

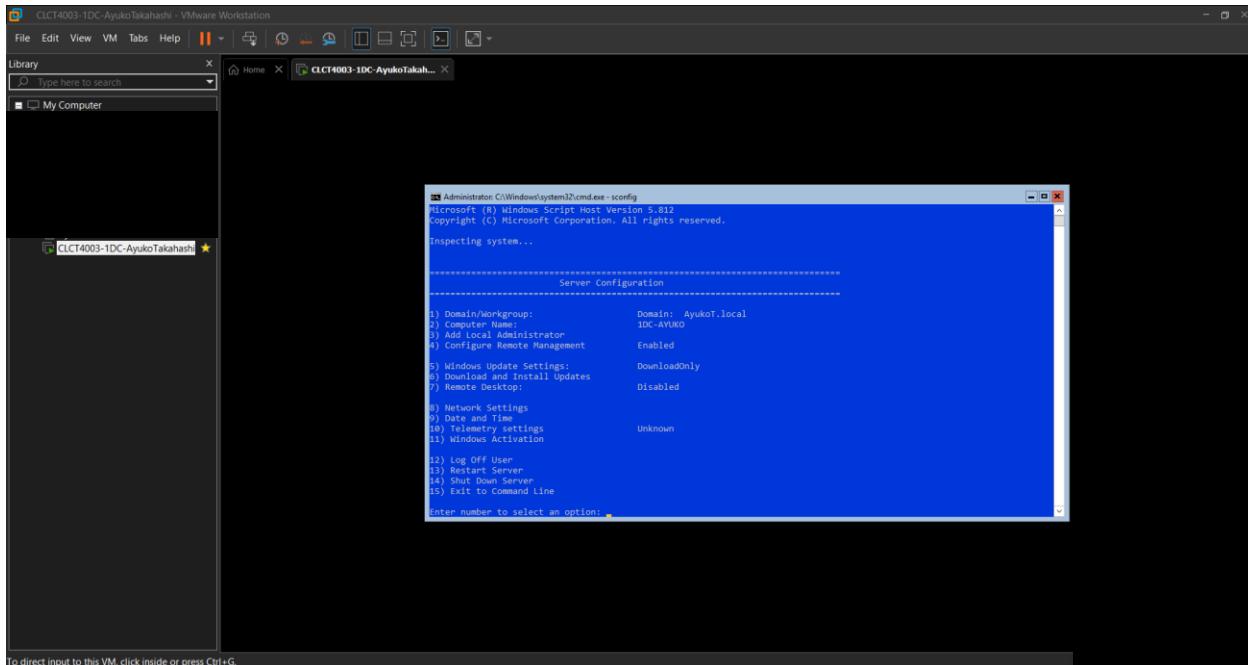
Enterprise Windows Server Infrastructure Deployment

Project Overview

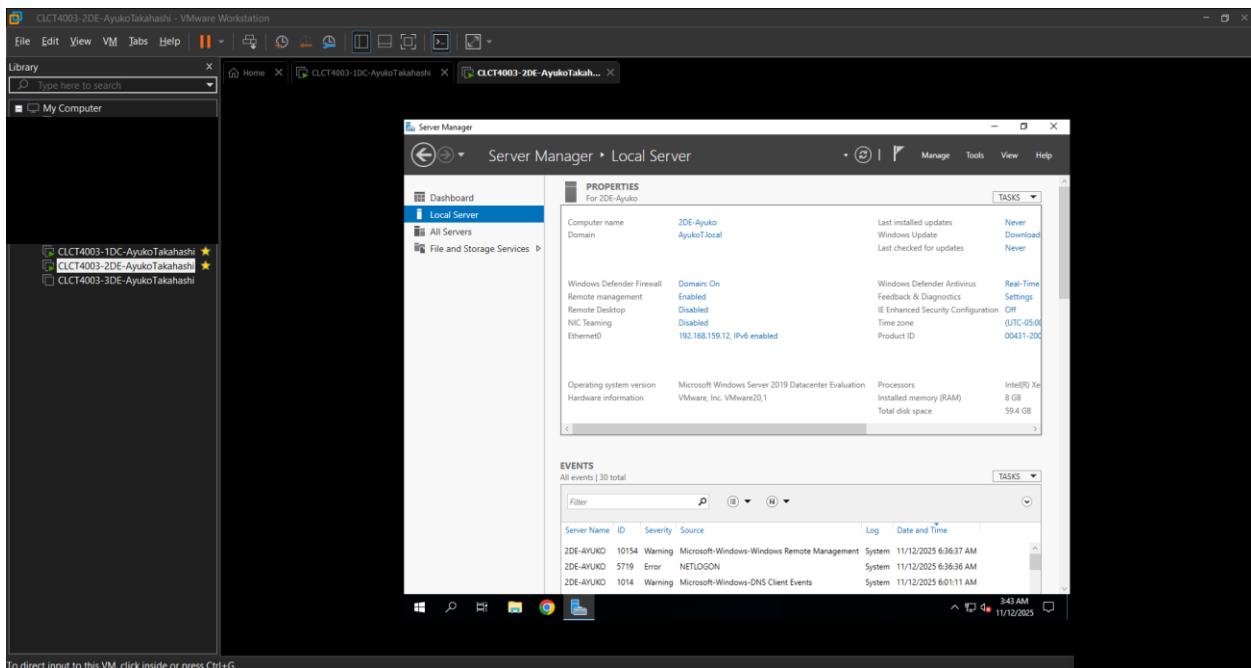
This document summarizes hands-on experience designing, deploying, and managing an enterprise Windows Server infrastructure. The project focuses on identity services, network configuration, storage, virtualization, and centralized management using industry-standard practices.

Core Infrastructure & Domain

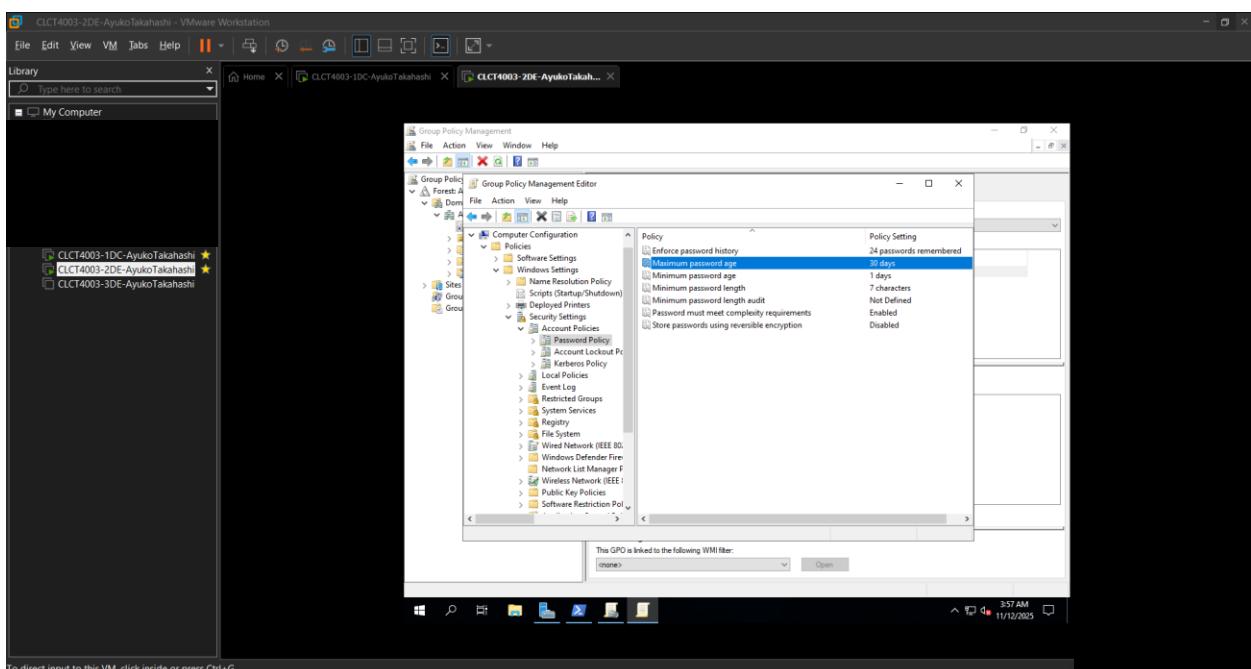
This section documents the deployment of Active Directory Domain Services using Server Core, including domain creation, server promotion, and security enforcement through Group Policy.



