# **WUSTL Network Documentation**

 The purpose of this document is to document and understand the various component of our current network infrastructure. These includes our virtual networks (VNETS) and Subnets.

## **Subscription: I2 - RDC 2.0 Azure POC – Dev**

### **[DEV\_RDC\_2.0\_POC-vnet](https://portal.azure.com/%22%20%5Cl%20%22%40gowustl.onmicrosoft.com/resource/subscriptions/3ef31469-2158-4895-be20-4790fd03311c/resourceGroups/DEV_RDC_2.0_POC/providers/Microsoft.Network/virtualNetworks/DEV_RDC_2.0_POC-vnet)**

* Description: Not currently used. It was set up as test.
* Address Space: 10.0.0.0/24

#### **Subnets**

1. **Default**
	* Description: Not currently used. It was set up as test.
	* Address Space: 10.0.0.0/24

### **i2rdc3-dev-vnet01**

* Description: Unknown vnet, not created by David. (If no resources delete it)
* Address Space: 10.0.0.0/16

#### **Subnets**

1. [**i2-throw-me-out-01Subnet**](https://portal.azure.com/)
	* Description: Unknown vnet, not created by David (If no resources delete it)
	* Address Space: 10.0.0.0/24

### **Ingest-Wizard-UI-Backend\_group-vnet**

* Description: Unknown vnet, not created by David (If no resources delete it)
* Address Space: 10.3.0.0/16

#### **Subnets**

1. **Default**
	* Description: Unknown vnet, not created by David (If no resources delete it)
	* Address Space: 10.3.0.0/24

### **SG\_RDC\_POC1-vnet**

* Description: Unknown vnet, not created by David (If no resources delete it)
	+ - Potentially created by Snehil (check with Snehil)
* Address Space: 10.0.1.0/24

#### **Subnets**

1. **Default**
	* Description: Unknown vnet, not created by David (If no resources delete it)
	* Address Space: 10.0.1.0/24

### **i2rdc3-dev-vnet01**

* Description: This is the main one, use to host RDC resources.
	+ - David created it.
* Address Space: 10.25.44.0/24, 192.168.44.0/24
	+ Second range was added due to IP space limitation.

#### **Subnets**

1. **[appgw-subnet](https://portal.azure.com/)**
	* Description: It used to host 3 – 5 app gateway.
		+ Currently just has 1 app gateway.
	* Address Space: 10.25.44.224/27
2. [**aux-subnet**](https://portal.azure.com/)
	* Description: It is used for our private endpoints.
	* Address Space: 10.25.44.192/28
3. [**k8s-api-subnet**](https://portal.azure.com/)
	* Description: It is use for Kubernetes API server.
	* Address Space: 10.25.44.208/28
4. [**pg-flex-subnet**](https://portal.azure.com/)
	* Description: Postgres flexible Server. (Not currently used)
	* Address Space: 192.168.44.0/27
5. [**vm-subnet**](https://portal.azure.com/)
	* Description: Used to launch virtual machines.
	* Address Space: 10.25.44.128/26
6. [**k8s-subnet**](https://portal.azure.com/)
	* Description: It is used for everything Kubernetes i.e., Nodes, Load balancers etc.
	* Adress Space: 10.25.44.0/25
7. [**GatewaySubnet**](https://portal.azure.com/)
	1. Description: No resources hosted on this subnet.
	2. Address Space: 192.168.44.32/28

