# Fault Tolerance - Backup Domain Controller

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## Author Note

This paper was prepared for NTW216, taught by Professor Mason Galatas.

## Abstract

The purpose of this paper is to demonstrate and explain the configuration of a backup domain controller attached to the author's present Windows Server 2016 virtual machine.

# Fault Tolerance - Backup Domain Controller

A backup domain controller adds fault tolerance to an existing server computer. A domain controller typically responds to security authentication requests within a domain, thus having a secondary one allows for security to continue in the event one of the controllers fail.

Creating a backup domain controller is a relatively simple endeavor compared to more complicated installations in Windows Server. First, the user must create a server (or a secondary VM (virtual machine) in this case). After doing so, the server must be properly setup and then have its preferred DNS set to the IP (intellectual protocol) address of the original server. The user can ping the IP address afterwards using command prompt to verify this has been done correctly.

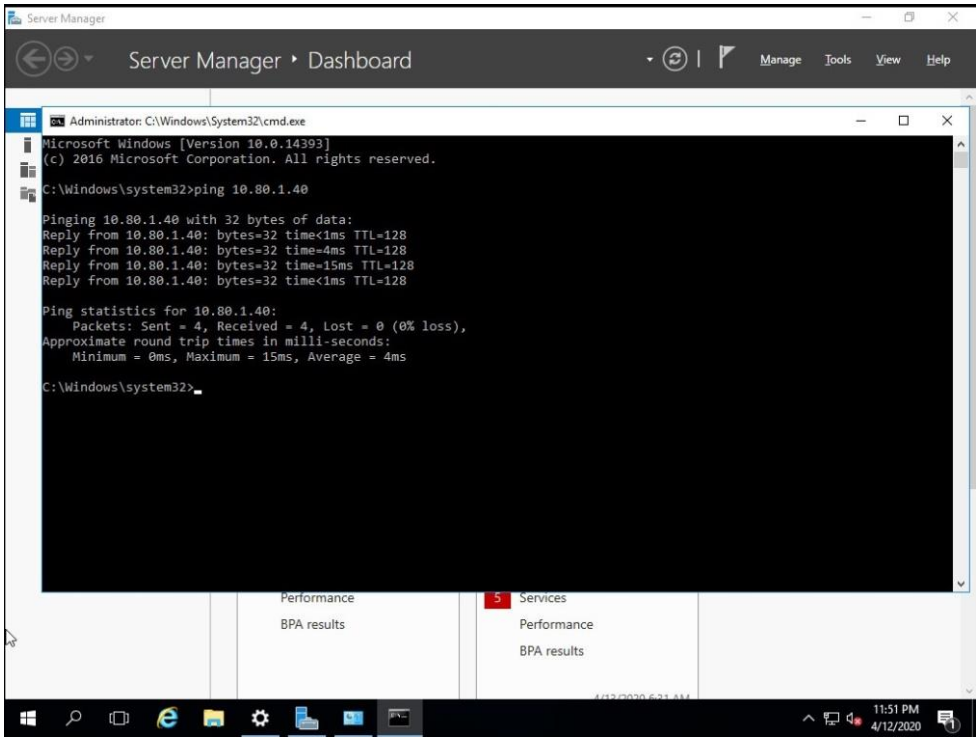


Figure 1. Windows Server 2016 screenshot. This details the original server being pinged by the backup domain server

The next step is to install Active Directory Domain Services through use of the Add Roles and Features menu.

