Optum Grid (Service Mesh)

# Introduction

* Cloud Optum Networks integrates with managed infrastructure such as firewalls, managed Kubernetes, and on-premise networks. Managed network bootstraps all necessary controls and connectivity for each team, ensuring a seamless and secure experience.
* Azure Network Management provide a comprehensive managed networking - creation of virtual networks, creation and management of subnets, NSGs, route table, and routes. It integrates with IP address management (IPAM) for CIDR block allocation and offers an option to enable on-premises connectivity.
* UHG Grid is a service mesh enabling service to service communication between on-perm and cloud as well as between cloud and cloud.

# Reference Documents

Azure Managed Network: [Azure Virtual Network Overview - Cloud Networking | HCP Docs](https://docs.hcp.uhg.com/cloud-networking/azure-virtual-network-overview)

Architecture Diagram: [s3api-core.optum.com/mesh/meshv5.svg](https://s3api-core.optum.com/mesh/meshv5.svg)

Grid Onboarding: [Home · uhg-arc/grid-onboarding Wiki](https://github.com/uhg-arc/grid-onboarding/wiki)

Onboarding Steps

## Azure

1. Create Account in HCP with help of Optum App Owner
   1. Ref: https://docs.hcp.uhg.com/account-manager/overview
2. Create HCP Account Resource Group and HCP Standard Resource Group with App Owner
   1. Ref: https://docs.hcp.uhg.com/account-manager/create-resource-group
3. Create NonProd Azure subscription from a non Contractor User
   1. Ref: https://docs.hcp.uhg.com/public-cloud-account-management/non-production-public-cloud-account-creation
4. Create Immerse Teams for admin group and contributor group
   1. Ref: https://immerse.uhg.com/teams
5. Create VNet
   1. Ref: [Azure Virtual Network Management - PCAM UI - Cloud Networking | HCP Docs](https://docs.hcp.uhg.com/cloud-networking/azure-network-management-pcam-ui#vnet-creation)
6. Create NSG and Firewall Creation
   1. Ref: [Azure Virtual Network Management - PCAM UI - Cloud Networking | HCP Docs](https://docs.hcp.uhg.com/cloud-networking/azure-network-management-pcam-ui#nsg-and-rule-creation)
7. Route Table Creation
   1. Ref: [Azure Virtual Network Management - PCAM UI - Cloud Networking | HCP Docs](https://docs.hcp.uhg.com/cloud-networking/azure-network-management-pcam-ui#route-table-creation)
8. Subnet Creation
   1. Ref: [Azure Virtual Network Management - PCAM UI - Cloud Networking | HCP Docs](https://docs.hcp.uhg.com/cloud-networking/azure-network-management-pcam-ui#subnet-creation)

# Service Communication

1. Service Registration
   1. Ref: <https://github.com/uhg-arc/grid-onboarding/wiki/Service-Registration>
2. Application to Application communication
   1. Ref: [Application to Application Communication · uhg-arc/grid-onboarding Wiki](https://github.com/uhg-arc/grid-onboarding/wiki/Application-to-Application-Communication)