

# Administration Cisco Unified Contact Center Enterprise with Cisco Unified CVP 12.0.1 Bootcamp



Created by

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**VoiceBootcamp Inc.**

**Revision 4.0**

**Table of Contents**



## Preface

This document is a detail design guide for Deploying Cisco Contact Center Enterprise 12.0.1 with CVP 12.01 VoiceBootcamp. This document is to be used during 10 days of classroom training at VoiceBootcamp Inc.

## Audience

This document is intent to be used by VoiceBootcamp Inc. clients and students and internal employees - and Friends of Faisal Khan J.

## Scope and Requirements

This document, which is to be used as a lab guide, will provide candidate a real world experience in deploying Cisco Unified Contact Center Enterprise (UCCE). This lab guide was designed based on a real world scenario. Candidates will focus on understand the design requirements and deploy the solution based on what is outlined in this document.

The document is divided into sections for:

- System Topology – Including Network layout, Sites, Server locations, Server types, Server Names & IP addresses etc.
- Setup – Information tables used for server application 'setup' tasks
- Configuration – Information tables and data used to add configuration information for each component
- Call Routing – Information on how calls will be routed from component to component

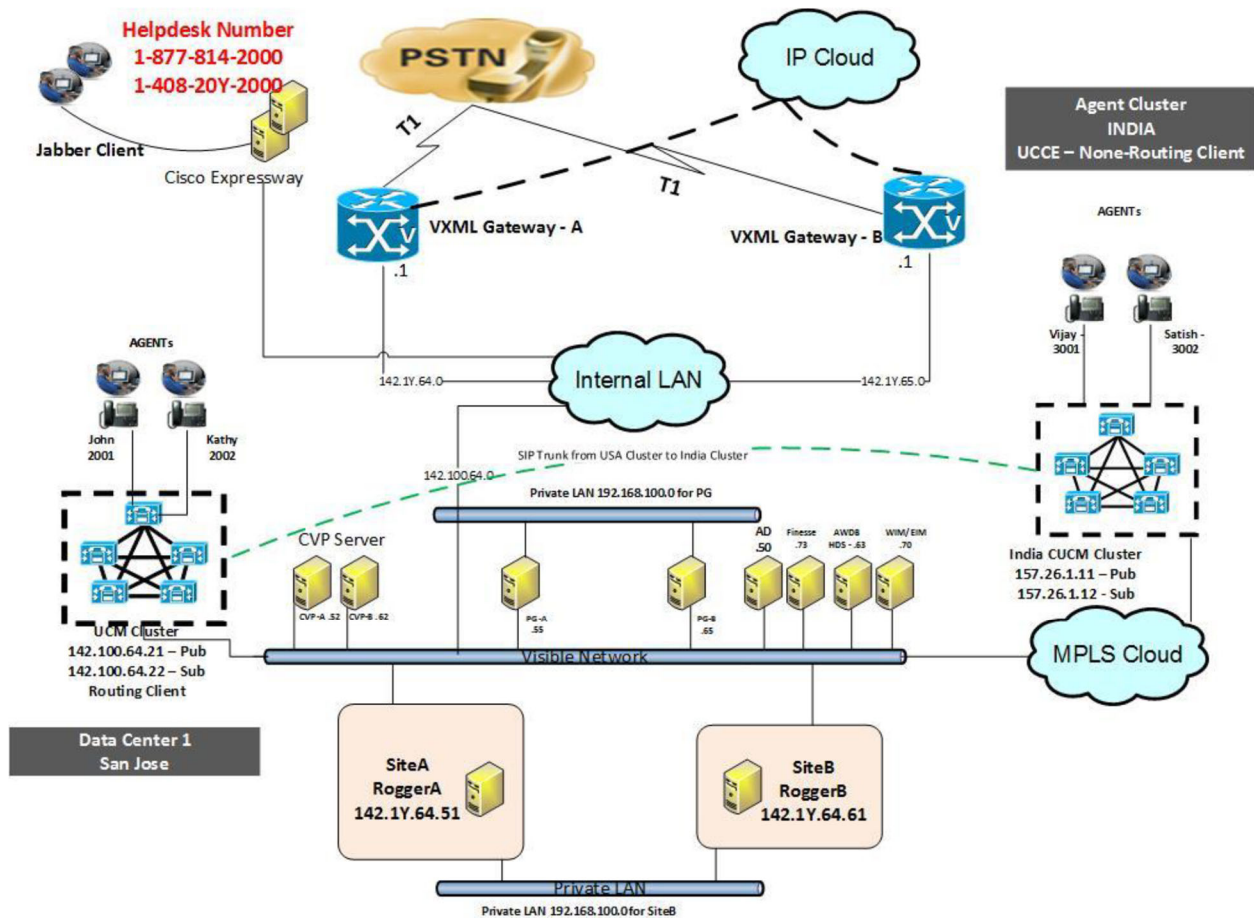
NOTE: This document includes configuration details relevant to the UCCE system and tables for inclusion of configuration information for the future business unit call flow designs. However, this document is NOT intended to cover business unit 'call flows'. The configuration information required for each business unit e.g. agents, skill groups, agent teams, etc. should be added to the tables in this document's appendices.

## **1) Network & System Server Topology**

All core servers (UC, UCCE and CVP) will be located in two data centers called HQ & SiteB. Candidates will work in a team to build these two data centers. The UC will utilize two CUCM

clusters; both distributed across the two data centers. The UCCE and CVP components will therefore use a Multi-Site with Distributed Call Processing model, splitting the diverse server components across the two data centers.

A 'Distributed Voice Gateway with Distributed Call Treatment and Queuing Using Unified CVP' model will be used. Agent sites can be located anywhere within the IP network. Traffic to the servers will be carried over the existing LAN/WAN. Cisco 2801 ISR Gateways will be located in the agent sites to ingress queue and deliver calls to the agents



## 2) Server Name and Network Addressing

Servers	Host Name	IP Add	NIC Information
Active Directory	ad	IP	142.1Y.64.100/24
CUCM – US Cluster	cucmpub	IP	142.1Y.64.21/24
CUCM – India Cluster	Ucmpub	IP	142.1Y.65.21/24

### 3) UCCE/CVP Server Table Lists

Domain Name: podY.com ← Y is your POD Number)

SiteA	UCCE Side A	Public Interface	142.1Y.64.51
	Rogger A	Private Interface	192.1Y.64.21
SiteB	UCCE – Site B	Public Interface	142.1Y.65.51
	Rogger B	Private Interface	192.1Y.64.31
SiteA	PG – A	Public Interface	142.1Y.64.55
		Private Interface	192.1Y.64.22
SiteB	PG –B	Public IP Address	142.1Y.65.55
		Private Interface	192.1Y.64.32
UCCE	Administrative & HDS	Public Interface	142.1Y.64.53
		Private Interface	192.1Y.64.23
UCCE	Administrative & HDS	Public Interface	142.1Y.65.53
		Private Interface	192.1Y.64.33
CVP-A	CVPA	Public Interface	142.1Y.64.52
CVP-B	CVPB	Public Interface	142.1Y.65.62
SiteA	Finesse	Public Interface	142.1Y.64.60
			<a href="http://fnusa.podY.com">http://fnusa.podY.com</a>
SiteB	Finesse	Public Interface	142.1Y.65.60
			<a href="http://fnindia.podY.com">http://fnindia.podY.com</a>

Agent Table – INDIA Cluster

POD Y - Agent

MAC Address	Agent Name	Extension
02004C4F4Y11	AgentY1	3Y01
02004C4F4Y12	AgentY2	3Y02
02004C4F4Y13	AgentY3	3Y03
02004C4F4Y14	AgentY4	3Y04

Please NOTE: Y represents your POD number not a character itself.

## 4) Setup – Cisco Unified ICM Servers

### Domain & MS Active Directory Integration

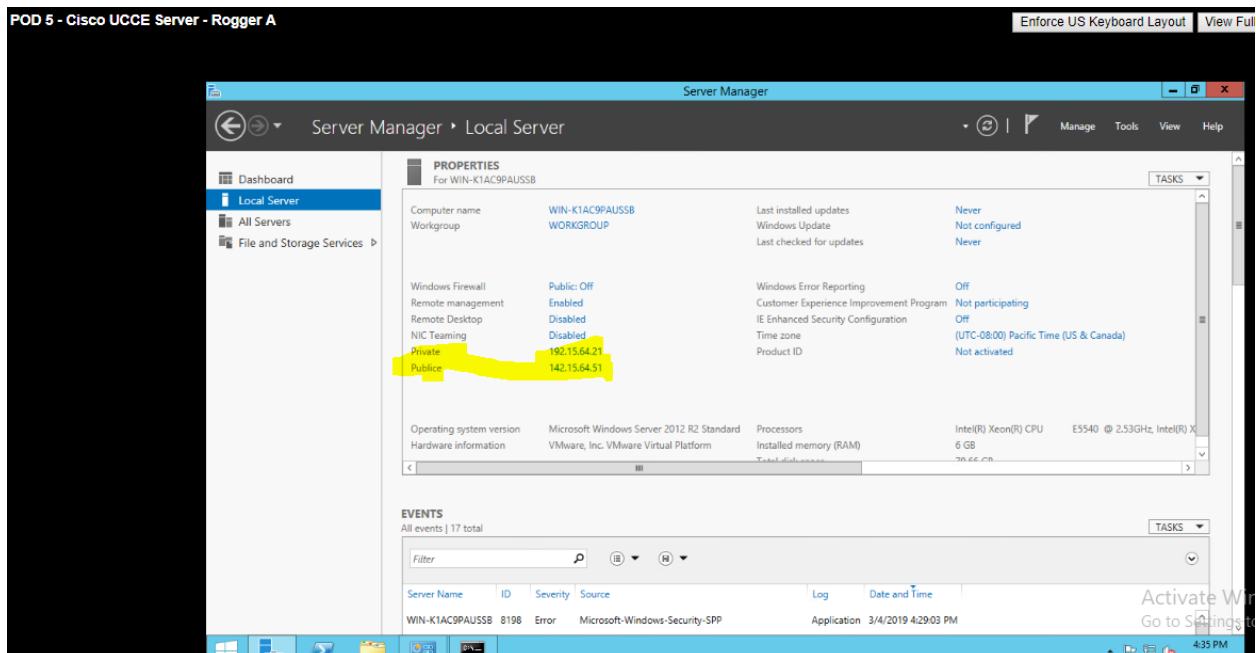
**NOTE: This must be done only on the server designated as a Microsoft Active Directory**

The Cisco UCCE servers are required to be members of a Microsoft Active Directory Domain (Minimum = Windows 2008 'Native'). The domain OU structure and requirements are outlined. Cisco Unified Contact Center Hosted (UCCH) uses the concepts of customers and customer instances to enable a single platform to support a multitenant environment.

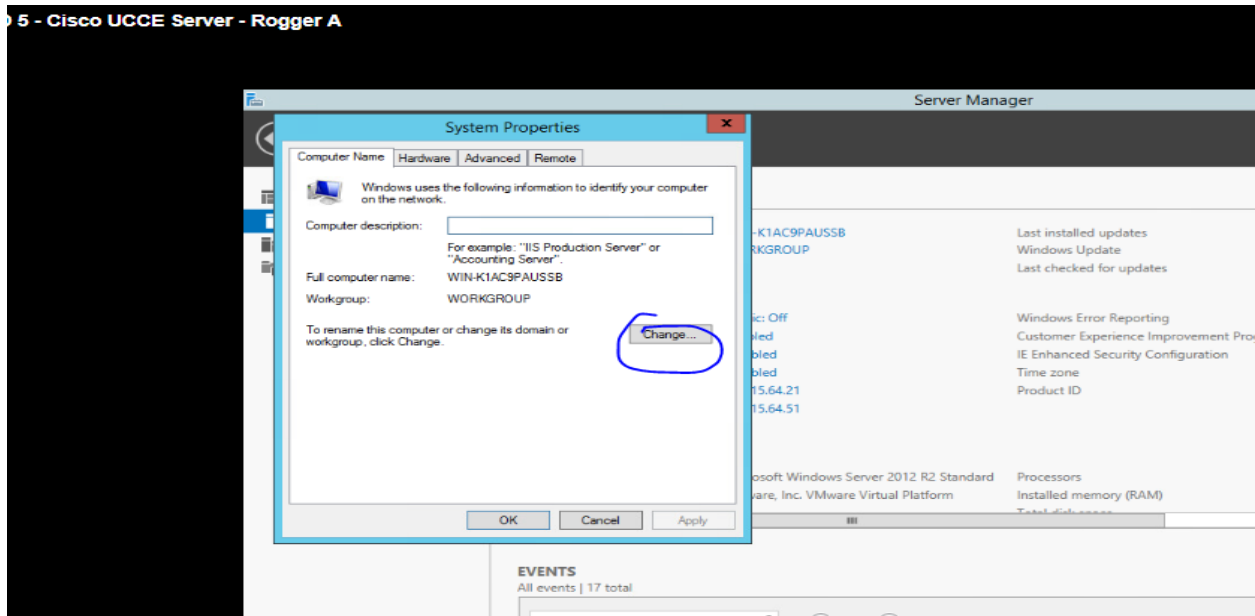
**Active Directory Server: 142.1Y.64.100**

