**WDS Configuration and Deployment Guide**

1. **Install and configure Windows Server 2016**

1. Load a bootable flash drive with a Windows Server 2016 iso image.

2. Boot the server PC with the bootable flash drive.

3. Choose Windows Server 2016 Datacenter Desktop Experience and install Windows Server.

4. Rename the server WDSSERVER.

5. Promote the server to domain controller of its own AD DS:

* Server Manager > Add Roles and Features > Role-based or feature-based installation > Select WDSSERVER > Select Active Directory Domain Services > Add Features > Install
* AD DS installation completed > Promote this server to a domain controller > Add a new forest > Root domain name: ctu.wds > Leave Domain Controller Options by default > DSRM password: P@ssw0rd > Ignore DNS delegation warning > NetBIOS domain name: CTU > Leave Paths by default > Install

6. Configure server’s network settings:

* IPv4:
  + Address: 10.10.0.10
  + Subnet: 255.255.255.0
  + Gateway: 10.10.0.1
* DNS server:
  + 10.10.0.1

7. Install and configure DHCP and create scope:

* Server Manager > Add Roles and Features > Role-based or feature-based installation > Select WDSSERVER > Select DHCP Server > Add Features > Install
* DHCP installation completed > Complete DHCP configuration > Leave Authorization by default > Close
* DHCP Management Console > Expand domain name > Right-click IPv4 > New Scope… > New Scope Wizard:
  + Name: WDS Imaging
  + Start IP: 10.10.0.100
  + End IP: 10.10.0.150
  + Length: 24
  + Subnet: 255.255.255.0
  + Lease duration: 7 days
  + Domain Name and DNS Servers:
    - Parent domain: ctu.wds
    - IP address: 10.10.0.1

**II. Install and configure Windows Deployment Services for Windows 10 Imaging**

1. Install and configure WDS:

* Server Manager > Add Roles and Features > Role-based or feature-based installation > Select WDSSERVER > Select Windows Deployment Services > Add Features > Leave Select role services by default > Install
* WDS installation completed > Server Manager > Select WDS > Right-click server to launch Windows Deployment Services Management Console
* Expand list of servers on the left panel > Right-click WDSSERVER > Configure Server > Select Integrated with Active Directory > Leave Remote Installation Folder Locations by default > Proxy DHCP Server: Select both options > PXE Server Initial Settings: Select Respond to all client computers (known and unknown) > Finish

2. Add boot image:

* Load a Windows Server 2016 iso image on a flash drive. A file from the image is needed to make the boot image for WDS.
* Windows Deployment Services Management Console > Right-click Boot Images in left panel > Add Boot Image > Browse > Navigate to and open the Windows Server 2016 iso file > sources > Select boot.wim > Open > Next > Image name: Win\_10\_Boot\_Image > Next > Next > Finish

3. Create capture image:

* Right-click the newly created boot image > Create Capture Image > Image name: Win\_10\_Cap\_Image; Location and file name: C:\RemoteInstall\CapImages\win\_10\_cap\_image.wim > Next > Select Add image to the Windows Deployment Server now > Finish

4. Create install image:

* Install a fresh Windows OS on a PC and customize it as desired. This will be the base image.
* File Explorer > C:\Windows\System32\Sysprep\sysprep.exe
* Select OOBE option > Select Generalize checkbox > Select Reboot option > OK
* Upon reboot, press F12 to enter PXE boot > Select Win\_10\_Cap\_Image > Follow Wizard to capture image and save a copy to a local location with file name win\_10\_base\_install.wim > Finish
* PC reboots after successful base image capture > Copy locally saved win\_10\_base\_install.wim file to a flash drive and transfer it to the server
* Windows Deployment Services Management Console > Right-click Install Images in left panel > Image group: Windows 10 > Browse to the location of newly transferred win\_10\_base\_install.wim file > Open > Next > Finish

**III. Image a PC using the base image with WDS**

1. Boot the PC and press F12 to enter PXE boot mode.

2. Select Win\_10\_Boot\_Image as boot image.

3. Select Win\_10\_Base\_Install as install image. Installation usually takes around one hour.

4. After installation, set up accounts and settings as desired.

5. PC is ready to be used.