



Introduction

This guide describes installing Cisco Business Communications Solution Verified Designs (BCS Verified Designs) using Cisco IP Communications (IPC) Express Quick Configuration Tool (QCT).

QCT is a GUI application provided for Cisco partners and resellers. You can use QCT to configure all Cisco CallManager Express (CME) supported platforms to enable the simple configuration of a basic telephony system that is typically less than 50 IP phones. In addition, QCT recognizes any Advanced Integrated Module (AIM) or network modules with Cisco Unity Express (CUE), thus providing voice-mail and Auto Attendant (AA) capability to the Cisco CME system.

QCT generates a complete telephony configuration file, which can be automatically downloaded to the Cisco router that support Cisco CME and Cisco CUE.

This guide also includes procedures for continuing the installation of Cisco BCS Verified Designs using the Cisco command-line interface (CLI).

Finally, this guide includes a procedure for adding security to the voice network using Cisco Security Device Manager.

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Documentation Organization

This document includes the following sections:

Table 1 Document Organization

Title	Description
Introduction	High-level description of Cisco BCS Verified Designs procedures and concepts. Includes hardware and software prerequisites as well as download prerequisites.
Installing Required Software	Basic steps to download and install the software required to install Cisco BCS Verified Designs.
Configuring Cisco Business Communications Solution Verified Designs	Step-by-step procedures for using Cisco IPC Express QCT to configure Cisco BCS Verified Designs.
Continuing the Cisco BCS Verified Designs Configuration Using CLI	Step-by-step procedures for using the Command Line Interface (CLI) to create subinterfaces for voice and data, configure DHCP IP addressing pool for the data network, and configure separate VLANs for data and voice.
Configuring Security on the Voice Network	Step-by-step procedures for using Cisco Security Device Manager to configure security on the voice network.
Appendix A: Cisco CallManager Express Bundles	Special configurations for Cisco BCS Verified Designs.
Appendix B: QCT Utilities	Features that allow the uploading of previously saved configuration files; an installation and debug log; and serial port communications selection.
Appendix C: Cisco BCS Verified Designs Configuration Example	A sample Cisco BCS Verified Designs configuration.

Required Steps to Install Cisco BCS Verified Designs

Follow these required steps to install Cisco BCS Verified Designs.

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- Step 1** Use Cisco IPC Express QCT to enter the system and phone parameter information listed on the Cisco BCS Planning Worksheet. (Refer to [Configuring Cisco Business Communications Solution Verified Designs, page 17.](#))
 - Step 2** Continue the Cisco BCS Verified Designs installation by creating subinterfaces for VLANs, a DHCP IP addressing pool for the data network, and separate data and voice VLANs using CLI. (Refer to [Continuing the Cisco BCS Verified Designs Configuration Using CLI, page 57.](#))
 - Step 3** Add security to the voice network using Cisco Security Device Manager. (Refer to [Configuring Security on the Voice Network, page 71.](#))
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Prerequisites

This section describes prerequisites for using QCT with Cisco BCS Verified Designs.

Required PC Setup

On some PCs, it might be necessary to change Internet options that prevent the appearance of pop-ups and change a security setting to allow active content to run files on the PC.

If necessary, choose **Internet Options** under the Tools menu on your browser. Under *Privacy*, remove any check in the *Block Pop-ups* check box. Under *Advanced/Security*, choose **Allow Active Content to Run Files on My Computer**.

Cisco Business Communications Solution Verified Designs Planning Worksheet

Use the *Cisco Business Communications Solution Verified Designs Planning Worksheet* to collect the necessary information from network administrators before installing Cisco BCS Verified Designs.

Hardware Requirements

Cisco BCS Verified Designs deploy based on Cisco ISR platforms, which include both the Cisco 2800 and the Cisco 3800 product families.

Cisco routers are normally shipped with Cisco voice services hardware and other optional equipment that you ordered already installed. To install any Cisco router or optional voice services hardware, see [“Related Documents” section on page 6.](#)

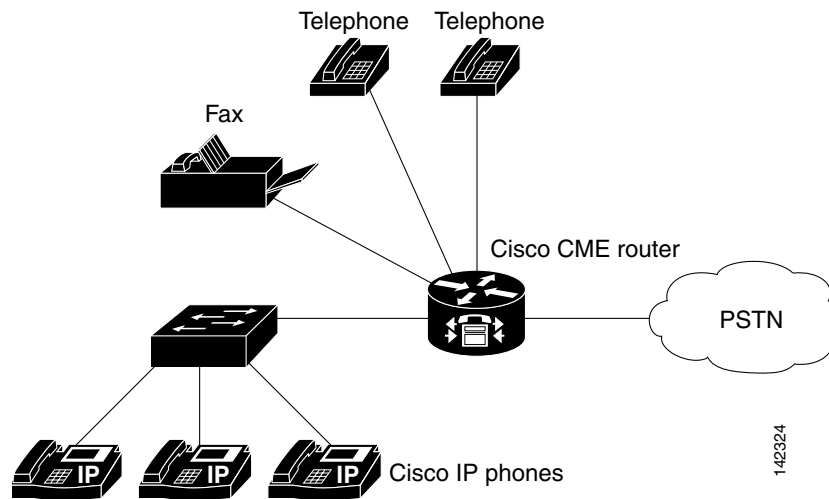
Console Port Connection

Cisco IPC Express QCT requires the use of a console cable to connect the serial port on your PC to the router's console port. If you need assistance in connecting your PC to your router's console port, see your router's installation and upgrade guide.

