

Configuring the Cisco SPA9000 Voice System with the Cyberdata® VoIP Intercom for Door Bell Applications

Introduction

The Cyberdata® VoIP Intercom, is a SIP-based Control unit that allows for remote control of a door entrance from an IP Phone. This provides an affordable door access solution for SMB's.

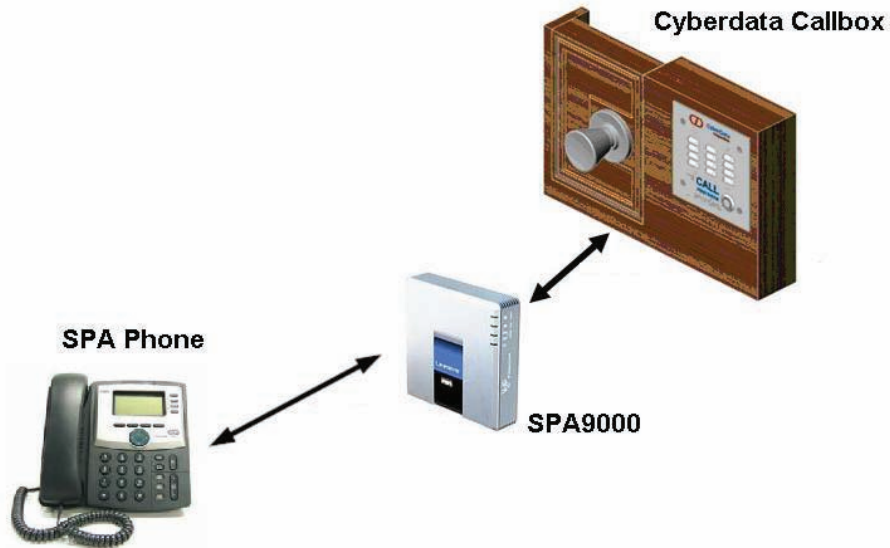
Here's how it works:

1. A call is initiated from the Cyberdata® VoIP Intercom to a predetermined extension.
2. The IP phone user answers the call and verifies the caller's identity.
3. The IP phone user enters a special code on the phone. This code triggers a relay and releases the door latch.
4. The door opens.

The Cyberdata® VoIP Intercom is a generic SIP endpoint. By leveraging the SIP Proxy/Registrar features on the Cisco SPA9000, it is possible to integrate with this device and explore the potential advantages of the solution.

Basic Topology

The picture below shows a functional diagram of this integration (some elements have been omitted for simplicity):



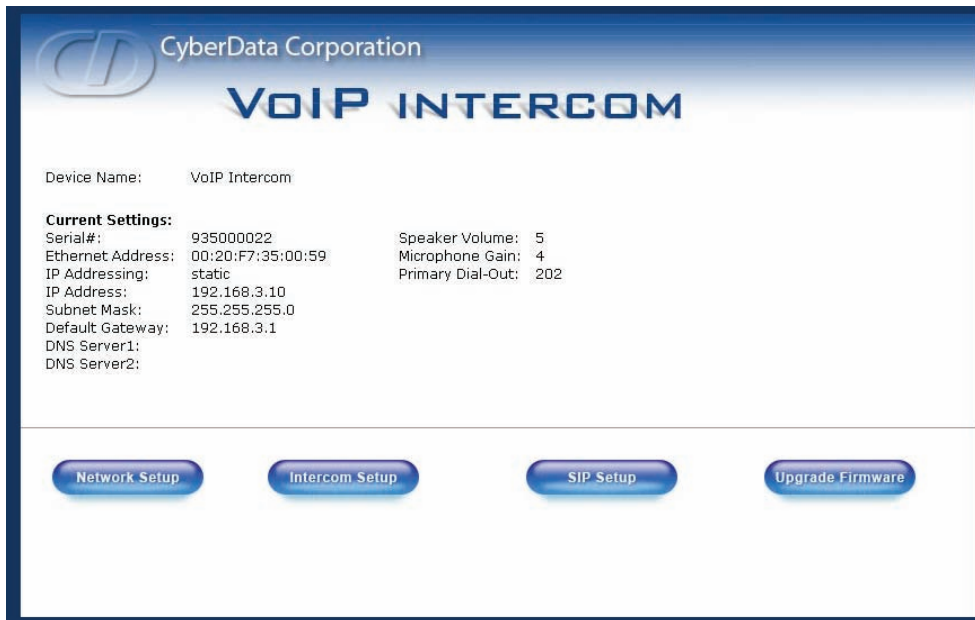
Prerequisites

This document assumes that all components are already connected and that IP connectivity is operational. Additionally, the SPA9000 may have already been configured using the Cisco SPA9000 Configuration Wizard. The SPA9000 configuration needs to be able to accommodate the Cyberdata® VoIP Intercom as an additional SIP device (just as it does for the Cisco SPA9000 Phones).

Cyberdata® VoIP Intercom Configuration

The administration of the Cyberdata® VoIP Intercom is done via HTTP. You can modify the default settings by opening a browser and entering the default IP address: 192.168.3.10. Log on by entering **admin** as both the username and the password.

There are four configuration pages: Network Setup, Intercom Setup, SIP Setup and Upgrade Firmware.



The above illustration shows the current configuration on the Cyberdata® VoIP Intercom.

The following configuration steps must be executed before connecting the Cyberdata® VoIP Intercom to the real network.

SIP Setup

You must configure the SIP setup to register the Cyberdata® VoIP Intercom to the SPA9000. You also must enter an extension number for the Cyberdata® VoIP Intercom as well as the destination number that is called when someone presses the Call button.

