**Introduction**  
On a network that does not have an Active Directory Integrated zone you will,   
  
Install DNS Sever role on two w2k8 virtual machines  
Configure Primary and Secondary Forward and Reverse Lookup zones on both  
Test your configuration using a Widows 7 DNS client  
  
Note that all machines are on the same network.

w7a  
 DNS Client  
w7a

Secondary DNS Server  
w2k8d04

Primary DNS Server  
w2k8c03

Virtual Hub

**IP Settings**  
On the Primary DNS server, configure the IP address, mask, and Preferred DNS  
172.16.150.60, 255.255.255.0, 172.16.150.60

On the Secondary DNS Server configure the IP address, mask, Preferred DNS, Alternate DNS Server  
172.16.150.80, 255.255.255.0, 172.16.150.80, 172.16.150.60  
  
On the client configure the IP address, mask, Preferred DNS, Alternate DNS Server  
172.16.150.15, 255.255.255.0, 172.16.150.60, 172.16.150.80  
  
  
**Ping**  
Turn on File Sharing on all machines  
Verify all machines can ping each other

**On the Primary DNS Server**  
From Server Manager, install DNS Sever role on the Primary server  
  
**On the Primary DNS Server Configure Forward Lookup Zone**  
Administrative Tools, DNS, click the plus next to w2k8c03, click the plus next to Forward Lookup Zones  
Add a New Zone is displayed on the right  
On the left, right click Forward Lookup Zones, New Zone  
On Welcome to New Zone Wizard, Next  
On Zone Type, accept the default Primary zone, Next  
On Zone name, type kim.com, Next  
On Zone file, accept the default file name, Next  
On Dynamic Update, leave the default, Next  
On Completing the New Zone Wizard, Finish  
Click kim.com to display the two records created  
Right click the NS record and notice on the Name Servers tab, IP Address is not populated   
  
Create host record for w2k8c03  
Right click kim.com  
Click New Host (A or AAAA)…  
On New Host, type w2k8c03 in Name ( ): field and 172.16.150.60 in IP Address: field, Add Host  
The successfully created message is displayed  
Click OK, Done

**On the Primary DNS Server Configure Reverse Lookup Zone**  
Administrative Tools, DNS, click the plus next to w2k8c03, right click Reverse Lookup Zones  
  
Add a New Zone is displayed on the right  
On the left, right click Reverse Lookup Zones, New Zone  
On Welcome to New Zone Wizard, Next  
On Zone Type, accept the default Primary zone, Next  
On Reverse Lookup Zone Name, Choose whether you want to create IPv4… accept IPv4 Reverse Lookup Zone, Next  
On Reverse Lookup Zone Name, To identify the reverse lookup zone….type your network address(172.16.150), Next  
On Zone file, accept the default file name, Next  
On Dynamic Update, leave the default, Next  
On Completing the New Zone Wizard, Finish  
Click the plus next to Reverse Lookup Zones  
Click the plus next to 150.16.172…. kim.com to display the two records created  
Right click the NS record and notice on the Name Servers tab, IP Address is not populated   
Create a PTR record for w2k8c02  
Click the plus next to Forward Lookup Zones  
Click kim.com  
Right click w2k8c03, Properties, click the Checkbox next to Update the associated pointer(PTR) record, OK  
Close DNS  
Administrative Tools, DNS …  
Click the plus next to w2k8c03  
Click the plus next to Reverse Lookup Zones  
Click 150.16… you should see the PTR record for w2k8c03

**On the Secondary DNS Server**  
Install DNS Sever role on the Secondary

**On the Secondary DNS Server Configure Forward Lookup Zone**Administrative Tools, DNS, click the plus next to w2k8d04, click the plus next to Forward Lookup Zones  
Add a New Zone is displayed on the right  
Right click Forward Lookup Zones, New Zone  
On Welcome to New Zone Wizard, Next  
On Zone Type, select Secondary zone, Next  
On Zone name, type kim.com, Next  
On Master DNS Servers, type 172.16.150.60, click the white area; you should see a green circle with a white check, Next  
On Completing the New Zone Wizard, Finish  
Click kim.com to display a red circle with a white x along with the words, Zone not Loaded by DNS Server

**On the Primary DNS Server Configure Forward Lookup Zone Transfer**  
Administrative Tools, DNS, click the plus next to the DNS server and plus next to Forward Lookup Zones. Right click kim.com, Properties, click the Zone Transfers tab, verify the Allow zone transfers: is checked, and Only to servers listed in Name Servers tab is checked  
Click Name Servers tab, Add  
On New Name Server Record, type w2k8d04.kim.com in FQDN field, and 172.16.150.80 in IP address field, click the white area a red circle with a white x  
Click OK

Notice that you added a NS record for the secondary DNS server  
OK

**On the Secondary DNS Server Configure Forward Lookup Zone Transfer**If Administrative Tools is open, close it  
Administrative Tools, DNS, click the plus next to w2k8d04, click the plus next to Forward Lookup Zones  
The zone, kim.com, should be transferred; otherwise, right click kim.com, Transfer from Master

**On the Primary DNS Server Configure Reverse Lookup Zone Transfer**  
Administrative Tools, DNS, click the plus next to the DNS server and plus next to Reverse Lookup Zones. Right click 150.16.172, Properties, click the Zone Transfers tab, verify the Allow zone transfers: is checked, and Only to servers listed in Name Servers tab is checked  
Click Name Servers tab, Add  
On New Name Server Record, type w2k8d04.kim.com in FQDN field, and 172.16.150.80 in IP address field, click the white area a red circle with a white x  
Click OK

Notice that you added a NS record for the secondary DNS server  
OK

**On the Secondary DNS Server Configure *Reverse Lookup Zone***If Administrative Tools is open, close it

Administrative Tools, DNS, click the plus next to w2k8c03, right click Reverse Lookup Zones  
  
Add a New Zone is displayed on the right  
On the left, right click Reverse Lookup Zones, New Zone  
On Welcome to New Zone Wizard, Next  
On Zone Type, accept the default Primary zone, Next  
On Reverse Lookup Zone Name, Choose whether you want to create IPv4… accept IPv4 Reverse Lookup Zone, Next  
On Reverse Lookup Zone Name, To identify the reverse lookup zone….type your network address(172.16.150), Next  
On Zone file, accept the default file name, Next  
On Dynamic Update, leave the default, Next  
On Completing the New Zone Wizard, Finish  
Click the plus next to Reverse Lookup Zones  
Click the plus next to 150.16.172…. kim.com to display the two records created  
Right click the NS record and notice on the Name Servers tab, IP Address is not populated   
Create a PTR record for w2k8c02  
Click the plus next to Forward Lookup Zones  
Click kim.com  
Right click w2k8c03, Properties, click the Checkbox next to Update the associated pointer(PTR) record, OK  
Close DNS  
Administrative Tools, DNS …  
Click the plus next to w2k8c03  
Click the plus next to Reverse Lookup Zones  
Click 150.16… you should see the PTR record for w2k8c03

***Test the configuration***Test1: If w7a is shutdown, power it on and ping all other machines by FQDN.   
  
Test2: Shutdown the Primary DNS server and repeat Test1   
  
Test3: Shutdown the Secondary DNS server and repeat Test1