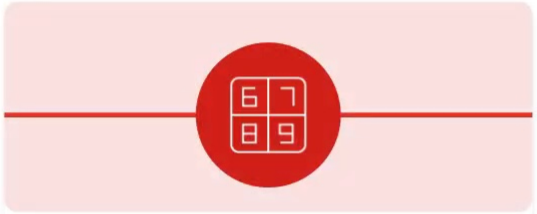

No-inputs happen when there is no user input, perhaps due to user distraction or confusion.

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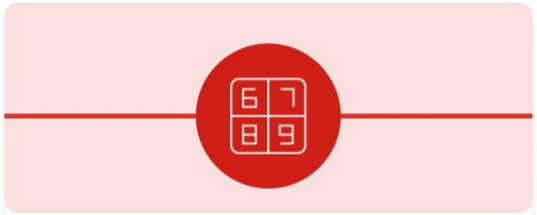

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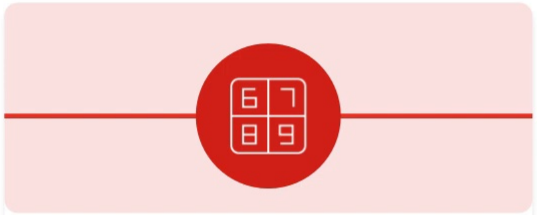

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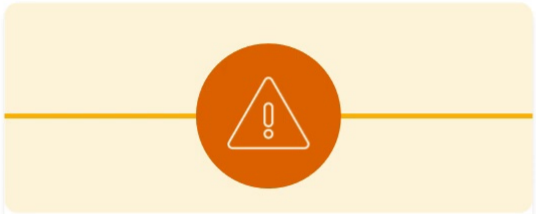

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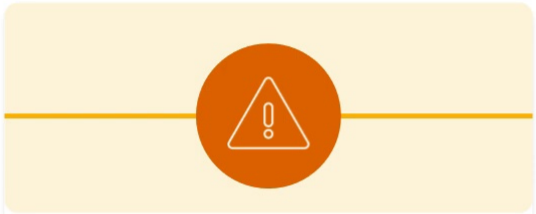

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Testing no-match scenarios

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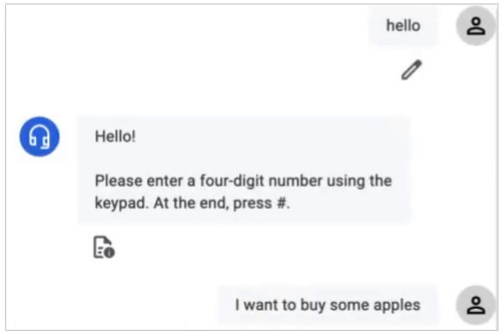
Creating scenarios where user inputs are intentionally out of scope.



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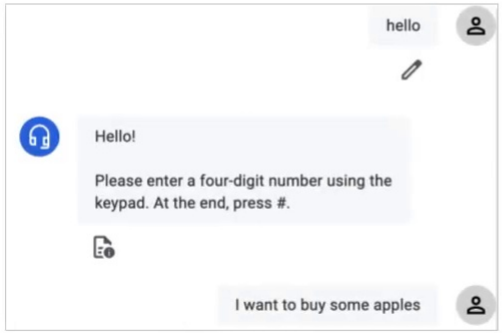

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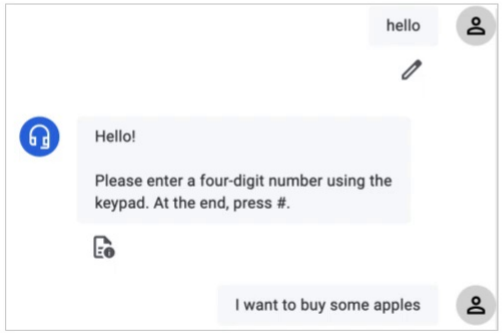

