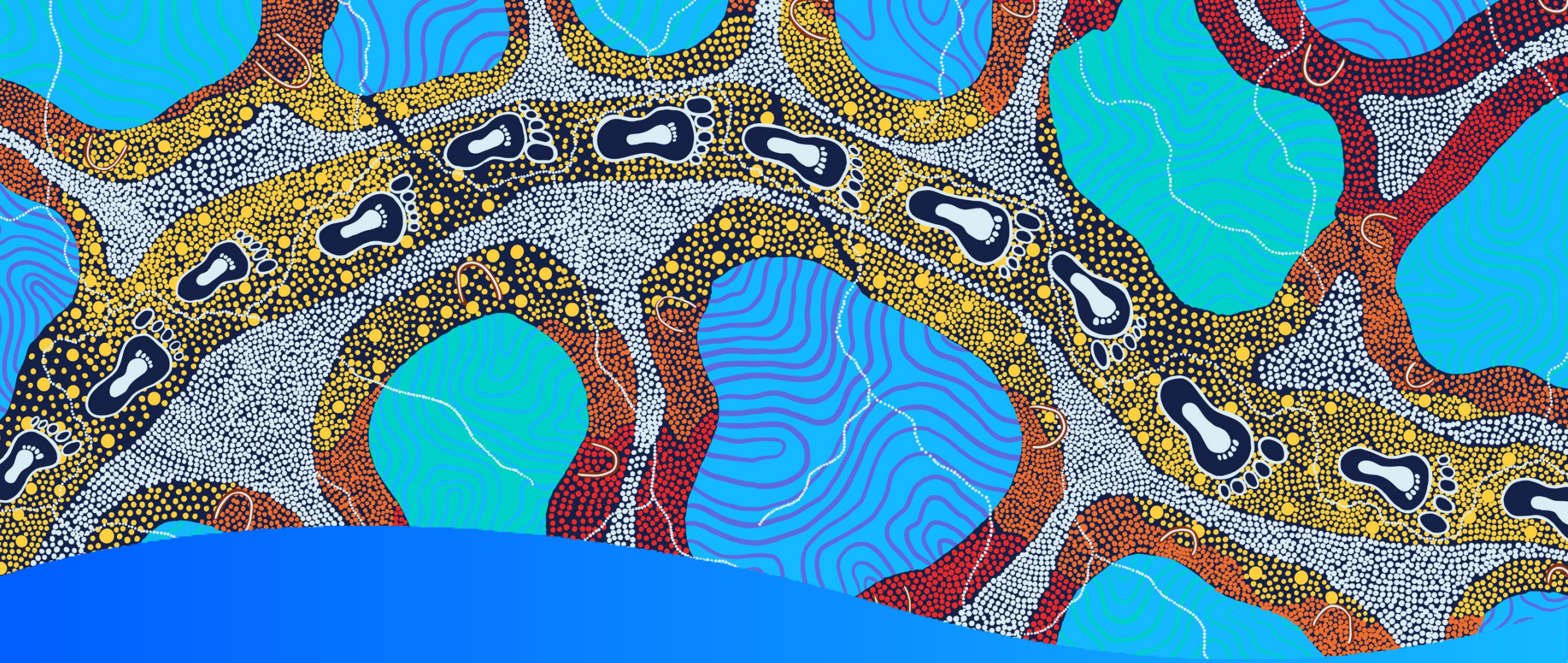
GOVERNMENT OF WESTERN AUSTRALIA

HSS health support services

Day 3 – Azure App Service

Application Hosting in Azure



HSS acknowledges the traditional custodians throughout Western Australia and their continuing connection to the land, waters and community. We pay our respects to all members of Aboriginal communities and their cultures, and acknowledge the wisdom of Elders both past and present.

Quick Recap of Day 2

1. Different database offering in Azure (relational, NoSQL and in-memory database)
    1. MS SQL
        1. Azure SQL Database
        2. Azure SQL Managed Instance
        3. SQL Server on Azure VM
    2. Other relational database - PostgreSQL, MySQL , MariaDB
    3. NoSQL – Azure Cosmos DB
        1. Different APIs available – NoSQL, MongoDB, Apache Cassandra etc.
    4. In-memory database – Azure Cache for Redis
2. Azure SQL Database
    1. Single Database vs Elastic Pool
    2. Purchasing model ($$$) – DTU vs vCore
    3. Backup – automatically backup by default
    4. New feature called Ledger
3. Homework solution

Application Hosting in Azure

Application hosting in Azure

Different ways to applications:

1. Azure Virtual Machine (VM)
2. Azure App Service** – PaaS hosting solution to host web apps and API. The quickest and easiest way to host them
3. Azure Static Web Apps – PaaS hosting solution for static website/web apps. Think Javascript apps, HTML sites, Blazor WASM…
4. Azure Function Apps – “Serverless” offering for hosting code to respond to events.
5. Azure Spring Apps – for Java Spring Boot apps/microservices
6. Azure Kubernetes Service – Fully managed Kubernetes platform for orchestrating and managing container-based apps
7. Azure Container Instance – Managed service for you to run an instance of your container-based app
8. Azure Container Apps** - Managed service for you to run your container-based app that scales and integrates with Dapr (a microservice framework)
9. Azure Batch – Use for running high-performance and large-scale processing jobs within a pool of VM.

Azure App Service - features

1. PaaS offering to host Web applications, REST API, web-based workload
2. Supported programming language – .NET, .NET Core, Java, Ruby, Node.JS (Javascript), PHP or Python
3. Managed environment – Azure automatically patches the OS and Framework for you
4. DevOps optimised – deploy automatically using Azure DevOps/Github
5. Scaling feature – Scale up/down or in/out manually or automatically
6. Visual Studio integrated – deploy directly from the IDE
7. Ability to host Azure functions – provide serverless hosting capability
8. Ability to host containers too

Azure App Service – concepts to understand

- App Service Plan – the plan/cost you need to pay to host your web workload. Different tiers available
- App Service Environment (ASE) – this is an isolated environment that Azure spin up to isolate your workload
- Authentication – built-in authentication capability to protect your web apps
- Integrates with Application Insight – to provide application monitoring
- Custom Domain – set custom domain name for your apps
- Backup – ability to set backup to backup your application and configuration
- WebJobs – Scheduled jobs to run background tasks
- Service Connector – allow you to connect App Service to any Azure resources (Storage, Database, Key Vault, Service Bus, SignalR etc.)
- Console – command-line based to perform simple task (think CMD on Windows Server or bash on Linux)
- Advanced Tools – a Kudu console to perform more advanced tasks on the app service
- App Service Logs – allow you to configure how and what you want to be logged

Playtime!