Domain Controller promotion completed.



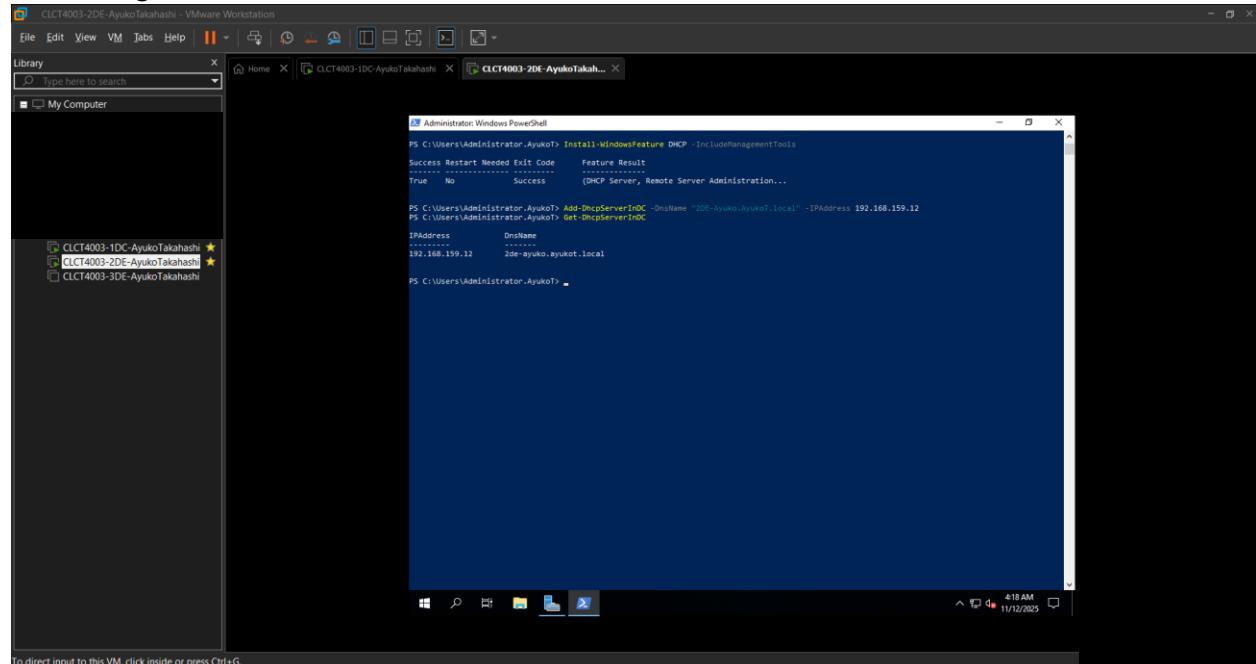
2DE-Ayuko successfully joined to the domain.



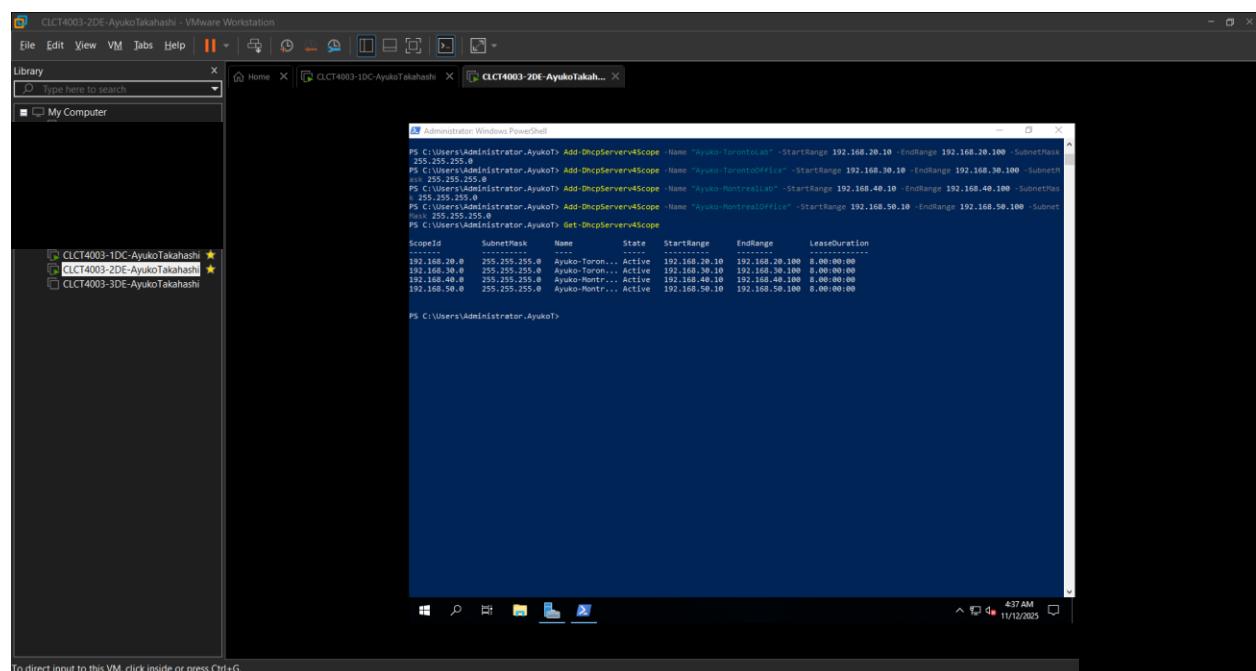
Group Policy: Maximum password age set to 30 days.

