

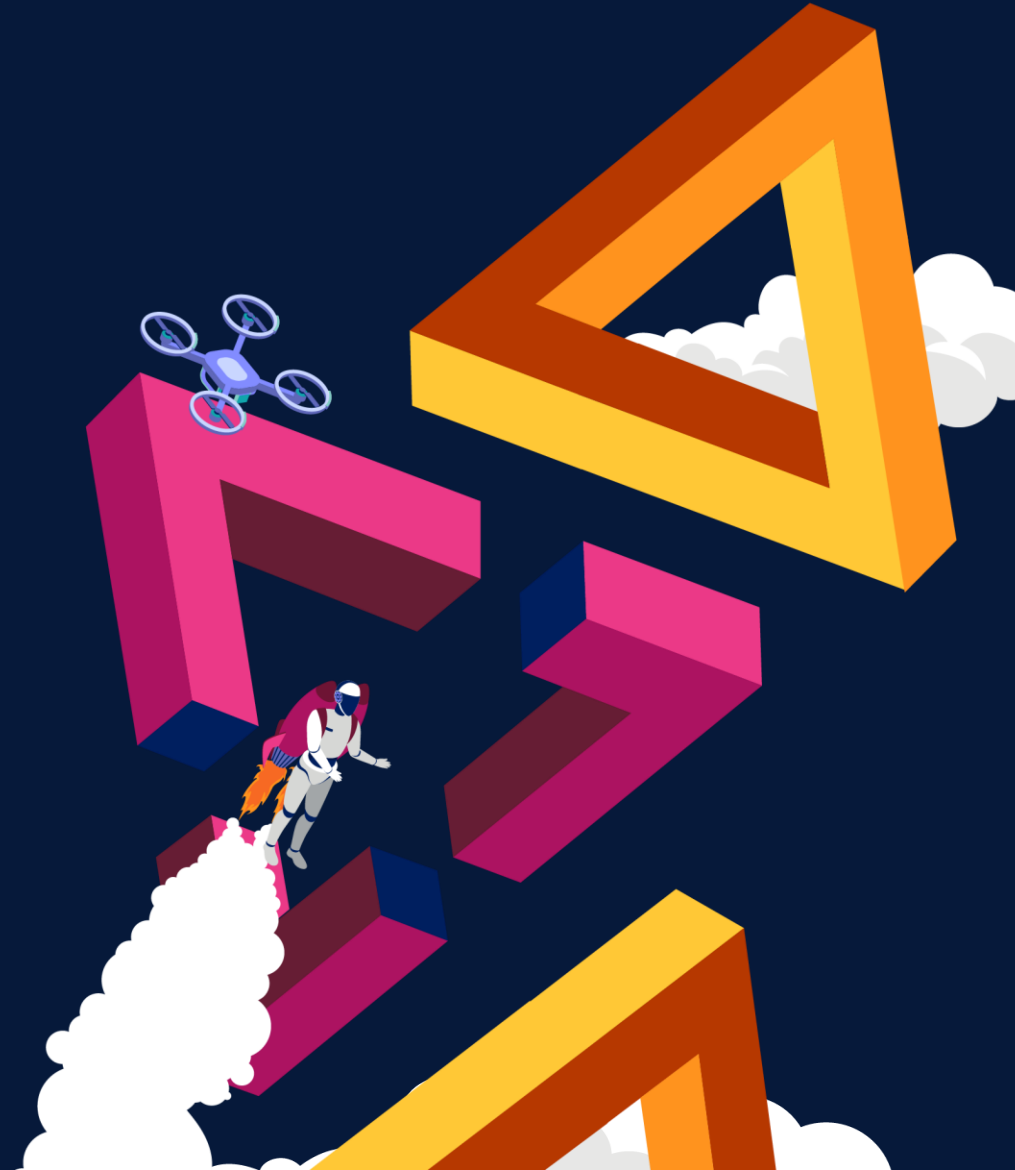


JUNE 1-3, 2025 | LAS VEGAS

Unleashing the Power of Pega Cloud

A Deep Dive into our Scalable Architecture built on Kubernetes

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The Pega Cloud Resume

What we offer on Pega Cloud



**36 global
regions**



**16+ compliance
certifications**



**30,000+ compute
instances**



**At least 1
update every
20 minutes,
24x365**



**Layered
Security and
Isolation with
best-in-class
encryption**



**Multi-Zone High
Availability and Data
redundancy**



**10+ years of
experience in
running mission
critical apps on cloud**



**Multi-Cloud,
Runs on AWS
and GCP**



Dave Casavant

Senior Director,
Cloud Architecture, Performance & Quality



Kamil Dudek

Fellow Cloud Architect
GenAI & Backing Services



Pega's as-a-Service Timeline



2011

Cloud 1

- Targeted to improve ROI over client-managed software.
- Focused on security, reliability, and integrations.



2015

Cloud 2

- Containerized Infinity deployments.
- Focused on operational consistency across the fleet.



2023

Cloud 3

- Embraces industry-standard container orchestration and microservices for a more resilient service offering.
- Focused on improved scalability through technologies like autoscaling.

Pega Cloud 3

Improved scalability

Seamless scalability, beyond even peak usage

Enhanced fault tolerance

Autonomously recover and restore services

Independent service updates

Increased change velocity, latest functionality and security

Future-proofed capabilities

Multi-cloud (AWS, GCP), GenAI, Enhanced DR and more

State-of-the-art delivery

Expanded infrastructure as code capabilities to improve operational efficiency and increase service reliability



**Pega Cloud is a
microservices
architecture**

Pega Cloud Architecture

Management Plane

Control Plane

Infrastructure

Security

Observability

Infrastructure Partner
(Amazon AWS or Google GCP)

Pega Cloud Architecture