**Install SQL Server on UCCE and Sprawler Servers. Follow the instructions**

**Now Installation: Window SQL 2014 in this Window server**

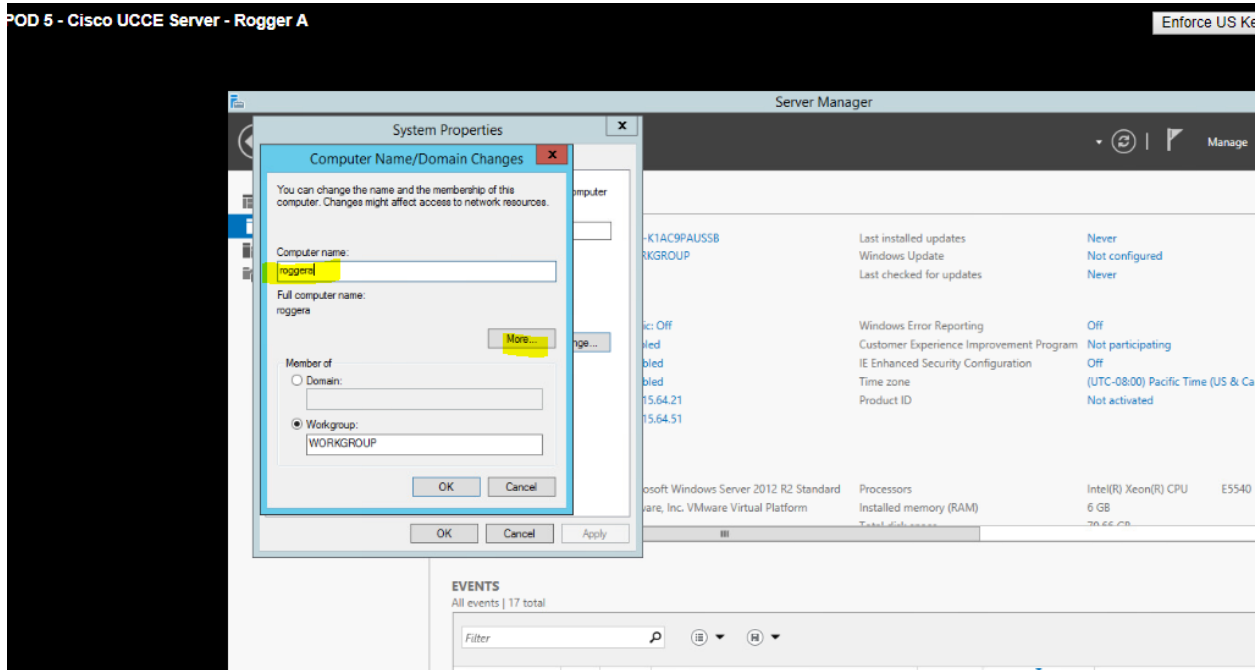


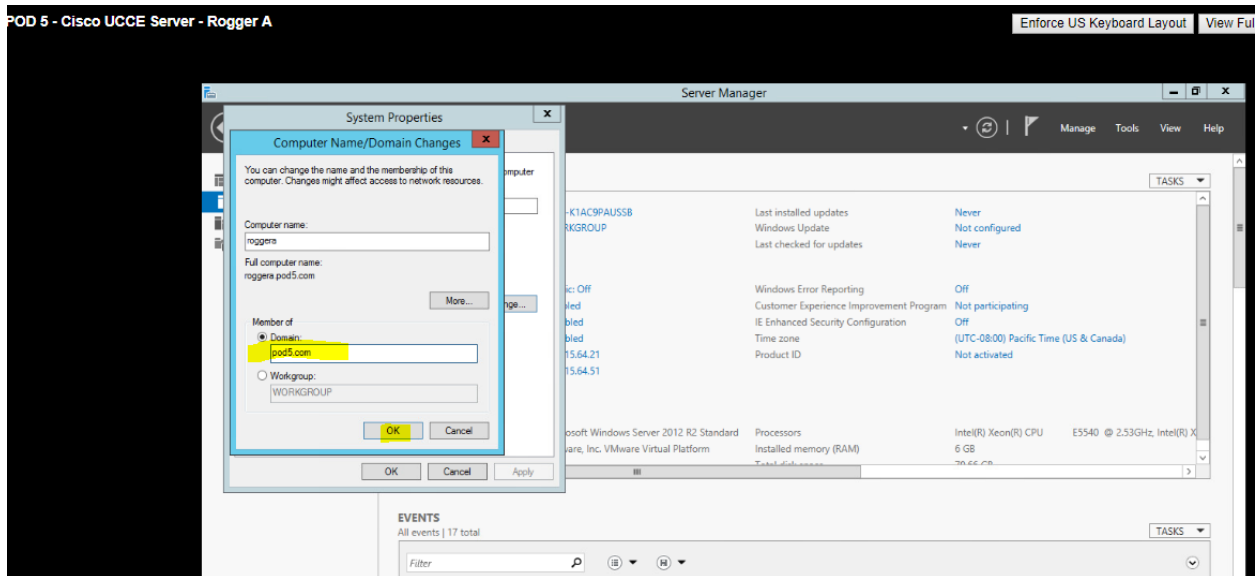
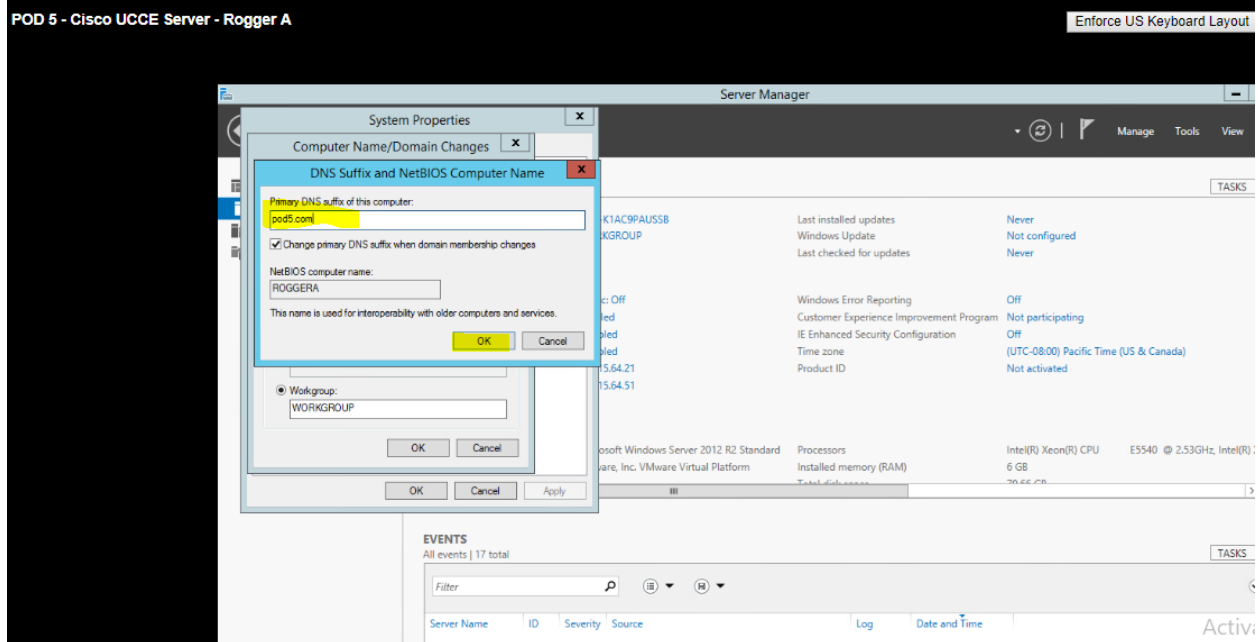
POD 5 - Cisco UCCE Server - Rogger A



POD 5 - Cisco UCCE Server - Rogger A

Enforce US Ke

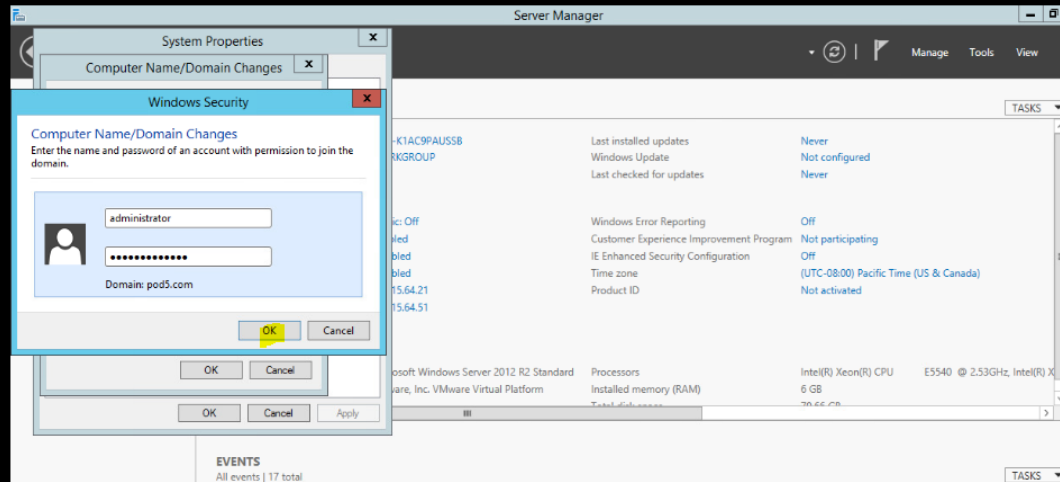




Active Directory user and password

POD 5 - Cisco UCCE Server - Rogger A

Enforce US Keyboard Layout



System Properties - Computer Name/Domain Changes

Windows Security - Computer Name/Domain Changes

Enter the name and password of an account with permission to join the domain.

Administrator: administrator  
 Password: [Redacted]  
 Domain: pod5.com

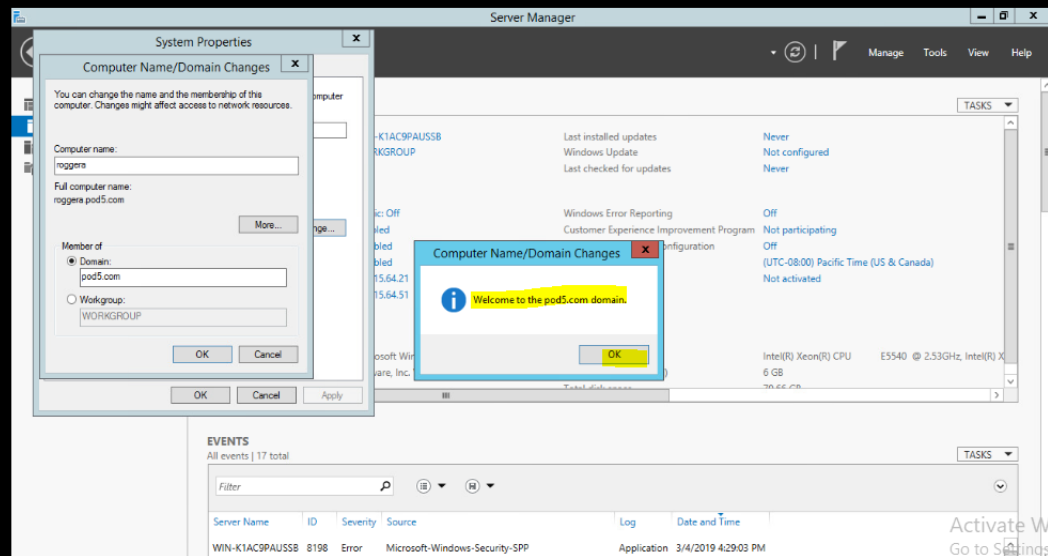
Server Manager - System Information

Model	VMware Virtual Platform	Processors	Intel(R) Xeon(R) CPU E5540 @ 2.53GHz, Intel(R) Xeon(R) CPU E5540 @ 2.53GHz
Installed memory (RAM)	6 GB	Product ID	Not activated
Time zone	(UTC-08:00) Pacific Time (US & Canada)	Windows Error Reporting	Off
Customer Experience Improvement Program	Not participating	Windows Update	Not configured
IE Enhanced Security Configuration	Off	Last installed updates	Never
Time zone	(UTC-08:00) Pacific Time (US & Canada)	Windows Update	Not configured
Product ID	Not activated	Last checked for updates	Never

EVENTS - All events | 17 total

POD 5 - Cisco UCCE Server - Rogger A

Enforce US Keyboard Layout View F



System Properties - Computer Name/Domain Changes

You can change the name and the membership of this computer. Changes might affect access to network resources.

Computer name: roggers

Full computer name: roggers.pod5.com

Member of:

- Domain: pod5.com
- Workgroup: WORKGROUP

Computer Name/Domain Changes - Welcome to the pod5.com domain

Server Manager - System Information

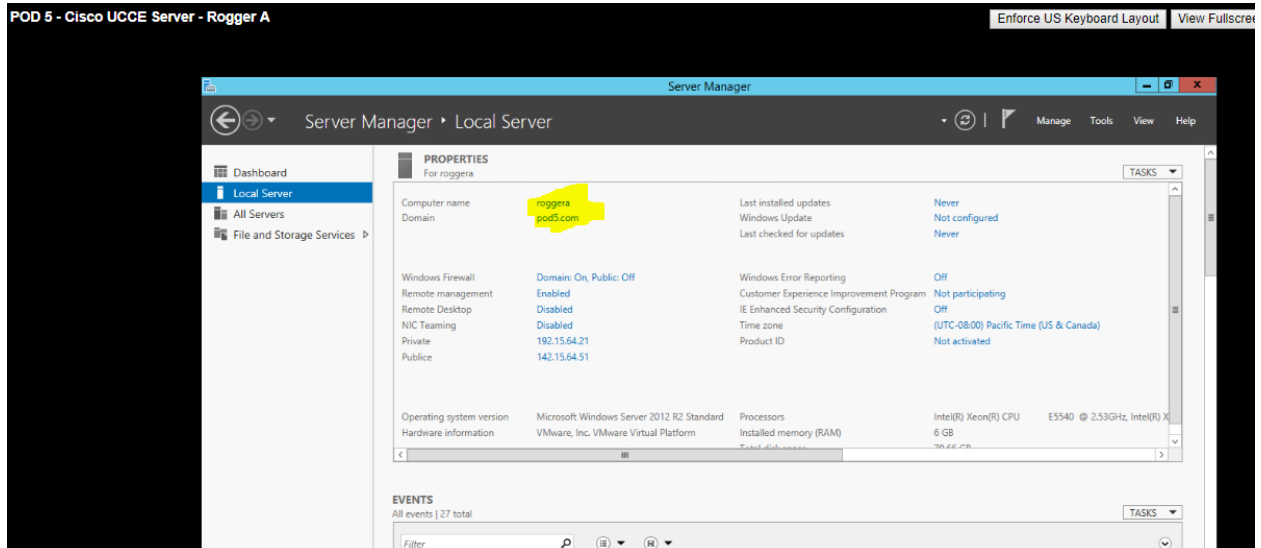
Model	VMware Virtual Platform	Processors	Intel(R) Xeon(R) CPU E5540 @ 2.53GHz, Intel(R) Xeon(R) CPU E5540 @ 2.53GHz
Installed memory (RAM)	6 GB	Product ID	Not activated
Time zone	(UTC-08:00) Pacific Time (US & Canada)	Windows Error Reporting	Off
Customer Experience Improvement Program	Not participating	Windows Update	Not configured
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Product ID	Not activated	Last checked for updates	Never

EVENTS - All events | 17 total

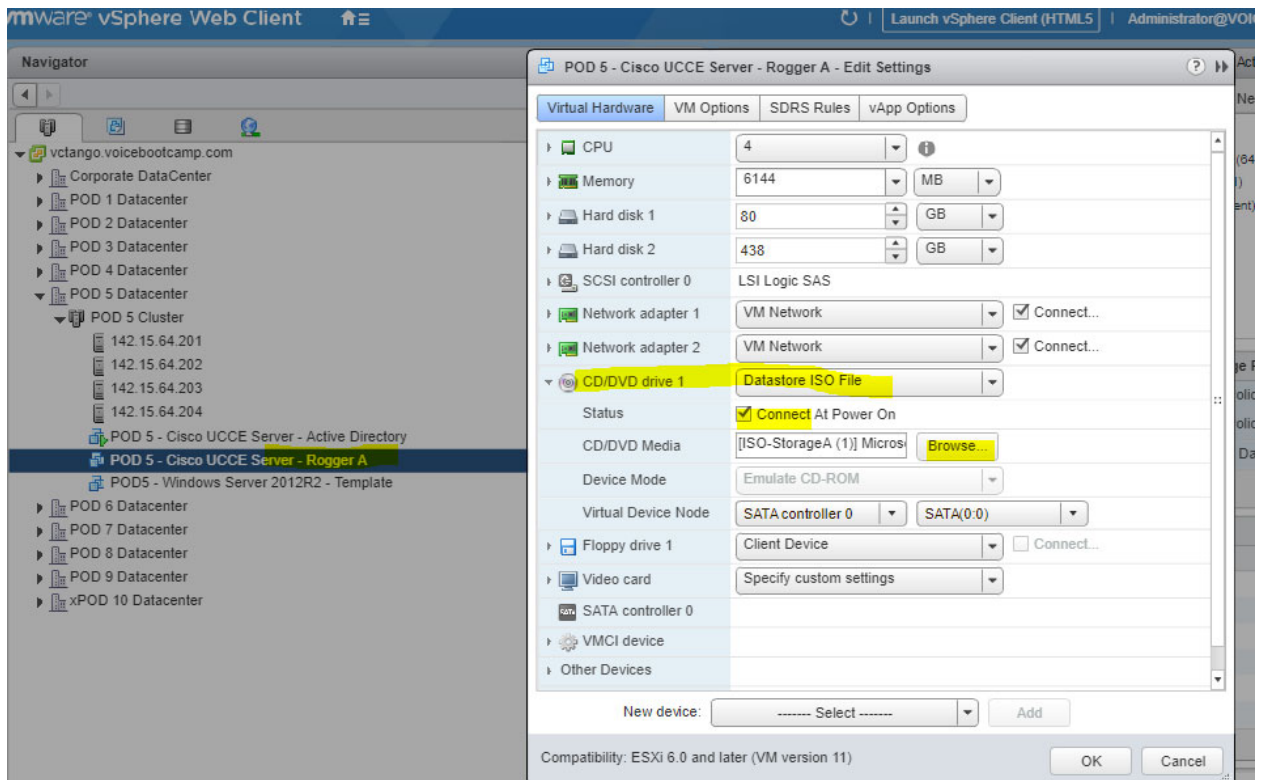
Server Name	ID	Severity	Source	Log	Date and Time
WIN-K1AC9PAUS8	8198	Error	Microsoft-Windows-Security-SPP	Application	3/4/2019 4:29:03 PM