DHCP & DNS

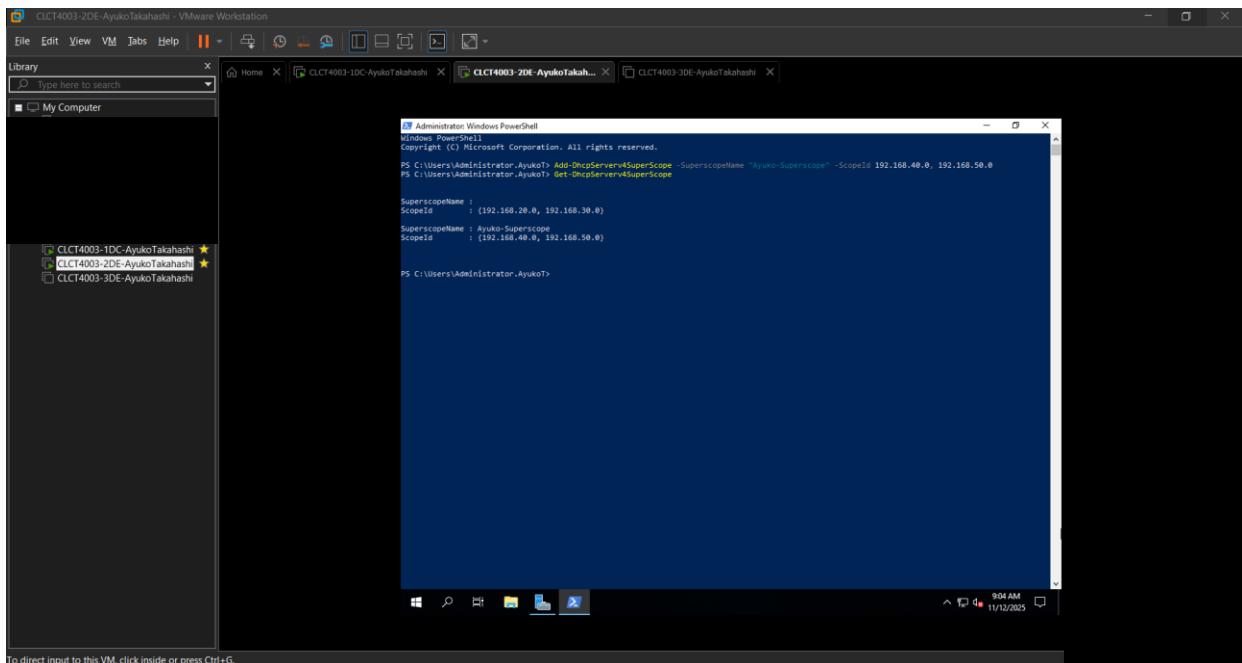
This section covers the configuration of DHCP and DNS services to support a multi-site environment, including scopes, superscopes, reservations, multicast addressing, and DNS forwarding.



DHCP server authorized in Active Directory.

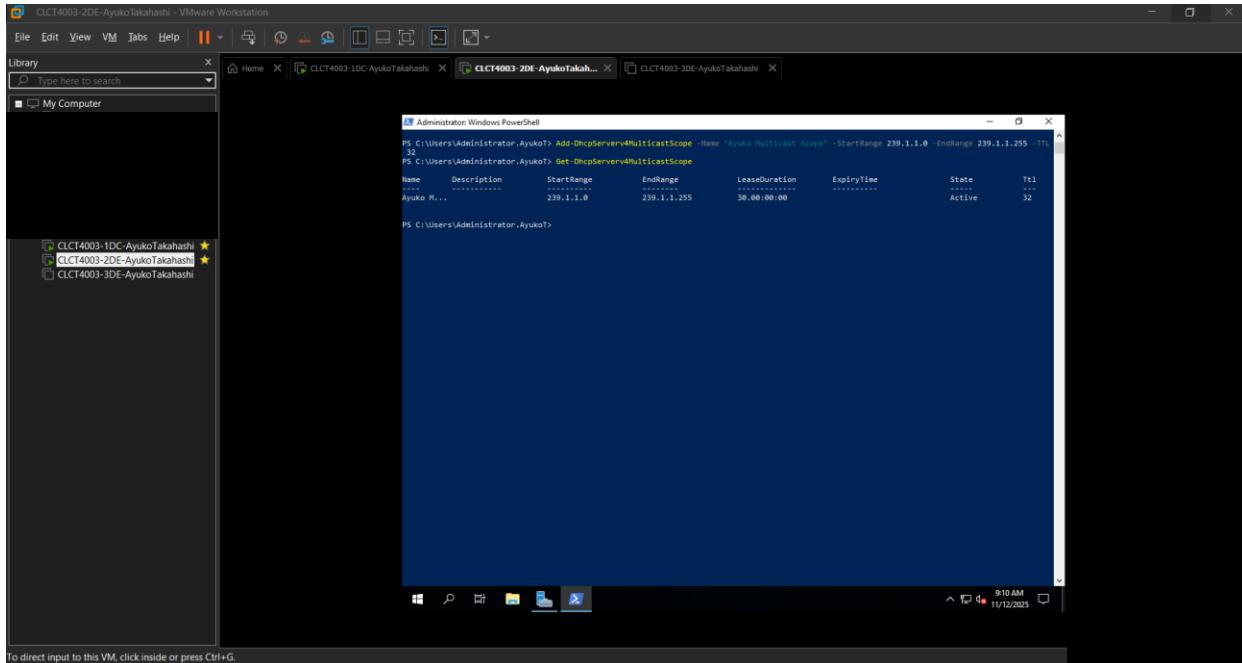


All 4 DHCP scopes listed.



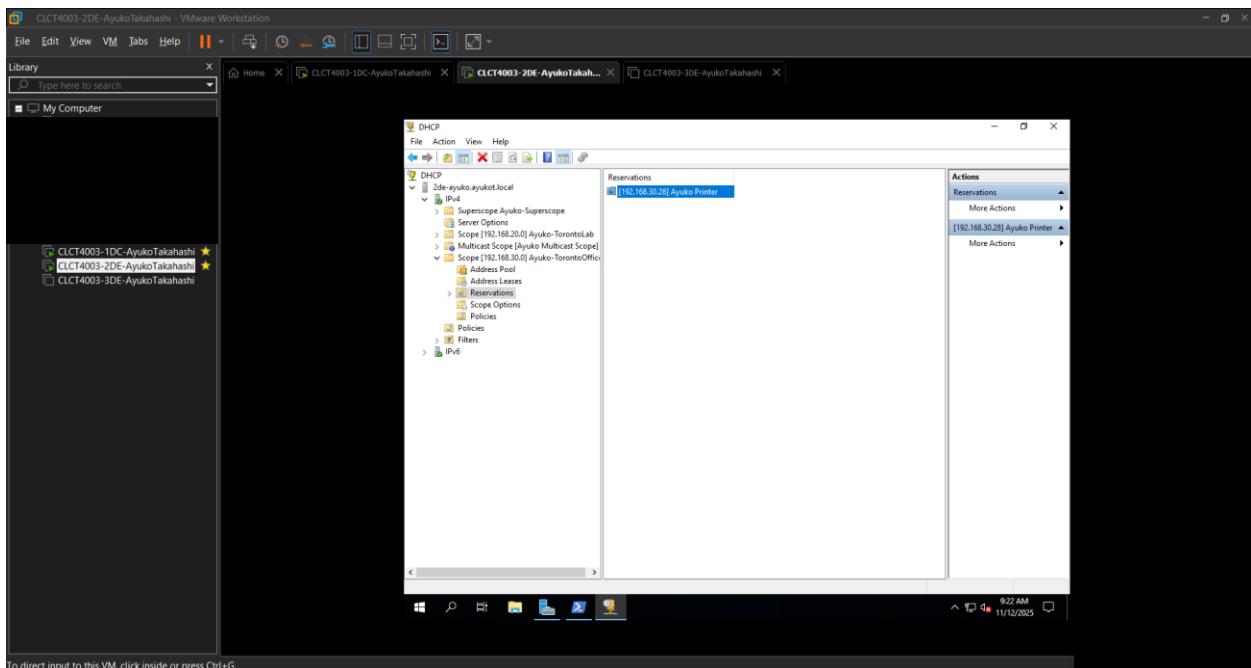
To direct input to this VM, click inside or press Ctrl+G.

