

The background features a vibrant blue gradient with subtle, wavy horizontal lines. A diagonal band of lighter blue and green stretches from the top right towards the center. The bottom right corner is dominated by a large, flowing shape in shades of purple, pink, and orange, resembling a stylized wave or a modern architectural element.

aws SUMMIT

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Untethering innovation: Financial services on AWS Cloud

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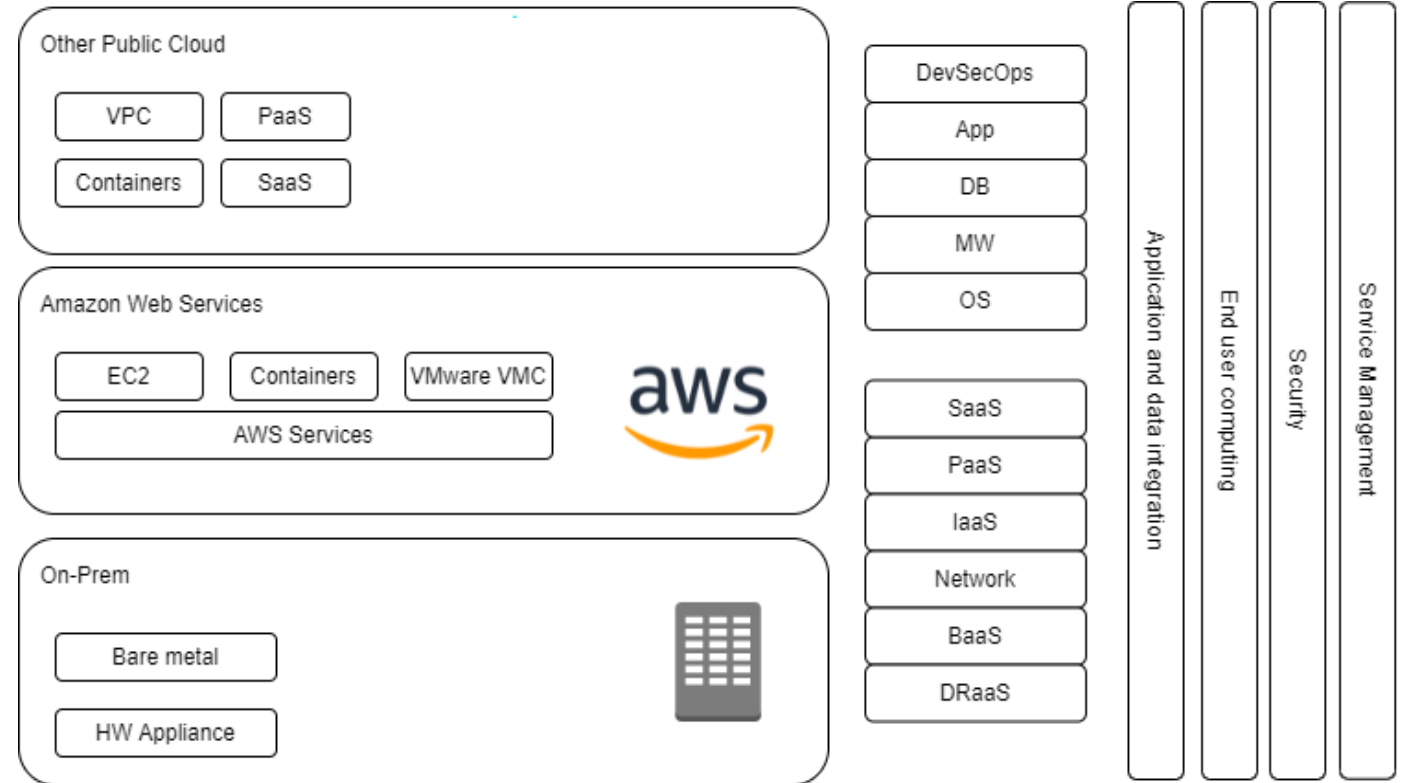
Kyndryl BFSI Client Journeys with AWS

- i. Bank on cloud with automatic infrastructure-as-code generation
- ii. Hybrid experience design for a multi-national financial services provider
- iii. Low-touch container management for a health insurer
- iv. Modernops for cloud-native app development for financial gaming