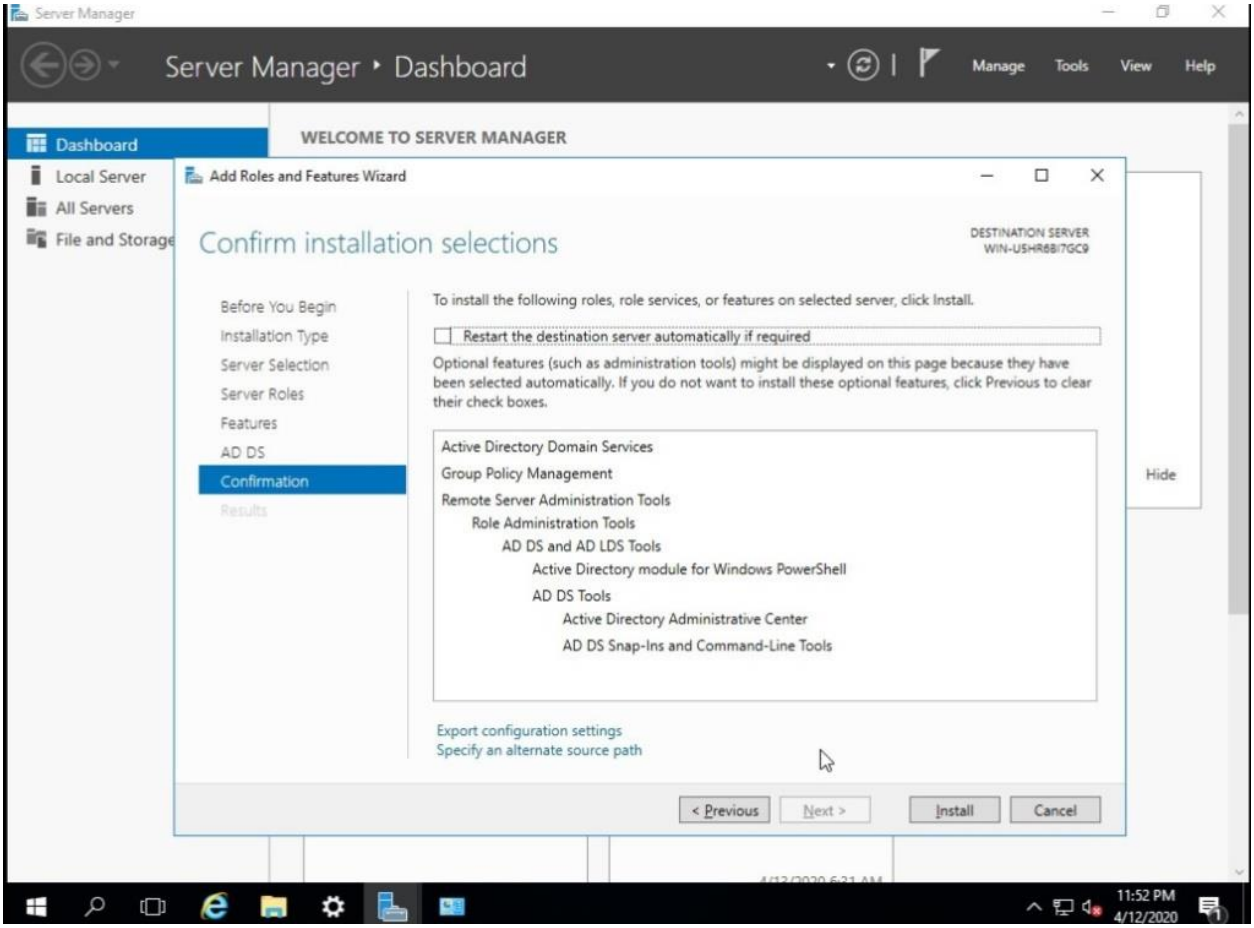


Figure 2. Windows Server 2016 screenshot. This showcases Active Directory Domain Services being installed on the Windows Server.

After doing so, it can then be configured through the alert widget in Server Manager (represented by the flag icon). Opening up the configuration menu allows the user to assign the domain controller to an existing domain, which is done by logging in using the first server's administrator login details and the domain name in front of the username (such as DOMAIN\Username). Then, a password is set for the Directory Services Restore Mode, and

default configuration options are selected. The server should automatically restart upon the completion of the configuration wizard.

