

# Re: Adding another DHCP Server

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*Source:*

[http://www.tech-archive.net/Archive/Win2000/microsoft.public.win2000.advanced\\_server/2005-10/msg00047.html](http://www.tech-archive.net/Archive/Win2000/microsoft.public.win2000.advanced_server/2005-10/msg00047.html)

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- *From:* Jorge\_de\_Almeida\_Pinto <[UseLinkToEmail@xxxxxxxxxxxxxxxxxxxxxxxxxxxxx](mailto:UseLinkToEmail@xxxxxxxxxxxxxxxxxxxxxxxxxxxxx)>
  - *Date:* 15 Oct 2005 15:35:54 -0400
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"" wrote:

- > We have a single DHCP server on our network.
- > I would like to add another or maybe two additional DHCP
- > servers (one being
- > the DC)
- > I am concerned (actually confused) about the scopes. Whether it
- > is a shared
- > pool, or individual ranges.
- >
- >
- > Can someone please point me in the right direction on how to
- > set up the
- > additional DHCP's and any other hints would be helpful.
- >
- > Many thanks
- >
- > Tony

For distributing scopes among multiple DHCP servers two well known rules are available.

Google for (only the text before the =):

50/50 dhcp = (central setup)

and

80/20 dhcp = (local and remote setup)

You should make sure only one DHCP servers leases a certain IP address otherwise you could get IP conflicts. DHCP Servers do

not share the DHCP db, only when clustered.

If one or more DHCP servers service the same set of clients you should, if applicable:

- (1) configure reservations on all those DHCP servers
- (2) Distribute available addresses among the DHCP servers

(1)

if you have clients that use DHCP reservations and you also have

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multiple DHCP servers that service those clients, you need

to configure the DHCP reservations on all DHCP servers that service those clients as you want to make sure that independent of

the DHCP server the client gets its reserved IP address

(2)

Depending on the distribution factor as mentioned above you need to make sure IP addresses are not leased more than once to

any other client. Let me give me an example....

Lets say you have a scope with the following AVAILABLE IP addresses.... A B C D E F G H I J (from A to J) and you have server

DHCP1 and server DHCP2 as DHCP servers.

You have the following possibilities:

(A) configure the complete scope "A B C D E F G H I J" and enable it on both DHCP servers DHCP1 and DHCP2 and enable conflict

detection so that each DHCP server first checks a certain IP address has not been leased by the OTHER DHCP server. (This is

not a best practice and thus not recommended)

(B) configure the complete scope "A B C D E F G H I J" and enable it on DHCP server DHCP1 and disable the scope on DHCP

server DHCP2 (and enable conflict on the DHCP server that is made the servicing DHCP server while the other is not because it

is unavailable or so) (this will work but if the first DHCP server becomes unavailable you need to enable conflict detection

on the other DHCP servers and enable all of its scopes manually)

(C) If you use the 50/50 rule (otherwise configure accordingly),configure half of the scope "A B C D E" on the DHCP server

DHCP1 and configure the other half on DHCP server DHCP2 "F G H I J" and enable the scopes. Conflict detection is not needed

here. The problem with this is that if the client switches from DHCP server the other DHCP server will issue a NACK because

the client if trying to renew an unknown IP address to that DHCP server.

(D) configure the complete scope "A B C D E F G H I J" and enable it on both DHCP servers DHCP1 and DHCP2. Conflict detection

is not needed here. If you use the 50/50 rule (otherwise configure accordingly), on the first DHCP server DHCP1 exclude "A B

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C D E" and on the second DHCP server DHCP2 exclude "F G H I J" If the client switches from DHCP server the other DHCP server

will not issue a NACK because it knows of the IP address although excluded (This is my preferred configuration and if also a

best practice)

Also remember:

If secure DDNS updates are done by the DHCP server on behalf of the clients and more than 1 DHCP server services the same

clients make sure each DHCP server is able to update the records. For this configure credentials on the DHCP server to

achieve this.

If DHCP service is hosted on a DC, for security purposes you should configure DHCP with additional credentials to register

records on behalf of the clients.

If it is a W2K DHCP server you can only use the command line to configure credentials (NETSH DHCP...)

If it is a W2K3 DHCP server you can use the command line and the GUI to configure credentials

For more info see:

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<http://www.microsoft.com/technet/prodtechnol/windowsserver2003/library/ServerHelp/d0e19b57-c368-46c2-b017-c>

\* <http://www.jsifaq.com/SUBN/tip6900/rh6941.htm>

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<http://www.microsoft.com/technet/prodtechnol/windowsserver2003/library/ServerHelp/179d4f6c-9482-4dac-8f03-7>

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- **Follow-Ups:**

- ◆ **Re: Adding another DHCP Server**

- ◇ From: Hank Arnold

- **References:**

Re: Adding another DHCP Server

◆ *Adding another DHCP Server*

◇ *From:* POP3.demon.co.uk

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