A Review paper on DHCP RELAY AGENT

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Abstract: DHCP Policies provide the DHCP admin with a very effective lever to achieve these scenarios. As of Windows Server 2008 R2, an admin configures an IP address range and option values for a scope/subnet. All clients which are in that scope/subnet get an IP address from this IP address range of the scope and get options configured for the scope.[1] If an administrator of the DHCP server needs to further apportion the IP address range of a scope to be delivered to a specific class of clients or devices or needs to give out different option values to different types of clients - as the aforementioned scenarios demand – there was no way for an admin to achieve that (unless you used individual reservations, which are effort intensive to manage). So, essentially, granularity at which you could assign IP addresses and options existed only up to the scope level. The DHCP policies in Windows Server 2012 help the administrator achieve exactly that – a more granular mechanism to assign IP addresses and options. Five criteria's that are needed for DHCP POLICIES: MAC Address, Vendor Class, User Class, Client Identifier, Relay Agent Information.

Keywords: MAC, PASS, BOOTP, DHCP DISCOVER.

I. INTRODUCTION

DHCP server in Windows Server 2008 provides support for provisioning customized IP address and network configurations to DHCP clients using DHCP policies. Policies can be created based on several criteria one of which is relay agent information. A relay agent is a small program that relays DHCP messages between clients and servers on different subnets. DHCP relay agents are part of the DHCP standards and function according to the Request for Comments standard documents that describe protocol design and related behavior.

A. How relay agents work

EXAMPLE:

1. DHCP client C broadcasts a DHCPDISCOVER packet on Subnet 2.
2. DHCP server 1 on remote Subnet 1 receives the message, it examines the gateway IP address field in the DHCP message header. If the field has an IP address of 0.0.0.0, the agent fills it with the relay agent or router's IP address and forwards the message to the remote Subnet 1 where the DHCP server is located.
3. When DHCP server 1 on remote Subnet 1 receives the message, it examines the gateway IP address field for a DHCP scope that can be used by the DHCP server to supply an IP address lease.

B. DHCP (Dynamic Host Configuration Protocol):

DHCP is a network protocol that enables a server to automatically assign an IP address to a computer from a defined range of numbers (i.e., a scope) configured for a given network.

C. DORA Process in DHCP:

DHCP operations fall into four phases: server discovery, IP lease offer, IP request, and IP lease acknowledgment. The DHCP operation begins with clients broadcasting a request. If the client and server are on different subnets, a DHCP Helper or DHCP Relay Agent may be used. [3]

• In the Manage Authorized Servers dialog box, select Authorize.
In the Authorize DHCP Server dialog box, key the name or IP address of the DHCP server to be authorized and then click OK.

The computer will list the IP and full computer name and then ask for confirmation. Click OK to continue.

D. DHCP Scope

- Determines which IP addresses are allocated to clients.
- Defines a set of IP addresses and associated configuration information that can be supplied to a DHCP client.

A scope must be defined and activated before DHCP clients can use the DHCP server for dynamic TCP/IP configuration.

You can configure as many scopes on a DHCP server as needed for your network environment.

- The IP addresses defined in a DHCP scope must be contiguous and are associated with a subnet mask.
  1. If the addresses you want to assign are not contiguous, you must create a scope encompassing all the addresses you want to assign and then exclude specific addresses or address ranges from the scope.
  2. You can create only one scope per subnet on a single DHCP server.

II. OFFICE APPLICATIONS

Some plans for Office 365 also include access to the current versions of the Office desktop applications for both Windows (Office 2013) and OS X (Office for Mac 2011) for the period of the subscription. In the case of Office 2013 on Windows, it is installed using a “Click-to-Run” system which allows users to begin using the applications almost instantaneously while files are streamed in the background. Updates to the software are installed automatically, covering both security updates and major new versions of Office[2]. A feature known as “Office on Demand” is also available, which allows users to temporarily stream an Office 2013 application on any compatible computer without needing to fully install it. Access to the Office Mobile apps for Android and iOS devices (including both smart phones and tablets) were originally limited to Office 365 subscribers but basic editing and document creation has since been made free for personal use. However, Office 365 is still required:
  - to use Office Mobile for business use
  - to unlock premium features within the apps
  - to enable editing features on large-screen tablets (screen size > 10.1”)

III. SECURITY

In December 2011, Microsoft announced that the Office 365 platform was now compliant with the ISO/IEC 27001 security standards, the European Union's Data Protection Directive (through the signing of model clauses), and the Health Insurance Portability and Accountability Act for health care environments in the United States. At the same time, Microsoft also unveiled a new “Trust Center” portal, containing further information on its privacy policies and security practices for the service. In May 2012, Microsoft announced that Office 365 was now compliant with the Federal Information Security Management Act: compliance with the act would now allow Office 365 to be used by U.S. government agencies. In spite of claiming to comply with European data protection standards, and in spite of existing Safe Harbor agreements, Microsoft has admitted that it will not refrain from handing over data stored on its European servers to US authorities under the Patriot Act.

IV. SIGN IN AND BASIC SETUP

As an administrator of your organization, you sign up for Microsoft Office 365 for professionals and small businesses for yourself and your organization on the Office 365 sign-up page. During the sign-up process, you are asked to set a new domain name and create a user ID for your account. You use this user ID to sign in to Office 365. If you are not an administrator, an administrator adds you to the account and creates a user ID for you to use whenever you sign in to Office 365. [4]

- Open browser and go to “login.microsoftonline.com”.
- Fill the username and password Then Click on Sign in.
- After Sign in click on menu on top left corner and go to admin.
- Dashboard of Office 365 will open.
Here we do all the configuration and customization of Office 365 for our organization.

V. USE EMAIL IN OFFICE 365

We can use email in Microsoft Office 365 for professionals and small businesses by using Microsoft Outlook Web App, a web-based version of Microsoft Outlook. Outlook Web App gives you access to your Microsoft Exchange mailbox from any computer connected to the web. You can also keep track of email from other accounts, such as Hotmail or Google mail, by connecting those accounts to your Outlook Web App account.

In addition to being able to access your email through Outlook Web App, you can connect your Office 365 email account to a desktop email program such as Microsoft Outlook or Microsoft Entourage 2008 for Mac, Web Services Edition.

VI. SIGN IN TO OUTLOOK WEB APP

Outlook Web App provides access to your email from any computer connected to the web, even a public computer at an airport terminal or hotel. All you need is your user name and password, which were provided to you when your company added your account to Office 365. To sign in to Outlook Web App from Office 365, follow these steps.

1. In the header, click **Outlook**.
2. On the **Sign In** page, choose a security option. Click **show explanation** for information about the options.
3. Type your Office 365 user name. Your user name takes the form of an email address such as: name@contoso.com.
4. Type your password, and then click **Sign in**.

REFERENCES:


