

HyperFlex Stretch集群部署指南

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简介

Hyperflex扩展集群是具有地理位置分散的节点的单个集群。集群的两端都充当某些用户VM的主设备。这些VM的数据会同步复制到其他站点。扩展集群使您能够访问整个集群，即使其中一个站点完全关闭。通常，这些站点之间连接时会有低延迟、专用的高速链路。

HyperFlex扩展群集使您能够为需要高正常运行时间（恢复时间目标接近于零）和无数据丢失（恢复点目标为零）的任务关键型工作负载部署主动 — 主动灾难避免解决方案。

先决条件

要求

- 集群中的所有节点应为相同的M5型号（全HX220 M5）或（HX 240 M5）
- sctretch集群中仅支持M5节点
- 仅ESXi HX平台支持Stretch群集
- 每个站点至少应有2个节点
- 两个集群上使用的所有VLAN必须相同
- 扩展集群配置需要见证虚拟机
- 扩展群集需要的IP地址数量与六节点群集所需的IP地址数量相同
- 扩展集群仅使用一个vCenter实例
- 扩展群集要正常运行，需要使用带DRS和HA的vCenter

使用的组件

- HX安装程序

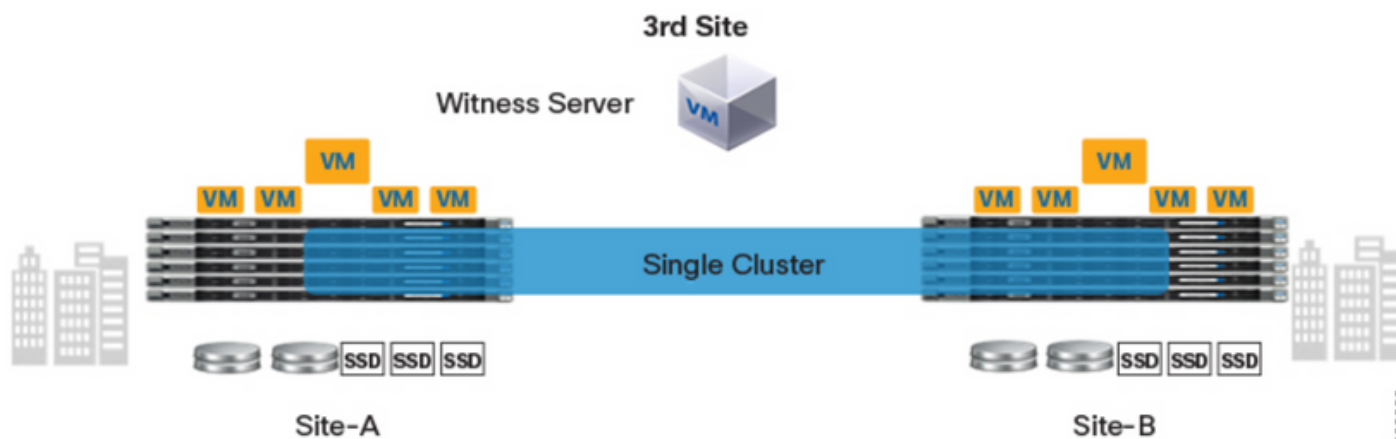
- 思科HX M5服务器
- VMWare vCenter
- Cisco UCSM
- VMWare ESXi

其他要求

- [安装前检查列表](#)
- [部署见证虚拟机](#)
- [更改见证VM密码](#)