Management Plane

An orange rectangular block with a 3D yellow geometric shape on its right side.

Control Plane

A pink rectangular block with a 3D pink geometric shape on its right side.

Infrastructure

A dark blue rectangular block with a 3D dark blue geometric shape on its right side.

Security

Observability

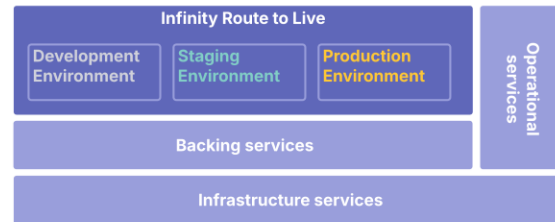
Infrastructure Partner
(Amazon AWS or Google GCP)

Infrastructure Partner (AWS, GCP)

Region

Client VPC

Client Kubernetes Cluster



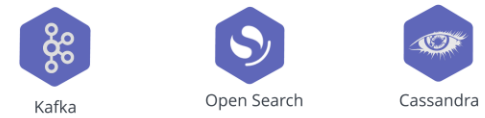
Database



File Storage



Backing Technology



GenAI Partner (AWS, GCP, Azure)

Region

Shared VPC



Infrastructure Partner (AWS, GCP)

Region

Client VPC

Client Kubernetes Cluster

Infinity Route to Live

Development
Environment

Staging
Environment

Production
Environment

Operational
services

Backing services

Infrastructure services

Infrastructure Partner (AWS, GCP)

Region

Client VPC

Client Kubernetes Cluster

Infinity Route to Live

Development
Environment

Staging
Environment

Production
Environment

Operational
services

Backing services

Infrastructure services

Infrastructure Partner (AWS, GCP)

Region

Client VPC

Client Kubernetes

Development
Environment

Staging
Environment

Production
Environment

Backing services

Infrastructure services

Operational
services

Infinity Environment

Web Tier



Background Tier



Infrastructure Partner (AWS, GCP)

Region

Client VPC

Backing services

Search & Reporting



GenAI Gateway



GenAI Assistant



GenAI Vector Store



Operational
services

Backing services

Infrastructure services

Infrastructure Partner (AWS, GCP)

Region

Client VPC

Client Kubernetes Cluster

Operational services

Infinity operations



Database operations



Infinity configurations



Kafka operations



Infinity upgrades



OpenSearch operations



Database upgrades



Cassandra operations



Operational
services

Infrastructure services

Infrastructure Partner (AWS, GCP)

