

How to Configure the DistributedDirector to Serve DNS MX Records

Document ID: 12601

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Introduction

This document describes how to configure Domain Name System (DNS) Mail Exchange (MX) records on a Cisco DistributedDirector (DD).

Prerequisites

Requirements

There are no specific requirements for this document.

Components Used

The information in this document is based on these software and hardware versions:

- DistributedDirector
- Cisco IOS® Software Releases 11.1(25)IA, 12.0(7)T, and later

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Conventions

For more information on document conventions, refer to the Cisco Technical Tips Conventions.

Configure the DistributedDirector to Serve DNS MX Records

Task

In this section, you are presented with the information to configure the features described in this document.

Step-by-Step Instructions

Complete these steps to configure your DD to serve DNS MX records. Before you begin, make sure that the DD is in global configuration mode for the commands.

1. Make an Address record (A record), which maps the DNS name to an IP address for the e-mail server.

Issue the **ip host** *host-name* [**additional**] [*tcp-port-number*] *address1* [*address2...addressN*] command.

The *host-name* is the name of the Simple Mail Transfer Protocol (SMTP) server. The *address1* is the IP address of the SMTP server. Here is an example:

```
ip host smtp.testdomain.com 172.18.124.101
```

2. Make an MX record, which maps the domain to an e-mail (SMTP) server name.

Issue the **ip host** *host-name* **mx** *preference* *target-host-name* command.

The *host-name* is the DNS name of the domain for which you want to accept e-mail. The *preference* sets the *target-host-name* preference, and the *target-host-name* is the DNS name of the SMTP server. Here is an example:

```
ip host testdomain.com mx 10 smtp.testdomain.com
```

Note: You can repeat Step 1 and Step 2 for each SMTP server that you wish to configure. If you set equal *preference* numbers, the e-mail server load balances.

3. Create a Start of Authority (SOA) record for the domain for which you intend to take e-mail.

Issue the **ip dns primary** *domain* **soa** *primary* *contact* [*refresh* [*retry* [*expire* [*minimum*]]]] command to create the SOA record.

The *domain* is the DNS name of the domain for which you want to accept e-mail. The *primary* is the DNS name of the DD. The *contact* is the e-mail of the administrator domain. The *refresh*, *retry*, *expire*, and *minimum* values are 10800, 3600, 604800, and 86400 in this example:

```
ip dns primary testdomain.com soa dd.testdomain.com admin.testdomain.com
10800 3600 604800 86400
```

Note: This command should be on *one* line.

4. Set a maximum Time to Live (TTL) value for the MX record for the domain in other DNS caches.

Issue the **ip director host** [**a** | **mx**] *host-name* **tll** *seconds* command.

The *host-name* is the DNS name of the domain for which you want to accept e-mail. Here is an example:

```
ip director hosts testdomain.com mx tll 43200
```

5. Set a maximum TTL value for the MX record for the SMTP server in other DNS caches.

Issue the **ip director host [a | mx] host-name ttl seconds** command.

The *host-name* is the DNS name of the SMTP server. Here is an example:

```
ip director hosts smtp.testdomain.com ttl 43200
```

Configuration

DistributedDirector
<pre>43-dd2500#show running-config Building configuration... Current configuration : 1344 bytes ! version 12.1 service timestamps debug uptime service timestamps log uptime no service password-encryption service udp-small-servers service tcp-small-servers ! hostname 43-dd2500 ! enable password XX ! ! ! ! ! ip subnet-zero ip host smtp.testdomain.com 172.18.124.101 ip host testdomain.com mx 10 smtp.testdomain.com ip domain-name cisco.com ip name-server 161.44.21.250 ! ! ! ! interface Ethernet0 ip address 10.27.2.7 255.255.255.0 ! interface Serial0 no ip address shutdown ! interface Serial1 no ip address shutdown ! ip classless ip route 0.0.0.0 0.0.0.0 10.27.2.1 no ip http server ip dns primary testdomain.com soa dd.testdomain.com admin.testdomain.com 10800 3600 604800 86400 ! no ip director cache ip director hosts testdomain.com MX ttl 43200 ip director hosts smtp.testdomain.com ttl 43200 ! line con 0 transport input pad v120 telnet rlogin udptn line aux 0</pre>

```
line vty 0 4
password XX
login
!
end
```

Test the MX Record

This section provides information you can use to confirm your configuration is working properly.

Certain **show** commands are supported by the Output Interpreter Tool (registered customers only), which allows you to view an analysis of **show** command output.

Here is an example of how to test the MX record with the use of the **nslookup set type=[any | mx]** *host-name* command:

```
D:\> nslookup
Default Server: [10.27.2.7]

!--- This is the IP address of the DD.

Address: 10.27.2.7
> set type=any

!--- This part of the command checks the data return for the domain.
!--- The data are any record type.

> testdomain.com
Server: [10.27.2.7]
Address: 10.27.2.7
testdomain.com MX preference = 10, mail exchanger = smtp.testdomain.com
testdomain.com
primary name server = dd.testdomain.com
responsible mail addr = admin.testdomain.com
serial = 2939936458
refresh = 10800 (3 hours)
retry = 3600 (1 hour)
expire = 604800 (7 days)
default TTL = 86400 (1 day)
>
> smtp.testdomain.com

!--- This part of the command checks the A record for the SMTP server.

Server: [10.27.2.7]
Address: 10.27.2.7
smtp.testdomain.com internet address = 172.18.124.101

> set type=mx

!--- This part of the command checks the MX record for only the domain
!--- in question.

> testdomain.com
Server: [10.27.2.7]
Address: 10.27.2.7
testdomain.com MX preference = 10, mail exchanger = smtp.testdomain.com
smtp.testdomain.com internet address = 172.18.124.101
>
```

show Command

Here is a sample output from the issue of the **show ip director hosts** command on the DD:

```
43-dd2500#show ip director hosts
Host testdomain.com (MX queries):
TTL for DNS replies is 43200
Servers:
Server 172.18.124.101:
Advertised 0 times, last at 00:00:00
Default preference: 10
Default portionhits: 0
Host smtp.testdomain.com (A queries):
TTL for DNS replies is 43200
Servers:
Server 172.18.124.101:
Advertised 0 times, last at 00:00:00
Default preference: 10
Default portionhits: 0
```

For more information about the commands, refer to the *Command Reference* section in *DistributedDirector Enhancements for Cisco IOS Release 11.1(25)IA*.

Troubleshoot

There is currently no specific troubleshooting information available for this configuration.

Related Information

- [DistributedDirector Enhancements for Cisco IOS Release 11.1\(25\)IA](#)
 - [Cisco DistributedDirector Product Literature](#)
 - [Technical Support – Cisco Systems](#)
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Updated: Jan 31, 2006

Document ID: 12601