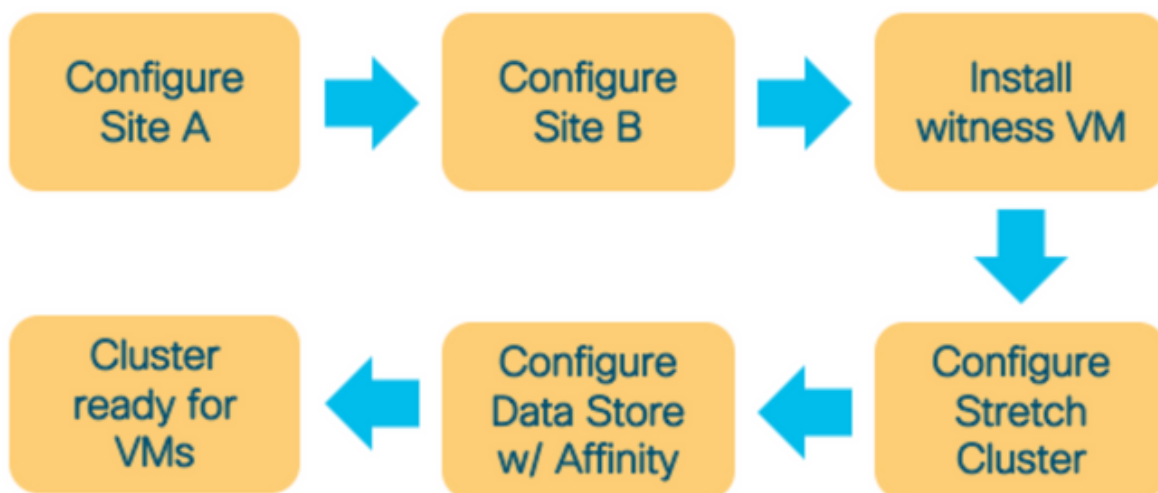
配置

网络图



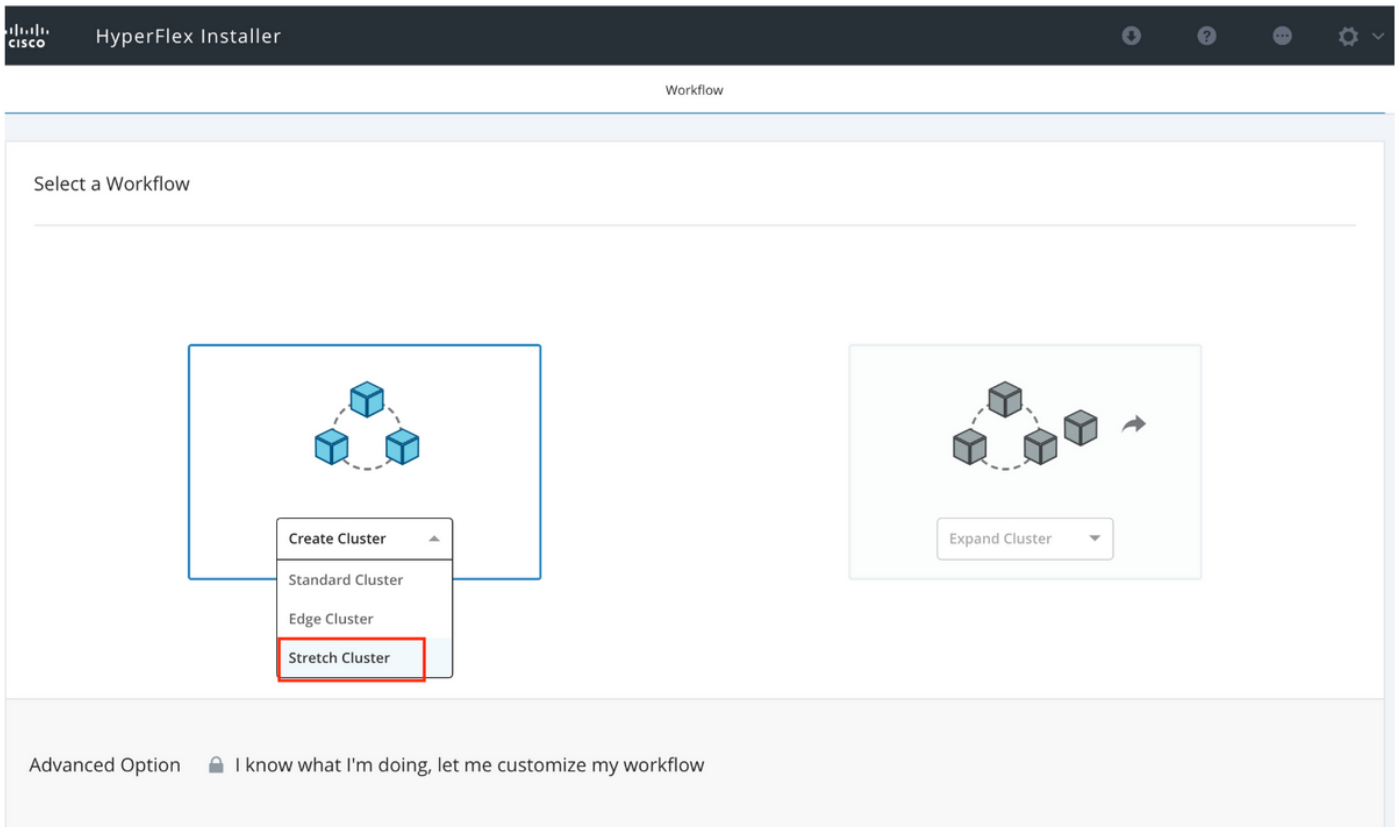
配置

扩展集群的所有配置都将通过单个HX安装程序完成。延伸集群安装步骤的工作流程如下所示：

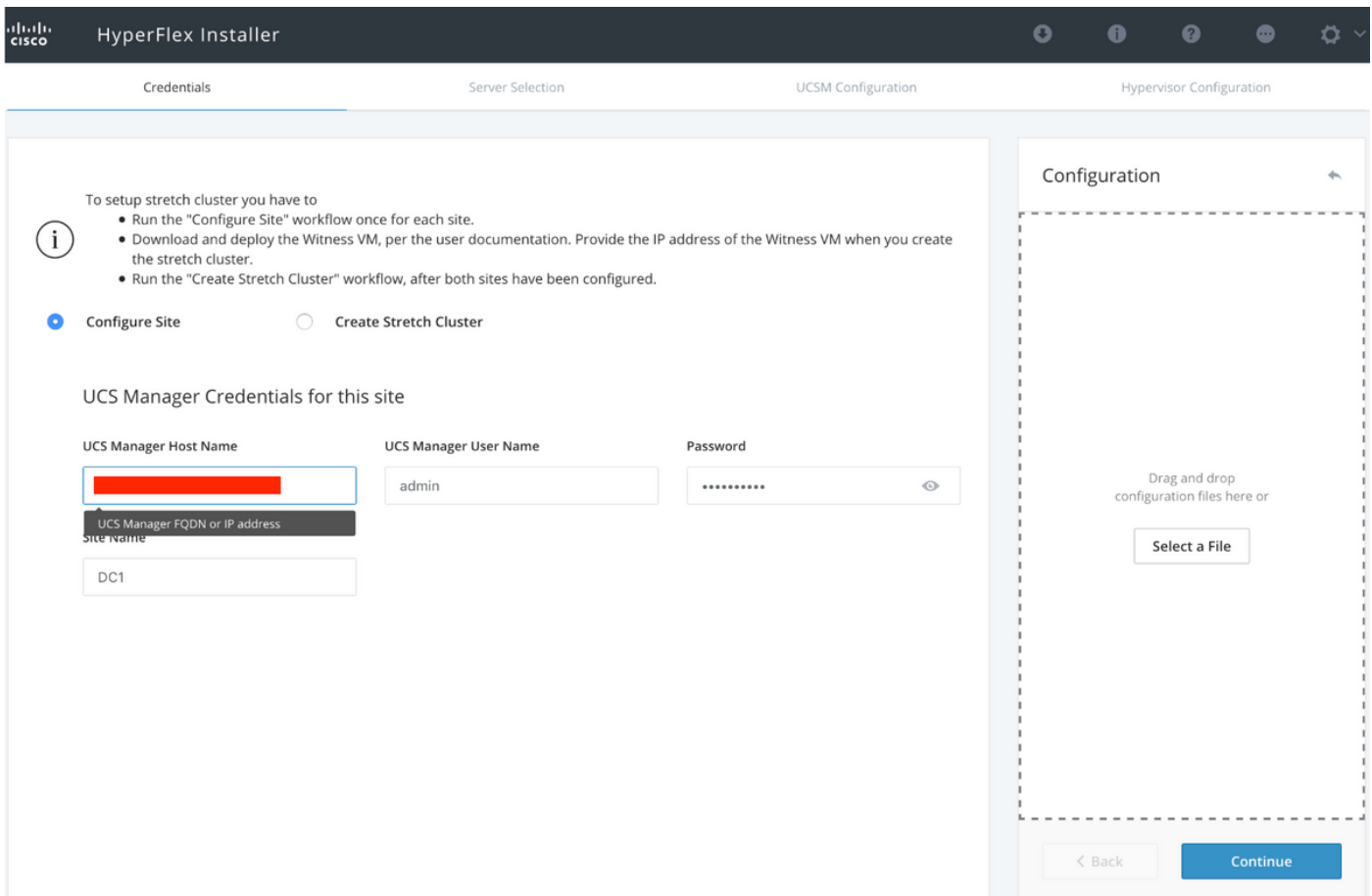


配置站点A

步骤1.登录到各分配的HX安装程序以启动集群配置。如果安装程序仍显示先前的安装状态，请单击上面栏中的轮子，然后选择“Start Over (开始)”开始新安装。在“选择 workflow—>创建集群—>(选择) 延伸集群。