Bank on AWS cloud: Large european bank partnering with kyndryl

- ✓ Decommissioning the customer's data ~1200 workloads moved to AWS Cloud
- ✓ 20% of workloads moved natively into AWS across EC2 and EKS
- ✓ 80% workloads moved to VMC-on-AWS
- ✓ MPLS → SDWAN
- ✓ Compliance being engineered on AWS



kyndryl

aws

Low touch landing zone design with automatic infra-as-code generator [1/4]

Bank on AWS Cloud

Problem Statement

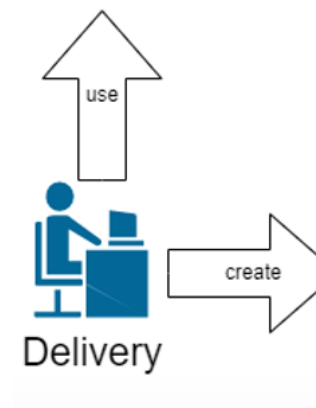
With accelerated cloud adoption, a future is upon us wherein customers **need to create and modify cloud environments on a frequent basis.**

Our customer needs to understand:

- How to remove human error
- How to enable DevOps
- How to minimize need for skills on Infrastructure as Code (IaC)
 - Terraform, ARM, CloudFormation, Crossplane.io

The approach a delivery team typically uses today

Configuration / Build sheet		
example-vm1	172.16.0.0/16	...
example-vm2	10.1.0.0/16	...

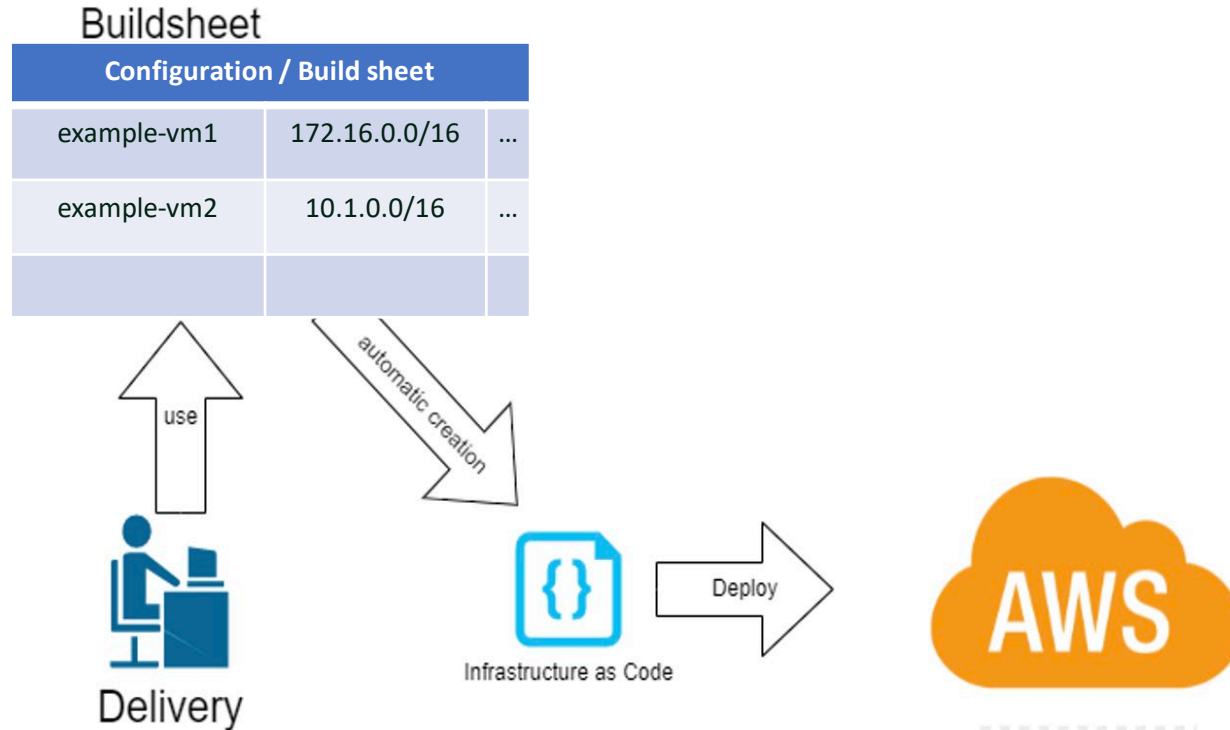


The screenshot shows the AWS console 'Create VPC' page. The 'VPC settings' section is visible, showing options for 'Resources to create' (VPC only selected), 'Name tag' (optional), 'IPv4 CIDR block' (IPv4 CIDR manual input selected), and 'IPv6 CIDR block' (No IPv6 CIDR block selected). The 'IPv4 CIDR' field is populated with '172.16.0.0/16'.