Montreal Superscope created.



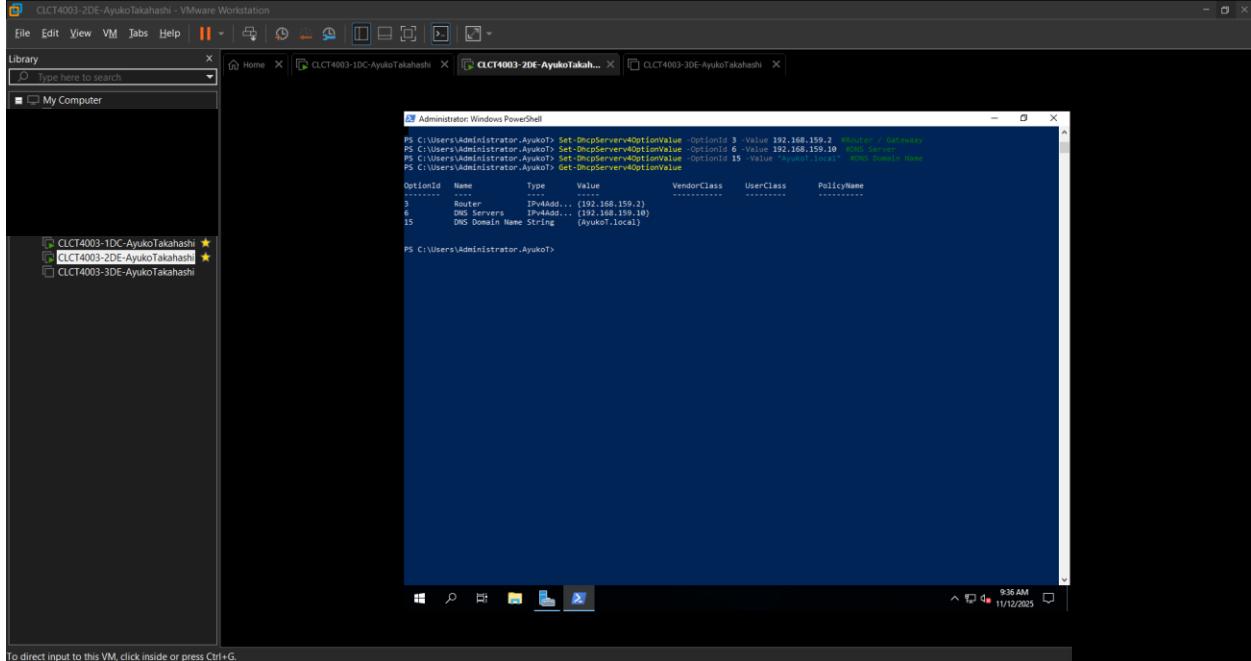
To direct input to this VM, click inside or press Ctrl+G.

Multicast scope listed.



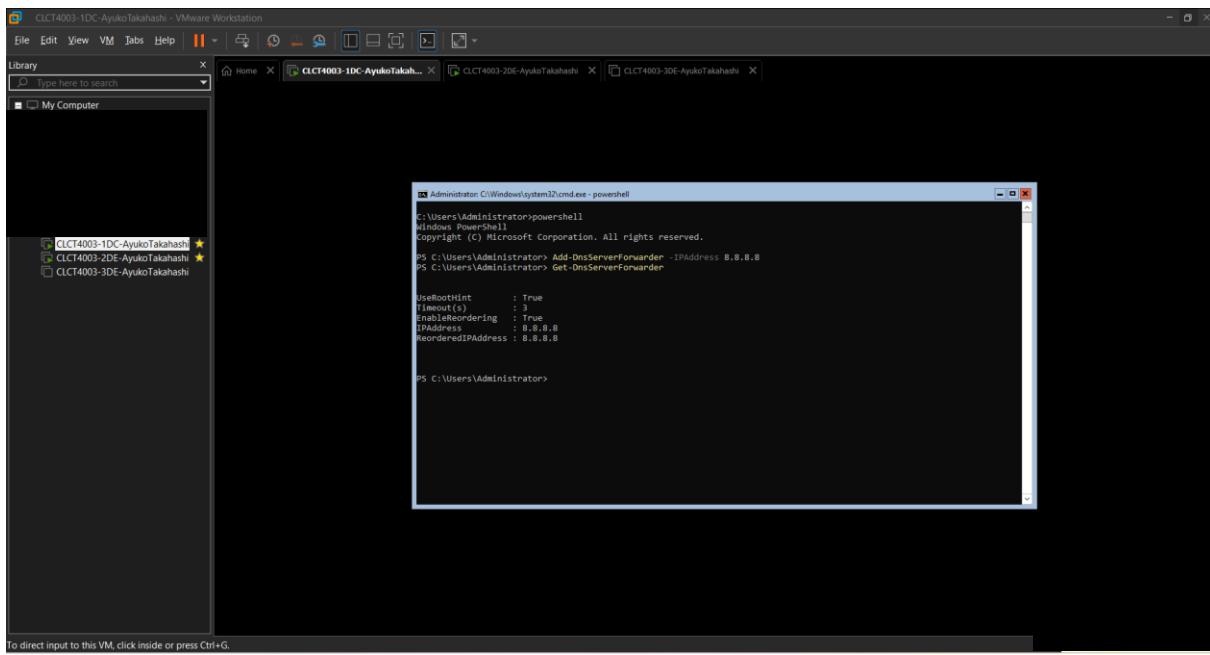
To direct input to this VM, click inside or press Ctrl+G.

DHCP reservation verified.



To direct input to this VM, click inside or press Ctrl+G.

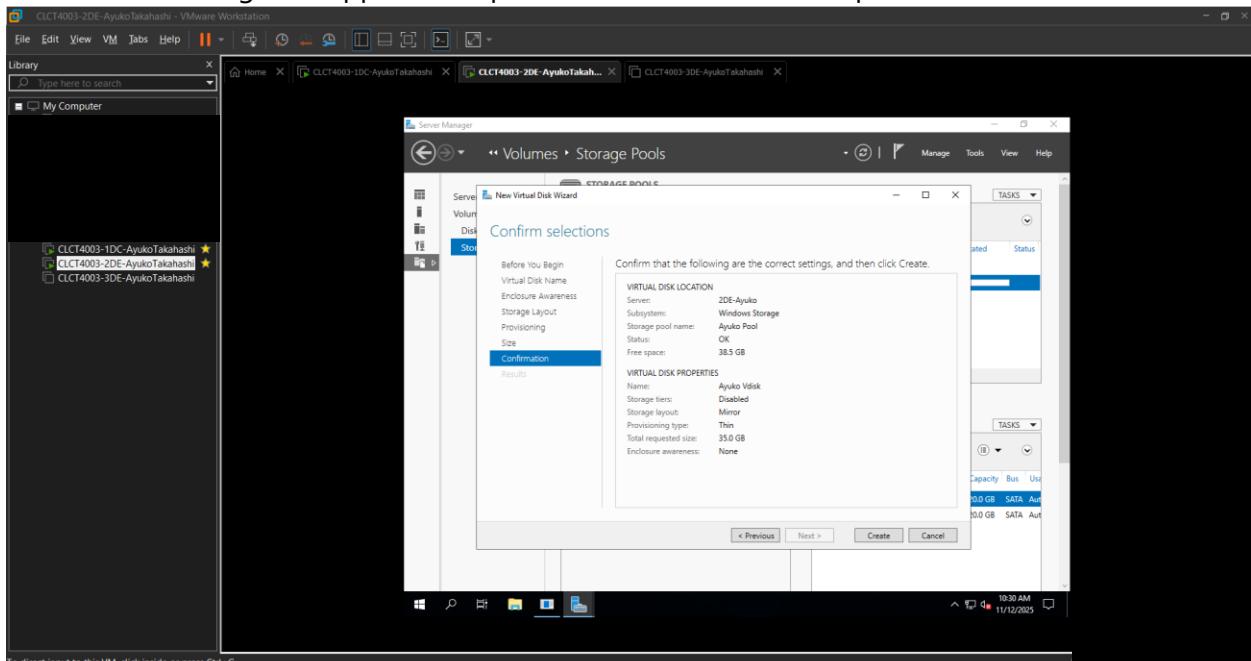
DHCP options verified via Get-DhcpServerv4OptionValue.