Hardware Configuration

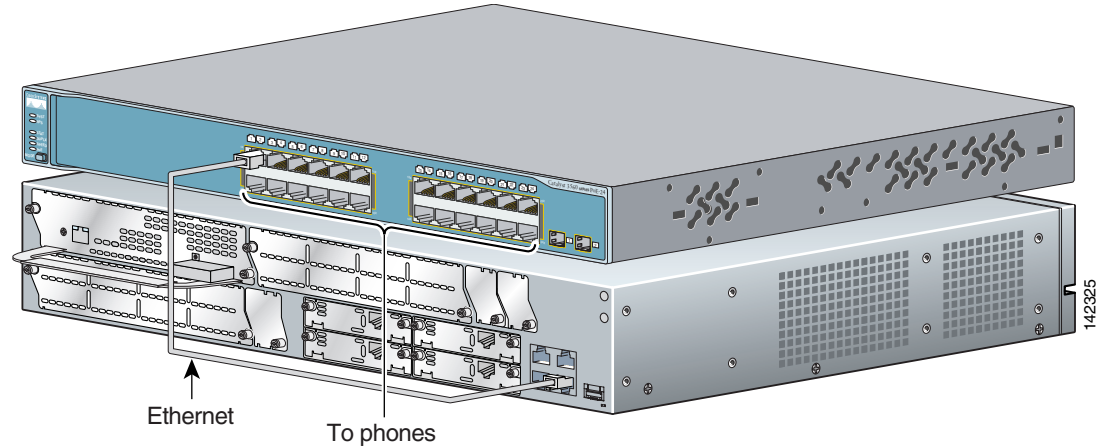
[Figure 1](#) shows a typical deployment of a Cisco BCS Verified Designs system with several Cisco IP phones connected to it. The Cisco CME router is connected to the PSTN.

Figure 1 Cisco BCS Verified Designs System



This guide assumes the Cisco BCS Verified Designs IP network is installed and operational. [Figure 2](#) shows a typical Cisco BCS Verified Designs hardware connection for the router and switch.

Figure 2 Cisco BCS Verified Designs Hardware Configuration (Typical)



Software Requirements

The Cisco router should be preloaded with the latest Cisco IOS, Cisco CME basic, and Cisco CME GUI software versions. In the event that the appropriate software versions are not installed, you will be required to download and extract the required software images and files.

Software Version

Cisco BCS Verified Designs was tested and installed using Cisco IOS Version 12.3(11)T6.

Cisco IPC Express Quick Configuration Tool

Download Cisco IPC Express QCT to your PC before installing Cisco BCS Verified Designs (refer to [Installing Cisco IPC Express QCT, page 7](#)).

Cisco Security Device Manager

Download Cisco Security Device Manager (Cisco SDM) to your PC before installing Cisco BCS Verified Designs (see [Installing Cisco Security Device Manager, page 12](#)). You must also download the Advanced IP Services software for firewall configuration. [Table 2](#) lists the required Advanced IP Services software package for Cisco ISR router types.

Table 2 Cisco Advanced IP Services Software

Cisco ISR Router Type	Advanced IP Services Software
Cisco 2801	S280UAISK9-12311T
Cisco 2811 through Cisco 2851	S28NUAISK9-12311T
Cisco 3825	S382UAISK9-12311T
Cisco 3845	S384UAISK9-12311T

Related Documents

Table 3 provides useful links to help ensure that your routers, switches, network module and AIM cards, IP phones, and cables are properly installed.

Table 3 *Related Documents*

Related Topic	Document Title
Planning worksheet	Cisco Business Communications Solution Verified Designs Planning Worksheet
Installing AIM Voice or CUE modules	Installing Advanced Integration Modules in Cisco 2600 Series, Cisco 3600 Series, and Cisco 3700 Series Routers
Installing AIM	AIM Installation Quick Start Guide
Installing internal modules	Installing and Upgrading Internal Modules in Cisco 2800 Series Routers
Cisco CME and Cisco CUE	Cisco CallManager Express 3.2 System Administrator's Guide
Cisco IOS Release 12.3(11)T software	Cisco IOS Software Releases 12.3T

What to Do Next

You are now ready to download the required software to install Cisco BCS Verified Designs (see the [“Installing Required Software”](#) chapter).