

VMware vFabric Data Director Worksheets

vFabric Data Director 1.0

The vFabric Data Director worksheets contained in this technical note are intended to help you plan your Data Director configuration. The worksheets include the following.

- [“Data Director Worksheet for vSphere Configuration”](#) on page 2
- [“Data Director Worksheet for a 4-VLAN Network Configuration”](#) on page 3
- [“Data Director Worksheet for a 2-VLAN Network Configuration”](#) on page 9

Data Director Worksheet for vSphere Configuration

vSphere Environment

vCenter Server name

vCenter version (confirm)

- VMware vCenter Server 5.0 Foundation

vSphere Update Manager (confirm)

- VMware vSphere Update Manager enabled

ESXi version (confirm one)

- VMware ESXi 5.0 Enterprise
 VMware ESXi 5.0 Enterprise Plus

vSphere Network Time Protocol (NTP)

- NTP daemon is enabled in all ESXi hosts
 NTP is enabled in vCenter

Data Director vApp Cluster Settings

Cluster name

- Enable HA (High Availability)
- Set 25% CPU cluster resources reserved for failover
 - Set 25% memory cluster resources reserved for failover
- Enable DRS (distributed resource scheduling)
- Enable DRS storage I/O Control
 - Set DRS automation to Partially Automated
- Disable Enhanced vMotion Compatibility

Data Director vApp Resource Pool Settings

Resource Pool name

- Set CPU resource shares to Normal
- Disable Unlimited
 - Set Reservation and Limit to same value
- Set Memory resource shares to Normal
- Disable Unlimited
 - Set Reservation and Limit to same value

Hardware Requirements

- 2+ ESXi hosts
 12+ GB of RAM combined
 1+ Gigabit Ethernet

Storage Requirements

- 2+ datastores with 40+ GB each of storage
 Datastores are not part of a storage pod
 All datastores connect to all hosts in cluster
 VMFS version is at least version 5

Data Director Worksheet for a 4-VLAN Network Configuration

This network configuration has four Management and 1+ DB Access VLAN Configuration

Management Network VLANs

Enter in the vCenter OVF Deployment Wizard – Network Mapping dialog.

VLAN 1 - vCenter Network

VLAN 2 - Web Console Network

VLAN 3 - Internal Network

VLAN 4 - DB Name Service Network

DB Access VLANs (at least one)

Enter in the Data Director Resource Bundle Creation Wizard.

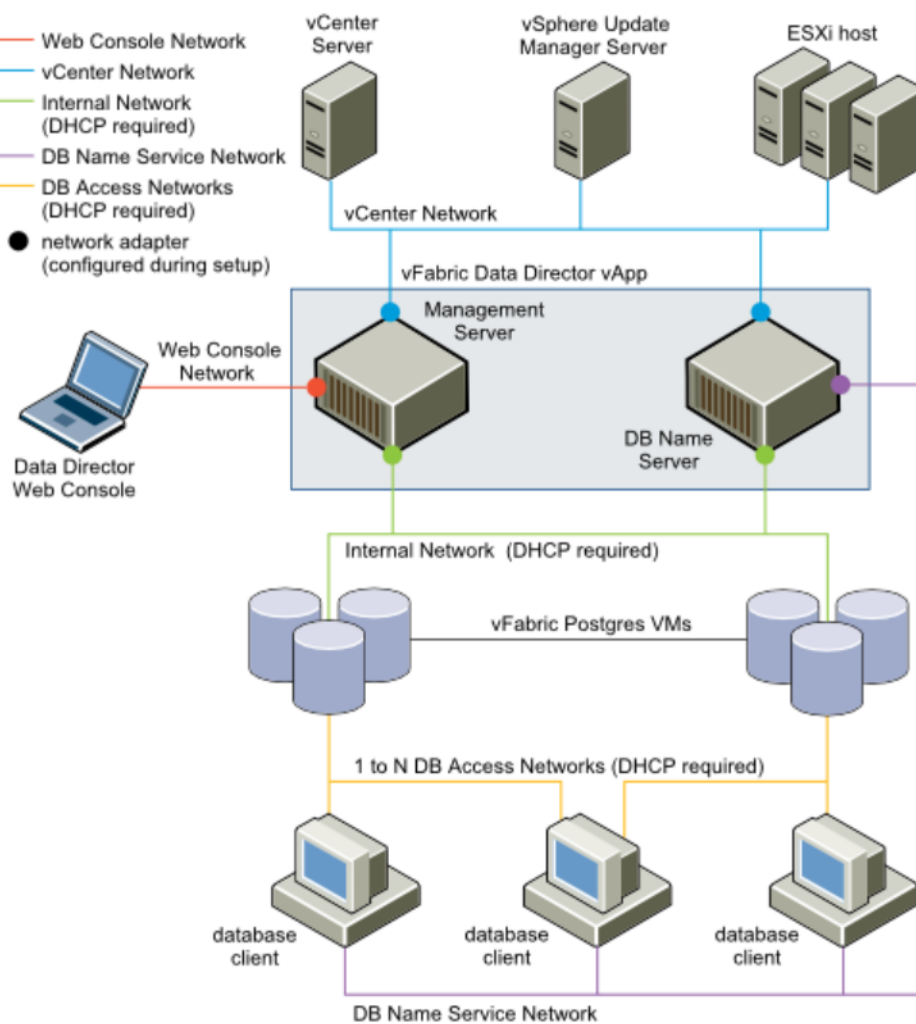
VLAN 5 - for DB Access Network 1

VLAN 6 - for DB Access Network 2

VLAN 7- for DB Access Network 3

VLAN 8 - for DB Access Network 4

Figure 1. 4-VLAN Network Configuration



VLAN for Web Console Network

Carries traffic between web clients (administrator and self-service consoles) and the Data Director Management Server.

Enter in the vCenter OVF Deployment Wizard – Web Console Network Adapter page.

VLAN Name: _____

This VLAN must be accessible from (confirm all)

- Data Director Management Server
- User web browsers
- SMTP mail server

The following ports must be accessible (confirm all)

- Port 80 (to end user web browsers)
- Port 443 (to end user web browsers)
- Port 25 (for outgoing SMTP mail traffic)
- Port 587 (for outgoing SMTP mail traffic)

Confirm this VLAN is at least 1-Gigabit Ethernet

- 1-Gigabit or greater

Network adapter connected to the VLAN for vCenter Network

Management Server – Web Console Network Adapter

Fully Qualified Domain Name (FQDN)

Example: **console.datadirector.company.com**

Data Director users use this name to open the web console in the browser.

IP address assignment (choose only one)

- Assign IP address using DHCP
DHCP requires Dynamic DNS (confirm)
 - VLAN supports Dynamic DNS

- Assign a static IP address

Static IP _____

Gateway _____

Netmask _____

DNS 1 _____

DNS 2 _____

- The FQDN resolves to this IP address

VLAN for vCenter Network

Carries management traffic between vCenter Server and the Data Director Management Server. This network carries commands that the Management Server uses to interact with vCenter Server and all the ESXi hosts managed by that vCenter Server.

Enter in the Data Director Initial Setup Wizard – vCenter Network page.

VLAN Name _____

This VLAN must be accessible from (confirm all)

- Data Director Management Server
- Data Director DB Name Server
- vCenter Server
- All ESXi hosts
- vCenter Update Manager Server

Confirm this VLAN is at least 1-gigabit Ethernet:

- 1-Gigabit or greater

IP address assignment (choose at least one):

- DHCP
- Static IP (specify the following):

Gateway _____

Netmask _____

DNS 1 _____

DNS 2 _____

Network adapters connected to the VLAN for vCenter Network

Management Server – vCenter Network Adapter

- Assign IP address using DHCP
- Assign a static IP address

Static IP

Optional: Fully Qualified Domain Name (FQDN)

Example: **mgsrvr-vcenter.datadirector.company.com**

This FQDN must resolve to static IP address or the VLAN must have Dynamic DNS.

DB Name Server – vCenter Network Adapter

- Assign IP address using DHCP
- Assign a static IP address

Static IP

Optional: Fully Qualified Domain Name (FQDN)

Example: **nmsrvr-vcenter.datadirector.company.com**

This FQDN must resolve to static IP address or the VLAN must have Dynamic DNS.

VLAN for Internal Network

Carries internal management traffic among vFabric Postgres databases, the Data Director Management Server, and the DB Name Server. This network must have DHCP enabled.

Enter in the Data Director Initial Setup Wizard – Network Configuration page.