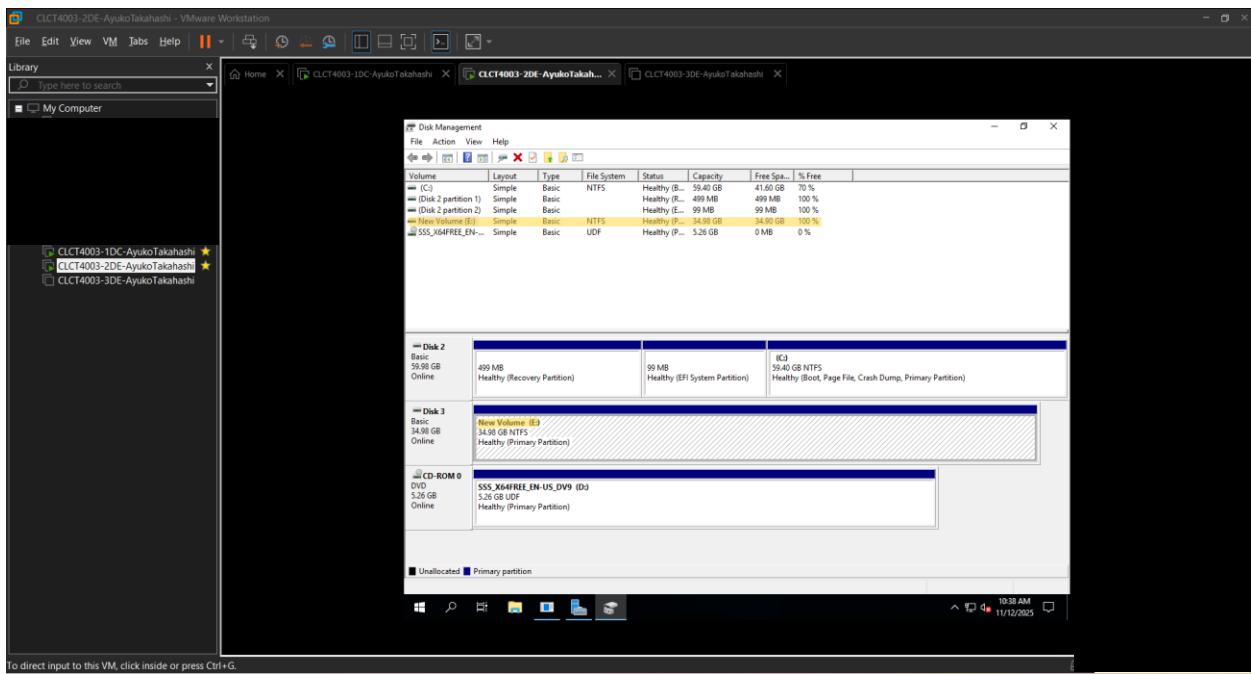
DNS forwarder configured to 8.8.8.8.

Storage & iSCSI

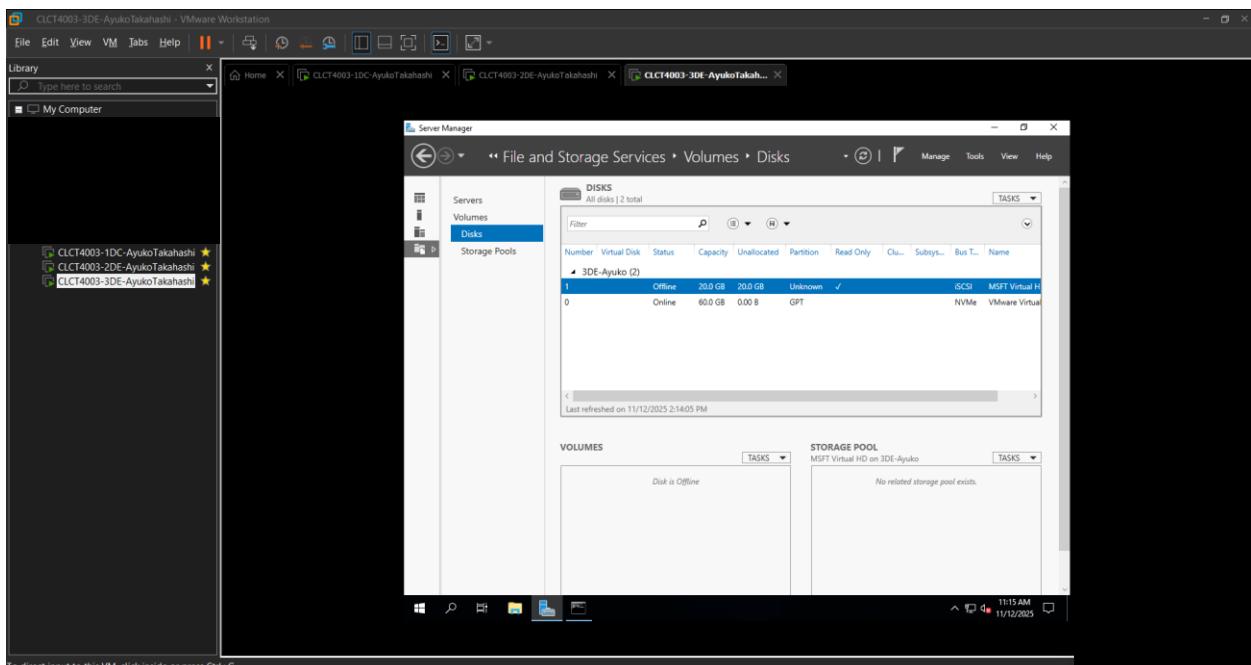
This section details the creation of storage pools and virtual disks, as well as the configuration of iSCSI shared storage to support enterprise workloads across multiple servers.