CyberData Corporation
VOIP INTERCOM

SIP Setup

SIP Server: 192.168.10.12 *

Outbound Proxy: *

Remote SIP Port: 6060 *

Local SIP Port: 5060 *

SIP User ID: Call Box *

Authenticate ID: 700 *

Authenticate Password: *

SIP Registration: Yes No *

Unregister on Reboot: Yes No *

Register Expiration (minutes): 60 *

Button Dial-Out:
Primary Number: 201 *

** changing this parameter causes system reboot when saved*

[Save Settings](#)

The following fields must be completed:

- SIP Server: The WAN IP Address of the SPA9000
- Remote SIP Port: The port on the SPA9000 that is used for registration of the Cyberdata® VoIP Intercom.
- Local SIP Port: The port that the Cyberdata® VoIP Intercom uses to listen for SIP messages from the SPA9000. The default is 5060.
- SIP user ID: The Calling Name ID for the Cyberdata® VoIP Intercom.
- Authenticate ID: An extension number for the Cyberdata® VoIP Intercom, for authentication purposes. In the example, the extension number is 700. The Authenticate Password field is left blank. It is recommended that you choose an extension number in the 1xx to 8xx range, which allows automatic registration to the SPA9000.
- Button Dial-Out Primary Number: The extension number of the IP phone that rings when a user presses the Call button on the Intercom. In the example, 201 is entered.

Intercom Setup

The most important parameter on this screen is the DTMF activation code, which represents the key sequence (while on a call) that the IP phone user presses to trigger the relay on the Cyberdata® VoIP Intercom Unit ("321" in this example).

Intercom Setup

Device Name:

Change Username:

Change Password:

Re-enter New Password:

Speaker Volume (0-9): *

Microphone Gain (0-9): *

Auxiliary Relay: On Off

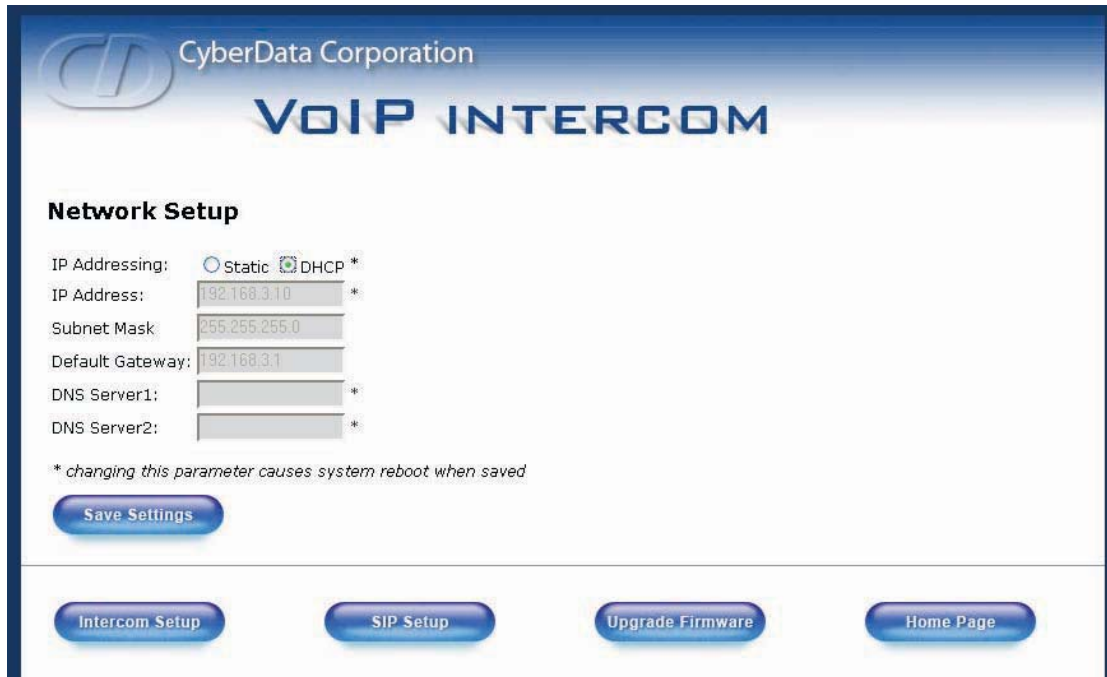
DTMF Relay Activation Code (3 digit):

Relay Activation Duration (0-9)sec:

** changing this parameter causes system reboot when saved*

Network Setup

DHCP is used in this implementation. The settings on this page have to be changed last, to guarantee continuous access to the Cyberdata® VoIP Intercom prior to connecting it to the network.



The screenshot shows the 'Network Setup' configuration page for the CyberData Corporation VoIP Intercom. The page features a blue header with the company logo and name. Below the header, the 'Network Setup' section contains several configuration fields:

- IP Addressing:** Radio buttons for 'Static' and 'DHCP *', with 'DHCP *' selected.
- IP Address:** Text input field containing '192.168.3.10'.
- Subnet Mask:** Text input field containing '255.255.255.0'.
- Default Gateway:** Text input field containing '192.168.3.1'.
- DNS Server1:** Empty text input field.
- DNS Server2:** Empty text input field.

Below the fields, a note states: '* changing this parameter causes system reboot when saved'. A 'Save Settings' button is located below the note. At the bottom of the page, there are four navigation buttons: 'Intercom Setup', 'SIP Setup', 'Upgrade Firmware', and 'Home Page'.

After this last step, connect the unit to the network and proceed to the next section.

SPA9000 Configuration

There is no configuration required on the SPA9000. If the Cyberdata® VoIP Intercom has an extension in the 1XX-8XX range, registration to the SPA9000 is automatic.