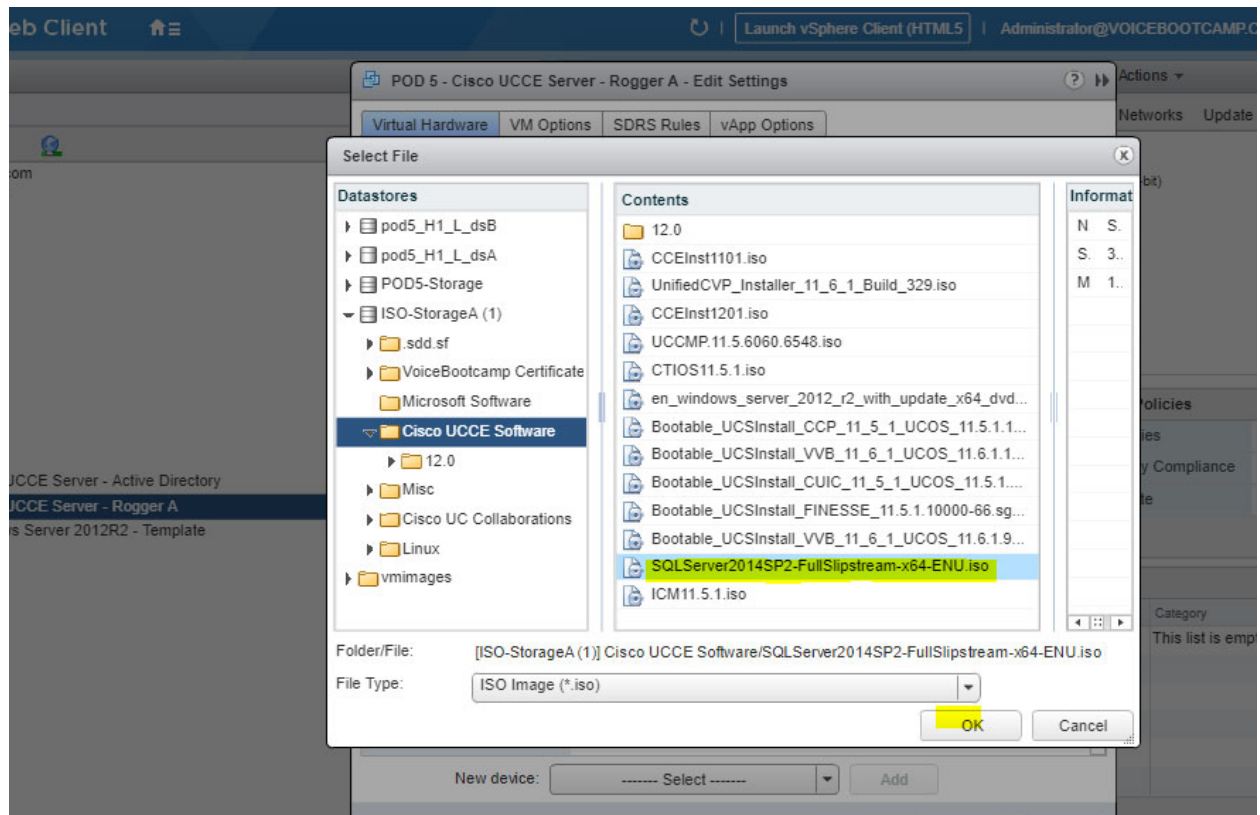
Activate Windows  
Go to Settings to activate Windows.



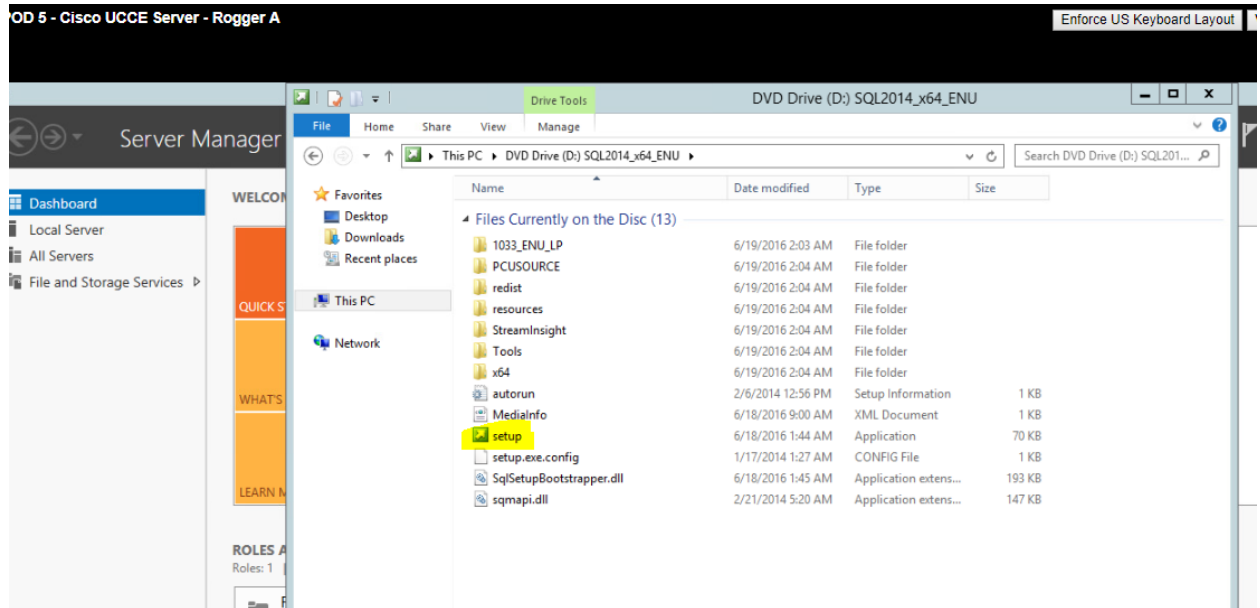
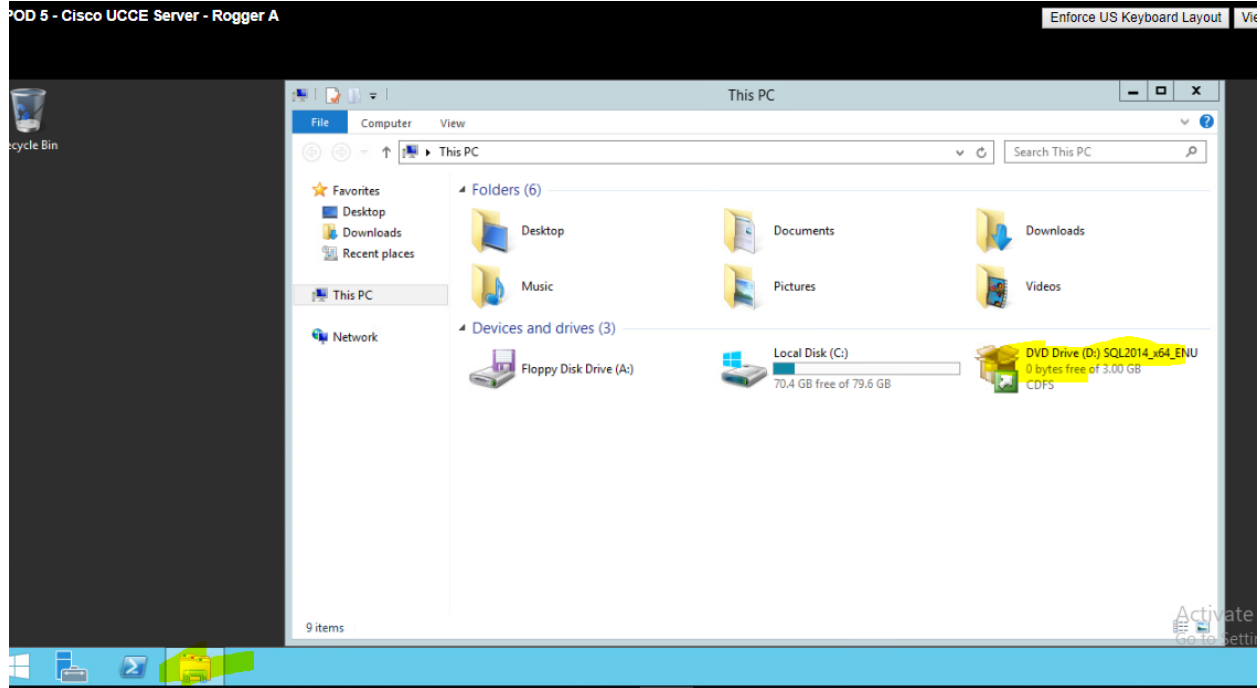