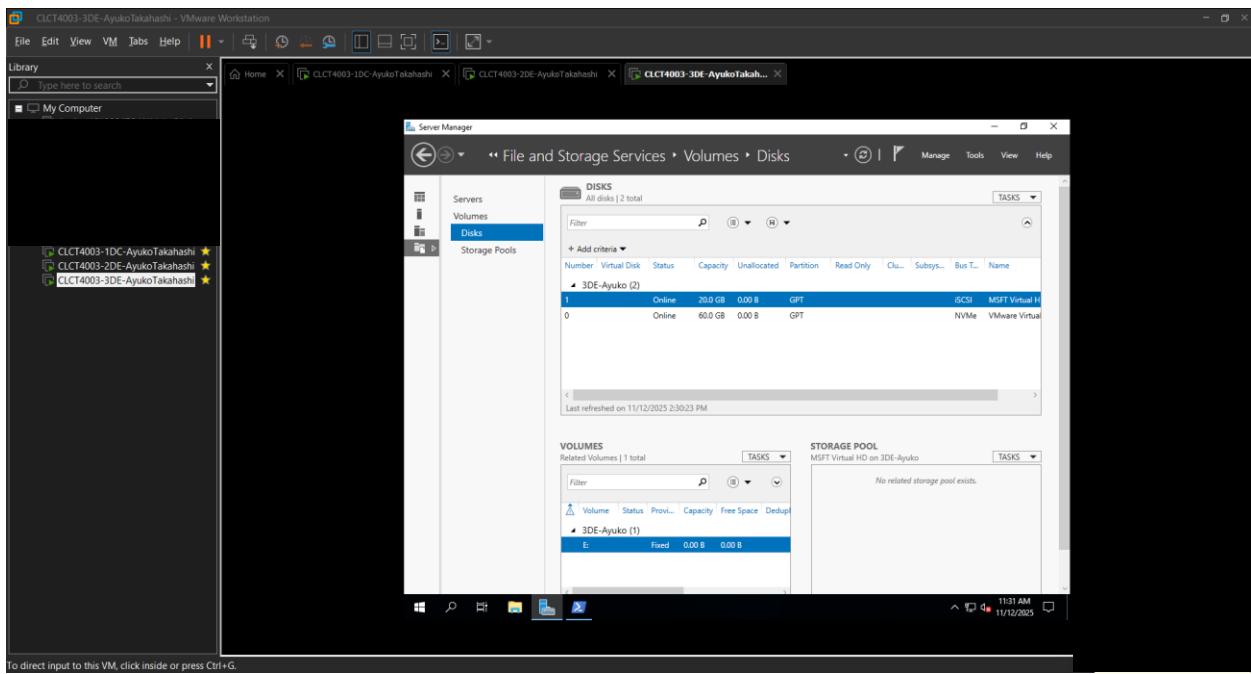
Virtual Disk summary (Ayuko Vdisk).



Mounted volume visible in Disk Management.



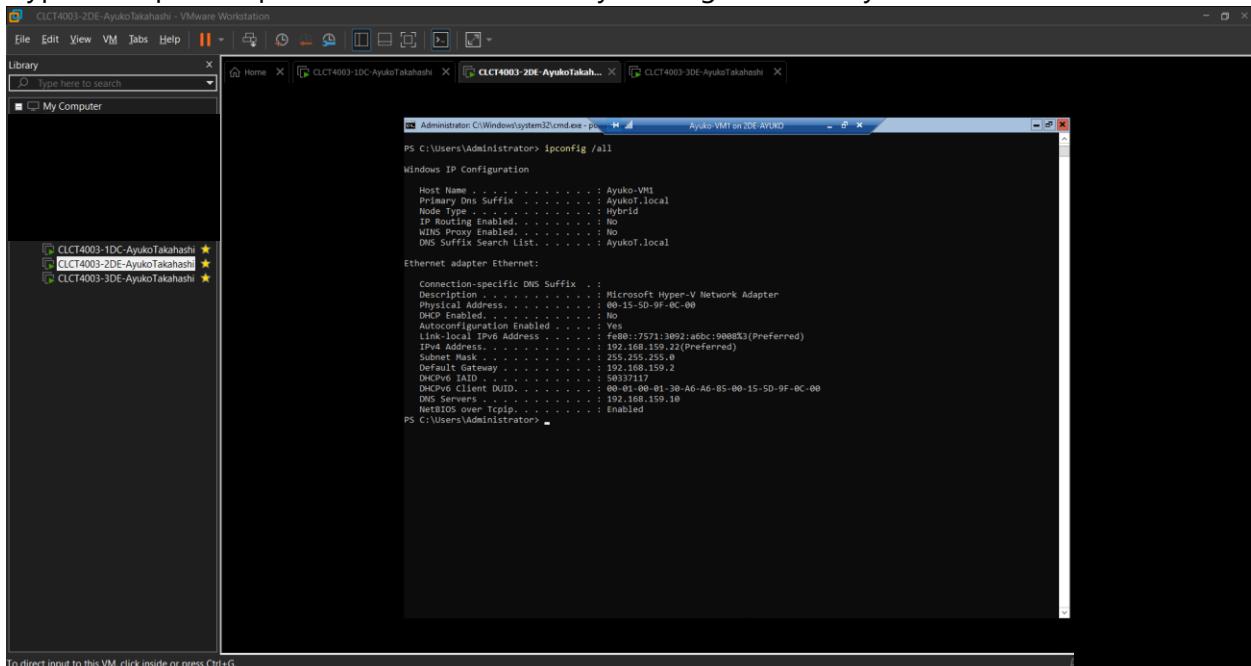
iSCSI disk visible on initiator (Server 3)



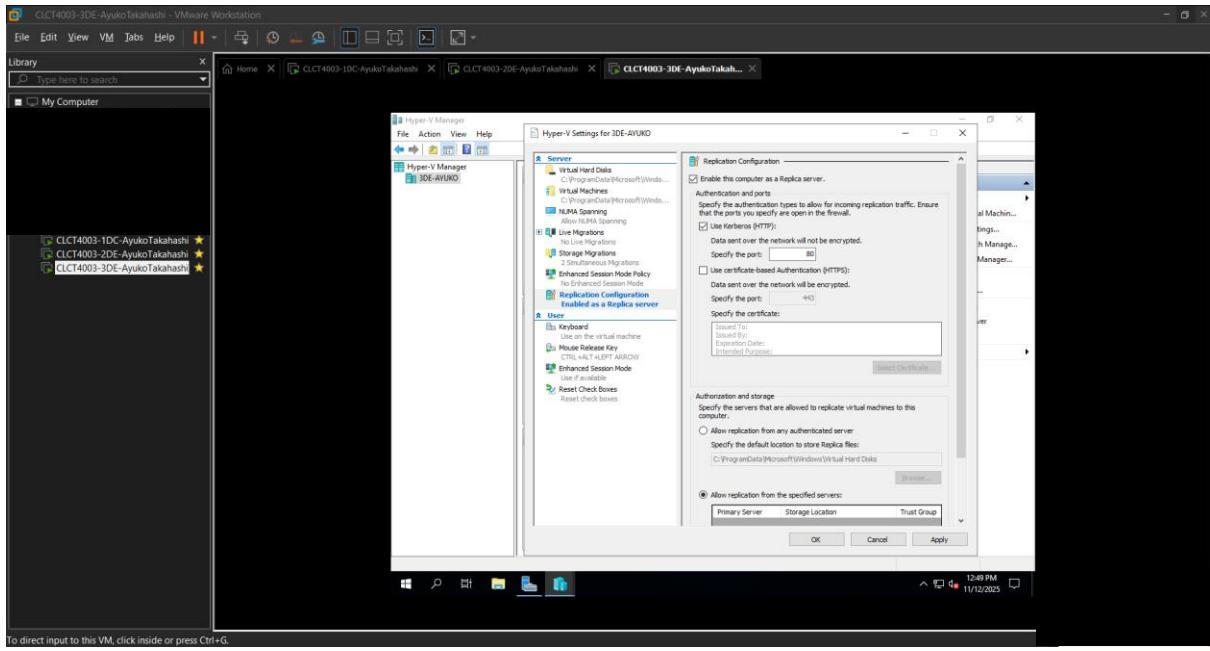
iSCSI disk initialized and usable.

