

Bringing Up a Subrate Trunk in a Lab Environment

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Introduction

This document explains how to bring up a subrate trunk in a lab environment.

In typical installations of subrate trunks, the trunk clocking is provided by the Telco. In order to use subrate trunks in a lab environment, you must provide a clock on the interface.

A subrate trunk (or packet line) is a communication link between two IPX nodes or IGX nodes, or both. The sub refers to the rate being less than T1 or E1 rate. A subrate trunk can not talk to fractional T1/E1 packet lines because they use different line synchronization mechanisms. This means that they can sync up one day, but not the next.

The physical interface can be V.11/X.21, V.35, or RS-449 interfaces.

Prerequisites

Requirements

The requirement is to emulate real-world configurations in a lab environment.

A subrate trunk requires clock be provided on each interface. In addition, the TX and RX data signals must be crossed between the trunk cards. This crossover can be accomplished using a crossover cable or a device that emulates a Telco subrate interface. With a cross-over cable, a clock must be provided to the interfaces because the subrate trunk card is a data terminal equipment (DTE) interface and does not supply clock.

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.

Procedure

The data rate of the subrate trunk must be a value supported by the IPX/IGX. Supported rates are:

- 64 Kbps
- 128 Kbps
- 256 Kbps
- 384 Kbps
- 512 Kbps
- 768 Kbps
- 1.024 Mbps
- 1.536 Mbps
- 1.920 Mbps

Complete these steps:

1. Add a local connection between two DCE ports on a single SDP (or HDM) using the V.35 or RS-449 interface matching the subrate trunk cards. The connection is configured with DCE interfaces on both ports. The data rate of the connection must match the rate of the trunk.
2. Connect a straight-through cable from one SDP/HDM port to one of the subrate trunk connectors.
3. Connect another straight-through V.35 or RS-449 cable from the other SDP/HDM port to the other subrate trunk connector.
4. Configure the subrate PLN/Trunk for the rate of the SDP/HDM local connection.
5. Add the subrate PLN/Trunk.

The subrate trunk uses the SDP/HDM card as the Telco. The SDP/HDM card provides clocking and the mechanism for crossing the transmit and receive data streams.

Related Information

- [Cisco WAN Switching Solutions](#)
- [Guide to New Names and Colors for WAN Switching Products](#)
- [Technical Support & Documentation – Cisco Systems](#)

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