步骤2.在配置站点工作流程中，在站点名称中输入UCSM凭证和DC信息。然后单击继续。

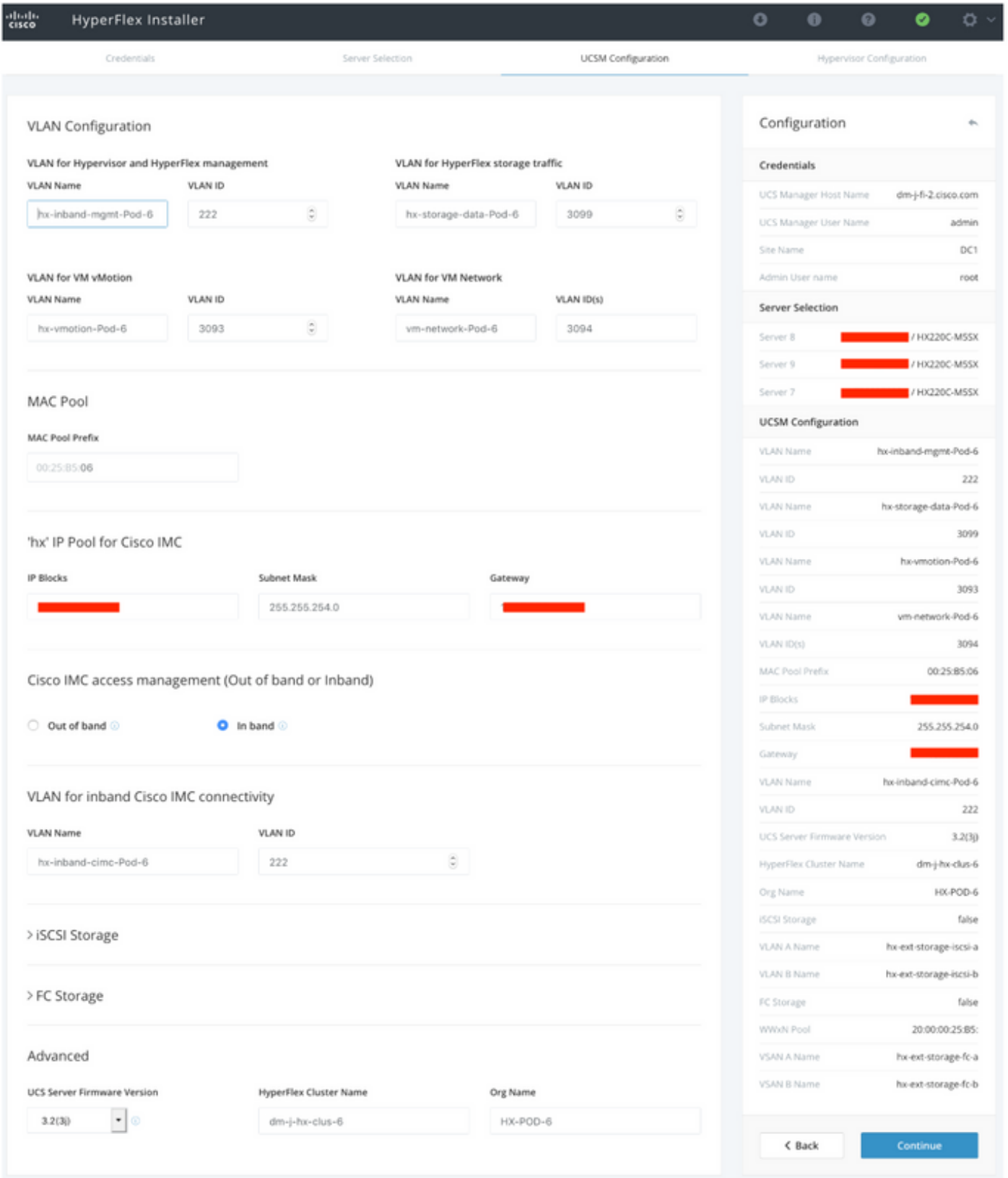


步骤3.在服务器选择中，选择源服务器，然后单击“继续”

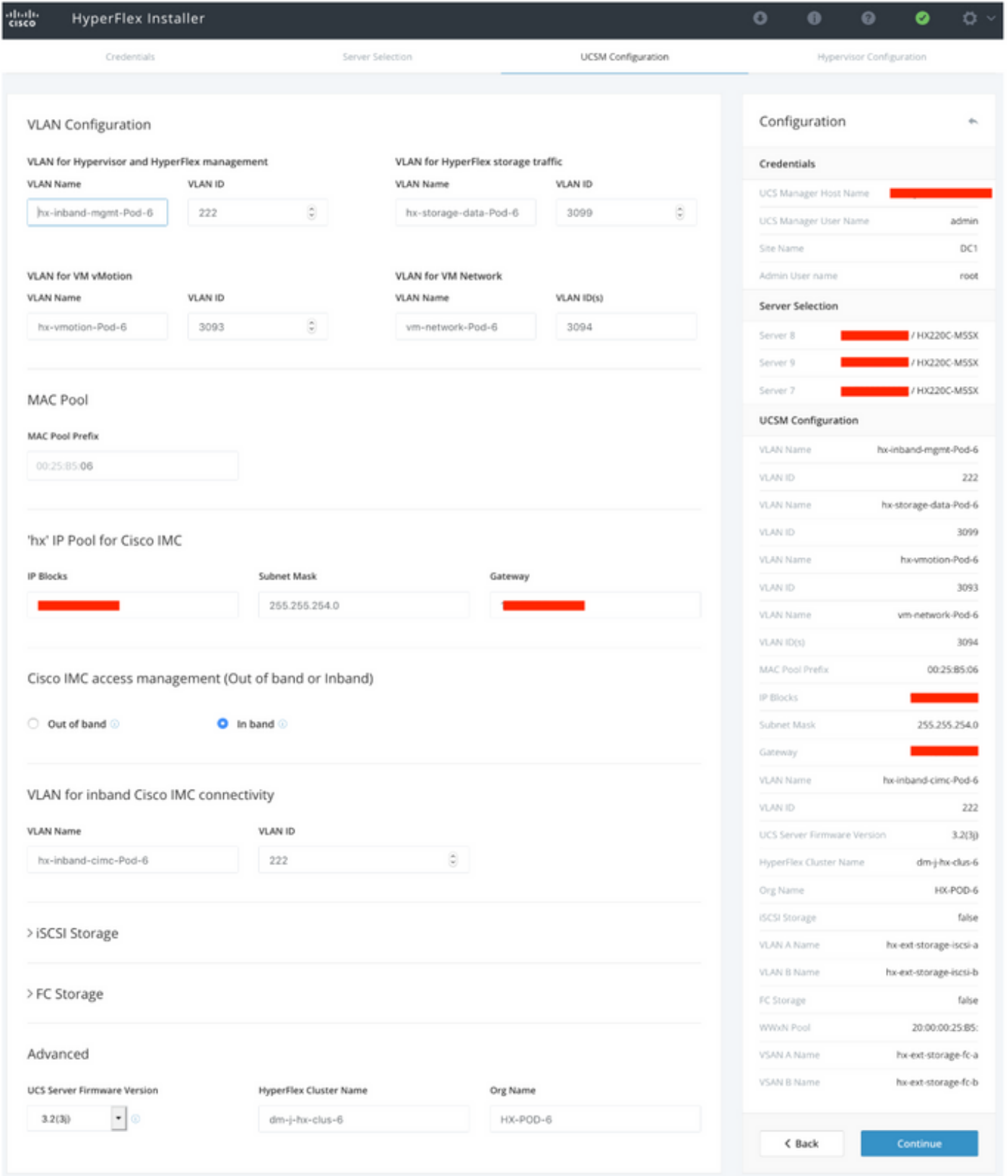
The screenshot shows the HyperFlex Installer interface. The top navigation bar includes the Cisco logo and the title 'HyperFlex Installer'. Below the navigation bar, there are four tabs: 'Credentials', 'Server Selection', 'UCSM Configuration', and 'Hypervisor Configuration'. The 'Server Selection' tab is currently selected. The main content area is divided into two sections. The left section, titled 'Server Selection', contains a sub-section 'Select Nodes for this site.' with two sub-tabs: 'Unassociated (3)' and 'Associated (6)'. Below these is a table with columns for 'Server Name', 'Status', 'Model', 'Serial', and 'Actions'. Three servers are listed: Server 7, Server 8, and Server 9, all with a status of 'unassociated' and model 'HX220C-M5SX'. Each row has a checked checkbox and a 'none' action. The right section, titled 'Configuration', contains a 'Credentials' sub-section with fields for 'UCS Manager Host Name', 'UCS Manager User Name', and 'Site Name'. The 'UCS Manager User Name' field is filled with 'admin' and the 'Site Name' field is filled with 'DC1'. At the bottom of the configuration panel, there are two buttons: '< Back' and 'Continue'.

