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

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Contents

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
```

Related Information

- **TCP/IP Routed Protocols Support Page**
- **IP Routing Support Page**
- **Technical Support & Documentation − Cisco Systems**

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