



Sample Product

*****Important Note*****

The enclosed sample pages are random selections from throughout the lab book and are not consecutive pages.

Building a DNS Infrastructure for Wired Brain Coffee, Inc.

Mega Lab 4

Part 1 of 3 in the
**Building a Windows 2000
Network Infrastructure Series**

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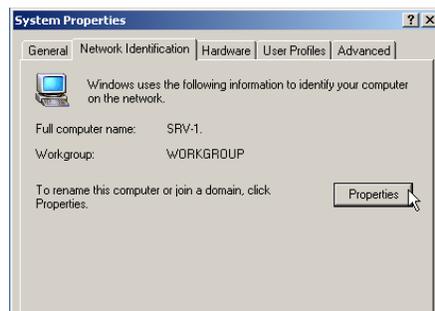


***Excerpt from within the lab, not in order!

Setting the Primary DNS Suffix

Before you go on you will need to add the primary DNS suffix to the computer name because the computer is not a part of a Windows 2000 domain. This setting controls where in the DNS namespace you would like this computer to exist. If you do not specify the primary DNS suffix, the computer will not be in the DNS domain wiredbraincoffee.com, and this lab will not work! By adding this suffix, you are effectively making wiredbraincoffee.com part of this computer's name. For example, the computer name for srv-1 would become srv-1.wiredbraincoffee.com.

1. To change the computers name on SRV-1 right click on **My Computer** from the desktop and select **Properties**.
2. From properties, go to the **Network Identification** tab. From the Network Identification tab, click on **Properties**.



(figure 10)

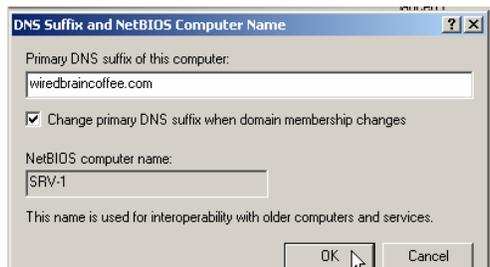
3. On the Network Identification properties page click on the **More...** Button.





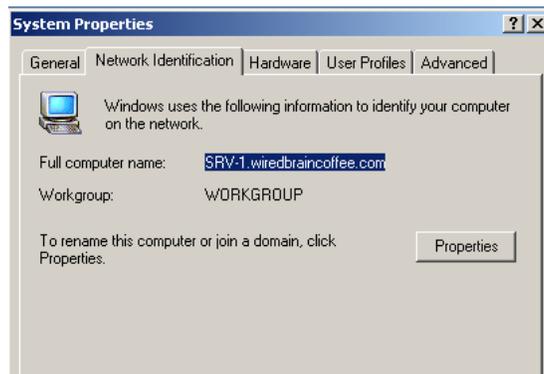
(figure 11)

4. That will bring up a dialog box where you can add the Primary DNS suffix of the computer. Type in *wiredbraincoffee.com* as the Primary DNS suffix and make sure the “**Change primary DNS suffix when domain membership changes**” option is selected. That way if the computer becomes a part of new domain other than *wiredbraincoffee.com*, the DNS suffix will change automatically. Click **OK**.



(figure 12)

5. Click **OK** until you get back to the Network Identification tab on the **My Computer** properties. Before rebooting, look at the Full computer name and make sure it is correct. Click **OK**. There will be a pop up screen asking if you would like to reboot now for changes to take effect. Click **Yes** for the computer to reboot.

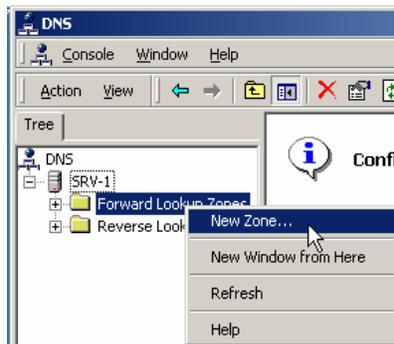


(figure 13)



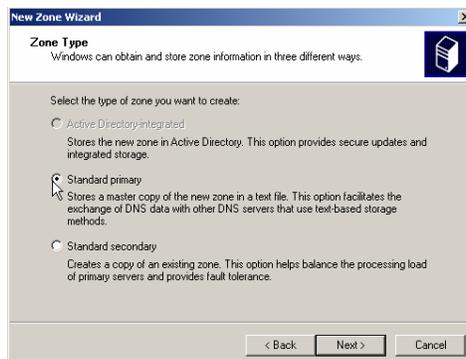
Creating a Forward Lookup Zone

1. Open the DNS console by clicking **Start→Programs→Administrative Tools→DNS**. The next step in setting up DNS is to create a Forward Lookup Zone. A forward lookup zone needs to be created to support Wired Brain Coffee's local network. The forward lookup zone will create a new DNS database that will contain the resource records of computers in the DNS domain. Right click on the **Forward Lookup Zones** folder and select **New Zone**.