### Now Installation: Window SQL 2014 in this Window server

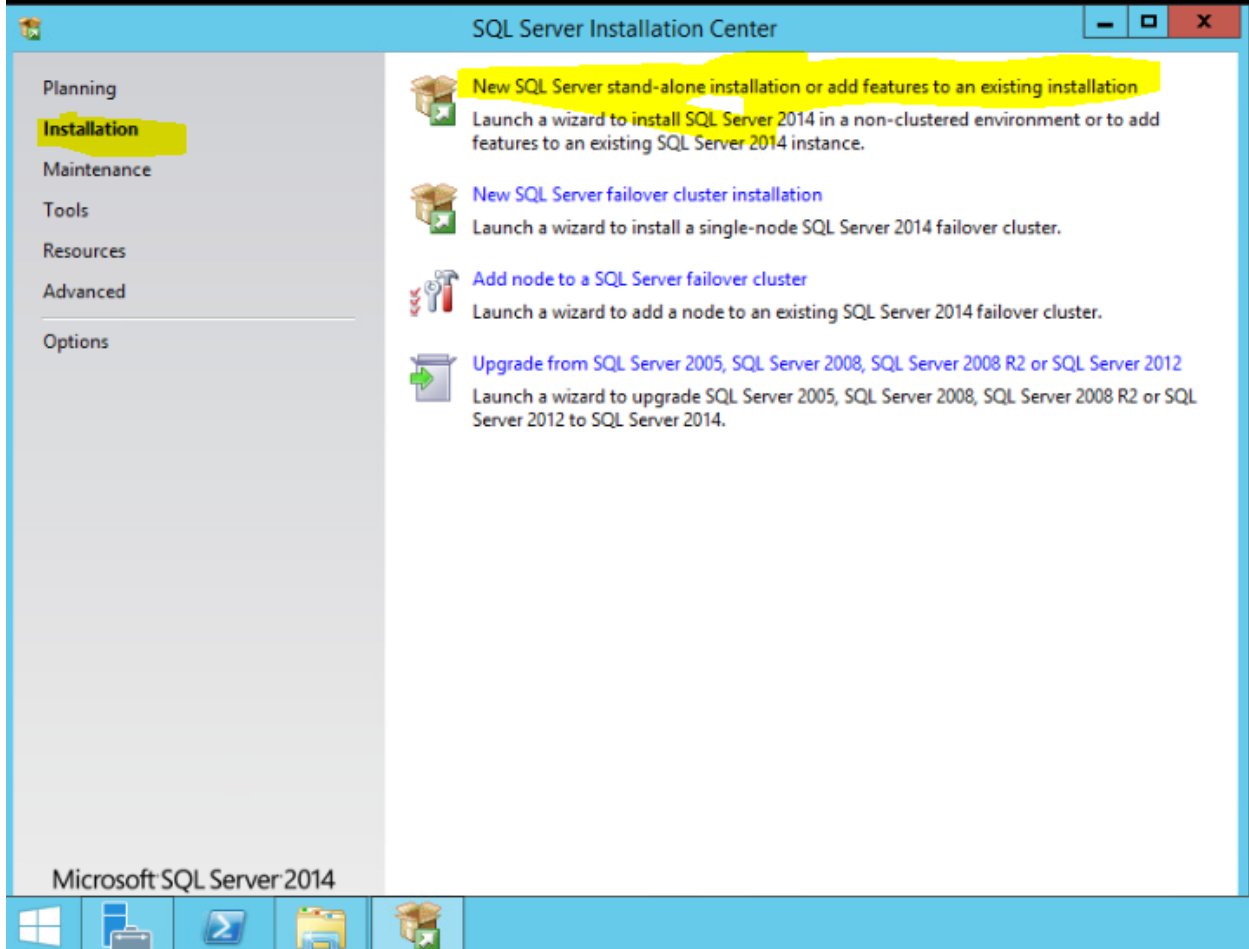


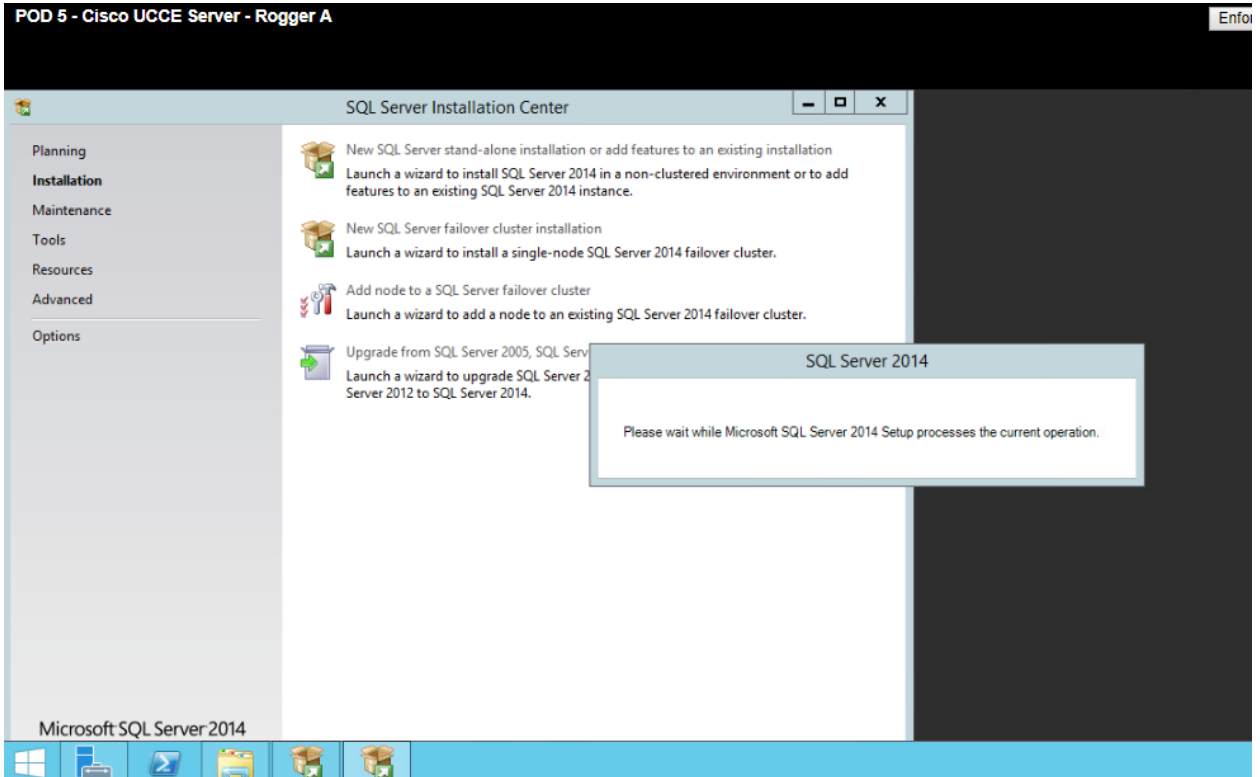


Power On to server

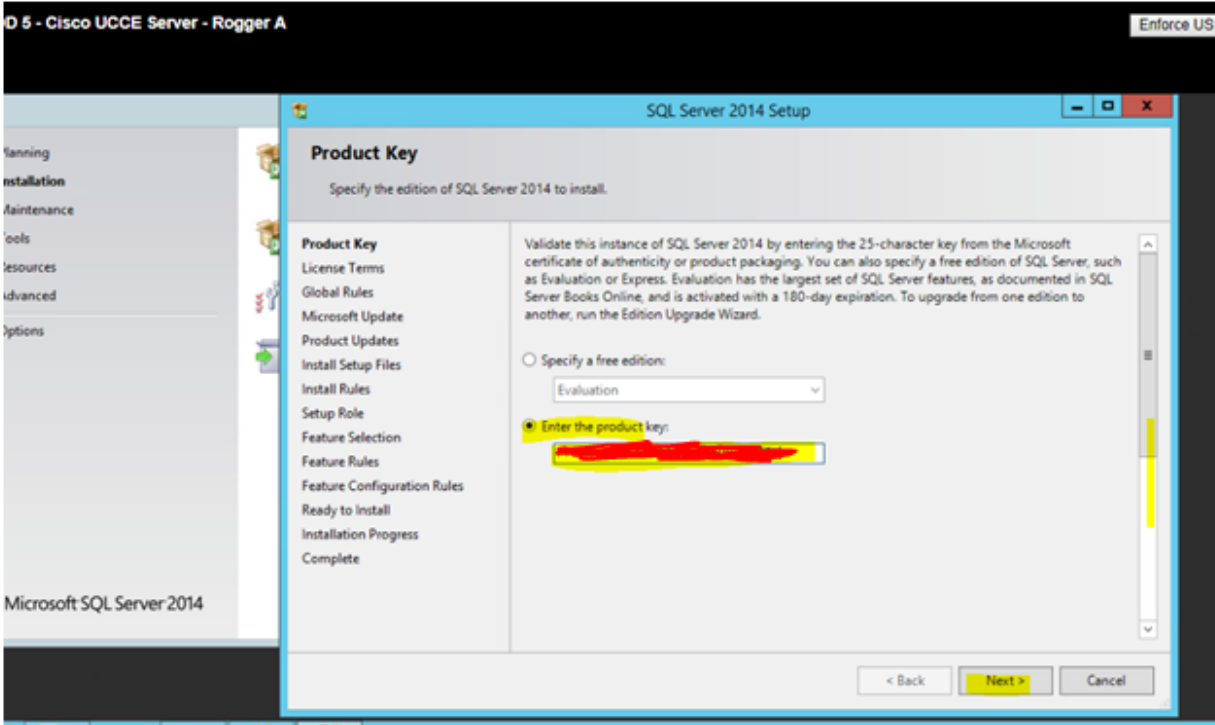


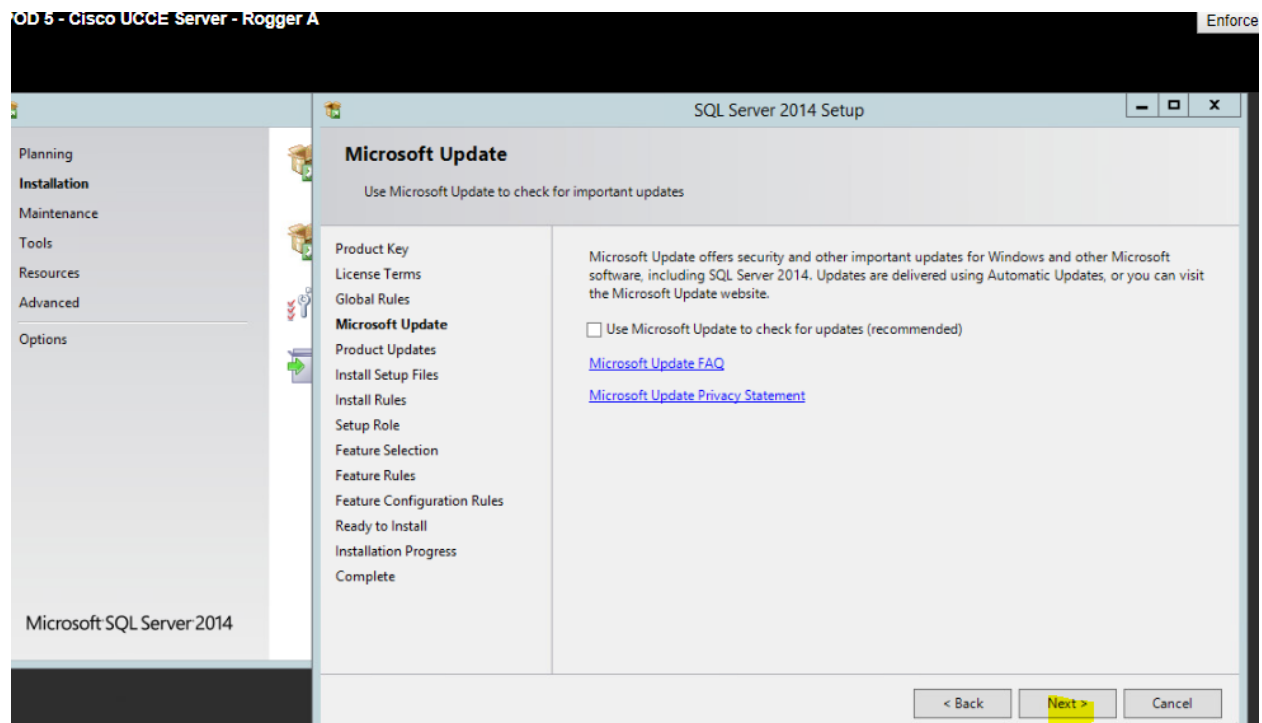
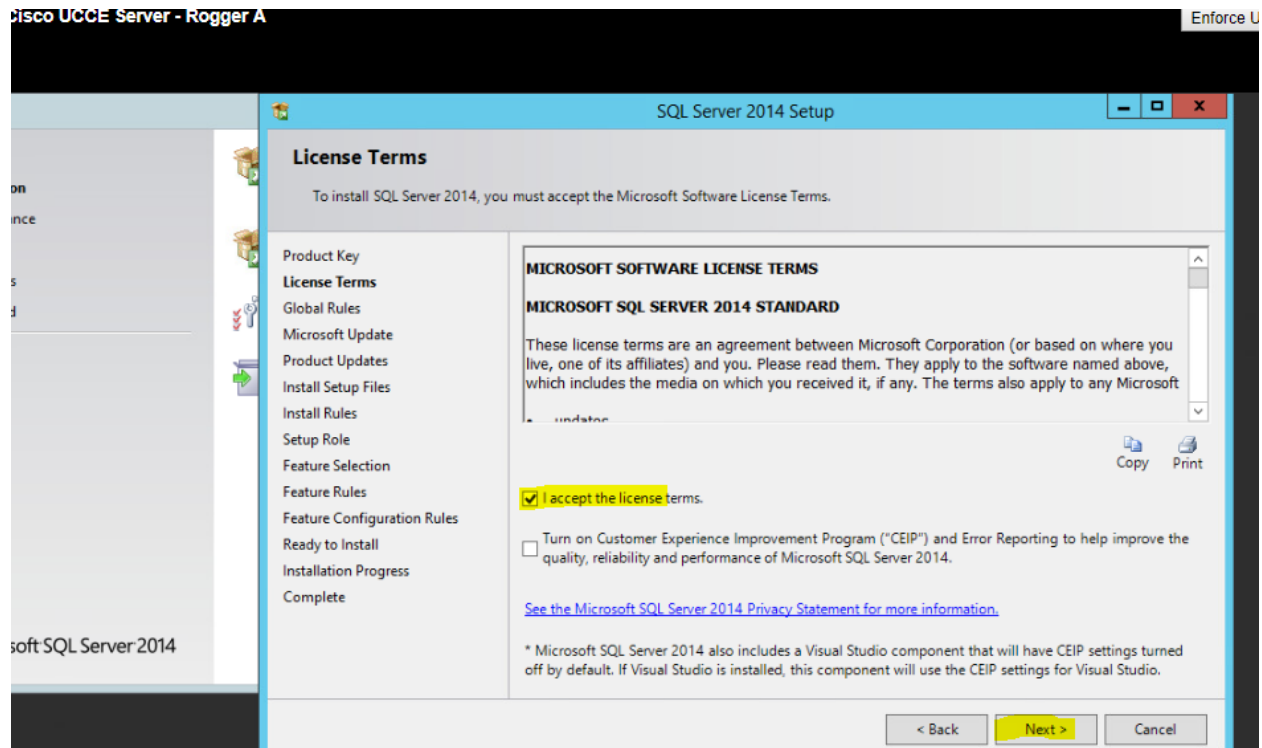
**POD 5 - Cisco UCCE Server - Rogger A**





Product Key (Ask your institute –HR Department)





UCCE Server - Rogger A Enforce

### SQL Server 2014 Setup

**Install Rules**

Setup rules identify potential problems that might occur while running Setup. Failures must be corrected before Setup can continue.

- Product Key
- License Terms
- Global Rules
- Microsoft Update
- Product Updates
- Install Setup Files
- Install Rules**
- Setup Role
- Feature Selection
- Feature Rules
- Feature Configuration Rules
- Ready to Install
- Installation Progress
- Complete

Operation completed. Passed: 7. Failed 0. Warning 0. Skipped 0.

Hide details << Re-run

[View detailed report](#)

Rule	Status
✓ Fusion Active Template Library (ATL)	Passed
✓ Previous releases of SQL Server 2008 Business Intelligence Devel...	Passed
✓ Consistency validation for SQL Server registry keys	Passed
✓ Computer domain controller	Passed
✓ Microsoft .NET Application Security	Passed
✓ Windows Firewall	Passed
✓ Block install when Microsoft SQL Server 2014 CTP1 is present.	Passed

< Back
Next >
Cancel
Help

POD 5 - Cisco UCCE Server - Rogger A Enforce US K

### SQL Server 2014 Setup

- Planning
- Installation**
- Maintenance
- Tools
- Resources
- Advanced
- Options

Microsoft SQL Server 2014

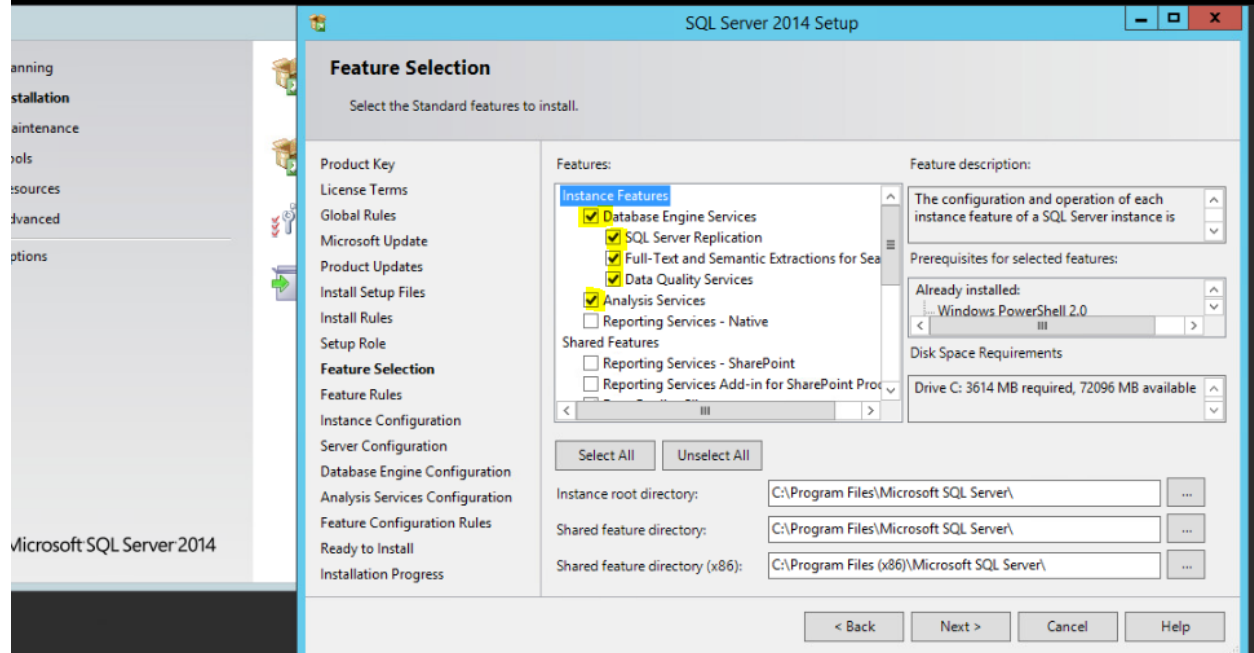
**Setup Role**

Click the SQL Server Feature Installation option to individually select which feature components to install, or click a feature role to install a specific configuration.

- SQL Server Feature Installation**  
Install SQL Server Database Engine Services, Analysis Services, Reporting Services, Integration Services, and other features.
- All Features With Defaults  
Install all features using default values for the service accounts.

< Back
Next >
Cancel
Help





**SQL Server 2014 Setup**

Select the Standard features to install.