| Server Name | Status | Model | Serial | Actions |
|-------------|--------------|-------------|------------|---------|
| Server 7 | unassociated | HX220C-M5SX | [REDACTED] | none |
| Server 8 | unassociated | HX220C-M5SX | [REDACTED] | none |
| Server 9 | unassociated | HX220C-M5SX | [REDACTED] | none |

步骤4.在UCSM配置部分输入VLAN ID和VLAN名称。在本例中，我们使用了Inband for CIMC。单击“继续”



步骤5.在“虚拟机监控程序配置”部分提供所有请求的信息。然后单击配置站点以开始站点配置。



步骤6. 确认站点A虚拟机监控程序配置成功。

Start Config Installer Validations UCSM Configuration Hypervisor Configuration

✓ Hypervisor Configuration Successful

Hypervisor Configuration - Overall **Succeeded**

- ✓ Login to UCS API
- ✓ Configuring static ip on the specified ESXi servers
- ✓ Configuring static ip on a ESXi server
- ✓ Login to ESXi through SoL with user specified username and password
- ✓ Logout from UCS API
- ✓ CONFIGURATION COMPLETED SUCCESSFULLY

配置站点B

步骤1.单击轮子，然后选择Configure Site开始站点B配置，如下所示。

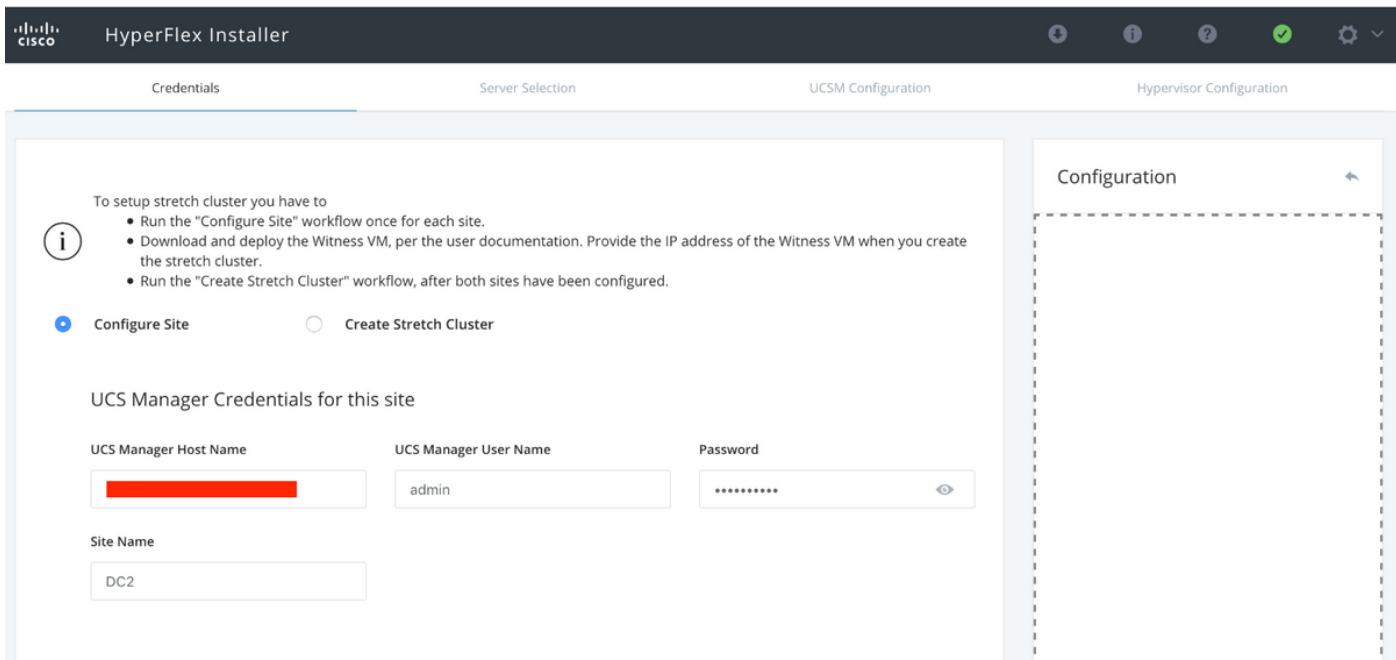
Start Config Installer Validations UCSM Configuration Hypervisor Configuration

Configuration

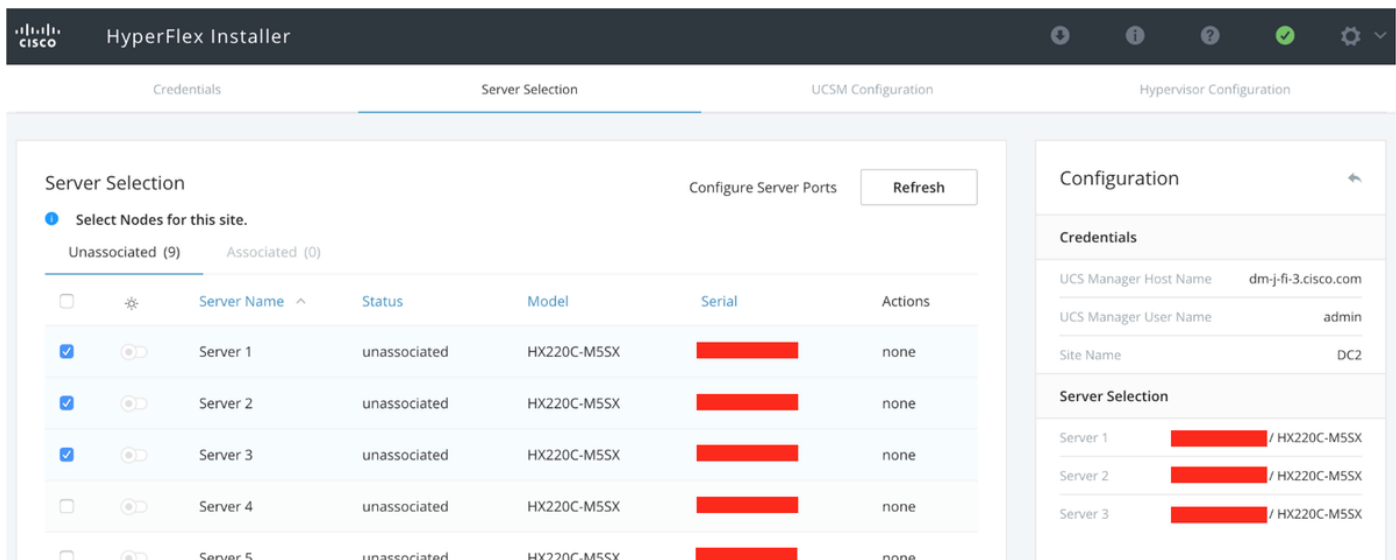
- Configure Site
- Create Stretch Cluster
- Log Out (root)

Credentials

步骤2.在“配置站点”工作流程中，在“站点名称”中输入目标UCSM凭据和目标DC。然后单击继续。



步骤3.在服务器选择中，选择源服务器，然后单击“继续”