(figure 14)

2. This will start the new zone wizard that will walk you through the basic installation of a new Forward Lookup Zone. The first screen will be a welcome screen, click **Next**. The next screen will show the types of zones that you can create and a brief explanation of each. A Standard Primary zone will store the master copy of the DNS database; this is the selection you would make if this is the first zone you will be creating. A Standard Secondary is only created when you already have a Standard Primary DNS zone on another system. A Standard Secondary zone stores a read-only copy of the primary DNS zone's database by accepting zone transfers (copies) from the primary. Active directory is not installed on this server, so the Active Directory integrated option is grayed out. Choose **Standard Primary** and click **Next**.



(figure 15)

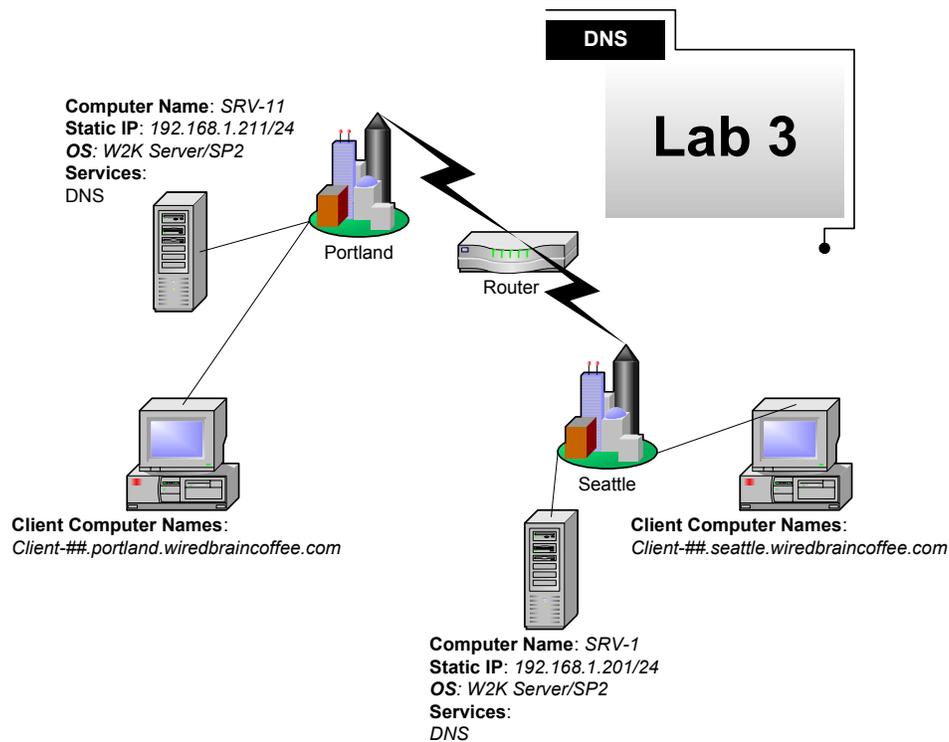


***Excerpt from within the lab, not in order!

Scenario

Wired Brain Coffee, Inc. has grown substantially since it first opened doors two months ago. It is unbelievable how much you have learned in such a short time. Your network manager, Charlie, now wants you to organize the DNS structure for even more growth. WBC will be expanding soon to Portland, Oregon, and Charlie wants you to organize DNS so that resources in Portland will have “Portland” as part of their host name. Charlie would also like you to research options to speed up DNS resolution time. Performance is adequate now, but who knows, with the network expanding so rapidly, maybe there is a better way of setting up DNS.

In Lab 3 you will work with several tricky concepts. First, you will create DNS domains within wiredbraincoffee.com and then you will delegate authority to one of them, turning it into a zone. The difference between zones, DNS domains & Windows 2000 domains is sometimes a difficult concept to grasp, so take a close look at the details within this lab and try to get a better understanding of their differences. You will also be exposed to the configuration and theory behind both DNS forwarders and DNS caching-only servers.