VLAN Name _____

This VLAN must be accessible from (confirm all)

- Data Director Management Server
- Data Director DB Name Server
- Database VMs

Confirm this VLAN is at least 1-gigabit Ethernet

- 1-Gigabit or greater

Confirm DHCP is enabled in this VLAN

- DHCP

Enable Static IP assignment (optional)

- Static IP (specify the following)

Gateway: _____

Netmask: _____

DNS 1: _____

DNS 2: _____

Network adapters connected to the VLAN for Internal Network

Management Server – Internal Network Adapter

- Assign IP address using DHCP

DHCP requires a FQDN and Dynamic DNS.

- VLAN supports Dynamic DNS
- Assign a static IP address

Static IP

Fully Qualified Domain Name (FQDN)

Example:

mgsrvr-internal.datadirector.company.com

This FQDN must resolve to the static IP address or the VLAN must have Dynamic DNS.

Name Server – Internal Network Adapter

- Assign IP address using DHCP

DHCP requires a FQDN and Dynamic DNS.

- VLAN supports Dynamic DNS
- Assign a static IP address

Static IP

Fully Qualified Domain Name (FQDN)

Example:

nmsrvr-internal.datadirector.company.com

This FQDN must resolve to static IP address or the VLAN must have Dynamic DNS.

VLAN for DB Name Service Network

Carries traffic for the name service for vFabric Postgres databases. The DB Name Server performs database name to IP address translation (database connection services) and must be visible from database clients.

Enter in the Data Director Initial Setup Wizard – Network Configuration page.

VLAN Name: _____

This VLAN must be accessible from (confirm all)

- Data Director Name Service Server
- Database clients (ODBC / JDBC / SQL)

The following ports must be accessible (confirm all)

- Port 443 is open (vSphere traffic)
- Port 5488 is open (vSphere traffic)
- Port 5489 is open (vSphere traffic)
- Port TCP 53 is open (DNS traffic)
- Port UDP 53 is open (DNS traffic)
- Port 5432 is open (Database traffic)

Confirm this VLAN is at least 1-Gigabit Ethernet:

- 1-Gigabit or greater

IP address assignment (choose at least one)

- DHCP
- Static IP (specify the following)

Gateway _____

Netmask _____

DNS 1 _____

DNS 2 _____

Network adapter connected to the VLAN for DB Name Service Network

DB Name Server – DB Name Service Network Adapter

Fully Qualified Domain Name (FQDN):

Example: **nameservice.datadirector.company.com**

OBDC, JDBC, and other database clients use this name to connect to a database.

IP address assignment (choose only one)

- Assign IP address using DHCP

DHCP requires Dynamic DNS (confirm)

- VLAN supports Dynamic DNS

- Assign a static IP address

Static IP

- The FQDN resolves to this IP address

DB Access Networks

DB Access Networks carry SQL traffic between database client applications and vPostgres databases. These networks are not defined at installation. DB Access Networks are made available when Data Director system administrators define resource bundles in the Data Director UI and assign the resource bundles to organizations. A DHCP Server is required on the DB Access Networks. You can add DB Access Networks as needed, up to one per database.

DB Access Network 1 (required)

VLAN Name _____

This VLAN must be accessible from (confirm all)

Database VMs (using this network)

Database clients (ODBC / JDBC / SQL)

Confirm this VLAN is at least 1-Gigabit Ethernet

1-Gigabit or greater

Confirm DHCP is enabled in this VLAN

DHCP

Number of IP addresses available in VLAN _____

DB Access Network 2

VLAN Name _____

This VLAN must be accessible from (confirm all)

Database VMs (using this network)

Database clients (ODBC / JDBC / SQL)

Confirm this VLAN is at least 1-Gigabit Ethernet

1-Gigabit or greater

Confirm DHCP is enabled in this VLAN

DHCP

Number of IP addresses available in VLAN _____

DB Access Network 3

VLAN Name _____

This VLAN must be accessible from (confirm all)

Database VMs (using this network)

Database clients (ODBC / JDBC / SQL)

Confirm this VLAN is at least 1-Gigabit Ethernet

1-Gigabit or greater

Confirm DHCP is enabled in this VLAN

DHCP

Number of IP addresses available in VLAN _____

DB Access Network 4

VLAN Name _____

This VLAN must be accessible from (confirm all)

