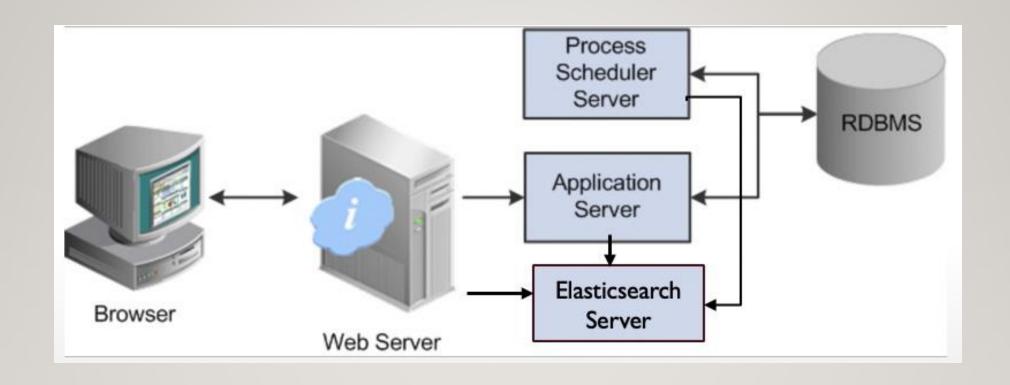
ON-PREM TO CLOUD MIGRATION PLAN

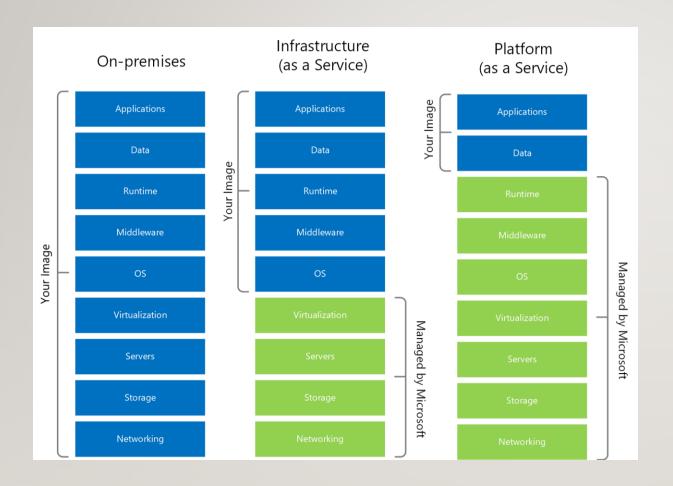
BY HARSHITHA ANUGANTI

TABLE OF CONTENTS

- 1. Existing On-Prem Architecture.
- 2. Proposed High level Architecture on Cloud.
- 3. Compliance with NIST 800-171
- 4. Technology considerations Containerization.
- 5. CI/CD pipelines.
- 6. Data Migration Plan.
- 7. Cloud Migration Roadmap 1st year milestones.
- 8. Conclusion.



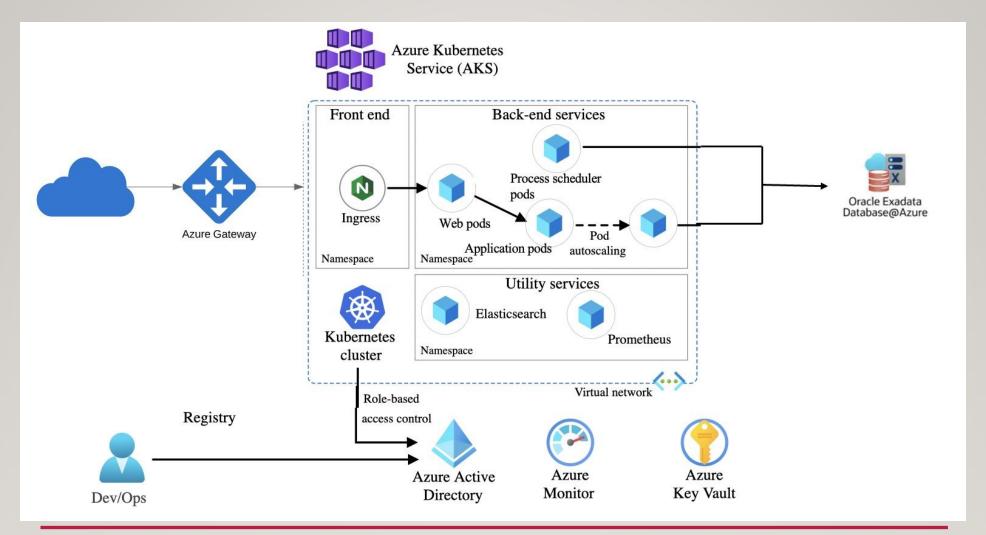
EXISTING ON-PREMARCHITECTURE



ISSUES WITH LIFT & SHIFT

Using Paas models over the Virtual machines(Iaas) provides:

- greater flexibility and scalability.
- pay-as-you-go model=>cost cutdown.
- No infrastructure management.