Region

Client VPC

Client Ku

Deve
Envi

Infrastructure services

Isolation



Ingress & Egress



Traffic encryption



Security policies



Service Mesh



Priority classes



Autoscaling

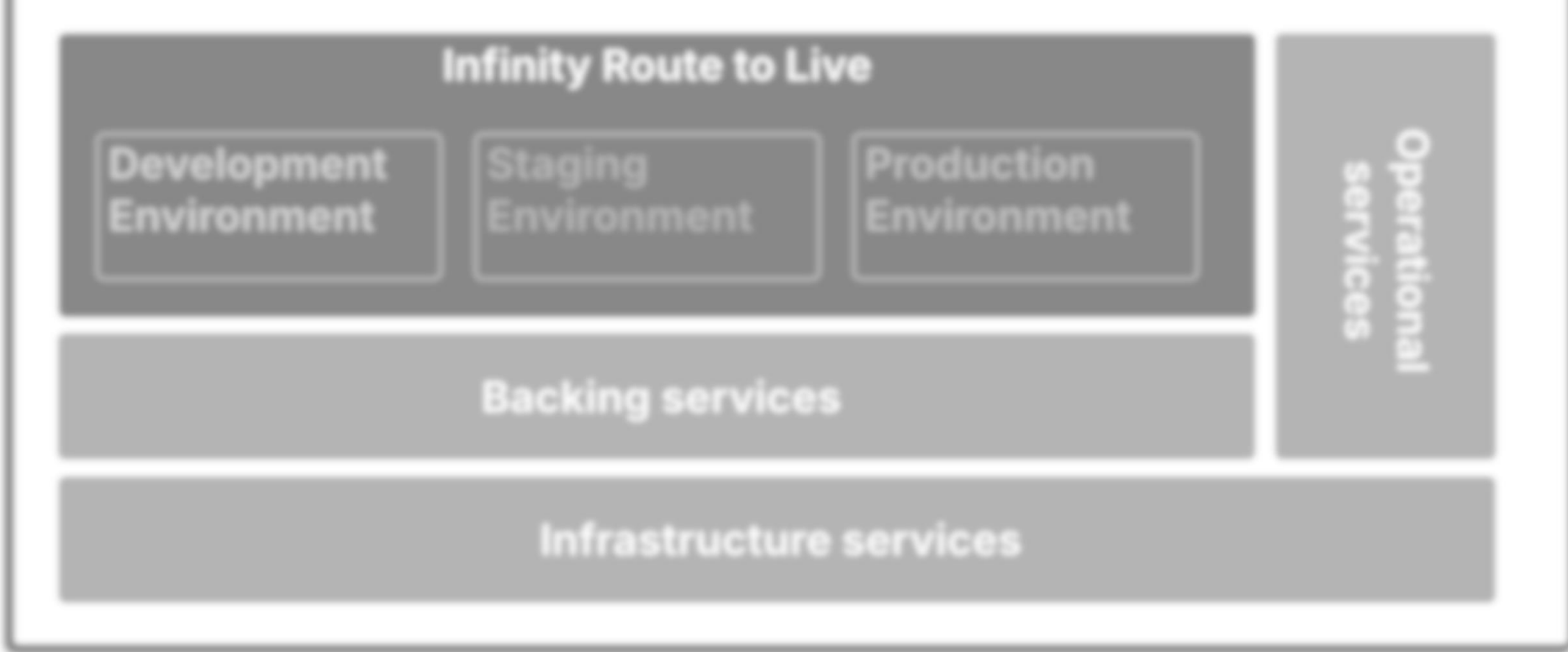


Telemetry

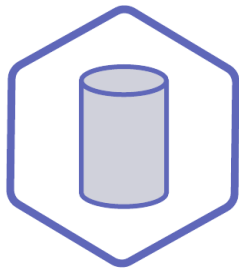


Operational
services

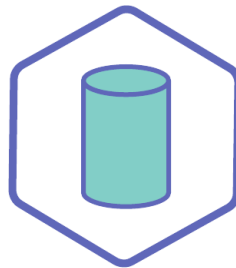
Infrastructure services



Database



Development



Staging



Production

Infinity Route to Live

Availability Zone 1

Availability Zone 2

Availability Zone 3

Database



Encrypted



Primary endpoint

Primary Route



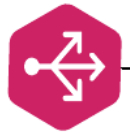
Primary

Synchronous Replication



Standby

Failover Route



Read-Only endpoint

Primary Route



Read replica

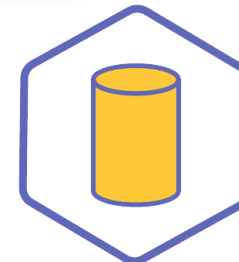
Data



Development



Staging



Production

Operational services

Development

Staging

Production

File Storage



Development



Staging



Production

Backing Technology



Kafka



Open Search



Cassandra



Kafka



Open Search



Cassandra

GenAI Partner (AWS, GCP, Azure)