Database VMs (using this network)

Database clients (ODBC / JDBC / SQL)

Confirm this VLAN is at least 1-Gigabit Ethernet

1-Gigabit or greater

Confirm DHCP is enabled in this VLAN

DHCP

Number of IP addresses available in VLAN _____

Data Director Worksheet for a 2-VLAN Network Configuration

VLAN 1

Name _____

Enter in the Data Director Setup Wizard – Network
Mapped to Internal Network

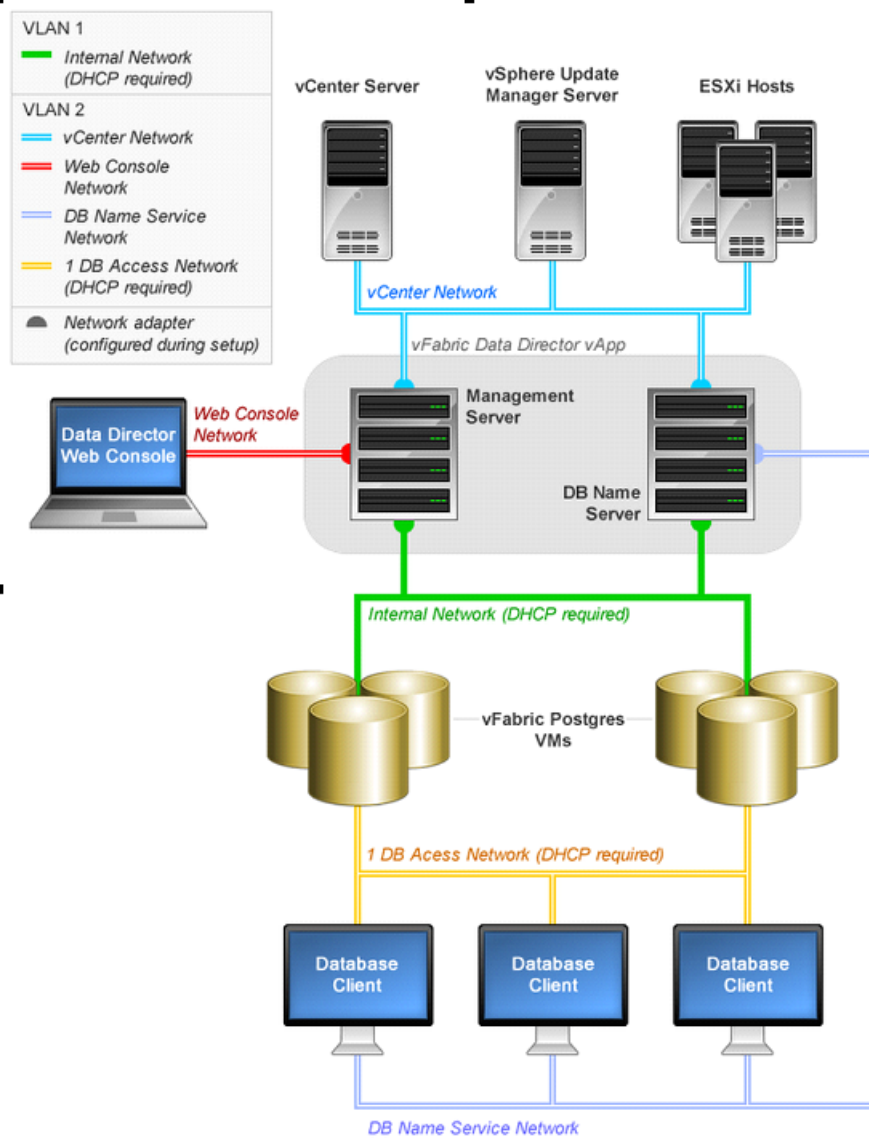
VLAN 2

Name _____

Enter in multiple places.Mapped to:

- Web Console Network
- vCenter Network
- DB Name Service Network
- Single DB Access Network

Figure 2. 2-VLAN Network Configuration



VLAN 1 - Internal Network

Carries internal management traffic among vFabric Postgres databases, the Data Director Management Server, and the DB Name Server. This network must have DHCP enabled.

Enter in the Data Director Initial Setup Wizard – Network Configuration page.

