

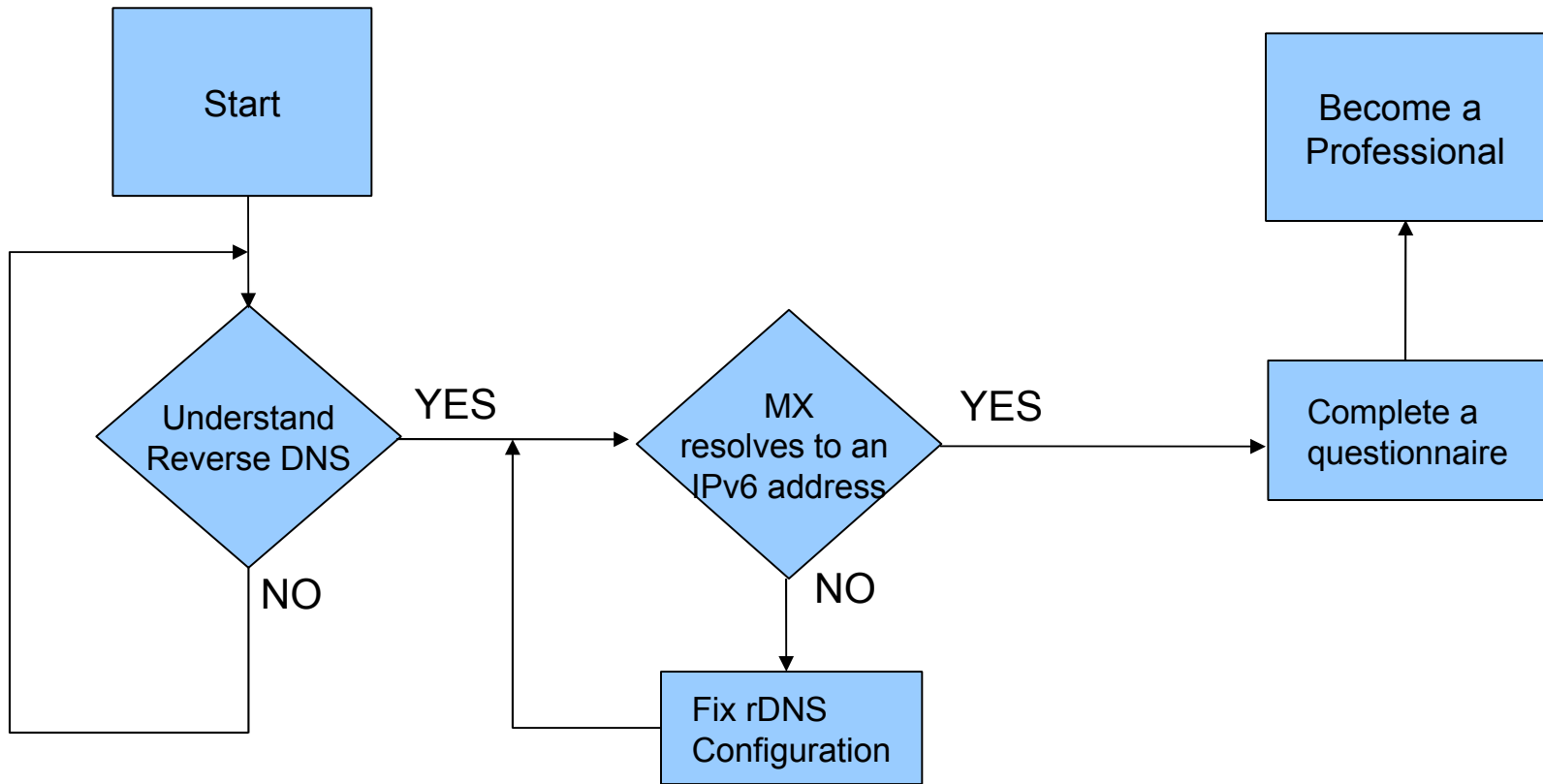
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# IPv6 Certification Program General Tutorial Session

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Level - Professional

# 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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# Test Overview

- Professional Test checks whether your IPv6 capable MTA has working reverse DNS or not.
- In order to pass the level, you must have a working reverse DNS.



# BIND Example – Reference ONLY

## ■ named.conf

```
// Example – let's say an ipv6 address is 2001:470:1111:540::1
zone "0.4.5.0.1.1.1.1.0.7.4.0.1.0.0.2.ip6.arpa" IN {
    type master;
    file "ipv6.named.rev";
};
```

## ■ ipv6.named.rev

```
$TTL 86400
@      IN      SOA      ns1.yourdomain.com. your_email. ( ... )
      IN      NS       ns1.yourdomain.com.
$ORIGIN 0.4.5.0.1.1.1.1.0.7.4.0.1.0.0.2.ip6.arpa.
1.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0      IN      PTR      yourdomain.
```



# Professional Test Page

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Enthusiast Technical Test  
Administrator Technical Test

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HTML 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>
```

## Professional

Congratulations, you are an IPv6 Administrator! The next step after getting your IPv6 Email working is to setup Reverse DNS for the mail server's IP. What you will need is:

- An IPv6 enabled mail system, with working RDNS.

Step	Description	Data
1	Check if your mail server has working rDNS	->

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## v4 Exhaustion

### IPv4 & IPv6 Statistics

#### v4 Addresses

469,289,035 ↓

#### 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

1,539,584 ↑

679

HURRICANE ELECTRIC  
Days remaining

# Professional Test Page

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## Professional Questionnaire

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

Your score was 4 OF 4.

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## Additional Tests

**Enthusiast Technical Test**

**Administrator**

**Technical Test**

**Professional**

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**Test**

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[kriswall](#) [1,337]

## v4 Exhaustion

IPv4 &  
IPv6  
Statistics

v4 Addresses

469,288,773 ↓

v4 /8s Left

10% (28/256)

v6 Networks

4% (1,553/32,194)



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# Troubleshoot Method

- Use the following dig commands to see whether you have working reverse DNS or not

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

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

```
:~$ dig -x $mx_ipv6_addr +short
```





## Contact:

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