Error Prone, No DevOps

Automatic infra-as-code generator [2/4]

Buildsheet to automatic create Cloud Resources

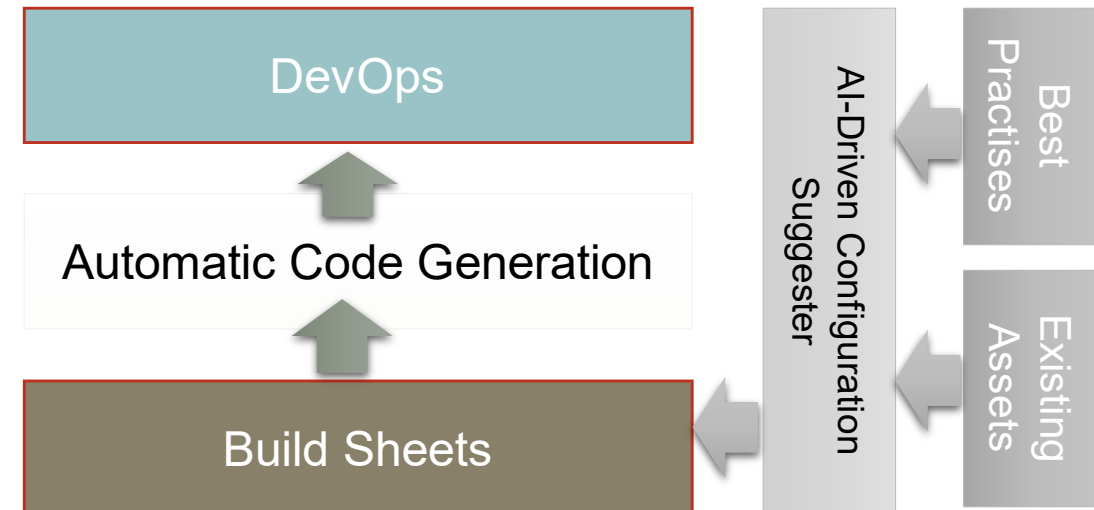


The solution is of course automation.
Our cool innovation is to generate the IaC (be it TF, CF, ARM) **automatically** from the build-sheet. Deploy on any cloud. Solution being used across customers.

Advantages:

- Minimizes the skills in IaC languages
- DevOps enabled on day 1

Architecture



Automatic infra-as-code generator [3/4]

An example build sheet capturing configuration of networks

	A	B	C
1	ref_name	cidr_block	tags
2	my_vpc1	172.16.0.0/16	Name="example-vm1"
3	my_vpc2	10.1.0.0/16	Name="example-vm2"
4			
5			
6			
7			



Generate Infrastructure as Code

```
{
  "resource": {
    "aws_vpc": [
      {
        "my_vpc1": {
          "cidr_block": "172.16.0.0/16",
          "tags": {
            "Name": "example-vm1"
          }
        }
      },
      {
        "my_vpc2": {
          "cidr_block": "10.1.0.0/16",
          "tags": {
            "Name": "example-vm2"
          }
        }
      }
    ]
  }
}
```

Automatic infra-as-code generator [4/4]