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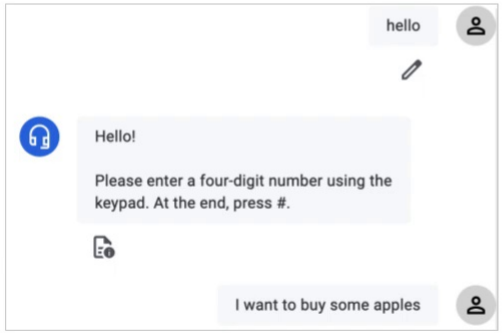

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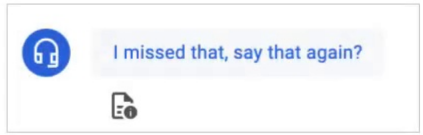

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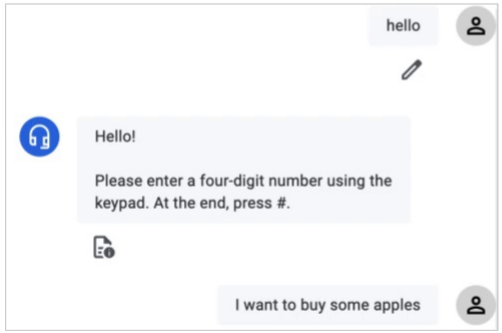

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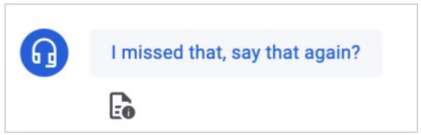

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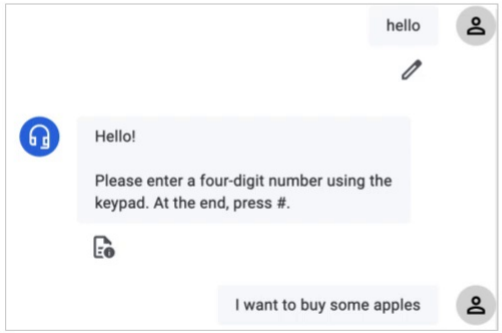

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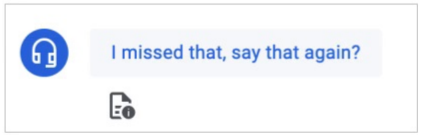

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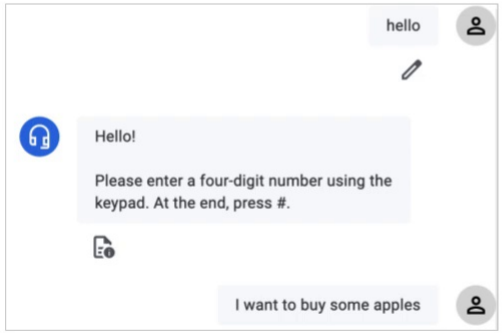

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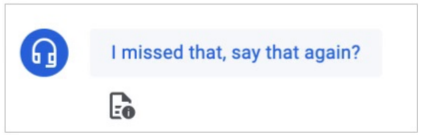

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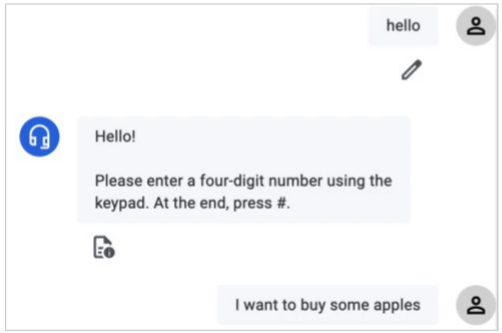

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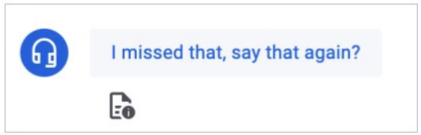

