

How Split Horizon Affects RIP/IGRP Routing Updates when Secondary Addresses Are Involved

Document ID: 13712

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Introduction

A router configured with a primary IP address and secondary addresses on a given interface behave differently when you send updates out that interface depending on whether split horizon is enabled or disabled. This document provides tables that list the differences in the updates.

Note: Source interface is defined as the network interface on which the update is sent.

Prerequisites

Requirements

There are no specific requirements for this document.

Components Used

This document is not restricted to specific software and hardware versions.

Conventions

Refer to Cisco Technical Tips Conventions for more information on document conventions.

Tables

Split horizon

Update source

Update contents

Enabled

Primary

Subnets of primary (if known through non–source interfaces). Other major networks (including secondary

network), known through non-source interface, summarized to major net boundary.

Enabled

Secondary

Subnets of secondary (if known through non-source interface). Other major networks (including primary network), known through non-source interface, summarized to major net boundary.

Disabled

Primary

All known subnets of primary. Other major networks (including secondary network), summarized to major net boundary.

Disabled

Secondary

All known subnets of secondary. Other major networks (including primary network), summarized to major net boundary.

Split horizon

Update source

Update contents

Enabled

Primary

Subnets of primary/secondary (if known through non-source interfaces). Other major networks, known through non-source interface, summarized to major net boundary.

Enabled

Secondary

None – no updates sourced from secondary.

Disabled

Primary

All known subnets of primary/secondary. Other major networks summarized to major net boundary.

Disabled

Secondary

All known subnets of primary/secondary. Other major networks summarized to major net boundary.

Split horizon

Update source

Update contents

Enabled

Primary

Subnets of primary (if known through non–source interfaces). Other major networks (including secondary network), known through non–source interface, summarized to major net boundary.

Enabled

Secondary

Only subnets of secondary network.

Disabled

Primary

All known subnets of primary. Other major networks (including secondary network), summarized to major net boundary.

Disabled

Secondary

All known subnets of secondary. Other major networks (including primary network), summarized to major net boundary.

Split horizon

Update source

Update contents

Enabled

Primary

Subnets of primary/secondary (if known through non–source interfaces). Other major networks, known through non–source interface, summarized to major net boundary.

Enabled

Secondary

None – No updates source from secondary.

Disabled

Primary

All known subnets of primary/secondary. Other major networks summarized to major net boundary.

Disabled

Secondary

All known subnets of primary/secondary. Other major networks summarized to major net boundary.

Split horizon is enabled on each interface by default. In order to disable split horizon, use the **no ip split-horizon interface** subcommand as shown here:

```
int e 0
no ip split-horizon
```

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Virtual Private Networks: Services
Virtual Private Networks: Security

Related Information

- [TCP/IP Routed Protocols Support Page](#)
- [IP Routing Support Page](#)
- [Technical Support & Documentation – Cisco Systems](#)

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Updated: Aug 18, 2005

Document ID: 13712