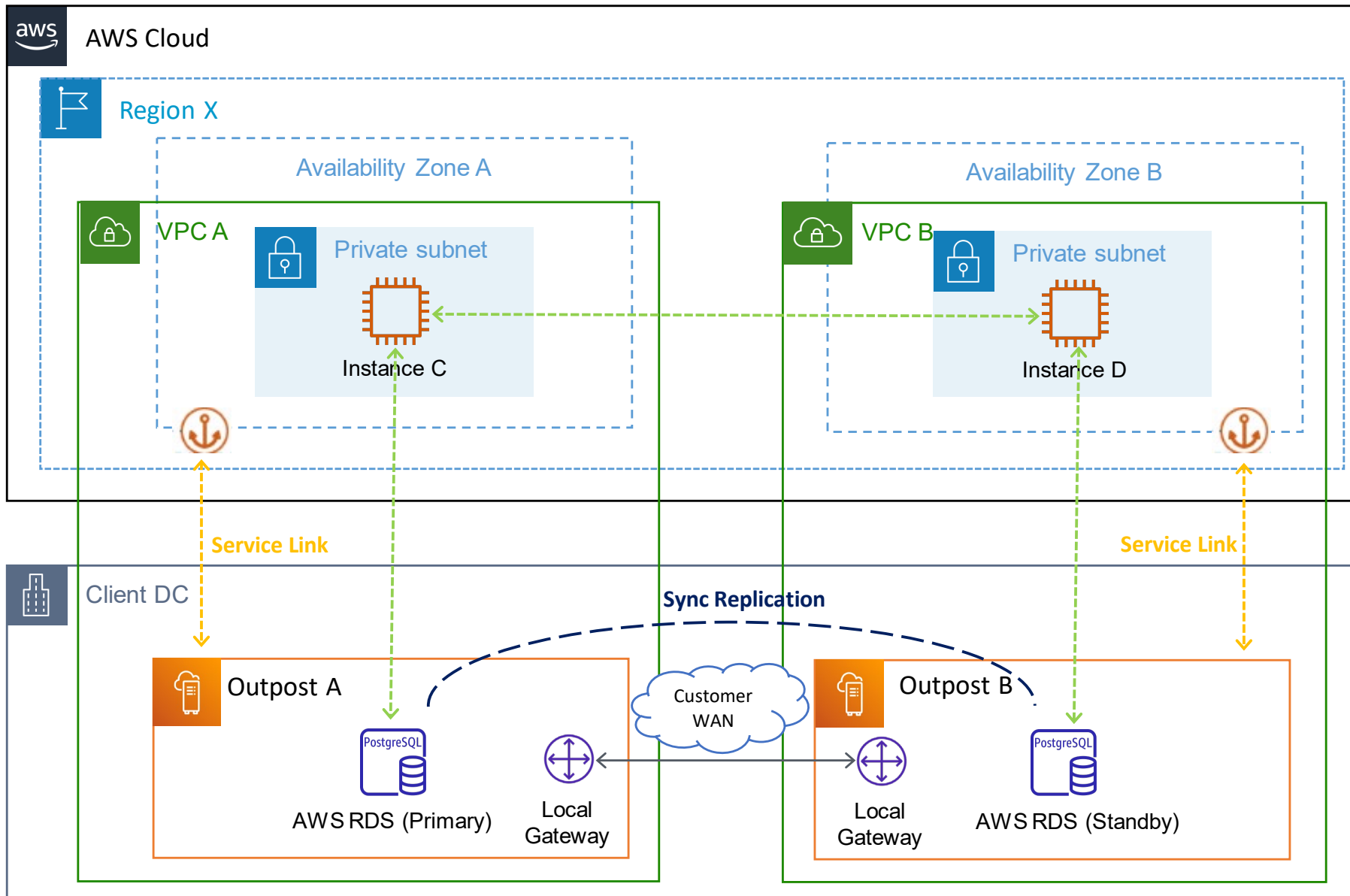
Network Resources Created in Cloud

The screenshot displays the AWS Management Console interface. At the top, the navigation bar includes the AWS logo, a 'Services' menu, a search bar with the placeholder 'Search' and a keyboard shortcut '[Alt+S]', and a 'VPC dashboard' link with a close icon. Below the navigation bar, the left-hand sidebar lists various network-related services: 'Virtual private cloud' (expanded), 'Your VPCs' (with a 'New' button), 'Subnets', 'Route tables', 'Internet gateways', 'Egress-only internet gateways', 'Carrier gateways', 'DHCP option sets', and 'Elastic IPs'. The main content area is titled 'Your VPCs (2) Info'. It features a search bar labeled 'Filter VPCs' and a 'search: ex' button with a close icon, alongside a 'Clear filters' button. Below this, a table lists the VPCs:

<input type="checkbox"/>	Name	VPC ID	State	IPv4 CIDR
<input type="checkbox"/>	example-vm1	vpc-03f4507018789737e	✓ Available	172.16.0.0/16
<input type="checkbox"/>	example-vm2	vpc-0b811f92dcfb72bf6	✓ Available	10.1.0.0/16