VLAN Name _____

This VLAN must be accessible from (confirm all)

- Data Director Management Server
- Data Director DB Name Server
- Database VMs

Confirm this VLAN is at least 1-Gigabit Ethernet

- 1-Gigabit or greater

Confirm DHCP is enabled in this VLAN

- DHCP

Enable Static IP assignment (optional)

- Static IP (specify the following)

Gateway _____

Netmask _____

DNS _____

DNS _____

Network adapters connected to the VLAN for Internal Network

Management Server – Internal Network Adapter

- Assign IP address using DHCP

DHCP requires a FQDN and Dynamic DNS.

- VLAN supports Dynamic DNS
- Assign a static IP address

Static IP

Fully Qualified Domain Name (FQDN)

Example:

mgsrvr-internal.datadirector.company.com

This FQDN must resolve to static IP address or the VLAN must have Dynamic DNS.

Name Server – Internal Network Adapter

- Assign IP address using DHCP

DHCP requires a FQDN and Dynamic DNS.

- VLAN supports Dynamic DNS
- Assign a static IP address

Static IP

Fully Qualified Domain Name (FQDN)

Example:

nmsrvr-internal.datadirector.company.com

This FQDN must resolve to static IP address or the VLAN must have Dynamic DNS.

VLAN 2 – All Other Networks

This VLAN is for the shared network for vCenter, Web Console, DB Name Service, and DB Access Networks. This network must have DHCP enabled.

Enter in the following places.

- The vCenter OVF Deployment Wizard – Web Console Network Adapter page
- The Data Director Initial Setup Wizard – vCenter Network page
- The Data Director Initial Setup Wizard – Network Configuration Page
- The Data Director Resource Bundle Creation Wizard

VLAN Name _____

This VLAN must be accessible from (confirm all)

- Data Director Management Server
- Data Director DB Name Server
- User web browsers
- SMTP mail server
- vCenter Server
- All ESXi hosts
- vCenter Update Manager Server
- Database VMs
- Database clients (ODBC / JDBC / SQL)

The following ports must be accessible (confirm all)

- Port 80 (to end user web browsers)
- Port 443 (to end user web browsers)
- Port 25 (for outgoing SMTP mail traffic)
- Port 587 (for outgoing SMTP mail traffic)
- Port 5488 is open (vSphere traffic)
- Port 5489 is open (vSphere traffic)
- Port TCP 53 is open (DNS traffic)
- Port UDP 53 is open (DNS traffic)
- Port 5432 is open (Database traffic)

Confirm this VLAN is at least 1-Gigabit Ethernet:

- 1-Gigabit or greater

Confirm DHCP is enabled in this VLAN

- DHCP

Enable Static IP assignment (optional)

- Static IP (specify the following)

Gateway

Netmask

DNS 1

DNS 2

Number of IP addresses available in VLAN _____

Network adapters connected to VLAN 2

Management Server – Web Console Network Adapter
Fully Qualified Domain Name (FQDN)

Example: **console.datadirector.company.com**

Data Director users use this name to open the web console in the browser.

IP address assignment (choose only one)

- Assign IP address using DHCP

DHCP requires Dynamic DNS (confirm):

- VLAN supports Dynamic DNS
 Assign a static IP address

Static IP

- The FQDN resolves to this IP address

Management Server – vCenter Network Adapter

- Assign IP address using DHCP
 Assign a static IP address

Static IP

Optional: Fully Qualified Domain Name (FQDN)

Example:

mgsrvr-vcenter.datadirector.company.com

This FQDN must resolve to static IP address or the VLAN must have Dynamic DNS.

DB Name Server – DB Name Service Network Adapter

Fully Qualified Domain Name (FQDN)

Example: **nameservice.datadirector.company.com**

OBDC, JDBC, and other database clients use this name to connect to a database.

IP address assignment (choose only one)

- Assign IP address using DHCP

DHCP requires Dynamic DNS (confirm)

- VLAN supports Dynamic DNS
 Assign a static IP address

Static IP

- The FQDN resolves to this IP address

DB Name Server – vCenter Network Adapter

- Assign IP address using DHCP
 Assign a static IP address

Static IP

Optional: Fully Qualified Domain Name (FQDN)

Example:

nmsrvr-vcenter.datadirector.company.com

This FQDN must resolve to static IP address or the VLAN must have Dynamic DNS.

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