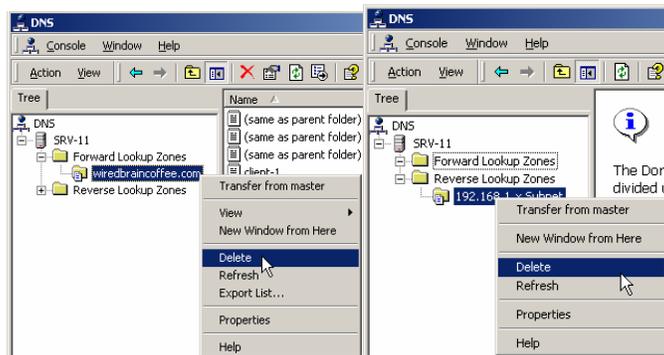
(figure 70)



*****Important Note*****

Before you get started with Lab 3, you need to delete the secondary zone from srv-11. Under normal circumstances, this would not be done, but for the purpose of this lab you will do this to ensure that we are at a common starting point.

1. Log on to **srv-11** and open the **DNS console**. Right click on **wiredbraincoffee.com** and select **Delete**. A screen will pop up asking if you are sure you want to delete the zone. Click **Yes**.
2. Next, you will delete the reverse lookup zone for the **192.168.1.x** subnet.



(figure 71)

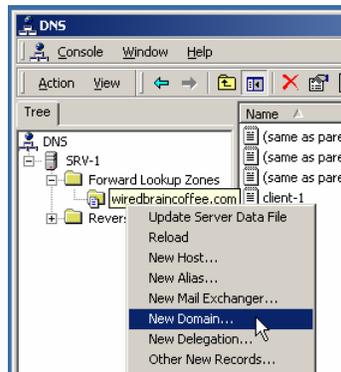
DNS Domains

The concept of a DNS domain, often, is enough to completely throw students and IT professionals for a loop. It is easy to understand the concept of an Internet or public domain name such as `trainsignal.com` or `Microsoft.com`. These are both DNS domains. The concept starts to become a bit fuzzier when you explore a private DNS structure within a company. What is a DNS domain for? How is it different than an Active Directory domain? Or a zone for that matter? A lot of times, there is no difference. If you set up a Windows 2000 domain named `wiredbraincoffee.com`, by default, you will also have a DNS domain and zone named `wiredbraincoffee.com`. In the next section, you will be creating DNS domains **not** Windows 2000 Active Directory domains. Creating DNS domains outside of your Windows 2000 domain structure is not that common, but it can be done. In our example, Wired Brain Coffee is expanding to Portland and they would like to be able to use host names to differentiate between machines in Seattle and machines in Portland. Creating DNS domains allows you to split up the DNS namespace. For example, a `srv-20` in Portland would take on the name `srv-20.portland.wiredbraincoffee.com` and a `client-50` in Seattle would take on the name `client-50.seattle.wiredbraincoffee.com`. The thing to remember here is that there is still only **one** Active Directory domain and only **one** DNS zone. What then, is the purpose of DNS domains? Creating DNS domains simply gives you the ability to better organize your resources.



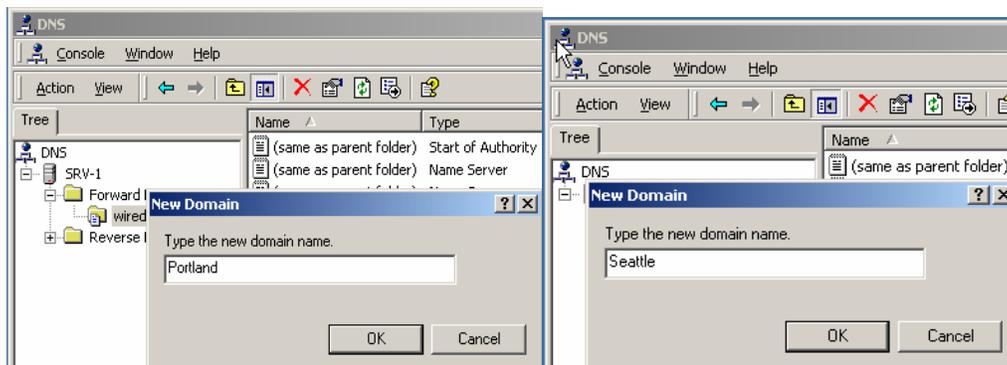
Creating Additional DNS Domains

1. Log on to srv-1 and open the DNS console. Right click on **wiredbraincoffee.com** and select **New Domain**.



(figure 72)

2. A screen will pop up asking for the new DNS domain name. Type in **Portland** and Click **OK**.
3. Right click on **wiredbraincoffee.com** again and select **New Domain**. Type in **Seattle** and Click **OK**



(figure 73)

Important Note

Keep in mind that the Primary DNS Suffix for the client computers would have to be changed on each computer to reflect which domain you want their host records created in. You would then just create host records for computers in the appropriate domain. Automatic updates will also work, provided you changed the Primary DNS suffix as described above.