#### VNET Peerings

1. [**wuit-peer-vnet-01-dev**](https://portal.azure.com/)
* Peers our development environment (i2rdc3-dev-vnet01) to that of wuit(wuit-vnet-01).
1. **Bjc-vnet-peering**
* Peers our development environment (i2rdc3-dev-vnet01) to that of bjc (bjc-vnet-peerng)
1. **Wusm-prod-vnet-main-peer**
* Peers our development environment (i2rdc3-dev-vnet01) to wusm production network (wusm-prod-vnet-main) within the I2 - RDC 2.0 Azure POC – Prod subscription.
1. **Wusm-dev-vnet-main-peer**
* Peers our development environment (i2rdc3-dev-vnet01) to wusm dev network (wusm-prod-vnet-main) within the I2 - RDC 2.0 Azure POC – Dev subscription.
1. **Wusm-dev-adb**
* Peers our development environment (i2rdc3-dev-vnet01) to our Databricks virtual network (Workers-vnet) I2 - RDC 2.0 Azure POC – Dev subscription.
1. **Wuit-peer-erd-dev:**
* Peers our development environment (i2rdc3-dev-vnet01) to our wuit-erd-hub-prod - Need confirmation from David/Ian

### **oracle-db-nifi-test2\_group-vnet**

* Description: Unknown vnet, not created by David (If no resources delete it)
* Address Space: 10.1.0.0/16

#### **Subnets**

1. Default
	* Description: Unknown vnet, not created by David (If no resources delete it)
	* Address Space: 10.1.0.0/24

### **workers-vnet**

* Description: It is used for the wustl dev Data Bricks.
* Address Space: 10.139.0.0/16

#### **Subnets**

1. **Public-subnet**
	* Description: it is used for the Data bricks nodes.
	* Address Space: 10.139.0.0/18
2. **Private-subnet**
	* Description: it is used for the Data bricks nodes.
	* Address Space: 10.139.64.0/18

#### **Peerings:**

1. **[i2rdc3-dev-vnet01](https://portal.azure.com/)**
* Peers our development environment (i2rdc3-dev-vnet01) to our Databricks virtual network (Workers-vnet) I2 - RDC 2.0 Azure POC – Dev subscription

### **wusm-dev-vnet-main**

* Description: Was created by David.
	+ Might be needed in the future for wusm related dev resources.
* Address Space: 192.168.48.0/24

#### **Subnets**

1. No subnets for this Vnet.

#### **VNET Peering**

1. **[i2rdc3-dev-vnet01-peer](https://portal.azure.com/)**
* Peers the wusm-dev-vnet-main to the i2rdc3-dev-vnet01 network that is hosted within the I2 - RDC 2.0 Azure POC – Dev subscription.

## **Subscription: I2 - RDC 2.0 Azure POC – Prod**

### **i2rdc3-prod-vnet01**

* Description: This is the main one, use to host RDC resources in our production environment. (David created it).
* Address space: 10.25.46.0/24, 192.168.46.0/24

#### **Subnets**

1. [**appgw-subnet**](https://portal.azure.com/)
	* Description: Used to host 3 – 5 prod application gateways.
	* Address Space: 10.25.46.224/27
2. [**vm-subnet**](https://portal.azure.com/)
	* Description: Used to launch production virtual machines.
	* Address Space: 10.25.46.128/26
3. [**aux-subnet**](https://portal.azure.com/)
	* Description: Used for our private endpoints.
	* Address Space: 10.25.46.192/28
4. [**k8s-api-subnet**](https://portal.azure.com/)
	* Description: It is used for Kubernetes API server.
	* Address Space: 10.25.46.208/28
5. [**pg-flex-subnet**](https://portal.azure.com/)
	* Description: it is used to host Postgres flexible Server. (Not currently used)
	* Address Space: 192.168.46.0/27
6. [**k8s-subnet**](https://portal.azure.com/)
	* Description: it is used for everything Kubernetes i.e., Nodes, Load balancers etc. Address Space: 10.25.46.0/25

#### **VNET Peering**

1. **Wuit-peer-vnet01-prod:**
* Peers our production environment (i2rdc3-prod-vnet01) to that of wuit(wuit-vnet-01).
1. **Bjc-vnet-peering**
* Peers our production environment (i2rdc3-prod-vnet01) to that of bjc (bjc-vnet-peerng)
1. **Wusm-prod-vnet-main-peer**
* Peers our production environment (i2rdc3-prod-vnet01) to that of wusm production vnet (wusm-prod-vnet-main) within the I2 - RDC 2.0 Azure POC – Prod subscription.
1. **Wuit-peer-erd-prod**
* Peers our production environment (i2rdc3-prod-vnet01) to wuit-erd-hub-prod – find out what this does.