Region

Shared VPC



OpenAI



Anthropic



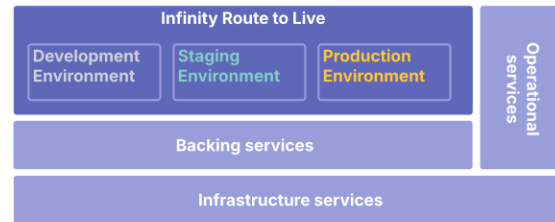
Gemini

Infrastructure Partner (AWS, GCP)

Region

Client VPC

Client Kubernetes Cluster



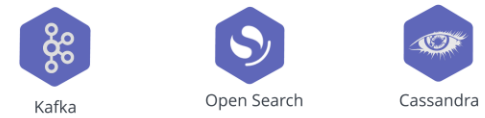
Database



File Storage



Backing Technology



GenAI Partner (AWS, GCP, Azure)

Region

Shared VPC



Pega Cloud Architecture

Management Plane

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Security

Observability

Infrastructure Partner
(Amazon AWS or Google GCP)

Control Plane

Orchestration Service



Service Catalog



Internal Data Plane



Provisioning Service



Control Plane

Orchestration Service



Service Catalog



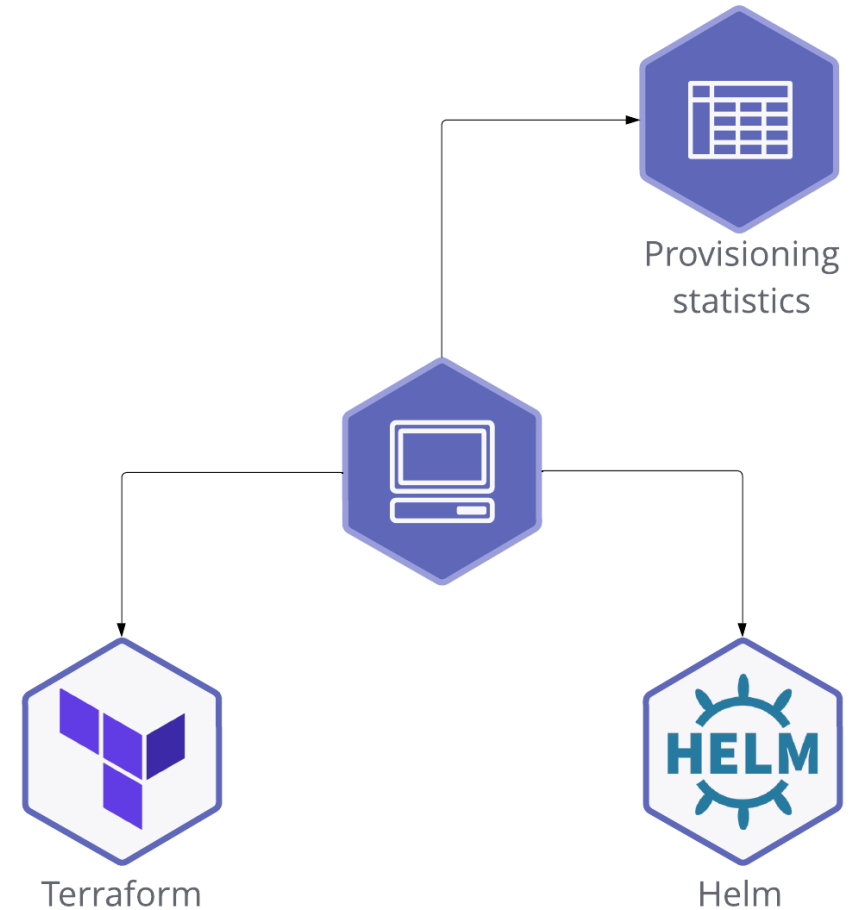
Internal Data Plane



Provisioning Service



Provisioning Service



Internal Data Plane

Identifier	Service Name	Service Version	Parameters
ad484cc8-2381-42eb-8878-773c57a44f5d	KuberentesCluster	1.3.0	Provider=EKS;...
0132503f-f038-466a-b221-3563c0bd80ee	Database	5.8.1	PostgresVesion=17.2;...
b92419ab-ca7e-4789-b287-fa47cbd41a47	Environment	9.1.3	PegaVersion=25.1;...