步骤4.在UCSM配置部分输入VLAN ID和VLAN名称。在本例中，我们使用了Inband for CIMC。单击“继续”

HyperFlex Installer

Credentials Server Selection **UCSM Configuration** Hypervisor Configuration

VLAN Configuration

VLAN for Hypervisor and HyperFlex management

VLAN Name: VLAN ID:

VLAN for HyperFlex storage traffic

VLAN Name: VLAN ID:

VLAN for VM vMotion

VLAN Name: VLAN ID:

VLAN for VM Network

VLAN Name: VLAN ID(s):

MAC Pool

MAC Pool Prefix:

'hx' IP Pool for Cisco IMC

IP Blocks: Subnet Mask: Gateway:

Cisco IMC access management (Out of band or Inband)

Out of band In band

VLAN for inband Cisco IMC connectivity

VLAN Name: VLAN ID:

> iSCSI Storage

> FC Storage

Advanced

UCS Server Firmware Version: HyperFlex Cluster Name: Org Name:

Configuration

Credentials

UCS Manager Host Name:

UCS Manager User Name:

Site Name:

Server Selection

Server 1: / HX220C-M55X

Server 2: / HX220C-M55X

Server 3: / HX220C-M55X

步骤5.在“虚拟机监控程序配置”部分提供所有请求的信息。然后单击**配置**站点以开始站点配置。

HyperFlex Installer

Credentials Server Selection UCSM Configuration Hypervisor Configuration

Configure common Hypervisor Settings

Subnet Mask: 255.255.254.0 Gateway: [REDACTED] DNS Server(s): [REDACTED]

Hypervisor Settings

Make IP Addresses and Hostnames Sequential

| # | Name | Serial | Static IP Address | Hostname |
|---|----------|------------|-------------------|------------|
| 1 | Server 1 | [REDACTED] | [REDACTED] | dm-j-hx-21 |
| 2 | Server 2 | [REDACTED] | [REDACTED] | dm-j-hx-22 |
| 3 | Server 3 | [REDACTED] | [REDACTED] | dm-j-hx-23 |

Hypervisor Credentials

Admin User name: root Hypervisor Password: [REDACTED]

Configuration

Credentials

UCS Manager Host Name: [REDACTED]
UCS Manager User Name: admin
Site Name: DC2
Admin User name: root

Server Selection

Server 1: [REDACTED] / HX220C-M5SX
Server 2: [REDACTED] / HX220C-M5SX
Server 3: [REDACTED] / HX220C-M5SX

UCSM Configuration

VLAN Name: hx-inband-mgmt
VLAN ID: 222
VLAN Name: hx-storage-data
VLAN ID: 3099
VLAN Name: hx-vmotion
VLAN ID: 3093
VLAN Name: vm-network
VLAN ID(s): 3094
MAC Pool Prefix: 00:25:B5:07
IP Blocks: [REDACTED]
Subnet Mask: 255.255.254.0
Gateway: [REDACTED]
VLAN Name: hx-inband-cimc-Pod-7
VLAN ID: 222
UCS Server Firmware Version: 3.2(3h)

[← Back](#) [Configure Site](#)

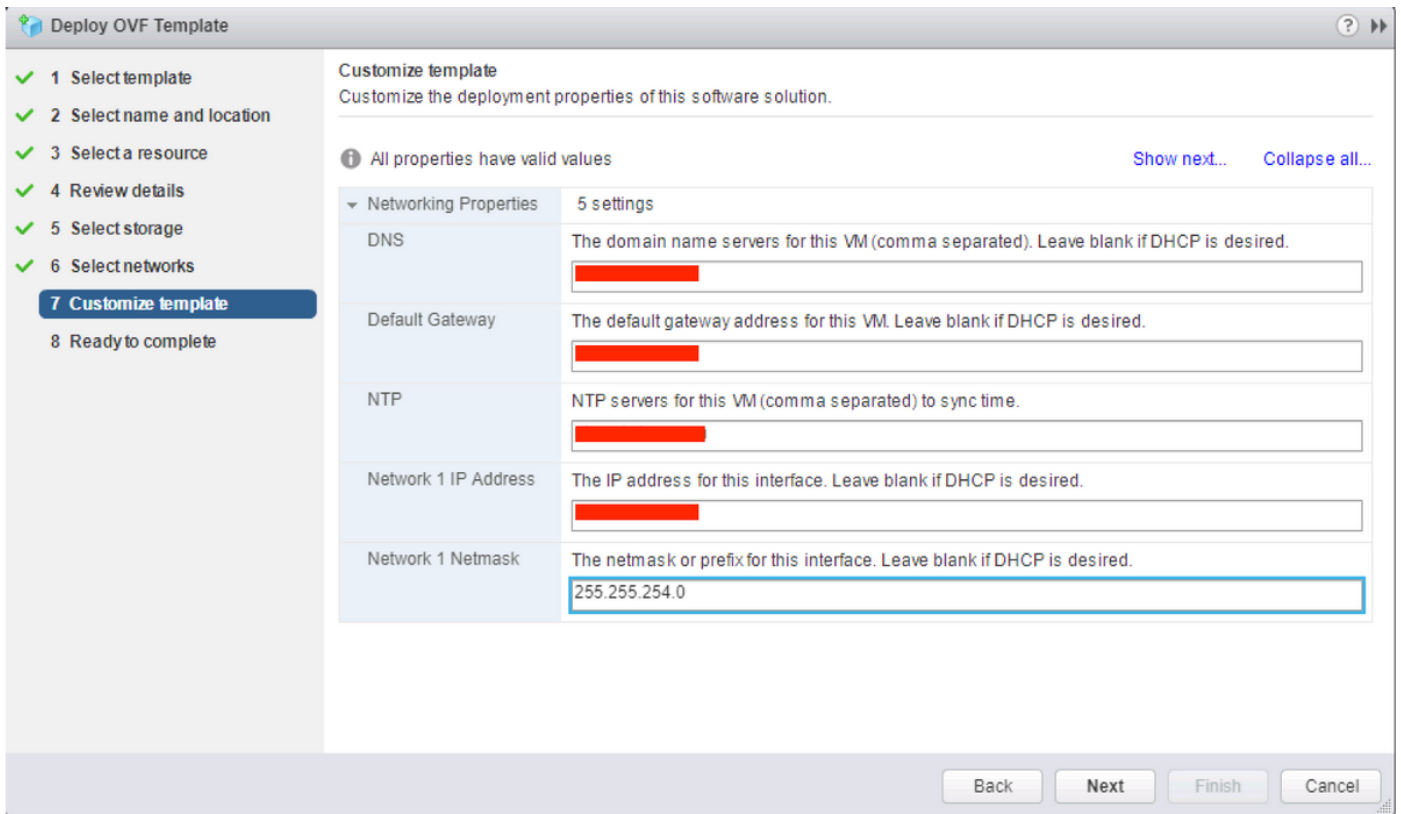
步骤6. 确认站点B虚拟机监控程序配置成功。

The progress bar shows five steps: Start, Config Installer, Validations, UCSM Configuration, and Hypervisor Configuration. All steps are marked with a green checkmark. Below the progress bar, a red-bordered box highlights the message: **✓ Hypervisor Configuration Successful**. Below this, a dropdown menu is set to 'Hypervisor Configuration'. The overall status is 'Succeeded'. The configuration steps listed are:

- ✓ Login to UCS API
- ✓ Configuring static ip on the specified ESXi servers
- ✓ Configuring static ip on a ESXi server
- ✓ Login to ESXi through SoL with user specified username and password
- ✓ Logout from UCS API
- ✓ CONFIGURATION COMPLETED SUCCESSFULLY

HX见证VM部署

- 这是继续前的重要步骤。HX见证VM需要启动并运行，并且可访问，以便安装成功。
- OVA映像需要部署在ESXi主机上。
- 请测试与此VM的连接并确保登录正常。
- 有关OVA安装属性，请参阅以下内容。



创建延伸群集

步骤1:

- 要开始配置延伸群集，请导航至安装程序上的轮，并选择**创建延伸群集**以开始延伸群集配置。
- 在凭证屏幕中提供源(站点A)和目标(站点B) **UCSM及其凭证、站点名称、UCSM组织名称、vCenter和虚拟机监控程序凭证**。单击**Continue(继续)**进入“Server Selection(服务器选择)”屏幕。

HyperFlex Installer

Credentials Server Selection IP Addresses Cluster Configuration

i To setup stretch cluster you have to

- Run the "Configure Site" workflow once for each site.
- Download and deploy the Witness VM, per the user documentation. Provide the IP address of the Witness VM when you create the stretch cluster.
- Run the "Create Stretch Cluster" workflow, after both sites have been configured.

Configure Site Create Stretch Cluster

UCS Manager Credentials for Site 1

UCS Manager Host Name: [REDACTED] User Name: admin Password: [REDACTED]

Site Name: DC1 Org Name: HX-POD-6

UCS Manager Credentials for Site 2

UCS Manager Host Name: [REDACTED] User Name: admin Password: [REDACTED]

Site Name: DC2 Org Name: HX-POD-7

vCenter Credentials

vCenter Server: [REDACTED] User Name: administrator@vsphere.local Admin Password: [REDACTED]

Hypervisor Credentials

Admin User name: root

The hypervisor on this node uses the factory default password

Hypervisor Password: [REDACTED]