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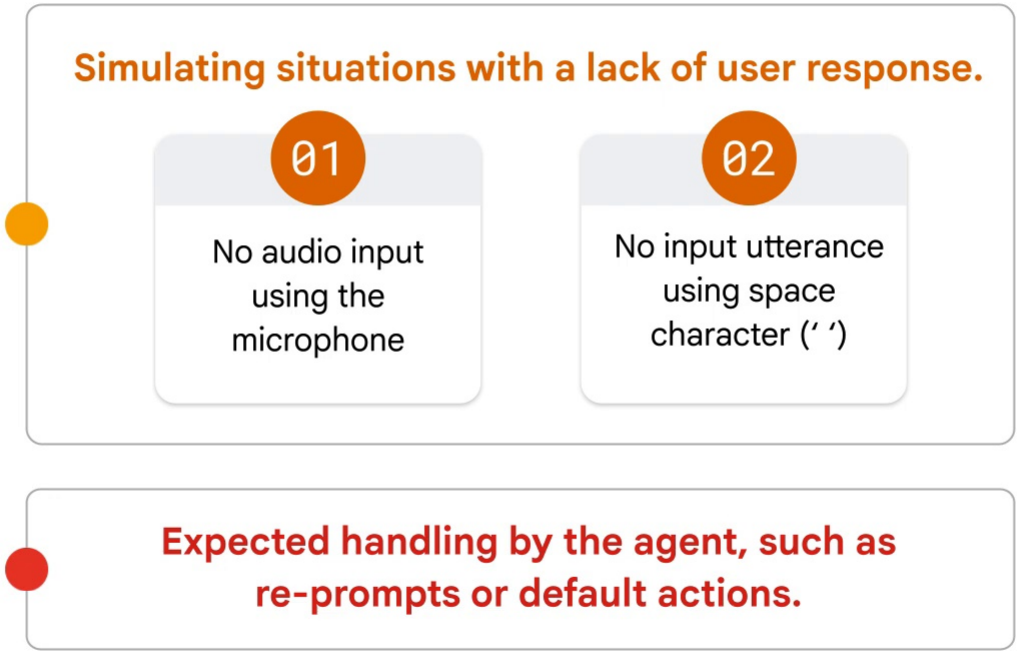