Internal Data Plane



Provisioning Service



Control Plane

Orchestration Service



Service Catalog



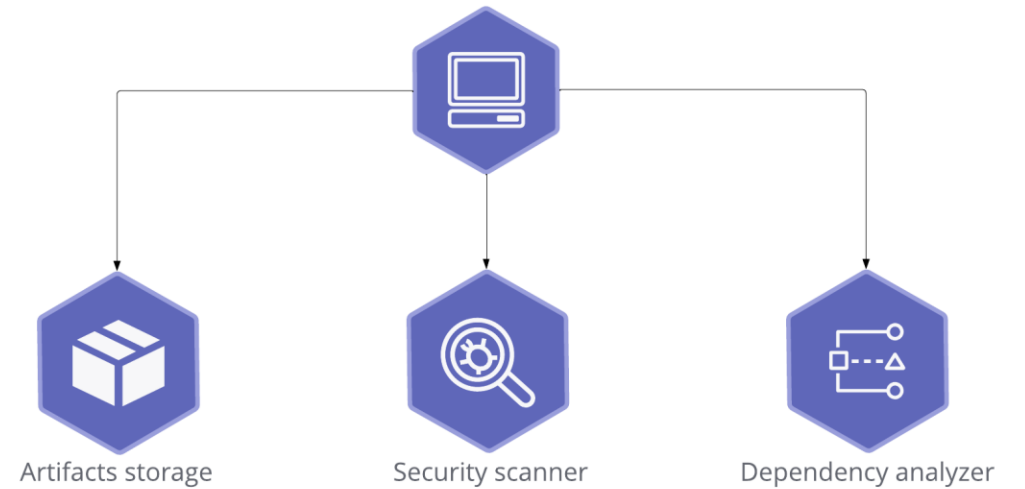
Internal Data Plane



Provisioning Service



Service Catalog



Control Plane

Orchestration Service

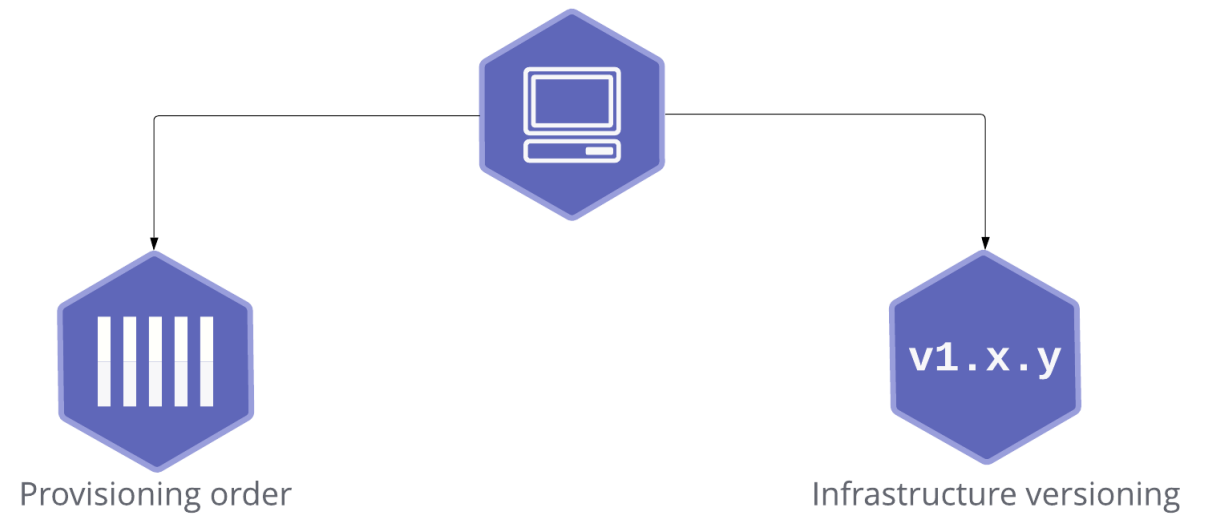


Service Catalog

Internal Data Plane

Provisioning Service

Orchestration Service



Control Plane

Orchestration Service



Service Catalog



Internal Data Plane



Provisioning Service



Pega Cloud Architecture

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Observability

Infrastructure Partner
(Amazon AWS or Google GCP)

Management Plane

My Pega Cloud



Global Operations Center



My Support Portal



Pega Diagnostic Center



Deployment Manager



Cloud Commercial Service



My Pega Cloud

- **My Pega Cloud** provides a seamless client self-service experience.
- Offers a one-stop solution to restart environments, download/analyze log files, and view scheduled maintenances etc.,
- Empowers users to manage environments effectively and keep current by initiating perform updates, ensuring the best experience with Pega Cloud Services.

The screenshot displays the 'My Pega Cloud' interface. At the top, the PEGA MPC logo is visible. Below it, the header 'My Pega Cloud' is followed by 'Pega Cloud 3'. A purple search bar contains the text 'Pega GenAI | Pega Cloud Buddy' and a search query 'how to enable Pega GenAI to my subscription'. Below the search bar, a light gray box titled 'How to enable Pega GenAI to my subscription?' provides instructions: 'To enable Pega GenAI in your subscription, please follow these steps: 1. Contact your Pega account representative to discuss adding Pega GenAI capabilities to your subscription. 