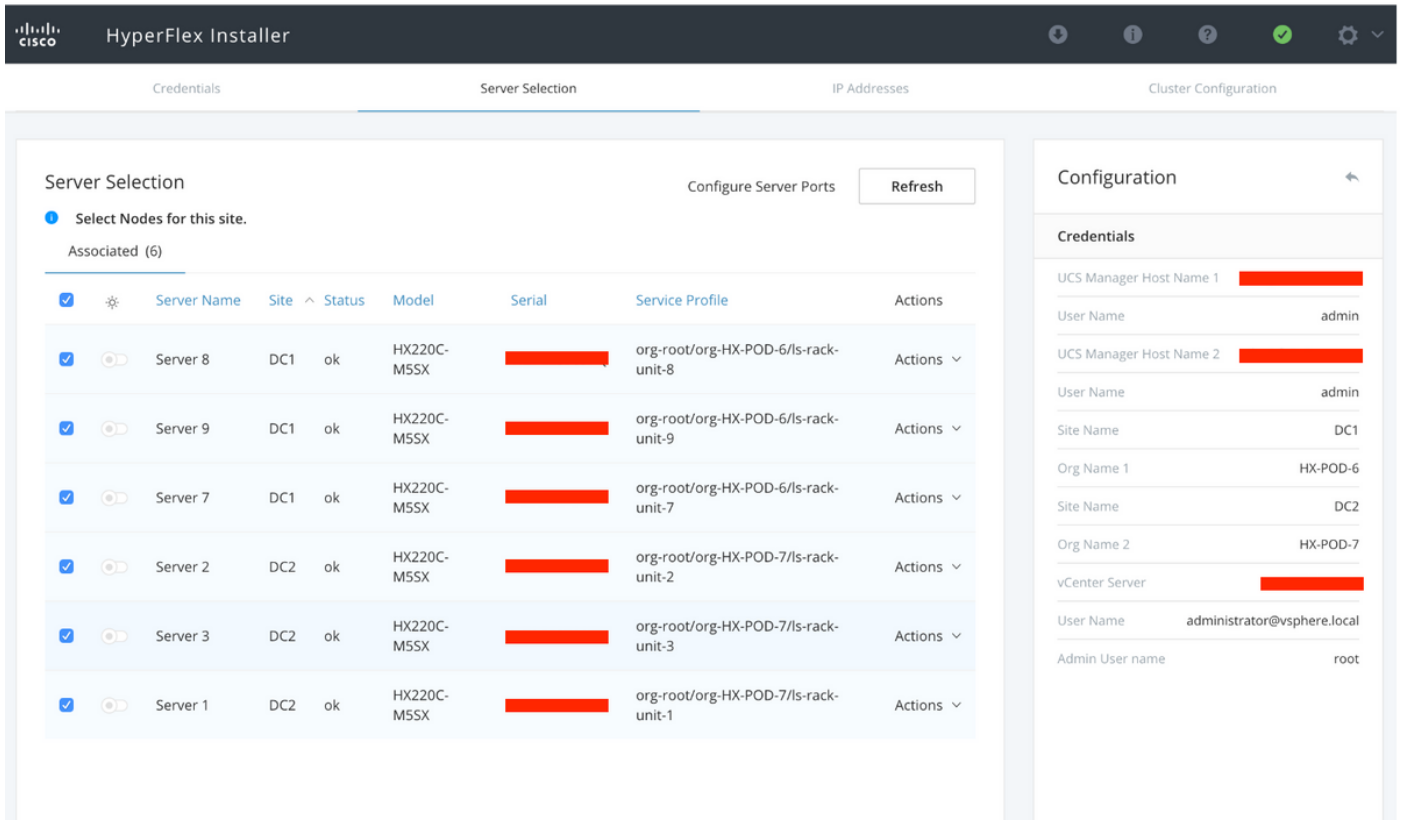
Configuration

Drag and drop configuration files here or

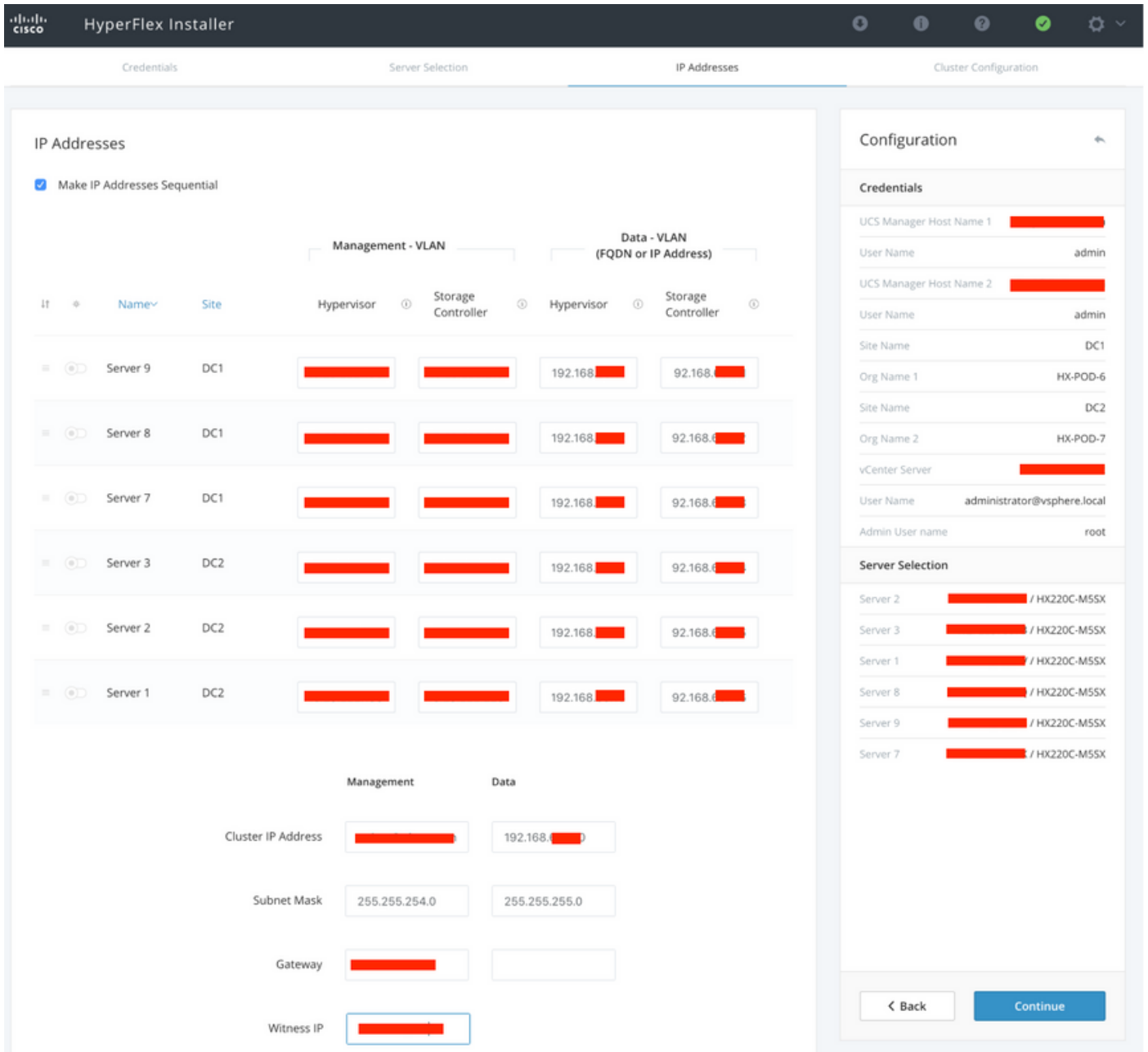
Select a File

< Back Continue

第二步： 确保所有服务器（源和目标服务器）都显示为选定状态。?? 然后单击 **继续**，



步骤3.在“IP地址”部分中，提供虚拟机监控程序和存储控制器管理（公共可路由）IP以及其DATA（私有不可路由）IP。此外，为管理和数据网络提供集群IP。单击 **Continue**。



步骤4.在Cluster Configuration(集群配置)下，输入Controller VM口令、vCenter配置详细信息、系统服务详细信息。在“高级网络”部分下，为两个站点配置相同的管理和数据VLAN。然后单击Start开始群集配置。

Cisco HX Cluster

Cluster Name: dm-j-hx-clus-6

Replication Factor: 2+2

Controller VM

Create Admin Password: [password]

Confirm Admin Password: [password]

vCenter Configuration

vCenter Datacenter Name: HX-Stretch

vCenter Cluster Name: dm-j-hx-clus-6

System Services

DNS Server(s): [redacted]

NTP Server(s): [redacted].cisco.com

DNS Domain Name: cisco.com

Time Zone: (UTC-08:00) Pacific Time

Auto Support

Auto Support: Enable Connected Services (Recommended)

Send service ticket notifications to: [empty]

Advanced Networking

Management VLAN Tag - Site 1: 222

Management VLAN Tag - Site 2: 222

Management vSwitch: vswitch-hx-inband-mgmt

Data VLAN Tag - Site 1: 3099

Data VLAN Tag - Site 2: 3099

Data vSwitch: vswitch-hx-storage-data

Advanced Configuration

Jumbo Frames: Enable Jumbo Frames on Data Network

Disk Partitions: Clean up disk partitions

Virtual Desktop (VDI): Optimize for VDI only deployment

Configuration

Credentials

UCS Manager Host Name 1: [redacted].m

User Name: admin

UCS Manager Host Name 2: [redacted].m

User Name: admin

Site Name: DC1

Org Name 1: HX-POD-6

Site Name: DC2

Org Name 2: HX-POD-7

vCenter Server: [redacted]

User Name: administrator@vsphere.local

Admin User name: root

Server Selection

Server 2: [redacted] / HX220C-M55X

Server 3: [redacted] / HX220C-M55X

Server 1: [redacted] / HX220C-M55X

Server 8: [redacted] / HX220C-M55X

Server 9: [redacted] / HX220C-M55X

Server 7: [redacted] / HX220C-M55X

IP Addresses

Cluster Name: dm-j-hx-clus-6

Management Cluster: [redacted].cisco.com

Data Cluster: [redacted]

Management Subnet Mask: 255.255.254.0

Data Subnet Mask: 255.255.255.0

Management Gateway: [redacted]

Witness IP: [redacted]

Server 9 (WZP22370075)

Management Hypervisor: [redacted]

Management Storage Controller: [redacted]

Data Hypervisor: [redacted]

Data Storage Controller: [redacted]

Server 3 (WZP22370078)

[Back](#) [Start](#)

步骤5. 确认群集创建已成功完成。

Progress
Summary

✔ Cluster Creation Successful View Summary >

Cluster Creation ▾

| Cluster Creation - Overall | |
|----------------------------|--------------------------------------|
| ✔ Succeeded | Preparing Storage Cluster |
| ✔ | Configuring Cluster Resource Manager |
| ✔ | updateClusterSEDStatus |

| | |
|------------------------------------|----------------------------|
| 192.168. [redacted] In Progress | ✔ Configuring NTP Services |
| 192.168. [redacted] In Progress | ✔ Configuring NTP Services |
| 192.168. [redacted] In Progress | ✔ Configuring NTP Services |
| 192.168. [redacted] In Progress | ✔ Configuring NTP Services |
| 192.168. [redacted] In Progress | ✔ Configuring NTP Services |
| 192.168. [redacted] In Progress | ✔ Configuring NTP Services |

Configuration

Credentials

UCS Manager Host Name 1 [redacted]

User Name admin

UCS Manager Host Name 2 [redacted]

User Name admin

Site Name DC1

Org Name 1 HX-POD-6

Site Name DC2

Org Name 2 HX-POD-7

vCenter Server [redacted]

User Name administrator@vsphere.local

Admin User name root

Server Selection

Server 2 [redacted] / HX220C-M5SX

Server 3 [redacted] / HX220C-M5SX

Server 1 [redacted] / HX220C-M5SX

Server 8 [redacted] / HX220C-M5SX

Server 9 [redacted] / HX220C-M5SX

Server 7 [redacted] / HX220C-M5SX

IP Addresses

Cluster Name dm-j-stretch-1

Management Cluster [redacted]

Data Cluster 192.168. [redacted]

Management Subnet Mask 255.255.254.0

Data Subnet Mask 255.255.255.0

Management Gateway [redacted]