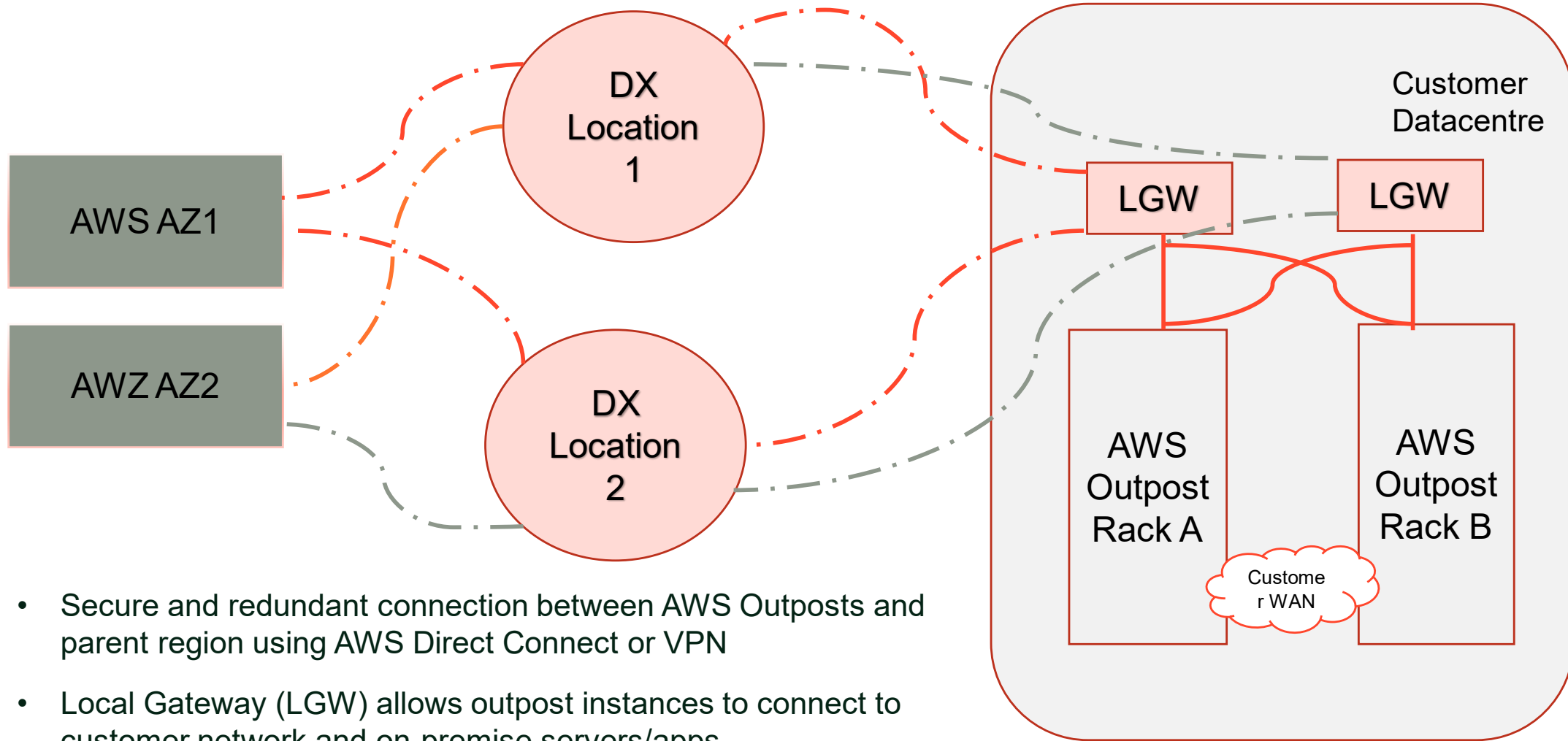
At the bottom of the main content area, there is a text prompt: 'Select a VPC above'.