**Feature Selection**

Product Key  
License Terms  
Global Rules  
Microsoft Update  
Product Updates  
Install Setup Files  
Install Rules  
Setup Role  
**Feature Selection**  
Feature Rules  
Instance Configuration  
Server Configuration  
Database Engine Configuration  
Analysis Services Configuration  
Feature Configuration Rules  
Ready to Install  
Installation Progress

**Features:**

- Instance Features
  - Database Engine Services
  - SQL Server Replication
  - Full-Text and Semantic Extractions for Search
  - Data Quality Services
  - Analysis Services
  - Reporting Services - Native
- Shared Features
  - Reporting Services - SharePoint
  - Reporting Services Add-in for SharePoint Products

**Feature description:**

The configuration and operation of each instance feature of a SQL Server instance is

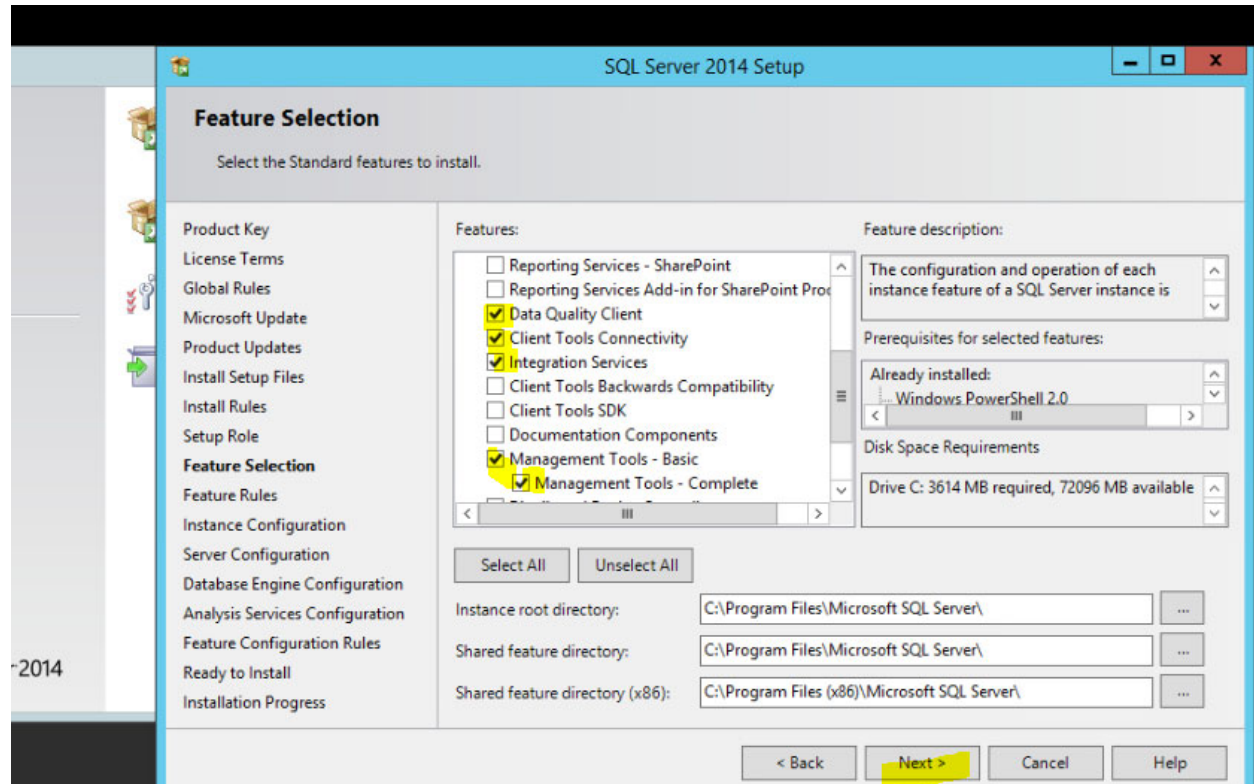
Prerequisites for selected features:

Already installed: Windows PowerShell 2.0

Disk Space Requirements  
Drive C: 3614 MB required, 72096 MB available

Instance root directory: C:\Program Files\Microsoft SQL Server\  
Shared feature directory: C:\Program Files\Microsoft SQL Server\  
Shared feature directory (x86): C:\Program Files (x86)\Microsoft SQL Server\

< Back   Next >   Cancel   Help



**SQL Server 2014 Setup**

Select the Standard features to install.

**Feature Selection**

Product Key  
License Terms  
Global Rules  
Microsoft Update  
Product Updates  
Install Setup Files  
Install Rules  
Setup Role  
**Feature Selection**  
Feature Rules  
Instance Configuration  
Server Configuration  
Database Engine Configuration  
Analysis Services Configuration  
Feature Configuration Rules  
Ready to Install  
Installation Progress

**Features:**

- Reporting Services - SharePoint
- Reporting Services Add-in for SharePoint Products
- Data Quality Client
- Client Tools Connectivity
- Integration Services
- Client Tools Backwards Compatibility
- Client Tools SDK
- Documentation Components
- Management Tools - Basic
- Management Tools - Complete

**Feature description:**

The configuration and operation of each instance feature of a SQL Server instance is

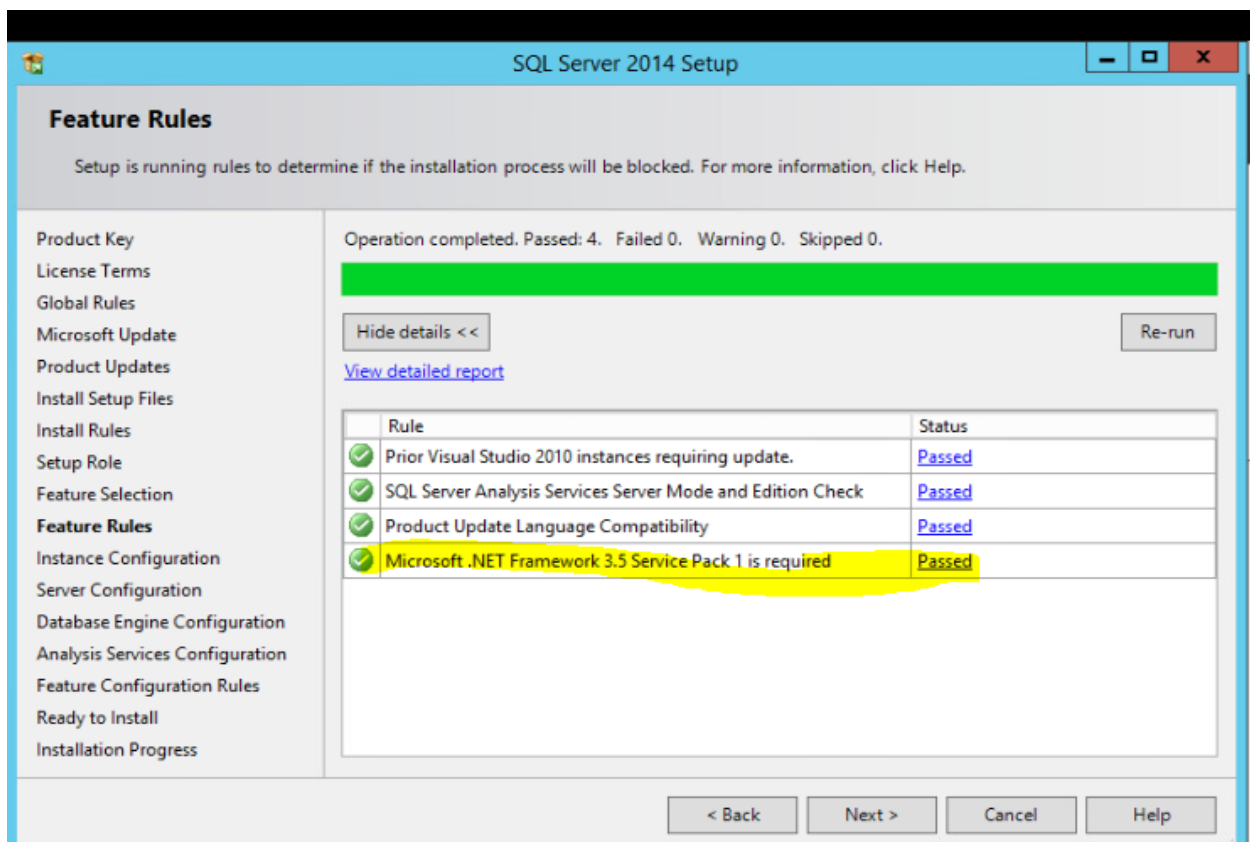
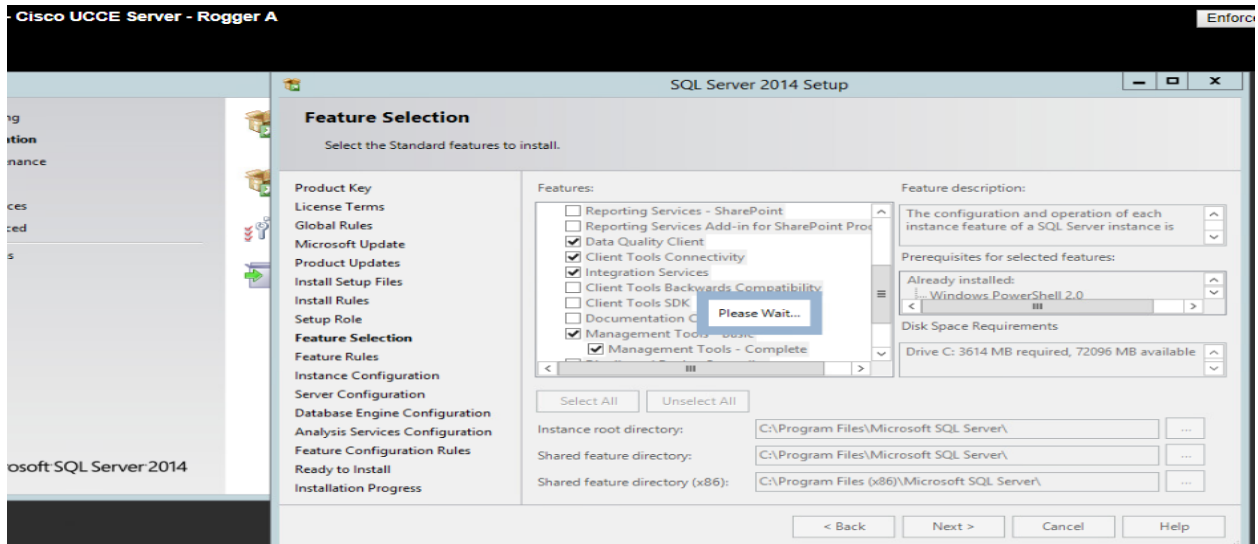
Prerequisites for selected features:

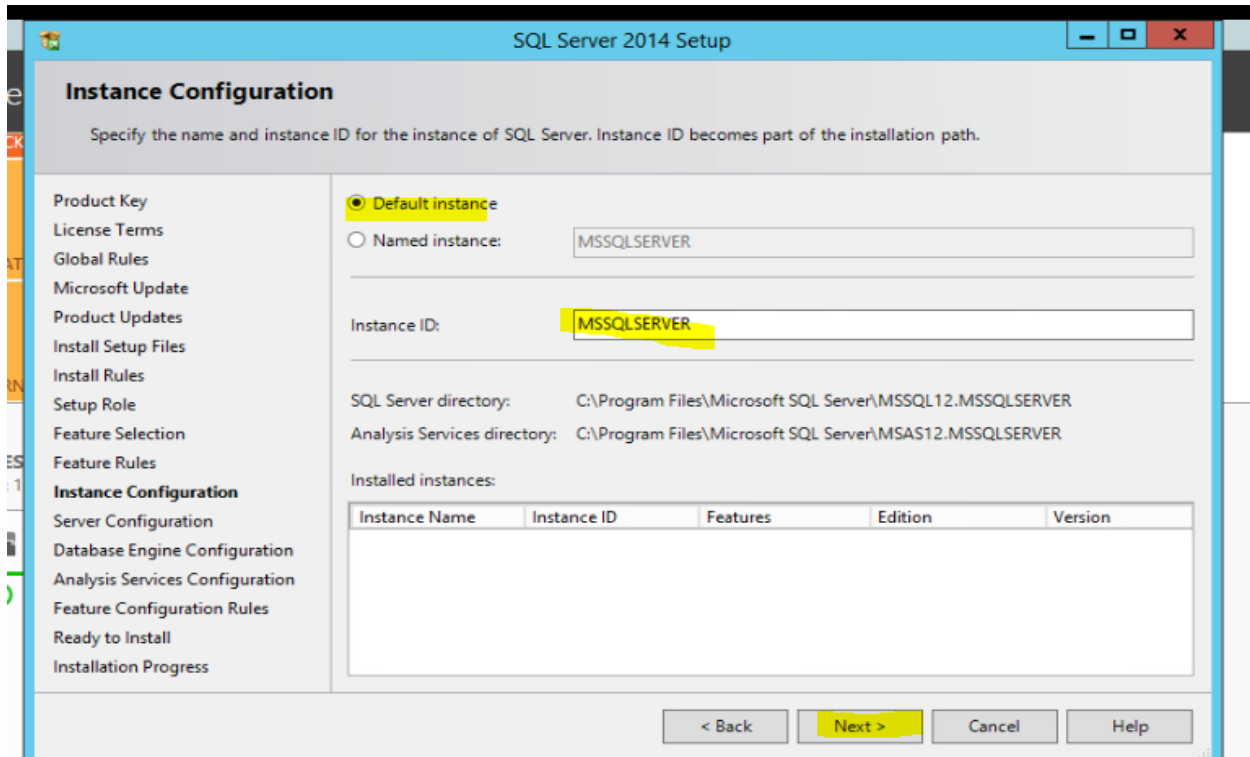
Already installed: Windows PowerShell 2.0

Disk Space Requirements  
Drive C: 3614 MB required, 72096 MB available

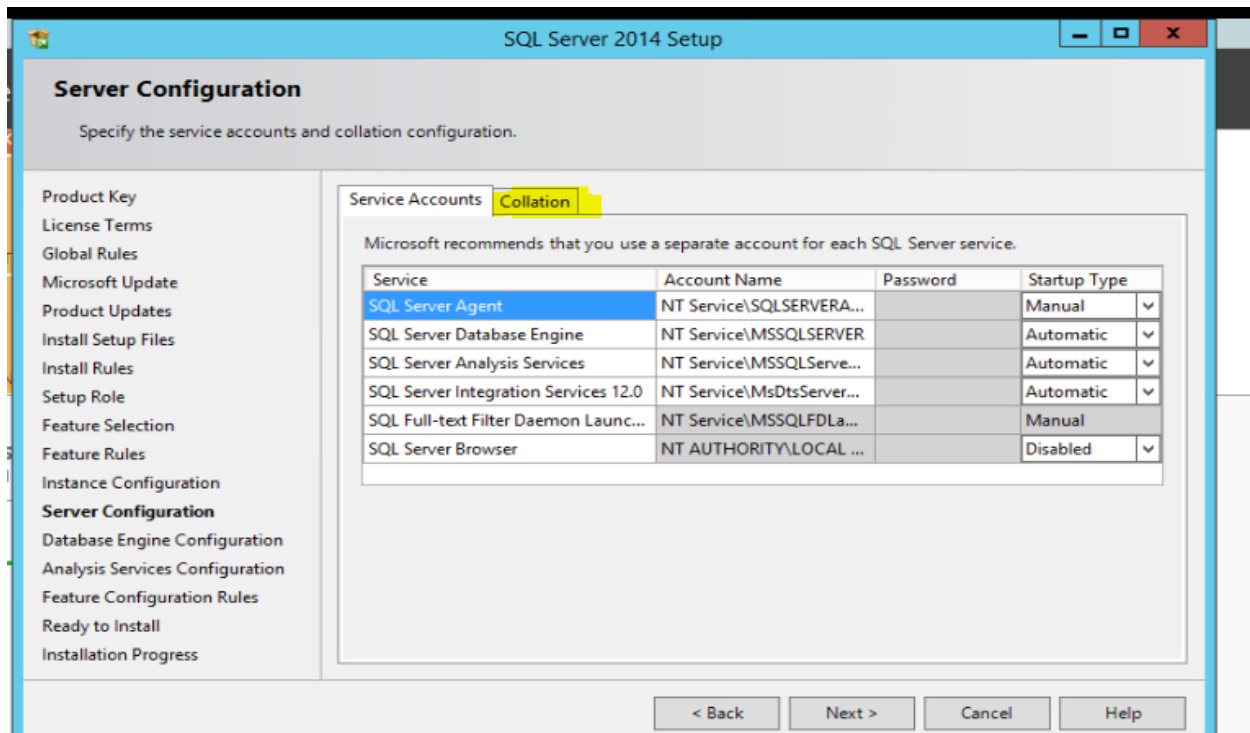
Instance root directory: C:\Program Files\Microsoft SQL Server\  
Shared feature directory: C:\Program Files\Microsoft SQL Server\  
Shared feature directory (x86): C:\Program Files (x86)\Microsoft SQL Server\