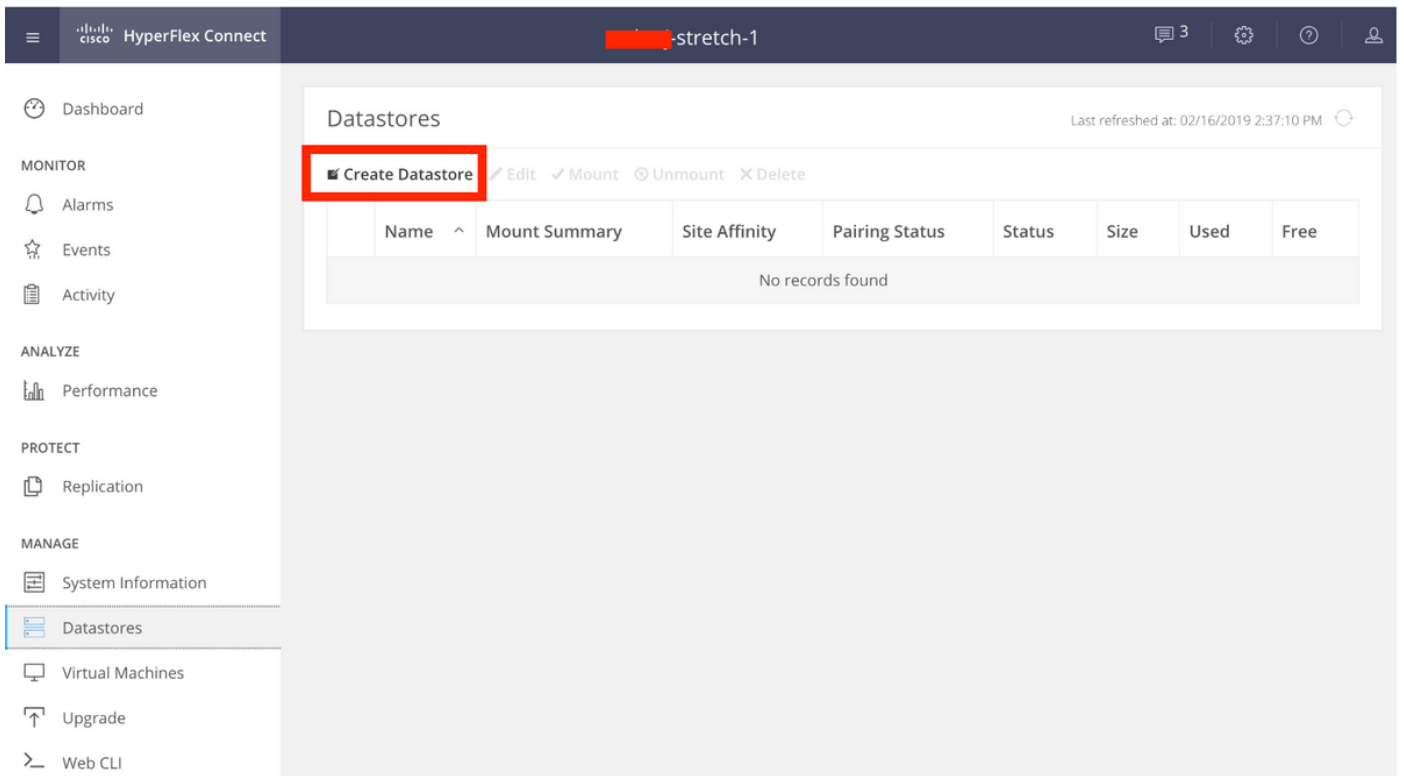
Witness IP [redacted]

Server 9 (WZP22370075)

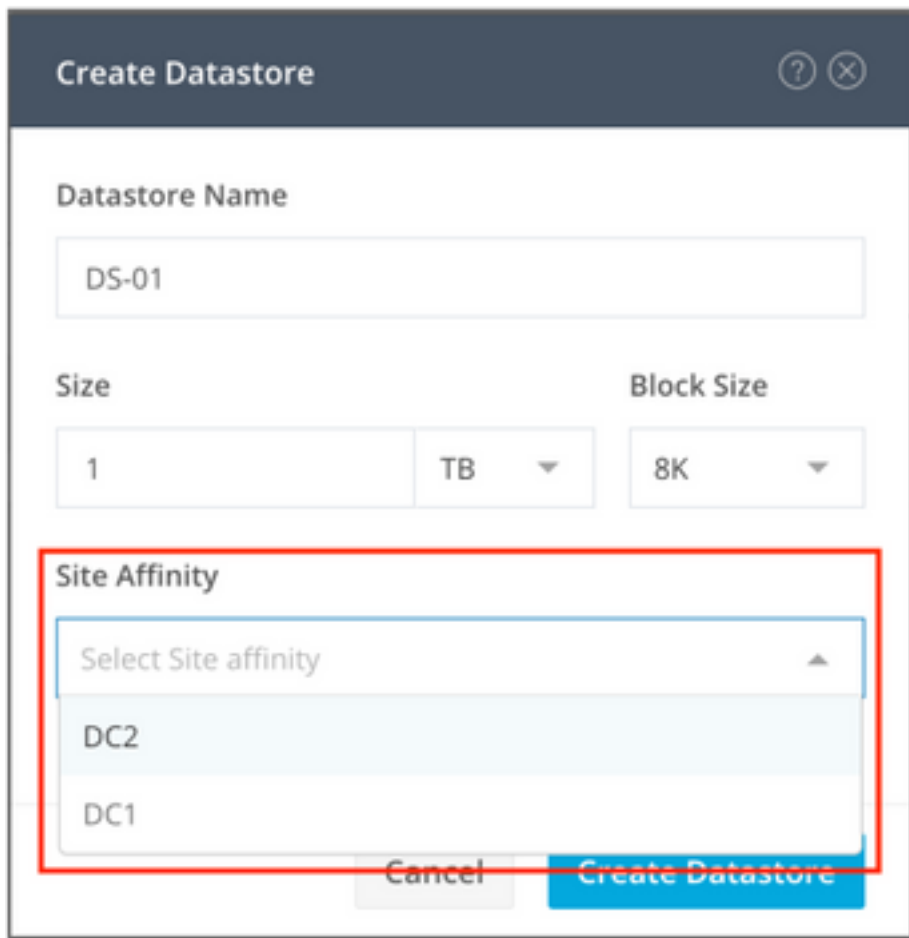
验证

创建Datastore

步骤1.在延伸群集上创建Datastore类似于在普通群集上创建Datastore。唯一的区别是在扩展集群中创建Datastore时定义站点关联。在Hyperflex Connect UI中，导航到Datastore，然后单击“创建Datastore”



步骤2. 创建Datastore并选择其大小。然后，在其他步骤中，在“站点关联”下拉菜单中选择两个站点之一。然后单击“Create Datastore”



步骤3. 确认新创建的数据存储的状态，它显示为MOUNTED，并显示其站点关联。

Datastores

Last refreshed at: 02/16/2019 2:41:02 PM 

Create Datastore  Edit  Mount  Unmount  Delete



Filter

| | Name ^ | Mount Summary | Site Affinity | Pairing Status | Status | Size | Used | Free |
|--------------------------|--------|---------------|---------------|----------------|--------|------|------|------|
| <input type="checkbox"/> | DS-01 | MOUNTED | DC1 | Unpaired | Normal | 1 TB | 0 B | 1 TB |

Showing 1 - 1 of 1