Virtualization & High Availability

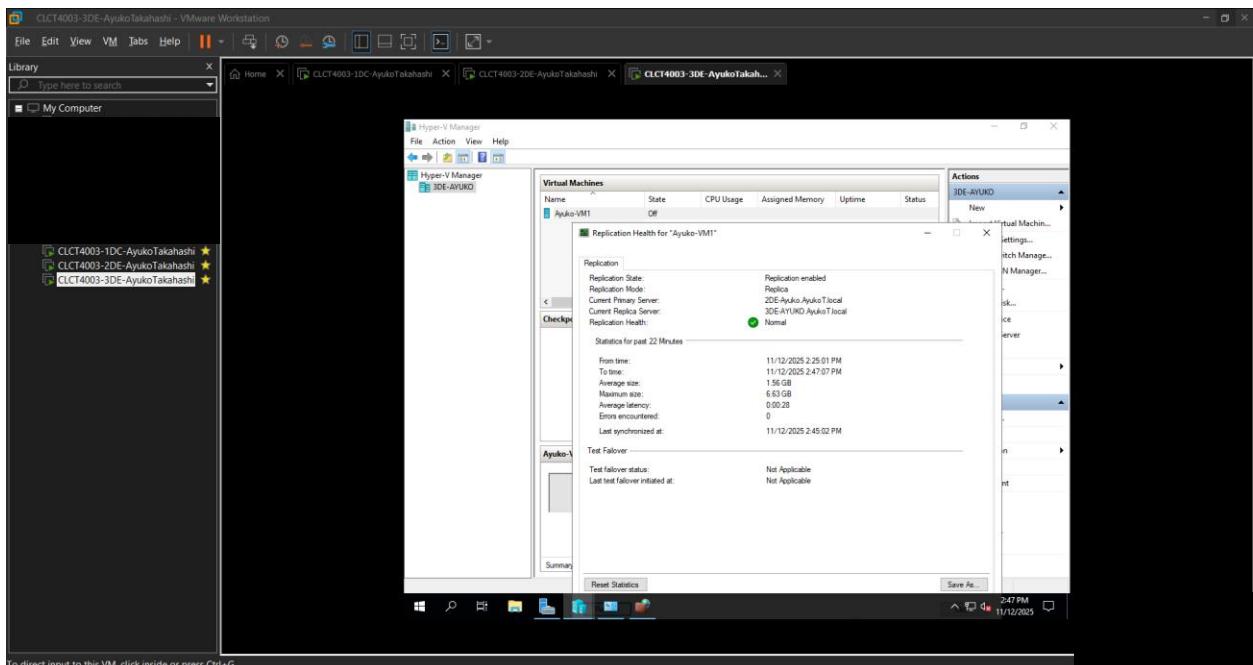
This section documents the deployment of Hyper-V virtual machines and the implementation of Hyper-V Replica to provide business continuity and high availability.



Hyper-V VM joined to the domain.



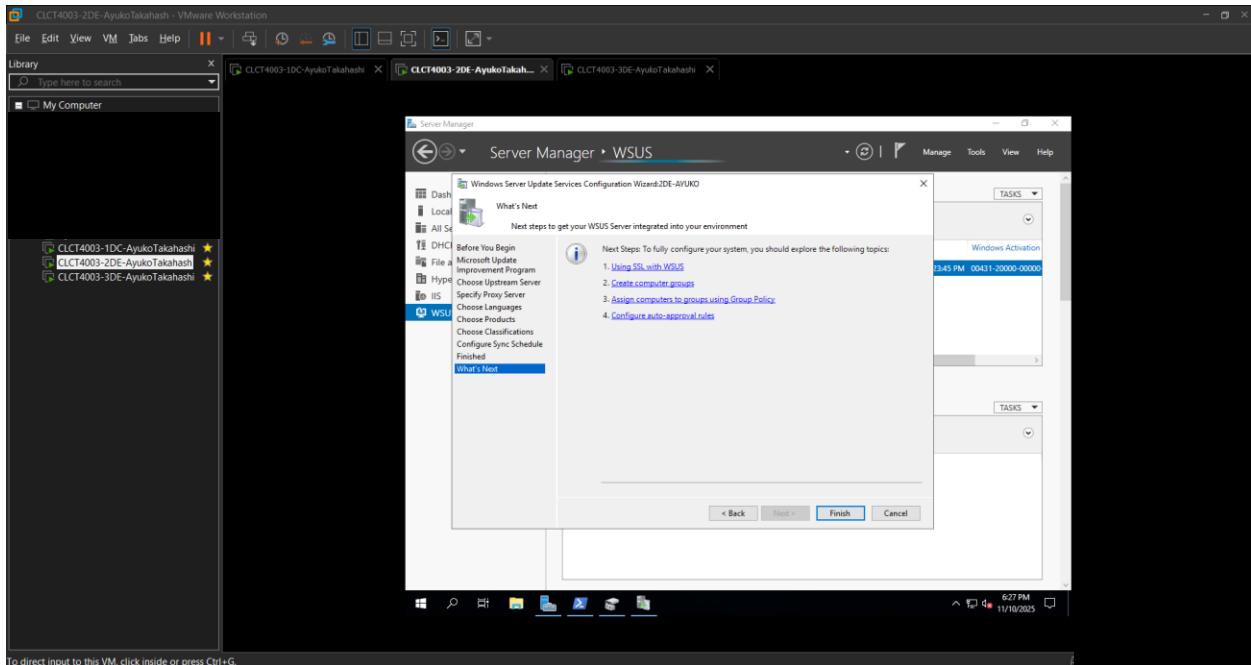
Hyper-V Replica enabled on replica server.



