PROVA A - TECNICO PROFESSIONALE

a) Accertamento lingua inglese: traduzione della guida in inglese "CREAZIONE DHCP SCOPE" (tale guida verrà successivamente utilizzata per la parte pratico-operativa).

b) Accertamento conoscenze/capacità pratico-operative:

Ad un apparato switch Layer 2 con delle VLAN configurate sono collegati due computer:
SRVDHCP – Windows Server 2012 R2 (IP 192.168.0.200) – porta 1
CLIENTDHCP – Windows Server 2012 R2 (Client DHCP) – porta 48
Al candidato si richiede di:
1) Tramite le linee guida del testo inglese configurare su SRVDHCP uno scope DHCP con i seguenti parametri:
   a. Network: 192.168.0.0/24
   b. Gateway: 192.168.0.254
   c. Range IP: da 192.168.0.50 a 192.168.0.100
   d. DNS: 192.168.0.200
2) Fare in modo che CLIENTDHCP ottenga un IP dallo scope appena configurato su SRVDHCP rendendo permanenti le modifiche apportate alle varie configurazioni.
3) Verificare la raggiungibilità IP tra SRVDHCP e CLIENTDHCP

Le credenziali di accesso a SRVDHCP e CLIENTDHCP sono:
username: Administrator
password: Concorso2018

Le credenziali di accesso a entrambi i computer portatili sono:
username: Candidato
password: Concorso2018

Il portatile con CLIENTDHCP ha accesso allo switch tramite console e sul desktop è possibile trovare il programma Putty per il collegamento.
Su entrambi I portatili è possibile, se serve, accedere a Internet utilizzando i link sul desktop di Chrome e Firefox in modalità "incognito"

c) DNS: definizione e funzionalità.

d) RAID: definizione, principali utilizzi e livelli, vantaggi e svantaggi.

Step-by-Step Creating a Windows Server DHCP Scope

Overview

A DHCP scope is an administrative grouping of IP addresses for a network subnet. With scopes you can configure common network settings for all clients receiving addresses, such as DNS servers and network gateways.

Scopes can filter hosts by name, MAC address, and operating system to either allow them or disallow them from receiving an IP address. Scope policies can be configured to assign different options to hosts based on their name, MAC address, or operating system. For example, we can create a policy that configures the NIS server for a Linux host in addition to options set at the scope level.

This tutorial will guide you through configuring DHCP scopes on Windows Server 2012 R2.

Create a New Scope

1.   Launch the DHCP console.
2.   From the tree on the left side of the console, expand the DHCP server's hostname node.
3.   Select and then right-click **IPv4**.
4.   From the IPv4 context menu, select **New Scope**.
5.   When the **New Scope Wizard** dialog box appears, click **Next**.
6.   On the **Scope Name** screen, enter the name of your new scope. You should give it a description to document its purpose. When done, click **Next**.
7.   On the **IP Address Range** screen, enter a starting IP address followed by an Ending IP address. This create the scope's range, which will be used to assign addresses to clients.
8.   Under **Configurating settings that propagate to DHCP client** section of the **IP Address Range**screen, either enter a subnet bit length (CIDR) in the Length field, or enter the dotted decimal notation of the subnet mask.
9.   Click **Next**...
10.   On the **Add Exclusions and Delay** screen, we can set IP addresses from within the range we defined that should be excluded. For example, if our range includes the IP address of our network gateway, we probably do not want our clients to use it, so we would add its IP address to the exclusion list. Click **Next** when done.
11.   On the **Lease Duration** screen, enter the length of time a client should be assigned an IP address. When done, click **Next**.
12.   On the **Configure DHCP Options** screen, select **Yes, I want to configure these options now**, and then Click **Next**.
13.   On the **Router (Default Gateway)** screen, enter the IP address of the gateway clients should use. Click **Next** when done.
14.   On the **Domain Name and DNS Servers** screen, enter the IP addresses of all DNS servers the client should use. Click **Next** when done.
15.   On the **WINS Servers** screen, if you have WINS servers add them here. Click **Next** when done.

Most Windows environments no longer use WINS for name resolution. Although, some legacy applications and hardware may still require it, so check your environment before skipping this.

16.   On the **Activate Scope** page, select **Yes, I want to activate this scope now.** A scope must be activated before it is allowed to assign clients IP addresses. If you do not want to activate it at this time, select No, I will activate this scope later. Click **Next** when done.

17.   Click **Finish**.

Scope Reservations

The purpose of DHCP is to automatically assign hosts connecting to your physical network an IP address. Which IP address they get depends on what has already been assigned and what is available. With reservations, on the other hand, we can ensure that a specific host always receives the same IP address.

Why would you do this instead of just assigning the host a static IP address? Well, this allows us to centrally assign IP addresses to all of our servers.

Host reservations use the MAC address of a client's network interface. When the DHCP server sees this MAC address during a DHCP request, it matches it to an IP address in the reservation list and then assigns that IP address to the host. No other host may be assigned the IP address.

1.   In the DHCP console, from the left tree view expand the scope you want to add reservations to.

2.   Select and then right-click **Reservations**. When the context menu appears, click **New Reservation…**

3.   Give the reservation a name. You should probably use the hostname of the server you are reserving the address for.
Assign the IP address.

4.   Enter the MAC address of the servers network interface.

5.   Document the purpose of the reservation by entering a description.

6.   Under **Support types**, select either Both, DHCP or BOOTP.

Both   The reservation will be used for both DHCP requests and BOOTP DHCP requests.

DHCP   The reservation will only apply to standard DHCP requests.

BOOTP   The reservation will only apply to BOOTP requests.

7.   Click Add to add the new reservation.