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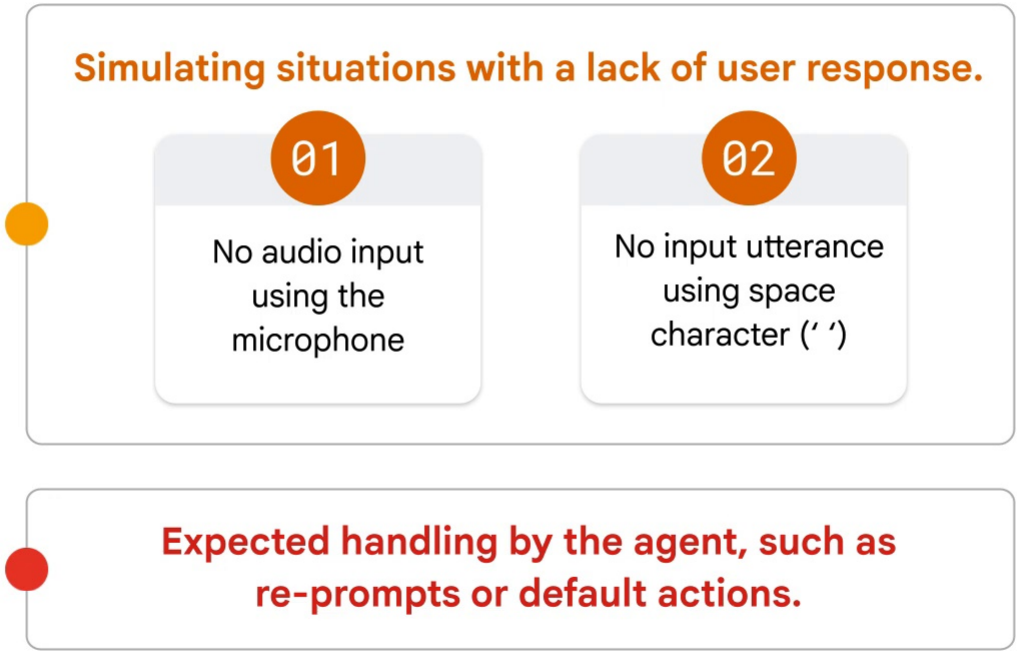
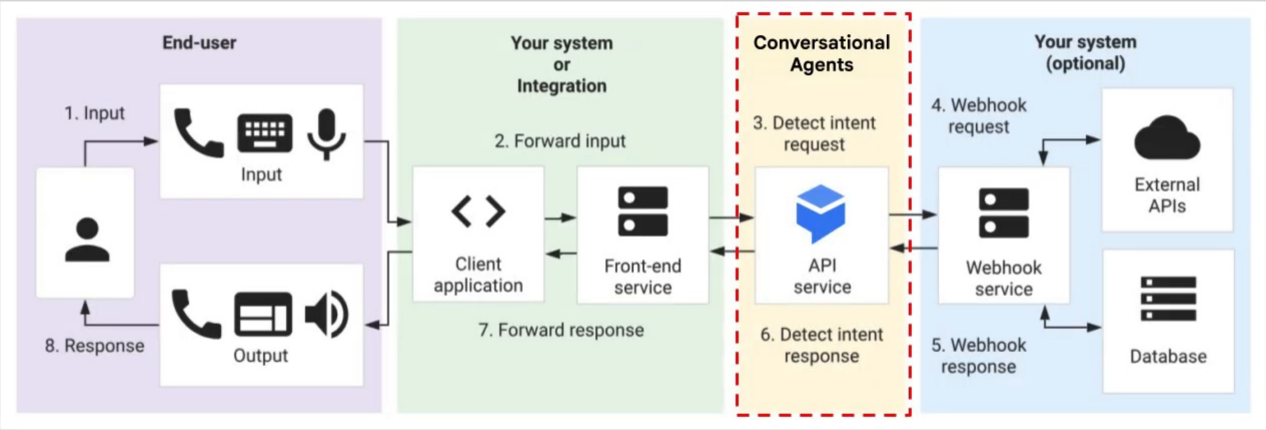


Testing webhook failure scenarios



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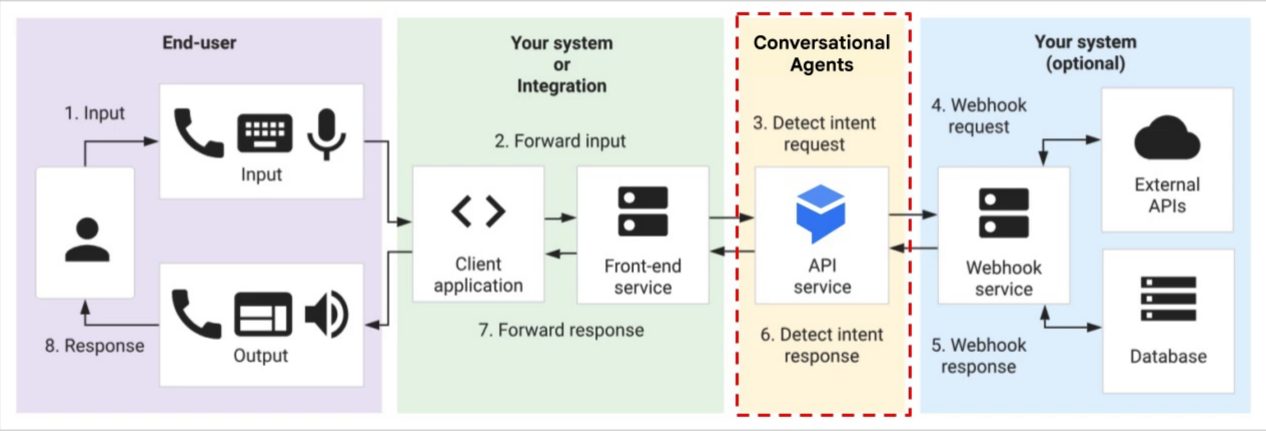

