

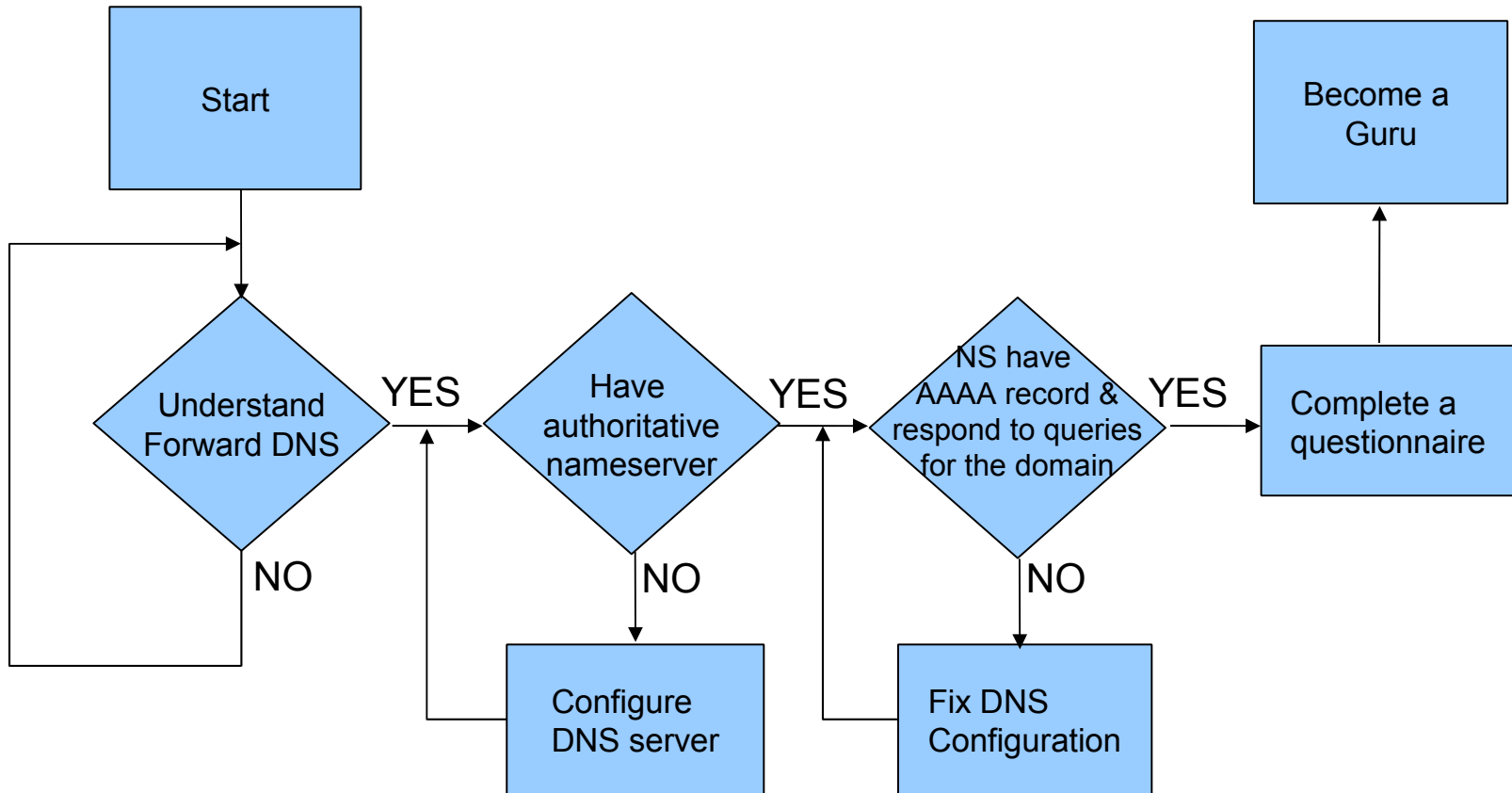
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# IPv6 Certification Program General Tutorial Session

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Level - Guru

# FLOW CHART



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# Key Concepts

- DNS – Domain Name System
  - a. Associates various information with domain name
  - b. distributes the responsibility of assigning domain names and mapping those names to IP addresses by designating authoritative name servers for each domain
- Forward DNS – a domain name maps to an IP address
- Reverse DNS – an IP address maps to a domain name



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# General Overview

- Guru Test checks whether the authoritative NS for your domain have AAAA records and respond to queries for the domain or not.
- In order to pass the level, your authoritative nameserver must have AAAA record.



# BIND Example – Reference ONLY

## ■ named.conf

```
zone "yourdomain.com" IN {  
    type master;  
    file "yourdomain.com.zone";  
};
```

## ■ yourdomain.com.zone

```
$TTL 86400  
@          IN          SOA      ns1.yourdomain.com. your_email. ( ... )  
          IN          NS       ns1.yourdomain.com.  
          IN          AAAA     $domain_ipv6_address  
ns1        IN          AAAA     $ns1_ipv6_address
```



# Guru Test Page

Print Certificate:



Add your certification to your webpage with this HTML:

```
<a href="http://ipv6.he.net/certification/scoresheet.php?pass_name=certTutor" target="_blank"></img></a>
```

- Additional Tests**
- Enthusiast Technical Test
  - Administrator Technical Test
  - Professional Technical Test

- Top 10 Certs**
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## Guru

Congratulations, you are an IPv6 Professional! To complete the Guru Test you will need:

- The Name Servers for need to have a AAAA records
- Those Name Servers need to respond to queries made via IPv6

[\[Reset Test\]](#)

Help	Step	Description	Data
*	1	If you need to edit off any subdomains to make it work, please do so here:	<input type="text"/>
*	2	Check to see that the nameservers associated with have IPv6 AAAAs	<input type="button" value="Test It!"/>
*	3	Check to see that the nameservers associated with are IPv6 accessible	<input type="button" value="Test It!"/>

- Services**
- [Transit](#)
  - [Colocation](#)
  - [Dedicated Servers](#)

**v4 Exhaustion**

**IPv4 & IPv6 Statistics**

- v4 Addresses**  
469,287,293 ↓
- v4 /8s Left**  
10% (28/256)
- v6 Networks**  
4% (1,553/32,194)
- v6 Ready TLDs**  
79% (222/280)
- v6 Glue**  
1,387
- v6 Domains**  
1,539,588 ↑

**679 Days**  
HURRICANE ELECTRIC remaining



# Guru Test Page

## Account Menu

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[Review Blogs](#)  
[Trace for more points!](#)  
[DIG AAAA for more points!](#)  
[DIG PTR for more points!](#)  
[Ping6 for more points!](#)  
[IPv6 Whois for more points!](#)  
[Logout](#)

## Guru Questionnaire

Congratulations you have completed the test: **Guru Questionnaire**

Your score was 4 OF 4.

Click [Here](#) to return to the main page.

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## Additional Tests

**Enthusiast Technical Test**  
**Administrator Technical Test**  
**Professional Technical Test**  
**Guru Questionnaire**  
**Guru Technical Test**

## Top 10 Certs

<a href="#">mhwarfield</a>	[1,400]
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<a href="#">kriteknetworks</a>	[1,400]

## Services

[Transit](#)  
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## v4 Exhaustion



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# Troubleshoot Method

- Use the following dig commands to see whether your authoritative nameserver have AAAA records

```
:~$ dig NS $domain +short
```

```
:~$ dig AAAA $NS +short
```

```
:~$ dig AAAA $domain @$nsAAAA
```





# Q&A



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## Contact:

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