Implementing AD DS Sites and Replication

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Lab Summary 4

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The company has implemented a single AD DS domain with the domain controllers. The users in some branch offices took so long to sign in to their computers because a large number of users does not fit to the current AD DS environment. Also, when they attempt to get into the network resources, the network goes slowly and fails sporadically. The administrators should find a way to implement a new AD DS infrastructure to help organizations meet the business requirements. If configuring AD DS sites and replication, it would optimize the user experience and network utilization within the corporate.

AD DS Replication

The standard domain controllers replicate AD information with a multiple master replication model. In the default partitions, there are four partitions: configuration partition, schema partition, domain partition, and application partition. Also, the multi-master replication should have accuracy or integrity, consistency or convergence, and performance or reasonable-level replication traffic. Any domain controllers with these components could initiate and promote to AD DS so that they can provide fault tolerance. Besides the multi-master replication, there are other critical characteristics of AD DS replication, including pull replication, store-and-forward replication, partitions, automatic generation of an efficient, robust replication topology, attribute-level and multivalue replication, distinct control of intersite replication and collision detection and management.

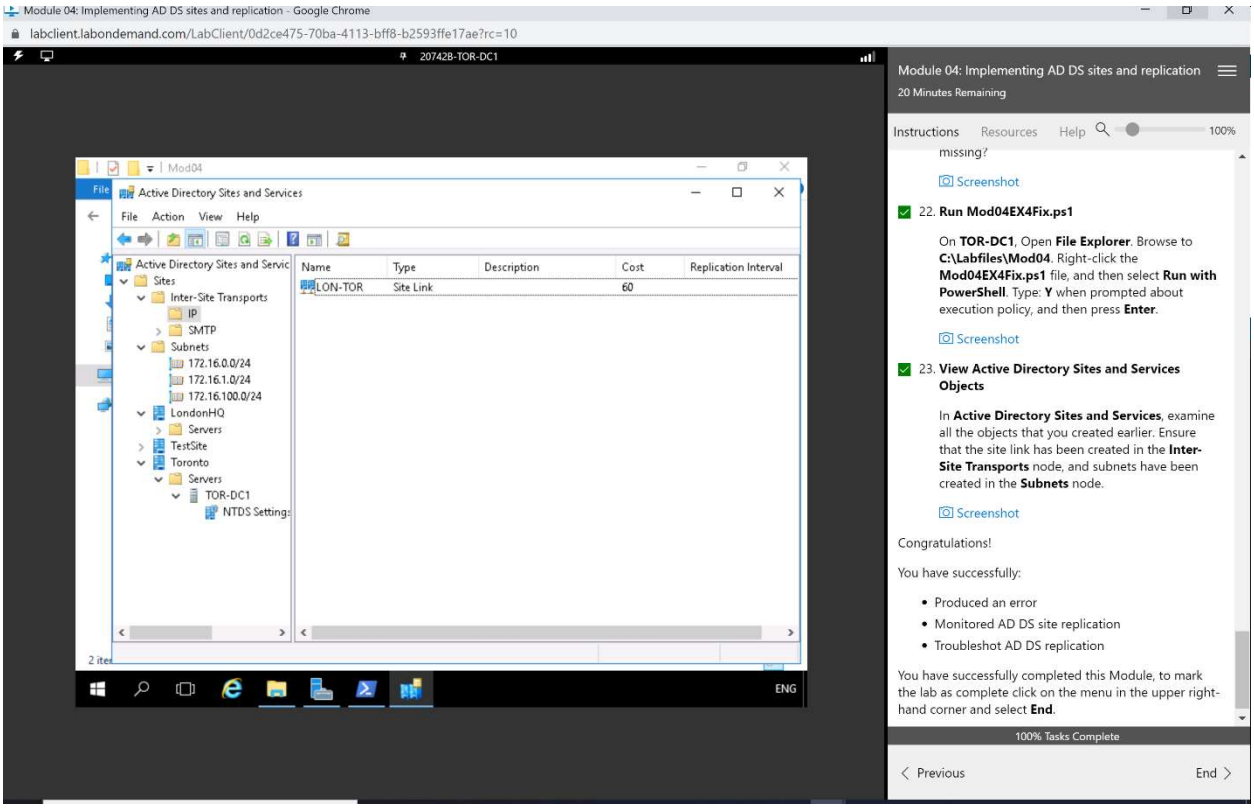
Configuring AD DS Sites

A site is a physical office or a city in a physical location. A group of sites could link up together as the physical network infrastructure. The AD DS site objects should achieve three primary service management tasks: managing replication traffic, providing service localization,

and linking GPOs to a site. The companies want to implement sites when controlling replication between domain controllers or service localization. Replication within sites is a fast, inexpensive, and highly reliable network. In contrast, replication between sites would cost more, have limited bandwidth and unreliable network links.

KCC, ISTG and Bridgehead Servers

The replication topology is usually two-way so that when one fails, the other will continue uninterrupted. The Knowledge Consistency Checker (KCC) is a component of AD DS to generate and optimize the replication automatically. The KCC will automatically rearrange the replication topology if a domain controller does not respond when checking every 15 minutes by default. When configuring multiple sites, the KCC on one DC in each site is designated as the intersite topology generator (ISTG). Only one ISTG should be in each site, regardless of the number of domains in the site. It calculates the ideal replication topology within the sites. The ISTG creates the connection agreement to replicate it to the bridgehead server. One of the domain controllers would be selected as the bridgehead server, and the other would be for the configuration.


Module 04: Implementing AD DS sites and replication - Google Chrome
labclient.labondemand.com/LabClient/0d2ce475-70ba-4113-bff8-b2593ffe17ae?rc=10
20742B-TOR-DC1
Active Directory Sites and Services
File Action View Help
Name Type Description Cost Replication Interval
LON-TOR Site Link 60
Inter-Site Transports
IP
SMTP
Subnets
172.16.0.0/24
172.16.1.0/24
172.16.100.0/24
LondonHQ
Servers
TestSite
Toronto
Servers
TOR-DC1
NTDS Settings
ENG
Module 04: Implementing AD DS sites and replication
20 Minutes Remaining
Instructions Resources Help 100%
Screenshot
22. Run Mod04EX4Fix.ps1
On TOR-DC1, Open File Explorer. Browse to C:\Labfiles\Mod04. Right-click the Mod04EX4Fix.ps1 file, and then select Run with PowerShell. Type: Y when prompted about execution policy, and then press Enter.
Screenshot
23. View Active Directory Sites and Services Objects
In Active Directory Sites and Services, examine all the objects that you created earlier. Ensure that the site link has been created in the Inter-Site Transports node, and subnets have been created in the Subnets node.
Screenshot
Congratulations!
You have successfully:
Produced an error
Monitored AD DS site replication
Troubleshot AD DS replication
You have successfully completed this Module, to mark the lab as complete click on the menu in the upper right-hand corner and select End.
100% Tasks Complete
Previous
End