Hybrid experience design for a financial services provider [1/2]



- Dual AWS Outposts architecture through two racks installed in different physically isolated sites, paired with different AZs in parent AWS Region using VPC association
- Services consumed via Outpost include EKS, RDS, S3, EC2 and EBS. In case of failure, RDS automatically promotes secondary to primary role after updating DNS records, App traffic is auto-redirected to new primary
- Local backup/DR/S3-snapshots/monitoring without going through region

Hybrid experience design for a financial services provider [2/2]



- Secure and redundant connection between AWS Outposts and parent region using AWS Direct Connect or VPN
- Local Gateway (LGW) allows outpost instances to connect to customer network and on-premise servers/apps

Container-native transformation of a health insurance provider [1/2]

The Challenge

Multiple legacy IT systems & bespoke applications. **1200 monolith apps being decomposed to microservices.**

- Consolidate & shift target solutions to cloud in alignment with regulations, competition & consumer demand
- The target environment has **600 high horsepower cluster across 25 OpenShift clusters on 3 environments** – AWS, IBM Cloud & on-premise

Solution & Delivery Approach

- **Forward-looking management** with bots, automation & self-healing
- Consistent migration in waves and immediate manage services both on cloud native containers and OpenShift container platform
- Collaborate with customer's application team – we are their extended ops team
- Collaborate with customer's security team, comply with security processes