PROPOSED HIGH LEVEL ARCHITECTURE ON CLOUD

COMPLIANCE WITH NIST 800-171

Azure Government

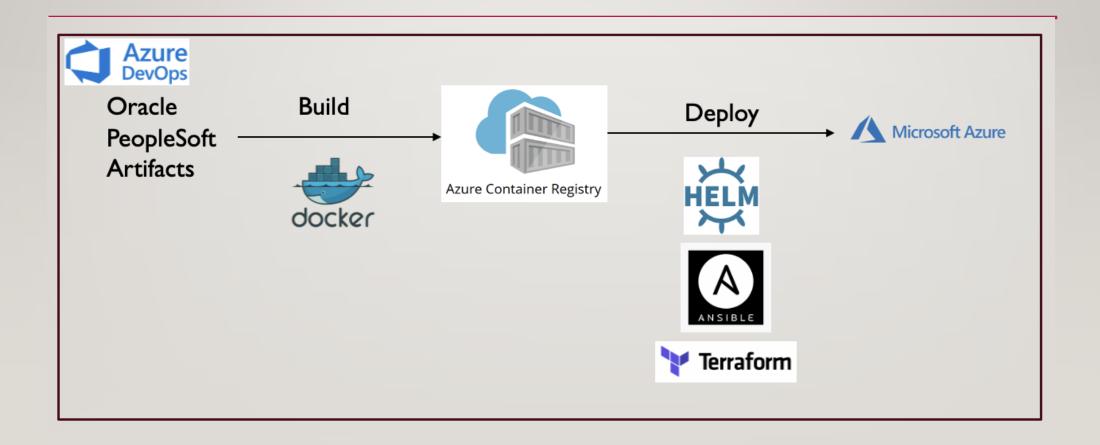
Azure Government services can accommodate data that is subject to various US government regulations and requirements. To provide you with the highest level of security and compliance, Azure Government uses physically isolated datacenters and networks located in the US only

TECHNOLOGY CONSIDERATIONS

Why Containerization?

- quicker to deploy
- Highly scalable and fault-tolerant systems.
- AKS costs nothing; you pay only for the worker node resources instead of VMs, vnet, public IPs, load balancers, storage accounts.
- Huge reduction in support and maintenance overhead. No patching and hardening (other than k8 upgrades). Massive reduction in platform deployment effort.

CI/CD PIPELINE DESIGN



Online Migration with a Backup location Physical Online Migration with a Backup Location After downloading and configuring, ZDM automatically: Starts database migration Backup Location Connects to source database to backup location Orchestrates transfer of DB backup files Target Database Primary Instantiates a Standby DB in the Target Applications Database 5 Synchronizes primary & standby 6 Switches over & swaps roles Finalizes the migration process

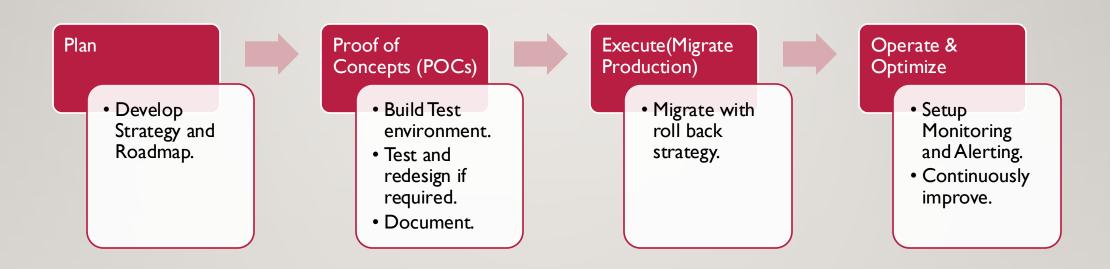
DATA MIGRATION PLAN

- Migrating to Oracle
 Database@Azure is
 similar to migrating to
 OCI.
- Oracle provides

 automated migration
 solutions such <u>Oracle Zero</u>

 <u>Downtime Migration</u>

CLOUD MIGRATION ROADMAP



Ist Quarter

- Planning.
- Training and Upskilling.

2nd Quarter

- Dockerize the services – web, app and batch.
- Building local Kubernetes environments using helm
- Validate

3rd Quarter

- Develop Terraform scripts for infrastructure deployment and Ansible for helm charts' deployment.
- Validate.

4th Quarter

- Setup
 Monitoring and Alerting systems.
- Spillovers.

IST YEAR MILESTONES

Building the Test Environment.

CONCLUSION



THANK YOU