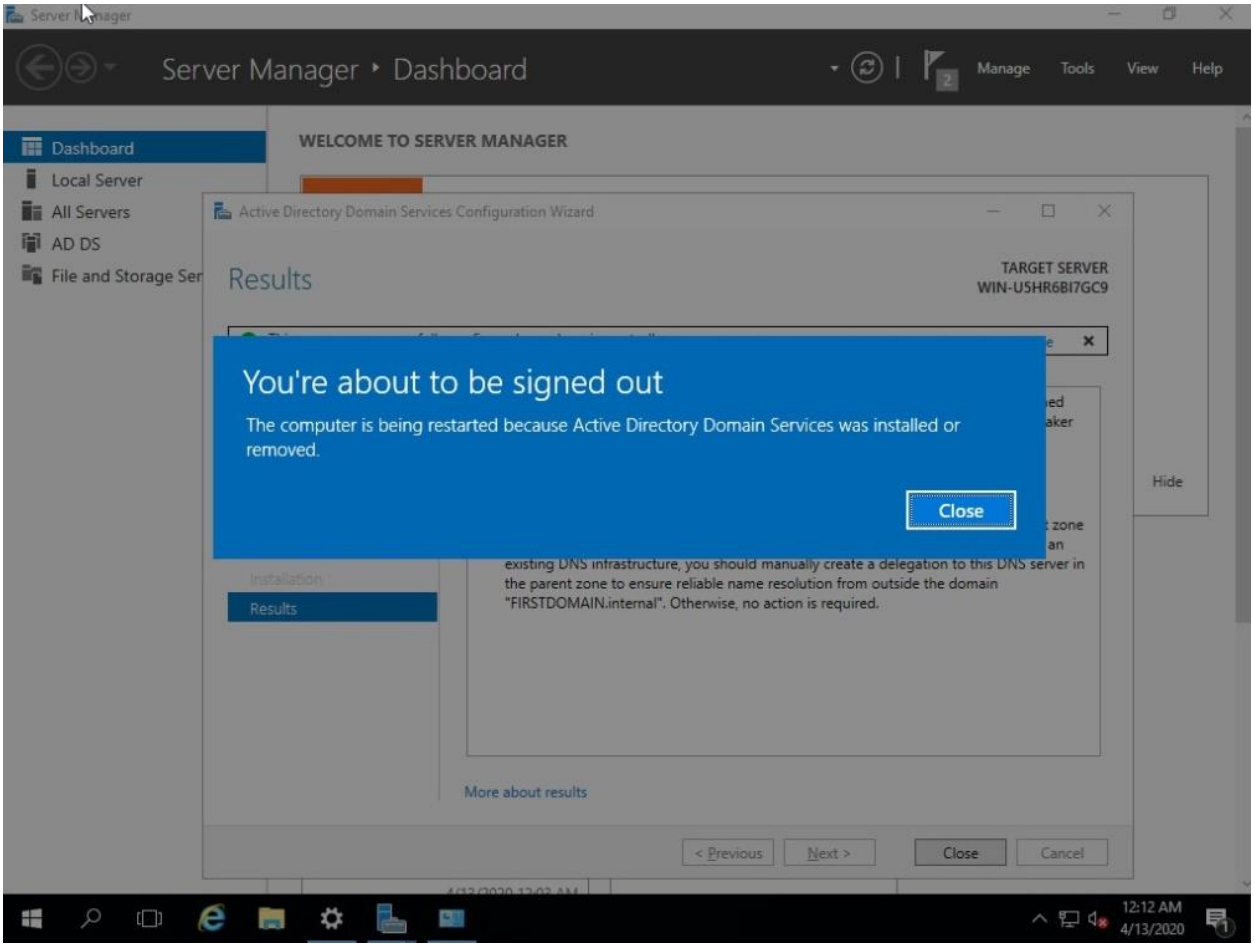


Figure 3. Windows Server 2016 screenshot. This displays the completion of the Active Directory Domain Services Configuration Wizard.

Following the configuration, the setup of the backup domain controller should now be complete. The user can login to the domain through the secondary controller using the credentials previously established and, upon viewing Active Directory Sites and Services, should be able to verify the success of the process by seeing both servers available.