85%

high-volume issues addressed without human intervention

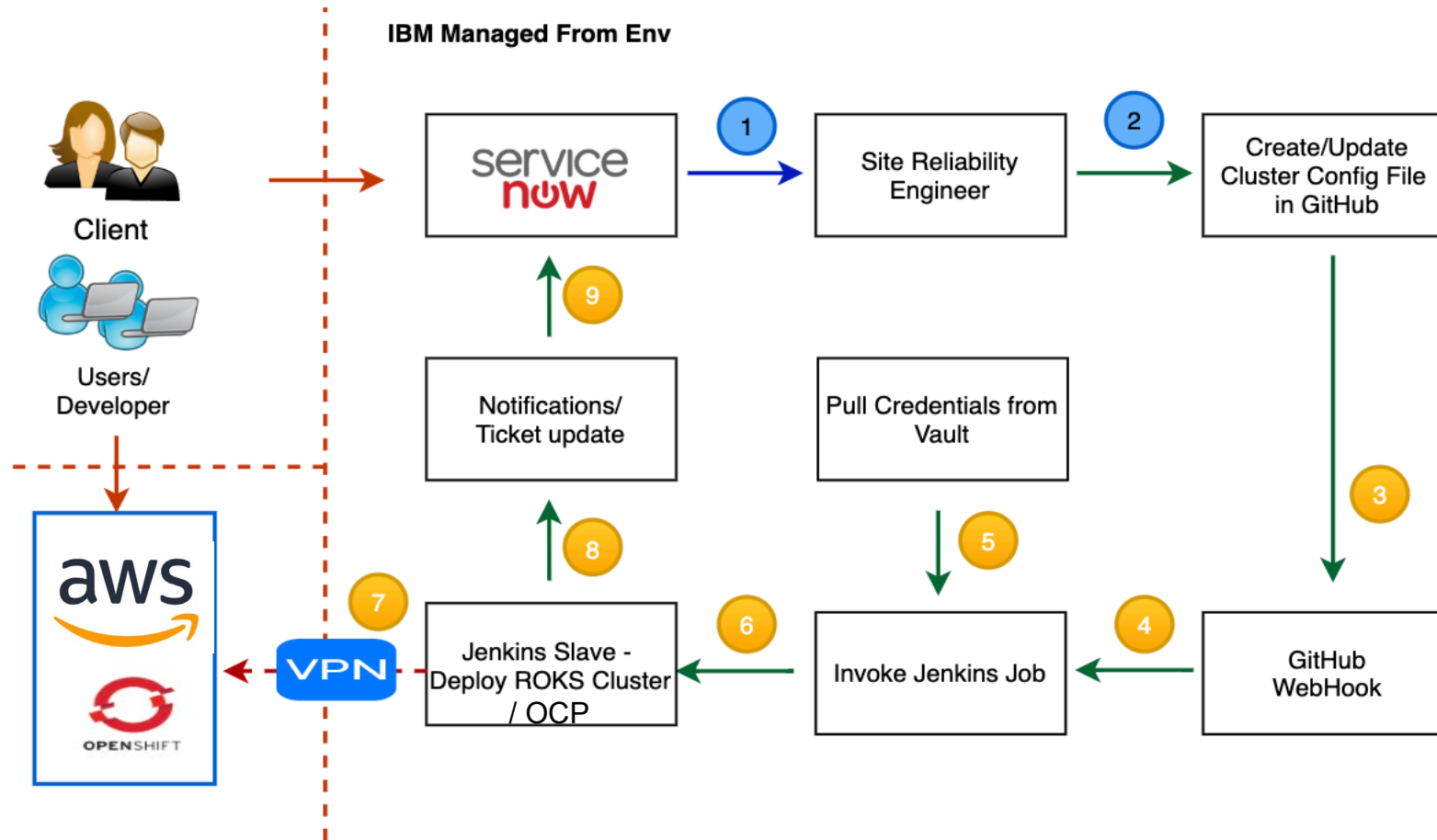
30%

workloads migrated across On-prem to cloud

25%

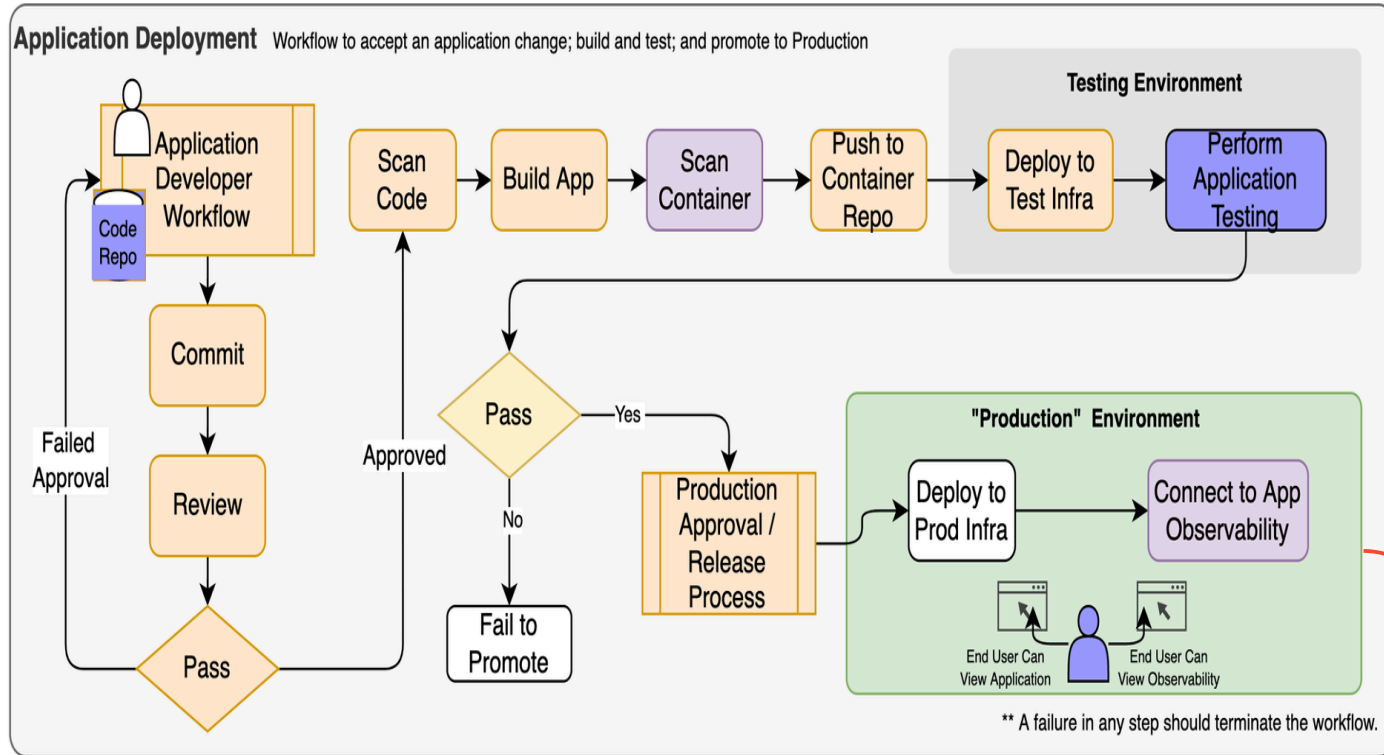
reduction of high-priority system incidents, improving system up-time and reliability

Container-native transformation of a health insurance provider [2/2]

