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## IPv6 DNS and DHCP configuration

### Tutorial pdfs

This lab is divided into three different pdf documents. This is basic information document. You can read the other two tutorial documents in this order:

1. Configuring\_IPv6\_and\_IPv4,\_forward\_and\_reverse\_DNS.pdf
2. Configuring\_DHCPv6\_server\_and\_client.pdf

Three teams can work together in this lab to perform tasks mentioned in the tutorial pdfs.

### Lab tasks

1. First setup network of three physical machines titled vm1, vm2 and vm3 as given in handout. *Note that you do not have to create network of virtual machines or use virtualization during the lab. Wherever lab handout mentions VM, you should assume physical machine in its place while performing lab tasks.*

**You should not use fd57:1d29:4f94::/48 prefix. Generate your own prefix using <http://www.simplifiedns.com/private-ipv6.aspx>**

2. Do static routing on vm2 for both IPv4 and IPv6 so that all machines vm1, vm2 and vm3 are connected to each other.
3. Configure DNS on vm1 as mentioned in tutorial pdf
4. Configure all three machines to use your configured DNS using IPv6 address of DNS server.
5. Ping, SSH etc. using DNS names.

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6. Configure HTTP server on VM3 and host test index.html file on it. Open vm3.ipv6test.iiit.ac.in, vm3.ipv6.ipv6test.iiit.ac.in and vm3.ipv4.ipv6test.iiit.ac.in using web browser from vm1 and capture packets using wireshark. Observe DNS queries and HTTP request / response headers that get captured.
  7. Configure stateless DHCP server on vm2. Configure stateless DHCP client on both vm1 and vm3.

**Note that you do not have to configure stateful DHCP as part of lab. Interested students can try that on their own.**

## **Submission**

Each group of three teams must submit DHCPv6 server and DNS server configuration files on courses website on or before 28th September, 2011 evening 03:30pm