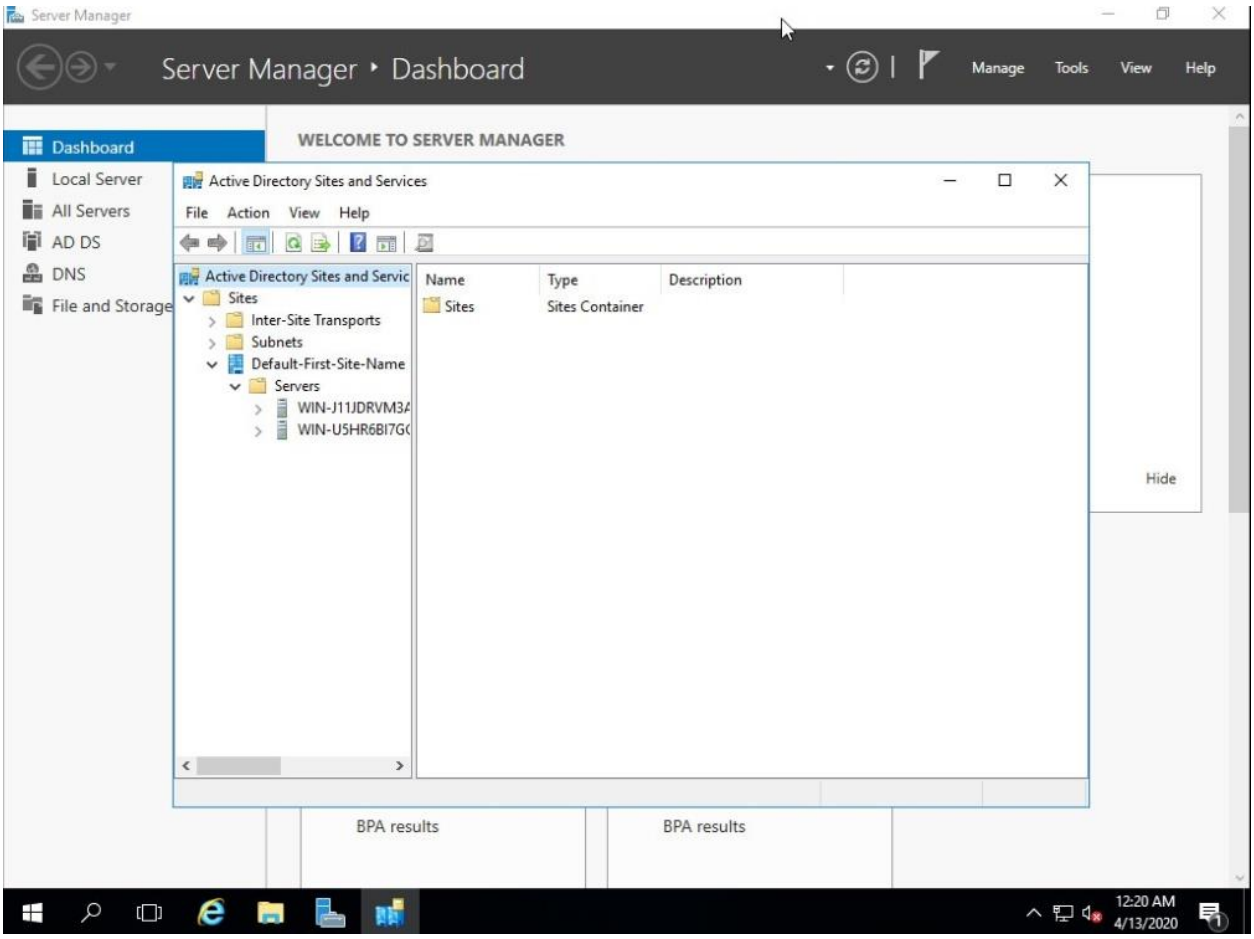


Figure 4. Windows Server 2016 screenshot. This displays both the default Windows 2016 Sever and its backup domain controller visible in the Active Directory Sites and Services menu.

# References

No references were utilized in this paper aside from the author's virtual machines.