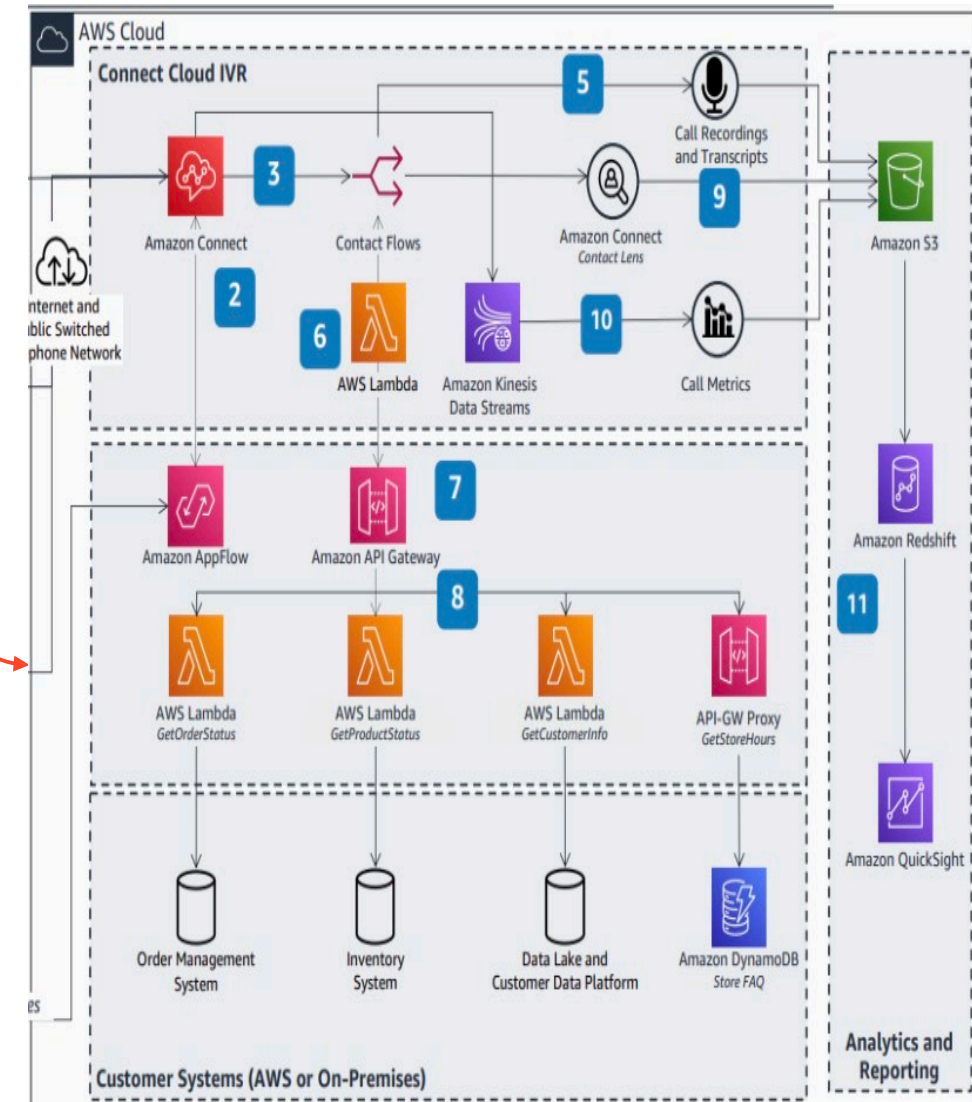


- Service requests handled through *ArgoCD* automation
- If a cluster has to be added or deleted, do it declaratively
- Declarative GitOps on YAML ensures current state converges to desired state through ArgoCD automation. Cluster change, backup frequency of etcd and storage classes
- Each change triggers a Jenkins job. Apply changes to cluster based on changes to GitRepo
- Roll back changes in case of failure
- Reflect changes via ITSM tool and ChatOps

Modernops for cloud native application development for a start-up



- Everything-as-code for Cloud-native development
- Build GitOps workflows through GitHub Action, Terraform and cloud-native IaC
- Check-in code to Git → Approval workflow to merge code → Trigger auto-build → Scan code for vulnerabilities (cleartext secrets, stores, dated patches) → Budget checks (FinOps, spend predictions) → Infrastructure Provisioning → Push docker image to registry → Pull request to K8S/Serverless runtime (Test → Preprod → Prod deployment) → Release Management (Roll-back, Roll-forward, scale-out/in)



Thank you!

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Please complete the
session survey