

Infrastructure: <https://github.com/canada-ca-terraform-modules/terraform-kubernetes-aks>

Platform: <https://github.com/canada-ca-terraform-modules/terraform-kubernetes-aks-platform>

All application secrets are encrypted, dynamically rotated and fully audited thanks to Vault

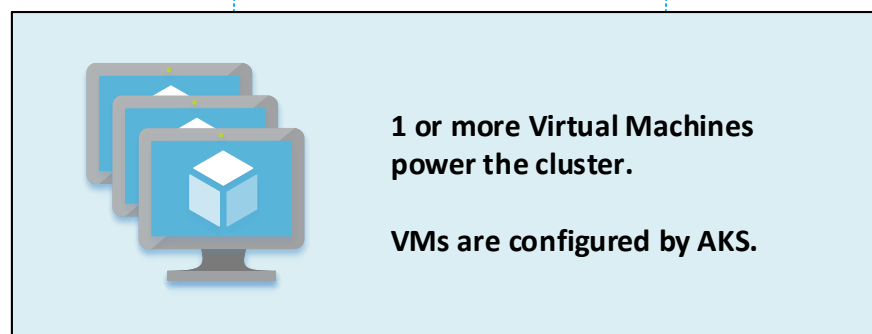
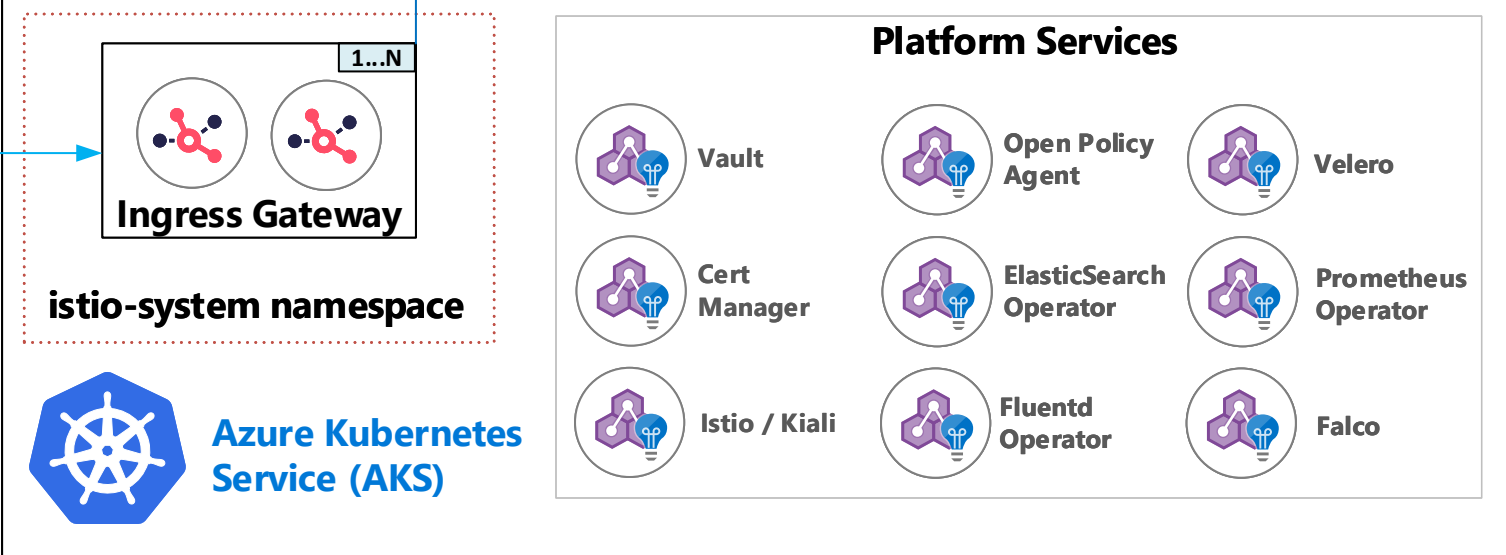
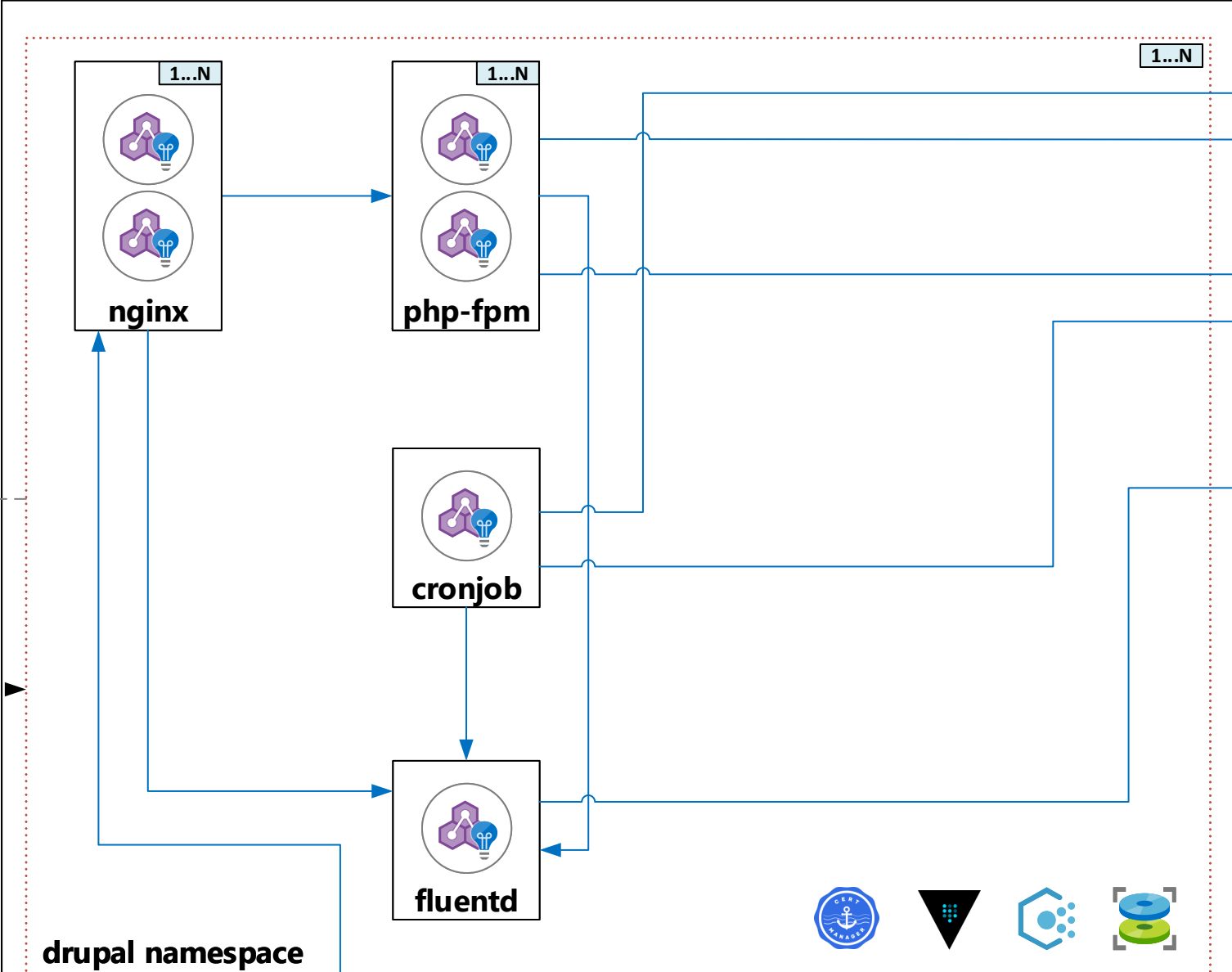
Helm Chart: <https://github.com/drupalwxt/helm-drupal>