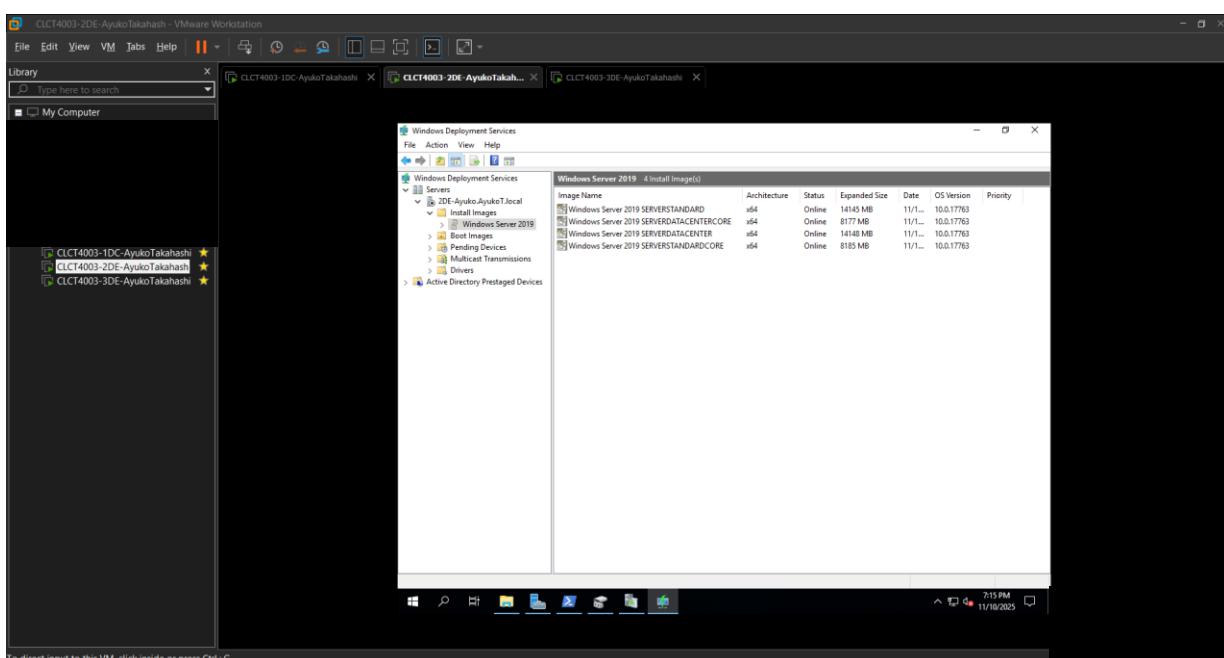
Replication Health shows Healthy.

Enterprise Management & Policy Enforcement

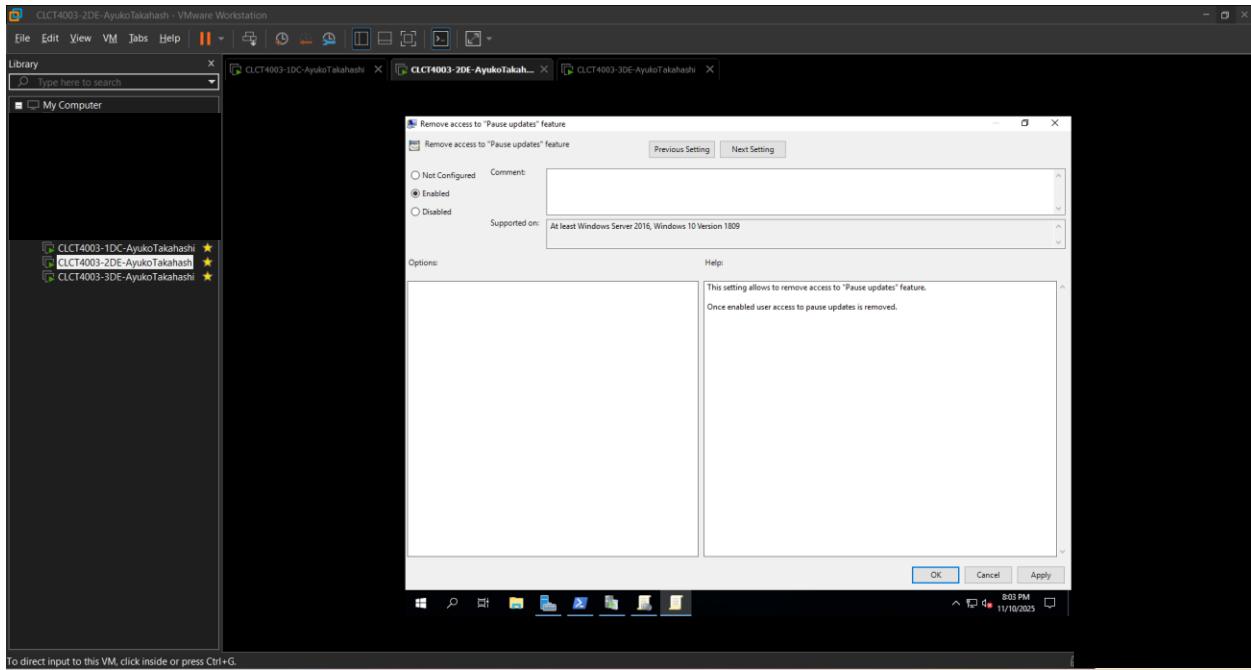
This section focuses on centralized update management and deployment using WSUS and WDS, along with Group Policy enforcement to control client update behavior and system compliance.



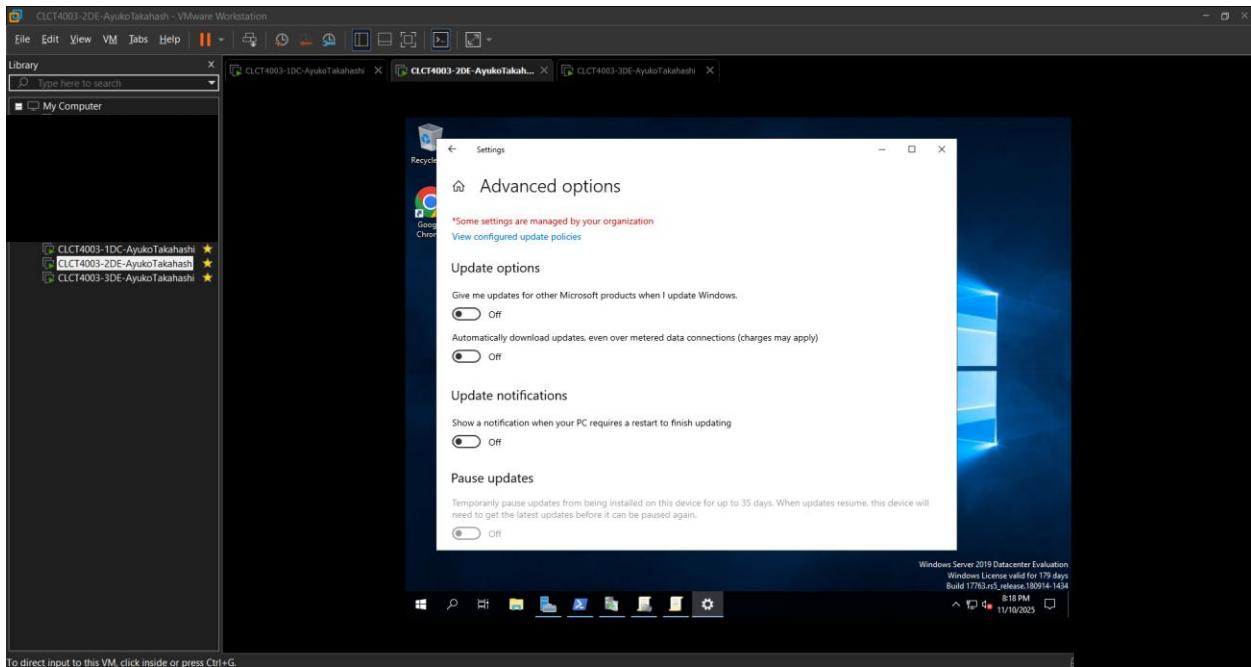
WSUS configuration completed successfully.



WDS boot + install images visible in console.



Group Policy: "Remove access to Pause Updates" enabled.



Pause Updates option grayed out on client.