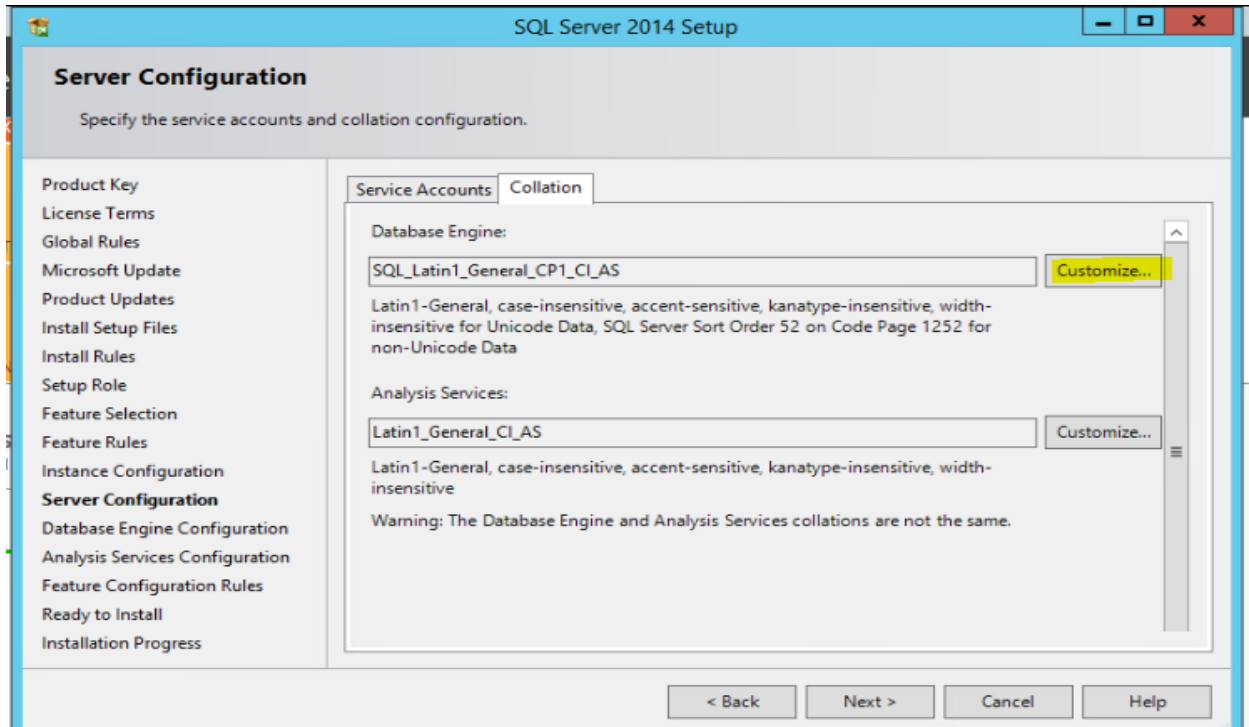
< Back   **Next >**   Cancel   Help





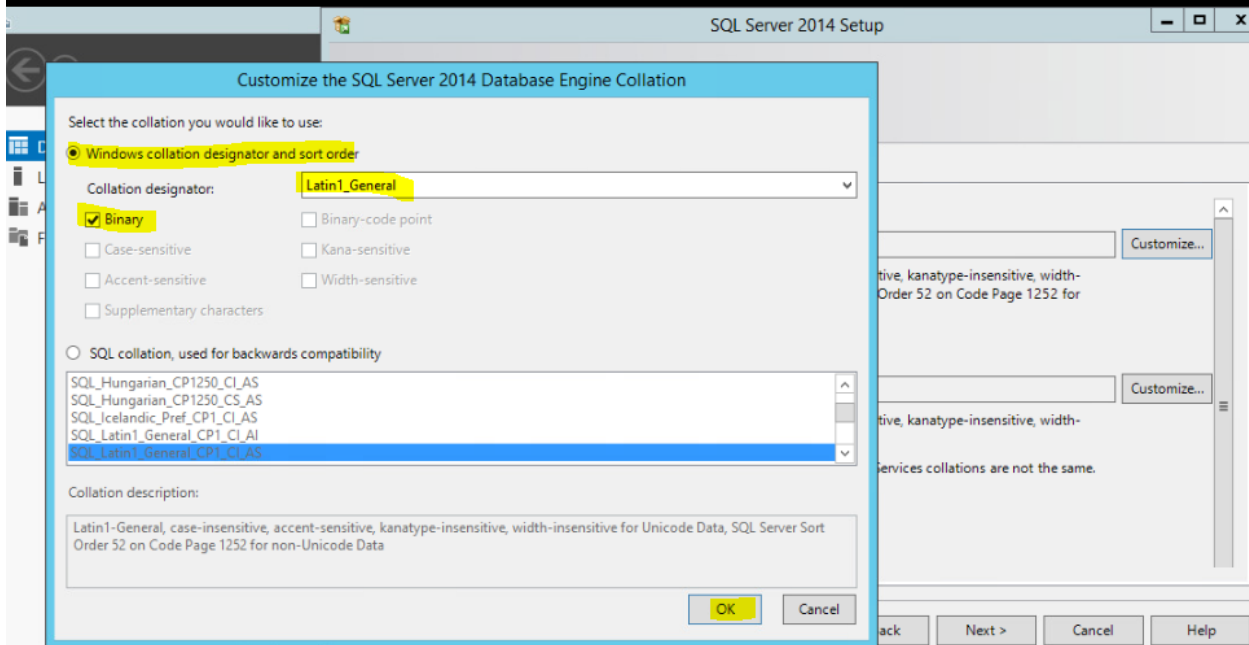
DO NOT CHANGE → Next

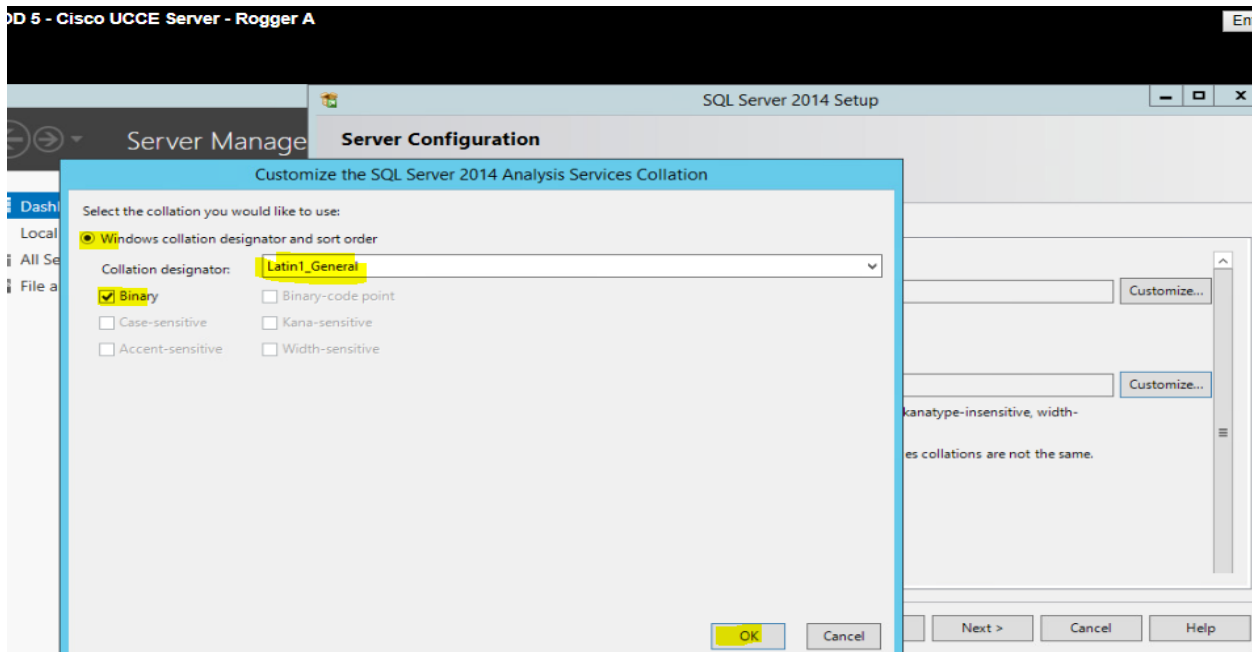
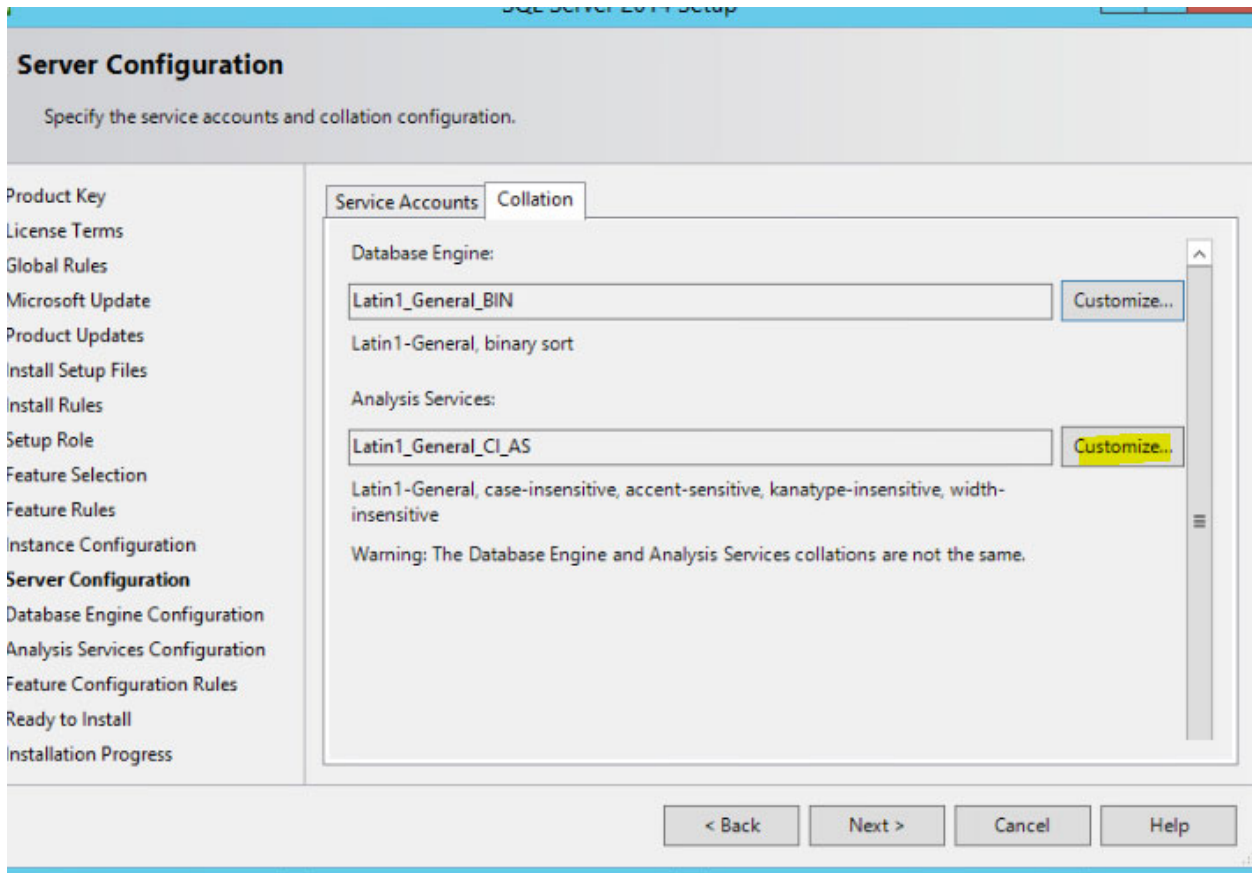


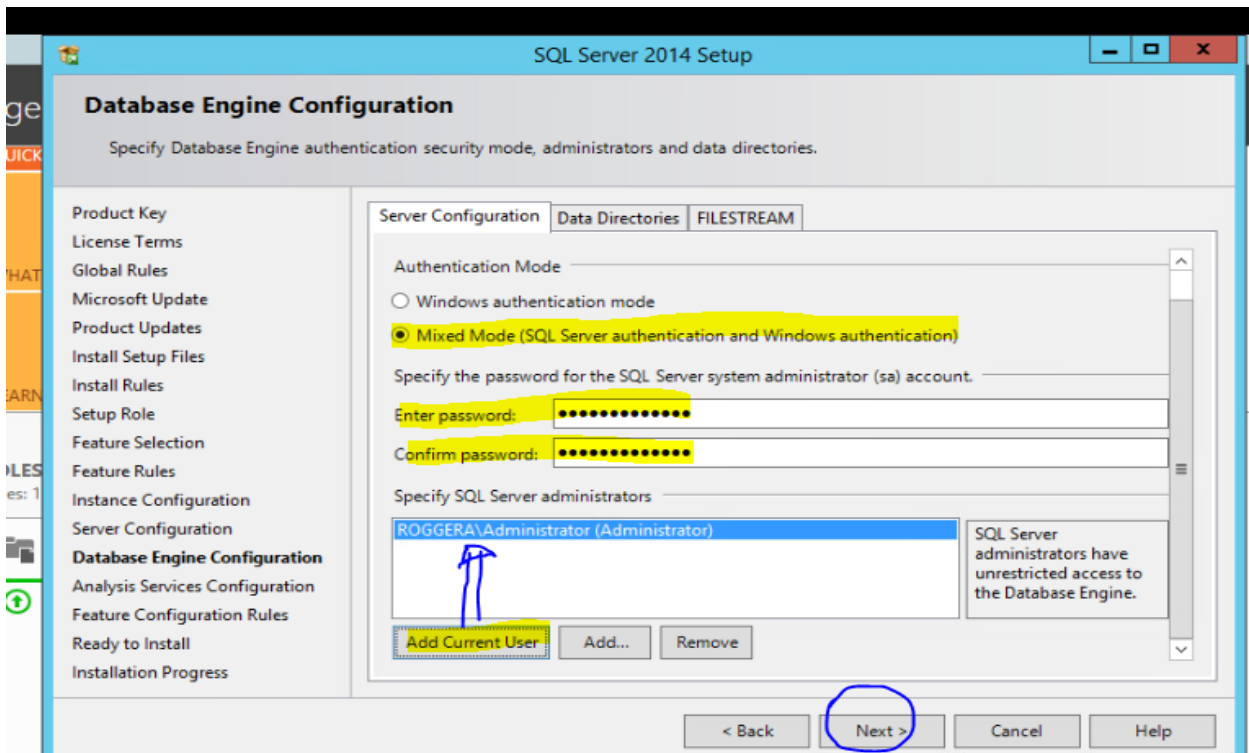
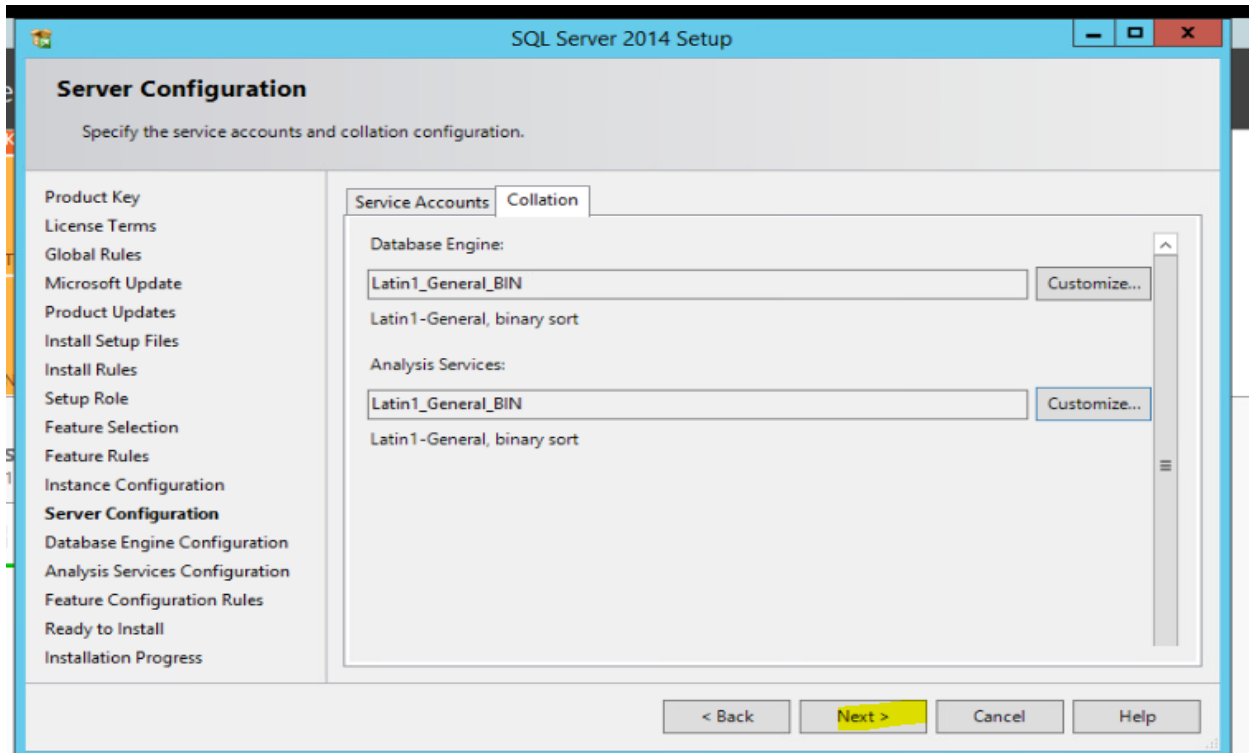


