



Introduction

Audience

The detailed scenario described in this integration solutions guide is intended for network engineers with the following characteristics:

- Work with access virtual private dial network (VPDN) technologies
- Have a Cisco Certified Network Associate (CCNA) or higher level of familiarity with Cisco IOS routers and technologies
- Have a basic understanding of how to configure Cisco access servers for dialup access
- Have a basic understanding of access VPDNs

Purpose

The purpose of this integration solutions guide is to describe how a large Internet service provider (ISP) plans, designs, and implements a hypothetical VPDN that uses the Layer 2 Tunneling Protocol (L2TP) as the tunneling protocol. The ISP works with two customers—a medium-sized service provider and an enterprise customer—to create two main types of VPDN service: wholesale dial and service for enterprise customers.

Scope

This integration solutions guide describes the basics of designing, implementing, and verifying an access VPDN dial-in network that uses L2TP as the tunneling protocol. It does not cover advanced topics associated with access VPDNs such as remote AAA, accounting, load balancing and backup, user segmentation, L2TP dial-out, multihop VPDN, and network management.

Prerequisites

Before you configure the access VPDN network, the following prerequisites must be in place:

- The ISP needs to have an access server configured to receive dial-in calls.
- The service provider needs to have a pool of IP address to assign to dial-in calls.

Document Organization

This document is divided into the following four chapters:

- **Introduction**—This chapter contains descriptions of the purpose and scope of this document, the network prerequisites that need to be in place before you implement an access VPDN network, and the organizational structure of this document.
- **Synopsis of Access VPDN Dial-In Using L2TP**—This chapter gives an overview of the access VPDN detailed scenario. It includes a brief description of the access VPDN scenario, including the business needs it addresses, its benefits, design considerations, the implementation process, and postimplementation ramifications.
- **Detailed Scenario for Access VPDN Dial-in Using L2TP**—This chapter describes how to design, configure, and verify an access VPDN network. It also includes analysis of the debug output generated by the access VPDN network.
- **Related Documents**—This chapter lists documentation relating to access VPDNs.