2. Pega will work with you to meet the prerequisites for enabling Pega GenAI in Pega Cloud. 3. After the prerequisites are met, Pega will incorporate Pega GenAI capabilities into the terms of your subscription. 4. Once enabled, you can connect your application to generative AI in App Studio. For more detailed information, you can visit the Pega GenAI documentation.' Below this, a 'Sources' section lists 'Enabling Pega GenAI in Pega Cloud'. A 'Rate this response' section shows '174 Users'. To the right, there are three cards: 'us-east-1' with 'View Project level details like Static IPs, SFTP IPs etc.', 'Infinity 8.7.0-103' with '24.2.0 Available' and a 'What's new' link, and a 'Resources' section with links to 'My Pega Cloud', 'Pega AI in Pega Cloud', 'Deployment Manager', 'Connectivity and Access Management', 'Pega Diagnostic Center', and 'Coming soon to Pega Cloud 3'.

PEGA MPC

My Pega Cloud

Pega Cloud 3

Pega GenAI | Pega Cloud Buddy ⓘ

how to enable Pega GenAI to my subscription →

How to enable Pega GenAI to my subscription?

To enable Pega GenAI in your subscription, please follow these steps:

1. Contact your Pega account representative to discuss adding Pega GenAI capabilities to your subscription.
2. Pega will work with you to meet the prerequisites for enabling Pega GenAI in Pega Cloud.
3. After the prerequisites are met, Pega will incorporate Pega GenAI capabilities into the terms of your subscription.
4. Once enabled, you can connect your application to generative AI in App Studio.

For more detailed information, you can visit the [Pega GenAI documentation](#).

Sources

- ✦ [Enabling Pega GenAI in Pega Cloud](#)

Rate this response 👍 👎

174
Users

us-east-1
View Project level details like Static IPs, SFTP IPs etc.