### **wusm-prod-vnet-main**

* Description: It was created by David.
	+ It has been used to host our openai project, GIC, Data Bricks and private endpoints.
* Address Space: 10.25.47.0/24, 192.168.88.0/24

#### **Subnets:**

1. [**AuxSubnet**](https://portal.azure.com/)
	* Description: Host all of the private end points
	* Address Space: 10.25.47.128/25
2. [**GICAppGWSubnet**](https://portal.azure.com/)
	* Description: Used to host the GIC application Gateway
		+ It was created before the AppGWSubnet
	* Address Space: 192.168.88.0/27
3. [**ACISubnet**](https://portal.azure.com/)
	* Description: It is used for Azure container instances.
	* Address Space; 192.168.88.32/27
4. [**pg-flex-subnet**](https://portal.azure.com/)
	* Description: It has been used to host the postgresql flexible server
	* Address Space: 192.168.88.64/27
5. [**AppGWSubnet**](https://portal.azure.com/)
	* Description: Was Created by David to host other non GIC App GW.
	* Adress Space: 192.168.88.96/27
6. [**ADBContainerSubnet**](https://portal.azure.com/)
	* Description: Azure Databrick clusters similar to those in the workers vnet.
	* Address Space; 10.25.47.0/26
7. [**ADBHostSubnet**](https://portal.azure.com/)
	* Description: Azure Databrick clusters similar to those in the workers vnet.
	* Address Space: 10.25.47.64/26
8. [**mysql-flex-subnet**](https://portal.azure.com/)
	* Description: It has been used to host the mysql flexible server
	* Address Space: 192.168.88.128/27

#### **VNET Peering**

1. **Wuit-peer-vnet01**
* Peers our production environment (wusm-prod-vnet-main) to wuit-vnet01 network – find out what this does.
1. **Curimeta-peer-1**
* Peers our production environment (wusm-prod-vnet-main) to virtual-desktop-vnet network – find out what this does.
1. **0a-peer1**
* Peers our production environment (wusm-prod-vnet-main) to the oavirtualnetwork – find out what this does.
1. **Curimeta-peer-2**
* Peers our production environment (wusm-prod-vnet-main) to the cl9diuliu25jc0tyy5vsq38p8 vnet – find out what this does.
1. **I2rdc3-dev-vnet01-peer**
* Peers our production environment (wusm-prod-vnet-main) to the i2rd3-dev-vnet01 vnet within the I2 - RDC 2.0 Azure POC – Dev subscription
1. **I2rdc3-prod-vnet01-peer**
* Peers our production environment (wusm-prod-vnet-main) to the i2rd3-prod-vnet01 vnet within the I2 - RDC 2.0 Azure POC – Prod subscription
1. **Wuit-peer-erd**
* Peers our production environment (wusm-prod-vnet-main) to wuit-erd-hub-prod – find out what this does.

## **Subscription: I2 - RDC 2.0 Azure POC – QA**

### **1.** **i2rdc3-qa-vnet01**

* Description: This is the main one, use to host RDC resources. (David created it).
* Address Space: 10.25.45.0/24, 192.168.45.0/24

#### **Subnets:**

1. [**appgw-subnet**](https://portal.azure.com/)
	* Description: It can be used to host 3 – 5 QA app gateway
	* Address Space: 10.25.45.224/27
2. [**vm-subnet**](https://portal.azure.com/)
	* Description: it is used to host QA virtual machines
	* Address Space: 10.25.45.128/26
3. [**aux-subnet**](https://portal.azure.com/)
	* Description: It is used for private endpoints
	* Address Space: 10.25.45.192/28
4. [**k8s-api-subnet**](https://portal.azure.com/)
	* Description: It is use for Kubernetes API server
	* Address Space: 10.25.45.208/28
5. [**pg-flex-subnet**](https://portal.azure.com/)
	* Description: Postgres flexible Server. (Not currently used)
	* Adress Space: 192.168.45.0/27
6. [**k8s-subnet**](https://portal.azure.com/)
	* Description: It is used for everything Kubernetes i.e., Nodes, Load balancers etc.
	* Address Space: 10.25.45.0/25