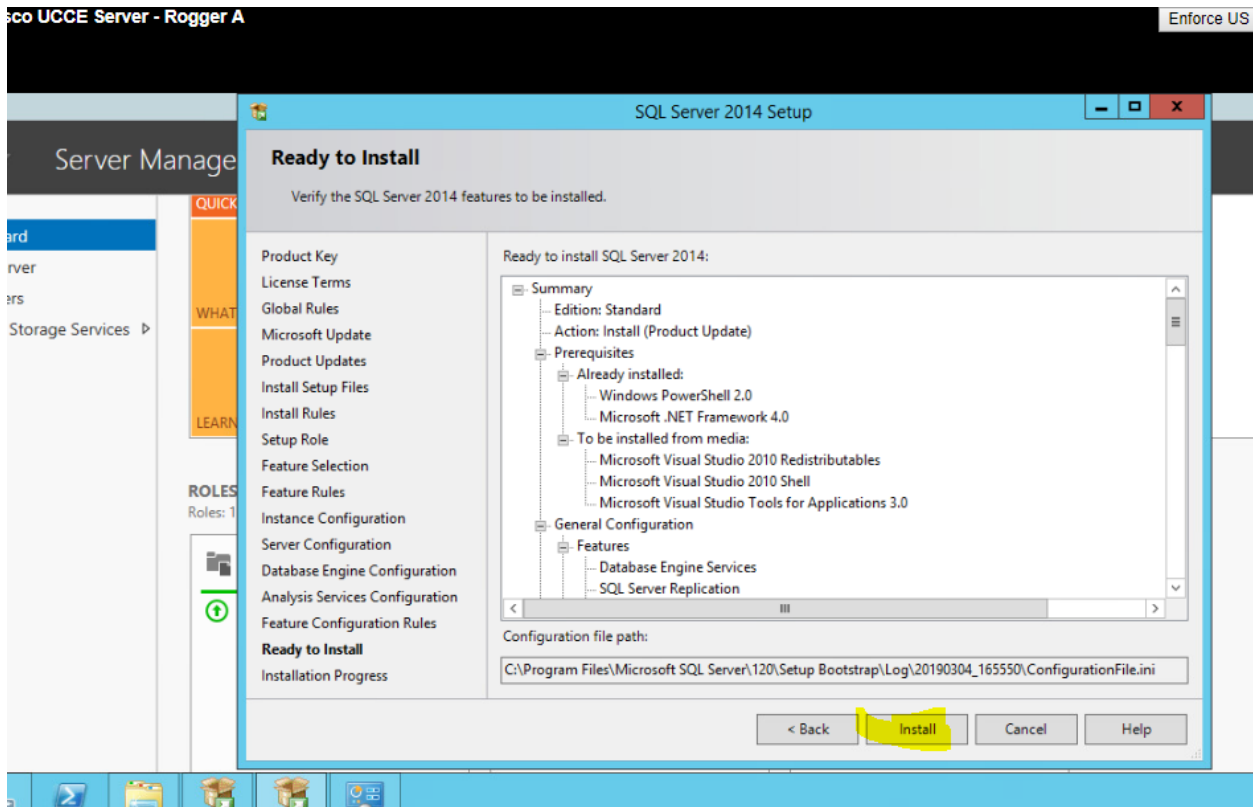
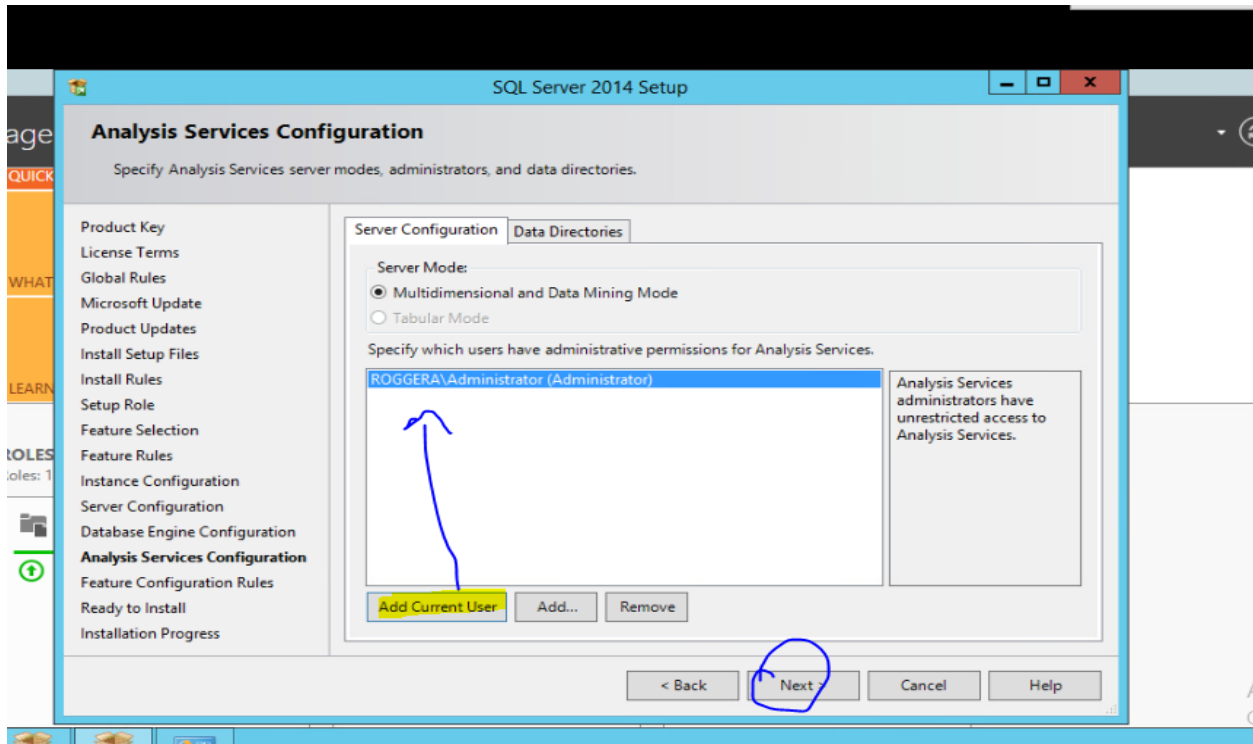
POD 5 - Cisco UCCE Server - Rogger A

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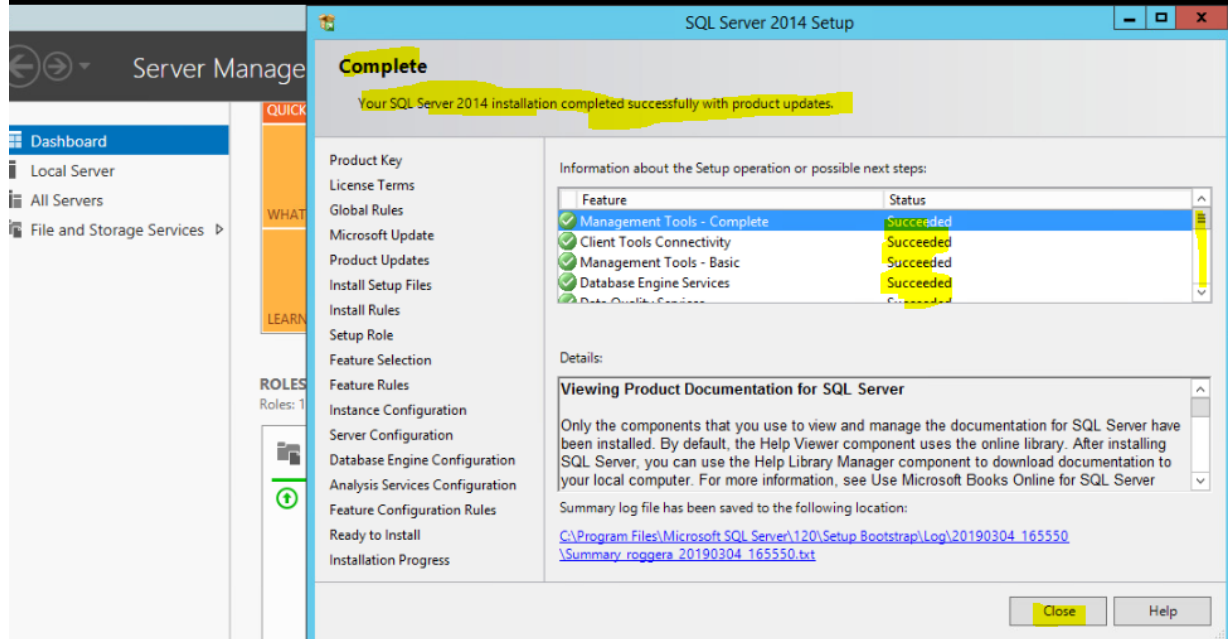






OD 5 - Cisco UCCE Server - Rogger A

Enforce L

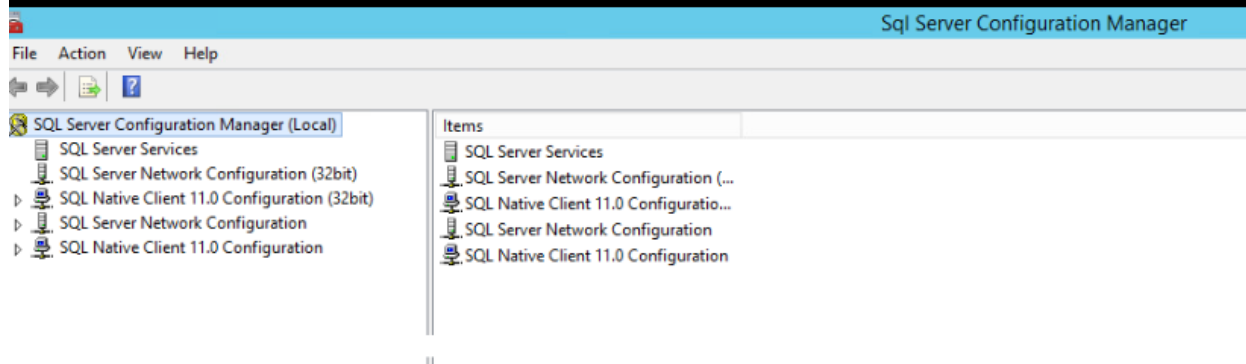


The screenshot shows the 'SQL Server 2014 Setup' window with the 'Complete' status. A message states: 'Your SQL Server 2014 installation completed successfully with product updates.' Below this, a table lists the installed features and their status:

Feature	Status
Management Tools - Complete	Succeeded
Client Tools Connectivity	Succeeded
Management Tools - Basic	Succeeded
Database Engine Services	Succeeded
Data Quality Services	Succeeded

Additional information includes a 'Details' section titled 'Viewing Product Documentation for SQL Server' and a log file path: `C:\Program Files\Microsoft SQL Server\120\Setup Bootstrap\Log\20190304_165550\Summary_roggera_20190304_165550.txt`. Buttons for 'Close' and 'Help' are visible at the bottom right.

POD 5 - Cisco UCCE Server - Rogger A



The screenshot shows the 'Sql Server Configuration Manager' interface. The left pane displays a tree view of configuration items for 'SQL Server Configuration Manager (Local)'. The right pane shows the details for the selected 'Items'.

**Left Pane (Tree View):**

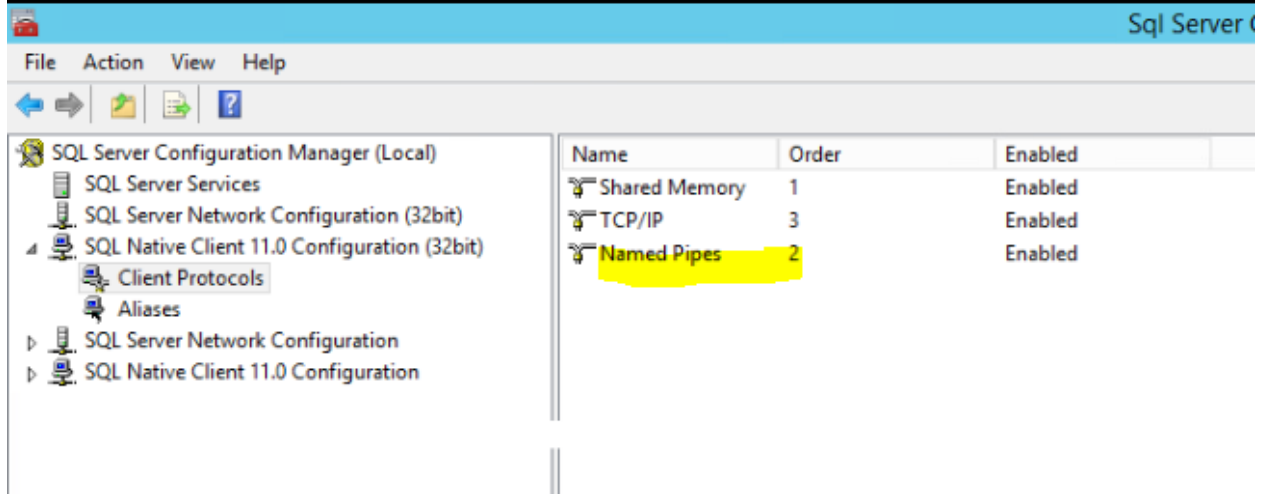
- SQL Server Configuration Manager (Local)
  - SQL Server Services
  - SQL Server Network Configuration (32bit)
  - SQL Native Client 11.0 Configuration (32bit)
  - SQL Server Network Configuration
  - SQL Native Client 11.0 Configuration