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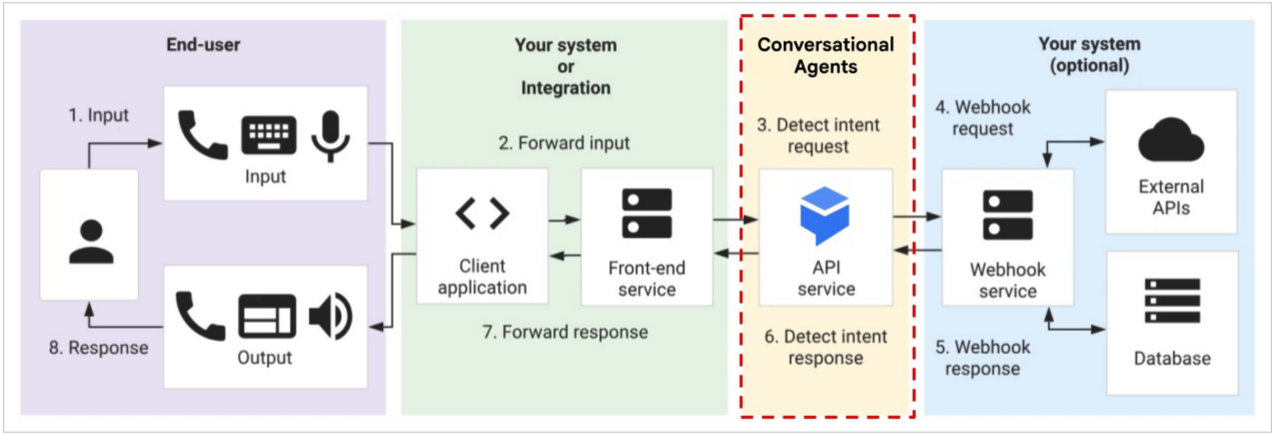

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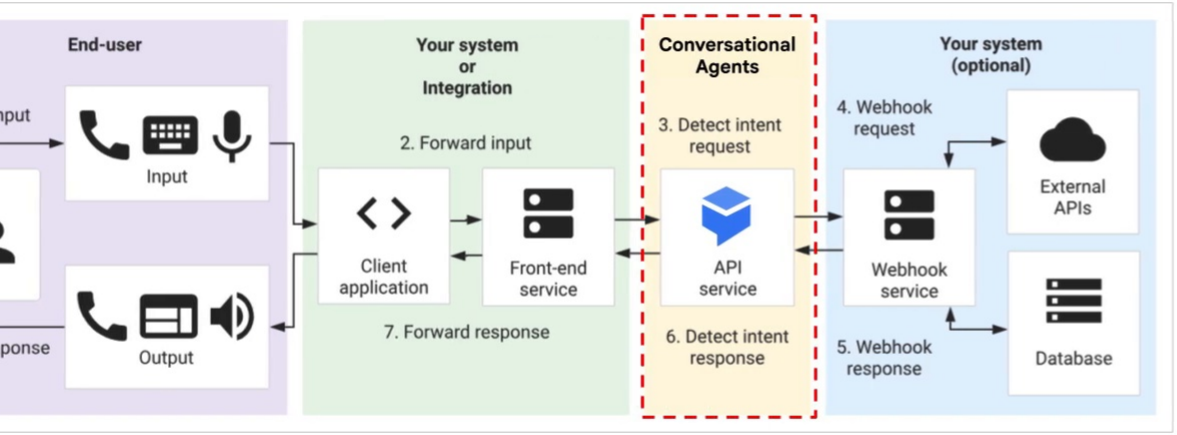

E2E Testing

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E2E Testing: Best practices

New page updates

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Multiple access paths

If a new page has several access points, create test cases covering each path to ensure all routes to the page work flawlessly.


Google Cloud