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REFERENCE ARCHITECTURE · PNX-RA · 817

Agent Assist on Amazon Connect + Bedrock

End-to-end reference for shipping real-time agent assist on Amazon Connect using AWS Bedrock foundation models — streaming transcript, retrieval, prompt orchestration, safety filters, CRM write-back and a repeatable Terraform pattern.

PREPARED FOR

CX Solution Architect, Head of Contact Center Platforms, VP Engineering

PREPARED BY

pronix.ai CX Engineering, Contact Center AI architects

EDITION

Updated Q1 2026 · 10 min read · 18-page PDF + diagrams

STRATEGY · IMPLEMENTATION · TALENT pronix.ai/resources

EXECUTIVE SUMMARY

Agent Assist on Amazon Connect + Bedrock

End-to-end reference for shipping real-time agent assist on Amazon Connect using AWS Bedrock foundation models — streaming transcript, retrieval, prompt orchestration, safety filters, CRM write-back and a repeatable Terraform pattern.

What you'll take away

- The streaming transcript path — Contact Lens, Kinesis, Lambda, Bedrock
- Retrieval design — OpenSearch, Bedrock KB, or Kendra — with quality trade-offs
- Prompt orchestration patterns and guardrail placement
- CRM write-back for Salesforce Service Cloud and Dynamics 365
- A Terraform module structure you can copy
- SLOs and observability signals to run agent assist in production

Audience: CX Solution Architect, Head of Contact Center Platforms, VP Engineering

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02	Retrieval layer	Choice between OpenSearch, Bedrock Knowledge Bases, and Kendra — with an evaluation harness to pick.
03	Prompt orchestration	System, task, tool and guardrail prompts; caching, batching, provider failover to Anthropic on Bedrock.
04	CRM write-back	Service Cloud + Dynamics 365 patterns for summary, disposition, next-best-action.
05	Terraform blueprint	Module layout, environments, cost tags, secret handling.

SECTION 01

Streaming transcript

Contact Lens → Kinesis → Lambda; latency budgets, chunking, and PII redaction upstream.

In our engagements, the practical work in this section usually breaks down into three deliverables: the streaming transcript path — contact lens, kinesis, lambda, bedrock.

Enterprise outcomes here come from production discipline, not slideware. Named owners, shipped guardrails, evaluation harnesses in CI and instrumented unit economics turn a promising pilot into a portfolio the board is willing to fund again next year.

SECTION 02

Retrieval layer

Choice between OpenSearch, Bedrock Knowledge Bases, and Kendra — with an evaluation harness to pick.

In our engagements, the practical work in this section usually breaks down into three deliverables: retrieval design — opensearch, bedrock kb, or kendra — with quality trade-offs.

Treat this as a reference, not a recipe. The layer boundaries matter more than the specific products you pick — a clean seam between orchestration, tools, memory and evaluation is what lets you swap providers as pricing, model quality and regulatory posture shift over the next 18 months.

WHAT GOOD LOOKS LIKE

Retrieval design — OpenSearch, Bedrock KB, or Kendra — with quality trade-offs

SECTION 03

Prompt orchestration

System, task, tool and guardrail prompts; caching, batching, provider failover to Anthropic on Bedrock.

In our engagements, the practical work in this section usually breaks down into three deliverables: prompt orchestration patterns and guardrail placement.

Enterprise outcomes here come from production discipline, not slideware. Named owners, shipped guardrails, evaluation harnesses in CI and instrumented unit economics turn a promising pilot into a portfolio the board is willing to fund again next year.

SECTION 04

CRM write-back

Service Cloud + Dynamics 365 patterns for summary, disposition, next-best-action.

In our engagements, the practical work in this section usually breaks down into three deliverables: crm write-back for salesforce service cloud and dynamics 365.

Enterprise outcomes here come from production discipline, not slideware. Named owners, shipped guardrails, evaluation harnesses in CI and instrumented unit economics turn a promising pilot into a portfolio the board is willing to fund again next year.

WHAT GOOD LOOKS LIKE

CRM write-back for Salesforce Service Cloud and Dynamics 365

SECTION 05

Terraform blueprint

Module layout, environments, cost tags, secret handling.

In our engagements, the practical work in this section usually breaks down into three deliverables: a terraform module structure you can copy.

Enterprise outcomes here come from production discipline, not slideware. Named owners, shipped guardrails, evaluation harnesses in CI and instrumented unit economics turn a promising pilot into a portfolio the board is willing to fund again next year.

FREQUENTLY ASKED

Questions from enterprise buyers

Do we need Contact Lens?

Yes for streaming transcripts. The playbook covers an alternate self-managed transcription path if Contact Lens isn't available in your region.

TURN THIS INTO A DECISION

Book a 30-minute working session.

Bring your platform, data, seats and delivery constraints. A pronix.ai strategy or CX engineering lead will walk this document through with your team and adapt it — no slideware, no generic playbook.

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