- Managed Database Service
- Azure Files Storage
- Log Analytics

- Open Policy Agent with policy enforcement from GateKeeper v3
- Velero is leveraged for point in time backups of your application and PVC's
- Istio is the chosen Service Mesh which enforces Mutual TLS across all services
- Cert Manager is leveraged to automate the management and issuance of certs

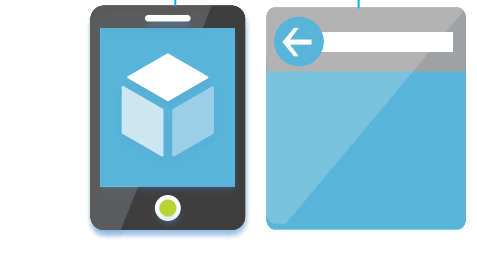
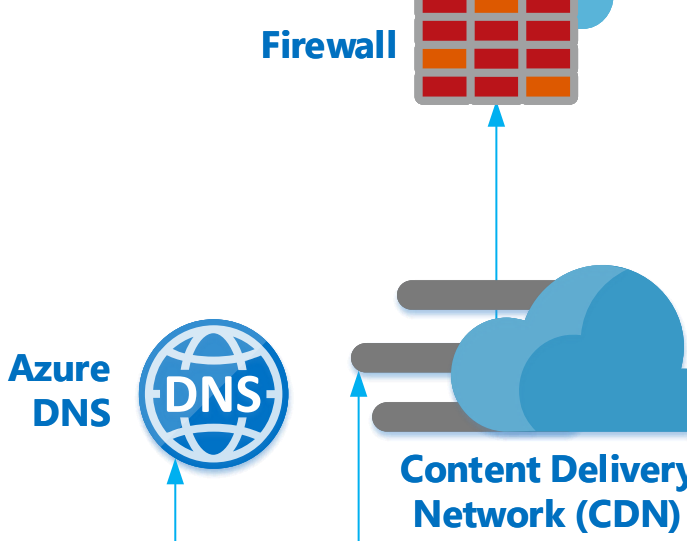
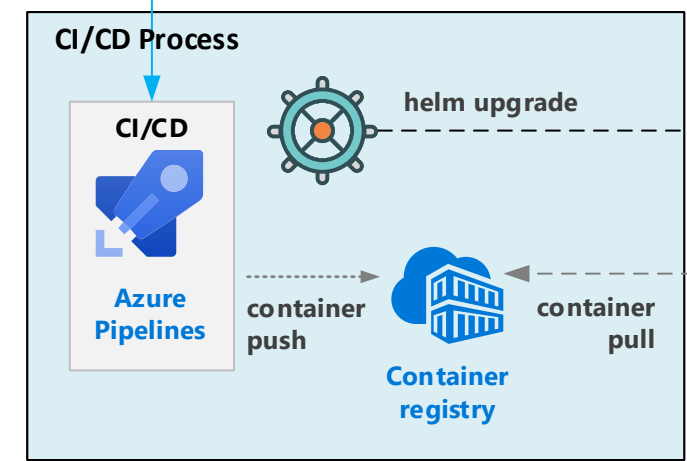
- Azure Services**
- Azure Key Vault**
Cluster secrets are encrypted using a key stored in the Azure Key Vault.
Disks are also encrypted at rest.
 - Azure Active Directory**
Provides user authentication for cluster management.
 - Monitoring**
Internal cluster monitoring logging handled by ElasticSearch / Kibana.
 - Log Analytics**
Fluentd can export any Kubernetes log to Azure Log Analytics.

- Use **Azure DNS** to provide domain name resolution.
- Use the **Azure Content Delivery Network (CDN)** to provide caching of static content and cacheable dynamic content.
- Use the **Azure Firewall** to secure the Virtual Network.
- Use the **Azure Kubernetes Service** to provide a managed Kubernetes cluster to run Drupal WxT. There can be multiple VMs backing the cluster.
- Use an **Azure Load Balancer** to provide access to the Istio Ingress Gateway running on one or more Kubernetes nodes.
- Use **Istio**, a service mesh, to provide: (a) mutual TLS between services in the cluster, (b) real-time observability and tracing, (c) canary / blue/green deployments, (d) advanced traffic routing.
- Other **platform services**: ElasticSearch and Fluentd for logging, Prometheus + Grafana for monitoring.
- Use **MySQL** from a Managed Database provided the cloud provider. Or, alternatively leverage the MySQL operator for in Cluster persistent storage.
- Use **Azure File Storage (NFS)** for Drupal public and private files.



DEV / OPS

Source Code Management



Azure Load Balancer

Azure Kubernetes Service (AKS)

Virtual Network