**Right Pane (Items):**

- SQL Server Services
- SQL Server Network Configuration (...)
- SQL Native Client 11.0 Configuratio...
- SQL Server Network: Configuration
- SQL Native Client 11.0 Configuration



### POD 5 - Cisco UCCE Server - Rogger A

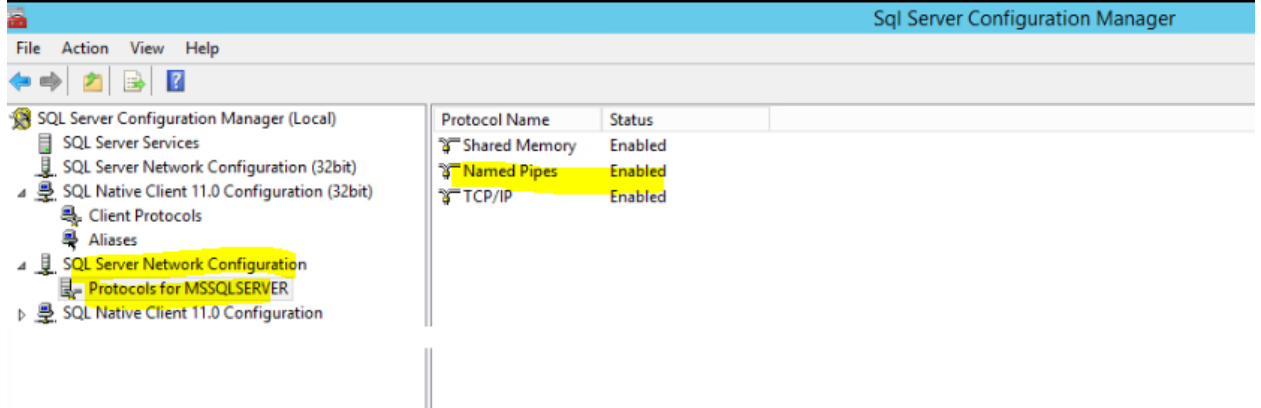


Sql Server C

File Action View Help

Name	Order	Enabled
Shared Memory	1	Enabled
TCP/IP	3	Enabled
Named Pipes	2	Enabled

### POD 5 - Cisco UCCE Server - Rogger A

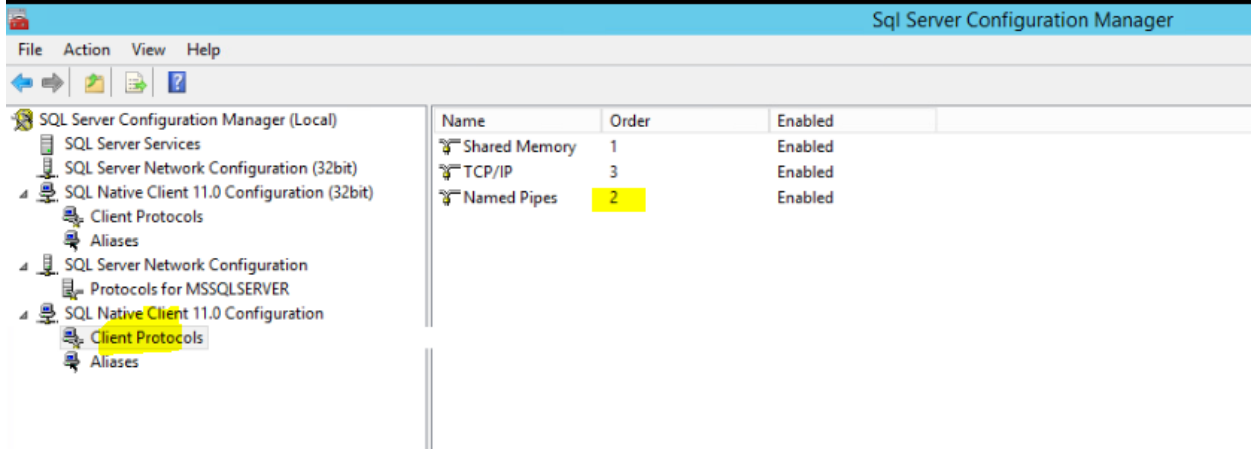


Sql Server Configuration Manager

File Action View Help

Protocol Name	Status
Shared Memory	Enabled
Named Pipes	Enabled
TCP/IP	Enabled

**POD 5 - Cisco UCCE Server - Rogger A**

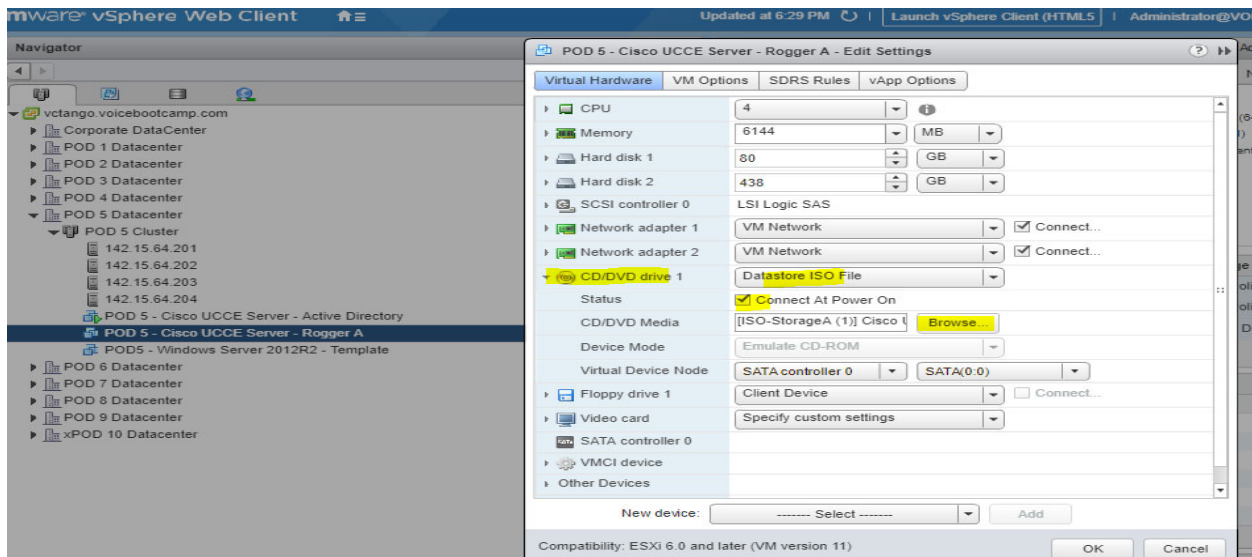


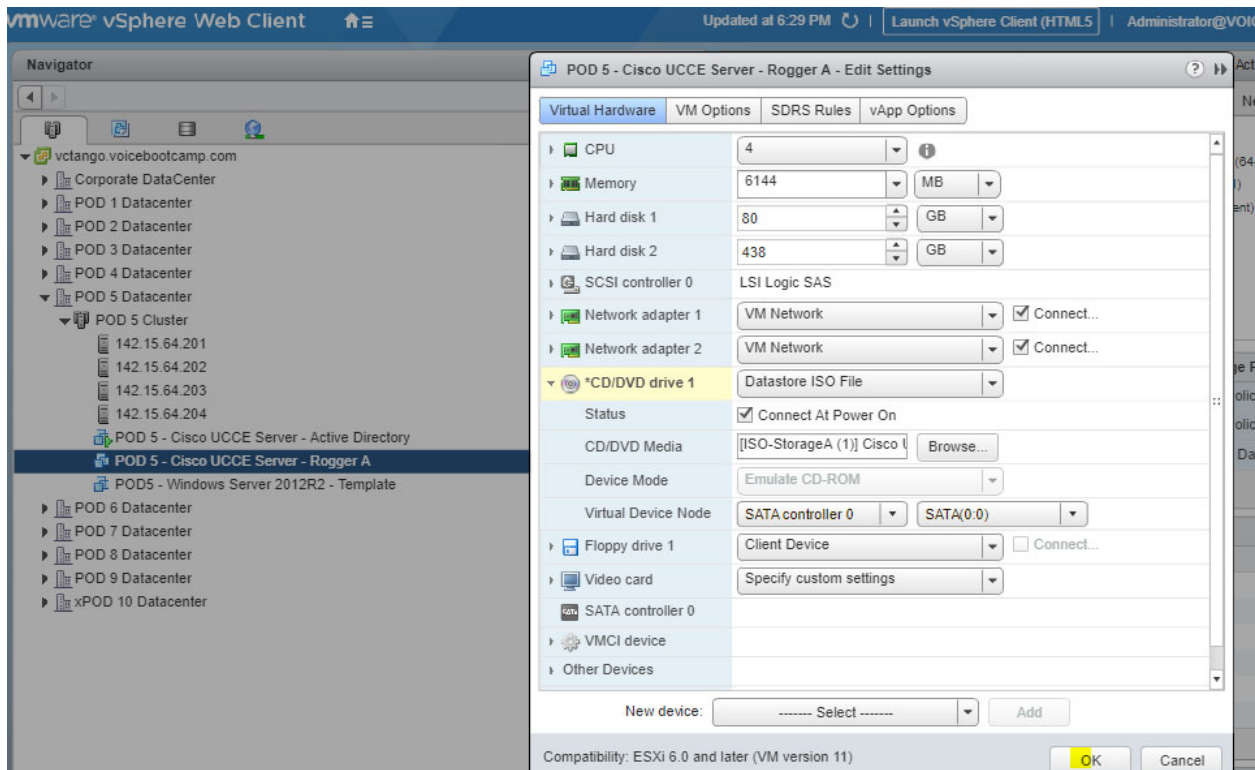
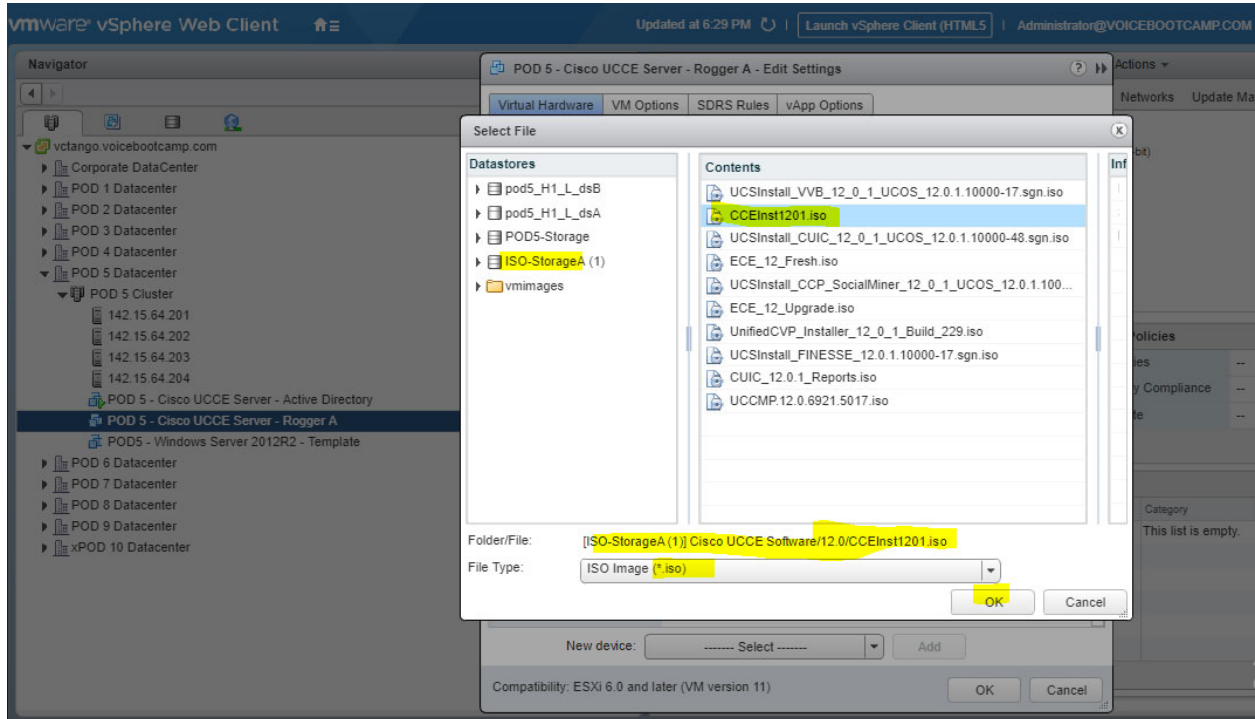
## 5) Cisco Unified ICM Component Installation

### Configure Domain Manager

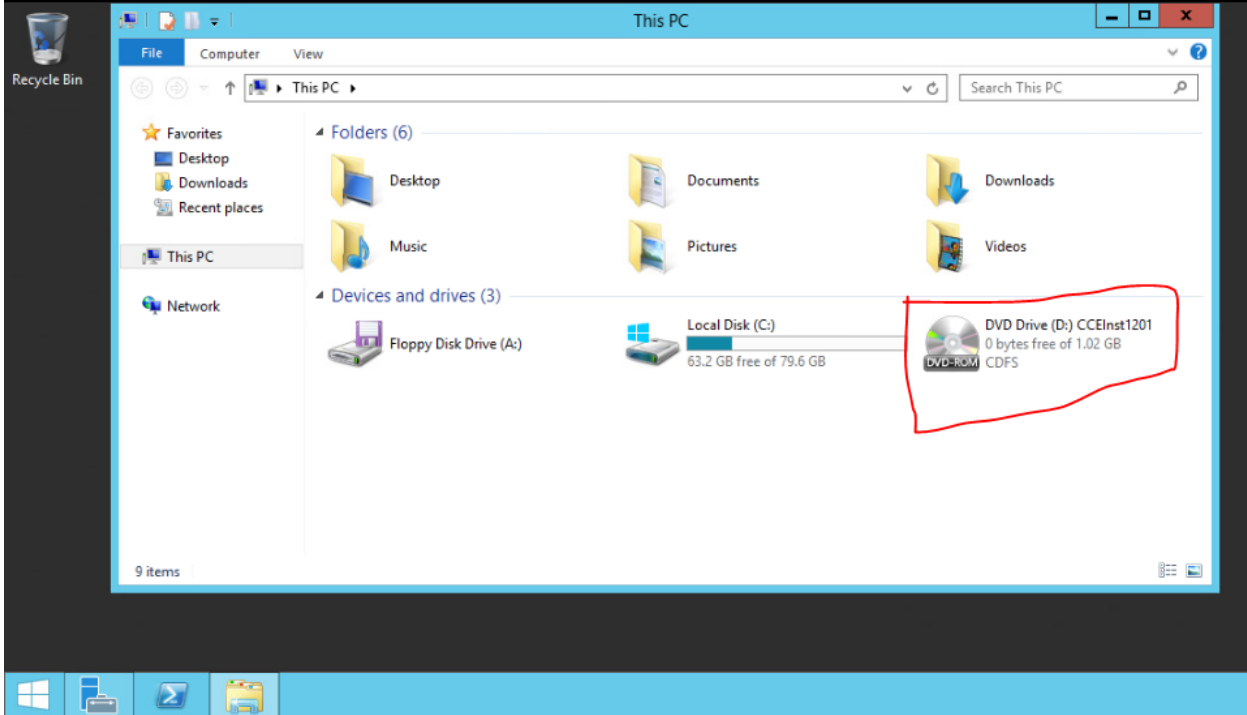
#### 1) Installing Cisco Unified UCCE 12.0.1 Base Software

#### Now Installation UCCE (ICM) Software in Window server





POD 5 - Cisco UCCE Server - Rogger A



POD 5 - Cisco UCCE Server - Rogger A

