



Architecture diagrams for travel

Architecture for Airline Crew Management Systems



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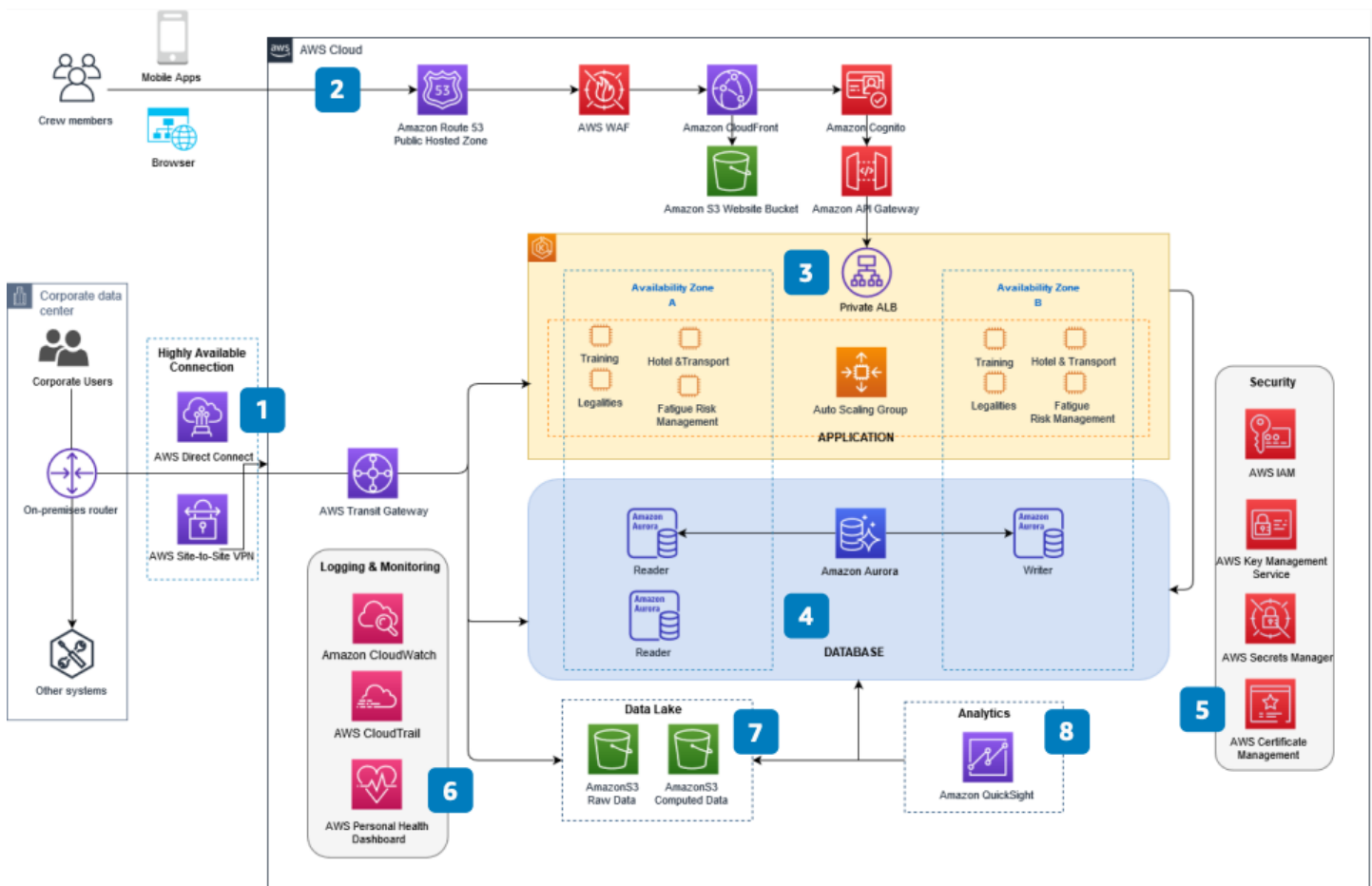
Architecture for Airline Crew Management Systems

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You can use AWS to create a highly available, secure, flexible, and cost-effective architecture for airline crew management systems. This architecture connects corporate users to crew applications through multiple networking options.

This architecture uses [Amazon Elastic Kubernetes Service](#) for container orchestration. It stores crew data in [Amazon Aurora](#) and provides business intelligence through [Amazon Quick Sight](#).

Airline crew management systems diagram



The following steps describe the architecture:

1. Connect corporate users and systems to crew management on AWS. Use [AWS Direct Connect](#) as primary and AWS Site-to-Site VPN as secondary.

2. [Amazon Cognito](#) provides user authentication and access control to crew applications.
3. Crew apps resolve domain names through [Route 53](#) to [API Gateway](#) and [CloudFront](#). API Gateway provides access to the application tier. CloudFront serves static pages and assets from [Amazon S3](#). [AWS WAF](#) protects these resources.
4. The application tier has a private Application Load Balancer for crew management microservices. Connect the Application Load Balancer to an [Amazon EKS](#) cluster across two Availability Zones.
5. [Amazon Aurora](#) PostgreSQL-Compatible Edition provides high availability with Aurora Replicas. Store data copies across multiple Availability Zones.
6. Use AWS cloud security services for at-rest, end-to-end encryption. Protect credentials and private keys.
7. Use [CloudWatch](#) and monitoring tools to optimize operational health.
8. Create a data lake with Amazon S3 and Amazon S3 Glacier for crew management data. Use the data lake for reporting, visualization, and advanced analytics.
9. Use [Quick](#) for business intelligence on crew planning, training statistics, and crew utilization.

Further reading

For additional information, see the following resources:

- [AWS Architecture Icons](#)
- [AWS Architecture Center](#)
- [AWS Well-Architected](#)

Diagram history

To receive updates about this reference architecture diagram, subscribe to the RSS feed.

Change	Description	Date
Initial publication	Reference architecture diagram first published.	June 11, 2021

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