Infinity 8.7.0-103
24.2.0 Available [What's new](#)

Resources ⓘ

- [My Pega Cloud](#)
- [Pega AI in Pega Cloud](#)
- [Deployment Manager](#)
- [Connectivity and Access Management](#)
- [Pega Diagnostic Center](#)
- [Coming soon to Pega Cloud 3](#)



PU-10507



pdck-dt 8.24.51 Platform Update

Actions

Account type	Production
Environment Name	pdck-dt
PAC ID	C6010A
Account name	Cloud Systems - PDC
Project Name	PDC - CloudK Dev
Source pega build version	8.23.2
Target pega version	24.2.1
Target pega build version	8.24.51
SR ID	CM-C22290
Master SR	CMD-B235
Initiated from	MPC
Initiated by	REG-281186
SOP Document	Minor update guide
Created	MPCCloudKGOCAPIUser 16 days ago
Updated	Agent(System-Queue-ServiceLevel.ProcessEvent) 8 days ago

Details

Environment details

Manual Interventions

Pulse

Pre Update Details

	Task Name	Status	Start Time	End Time
	Dry Run	Completed	Apr 22, 2025 5:35:51 AM	Apr 22, 2025 5:38:13 AM
	Create catalog Entry	Completed	Apr 22, 2025 5:38:13 AM	Apr 22, 2025 5:38:18 AM
	Pre schedule validation	Completed	Apr 22, 2025 5:38:18 AM	Apr 22, 2025 5:40:20 AM

Update Details

	Task name	Status	Start time	End time
	Conflict check	Completed	Apr 22, 2025 11:00:13 PM	Apr 22, 2025 11:00:13 PM
	Pre update validation	Completed	Apr 22, 2025 11:00:13 PM	Apr 22, 2025 11:02:38 PM
	Mute monitoring	Completed	Apr 22, 2025 11:18:41 PM	Apr 22, 2025 11:18:41 PM
	Update	Completed	Apr 22, 2025 11:18:49 PM	Apr 23, 2025 1:55:02 AM
	Unmute monitoring	Skipped	Apr 23, 2025 1:55:03 AM	Apr 23, 2025 1:55:03 AM
	Sync environment	Completed	Apr 23, 2025 1:55:03 AM	Apr 23, 2025 1:55:04 AM

Post Update Details

	Task name	Status	Start time	End time
	Post update validation	Completed	Apr 23, 2025 1:55:04 AM	Apr 23, 2025 1:57:10 AM
	Schema cleanup	Completed	Apr 30, 2025 1:57:11 AM	Apr 30, 2025 2:07:37 AM



0



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Pega Cloud continuous infrastructure updates

- Pega provides continuous infrastructure updates for clients to support the newest Pega Cloud infrastructure features and enhancements, including performance and security improvements.
- Continuous infrastructure updates take place without downtime, and you can continue to use your applications during this time.
- At least one update every 20 minutes, 24x7x365.

The screenshot displays the Pega Global Operations Center (GOC) interface for a specific update job. The top navigation bar includes the GOC logo and a search bar. The main header shows the job ID 'SJ-5189' and the title 'aws Production Adoption 3.36.3 Project Update Job'. Below the header, a progress bar indicates the stages: Initialization, Approve, Rollout, and Resolve, all marked with checkmarks. The 'Rollout Stages' section shows a sequence of four steps: 1. Account Services, 2. Global Controlplane Services, 3. Sample Rollouts, and 4. Client Deployments. The 'Rollout Status' section features a donut chart showing 100.00% completion and a table summarizing the status of various components.

Rollout Status	49 / 49	0	0	0
Rolled Out				
Eligible	49	0	0	0
Completed				
Cancelled	0	0	0	0
Scheduled				
Not Ready				
Failed				
In Progress				
Rejected				
Ineligible				

Pega Cloud Architecture

Management Plane

A yellow 3D geometric shape, resembling a stylized 'P' or a corner block, positioned in the bottom right corner of the orange Management Plane.

Control Plane

A pink 3D geometric shape, resembling a stylized 'P' or a corner block, positioned in the bottom right corner of the pink Control Plane. It features small blue and yellow dots and star-like shapes.

Infrastructure

A dark blue 3D geometric shape, resembling a stylized 'P' or a corner block, positioned in the bottom right corner of the dark blue Infrastructure plane. It features small yellow and orange dots and star-like shapes.

Security

Observability

Infrastructure Partner
(Amazon AWS or Google GCP)

The Pega Cloud Architecture

Keep it Simple

- Predictable solutions
- Break up complexity
- Automation for scale

Business Driven

- Durable and available
- Scalable
- Aligned to the products we offer

Well Architected

- Build for change™
- End to end agency
- Organizationally aligned with processes



PegaWorld

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