#### VNET Peering:

1. **Wuit-peer-vnet01****-qa**
* Peers our QA environment (i2rd3-qa-vnet01) to wuit-vnet-01 network.
1. **Bjc-vnet-peering**
* Peers our production environment (i2rdc3-qa-vnet01) to that of bjc (sns-a1-hub-vnet-hub01) network
1. **Wuit-peer-erd-qa**
* Peers our production environment (i2rdc3-qa-vnet01) to that of wuit-erd-hub-prod network

## **Subscription: I2 – SandBox**

### **COVID19-Resources-vnet**

* Description: Started by Suhas that was meant to be used during the COVID project.
	1. Need confirmation to delete.
* Address Space: 10.0.1.0/24

#### **Subnets**

1. **Default**
	* Description: Need confirmation to delete
	* Adress Space: 10.0.1.0/24

### **general-i2-wustl-vnet**

* + Description: Was created to peer to the WashU Network.
	+ **Can be decommissioned.**
	+ Address Space: 10.0.0.0/24

#### **Subnets**

1. **Default**
	* Description: **Can be decommissioned.**
	* Address Space: 10.0.0.0/24

### **vnet-i2-wustl**

* + Description**.**
	+ Address Space: 10.24.96.32/27

#### **Subnets**

1. **Dev**
	* Description:
	* Address Space: 10.24.96.32/28
2. **Prod**
	* Description:
	* Address Space: 10.24.96.48/28

### **i2-shared-vnet**

* Description: Peered to WashU network.
	+ Need confirmation from suhas before decommissioning.
	+ Ideal for any POC in SandBox that needs access to the WashU network.
	+ Anything that needs tesing.
* Address Space: 10.237.0.0/24

#### **Subnets**

1. **Vm-subnets**
	* Description:
	* Address Space: 10.237.0.0/26

#### **VNET Peering**

1. **Wuit-peer-vnet01**
* Peers our i2-shared-vnet sandbox network (i2-shared-vnet) to wuit-vnet-01 network.
1. **Wuit-peer-erd**
* Peers our i2-shared-vnet sandbox network (i2-shared-vnet) to wuit-erd-hub-prod network.

## **Subscription: ICS – Redcap**

### **i2-redcap-build-vmVNET**

* Description: Not currently been used to host any resources.
* Address Space: 10.0.0.0/16

#### **Subnet**

1. **[i2-redcap-build-vmSubnet](https://portal.azure.com/)**
	* Description:
	* Address Space: 10.0.0.0/24

### **i2-redcap-main-vnet**

* Description: It has been used to host Redcap resources.
* Address Space: 10.24.96.128/28, 10.24.96.144/28, 192.168.255.192/27, 192.168.255.224/27

#### **Subnets**

1. [**appgw**](https://portal.azure.com/)
	* Description: It is used to host our redcap application gateway.
	* Address Space: 192.168.255.224/27
2. [**main**](https://portal.azure.com/)
	* Description: Main subnets where resources non-Gateway, app services & Database resources are launched in.
	* Address Space: 10.24.96.144/28
3. [**appsvc**](https://portal.azure.com/)
	* Description: Subnet used to host our app service resources.
	* Address Space: 192.168.255.192/27
4. [**mysql-flex**](https://portal.azure.com/)
	* Description: Used to host our flexible MySQL flexible servers.
	* Address Space: 10.24.96.128/28

#### **VNET Peering**

1. **Wuit-vnet-01-peer**
* Peers our redcap network (i2-redcap-main-vnet) to wuit-vnet-01 network.
1. **Wuit-peer-erd**
* Peers our redcap network (i2-redcap-main-vnet) to wuit-erd-hub-prod network.