SMS Security Management System

Otis Elevator Compass™ Integration Overview

This document provides background information on the integration of the Otis Elevator Company Compass™ system with the SMS Security Management System. It includes:

- A brief summary of the Compass system operation.

- Descriptions of the Compass, SMS, and network components that make up the SMS/Compass integration.

- Instructions for initializing the SMS software to support an interface to the Compass system.

- Instructions for accessing the Compass configuration pages within the SMS user interface.

    NOTE: For the specific steps required to configure the integration, refer to the SMS online Help. For information on configuring the Compass system, refer to the Otis Compass documentation.

Summary of the Compass System Operation

The Compass system is designed to optimize the use of elevators in large office buildings. The system is based on the concept that a person who enters such a building will routinely access only certain floors, and these floors can be identified by reading the person's ID card. Once a person's default floor and authorized floors are identified, the Compass system chooses an elevator cab and uses a computer display to direct the person to that cab. The display shows the cab number and an arrow indicating the cab's general direction.

The operation of reading a person's ID card and choosing an elevator cab is implemented through two separate systems. The ID card reader and the user identification software are controlled by the SMS system. The computer that makes the elevator selection, and the computer display that directs the user to the appropriate elevator cab, are under the control of the Compass system.

Once the SMS system has identified and authenticated a user's ID card, it sends a message to the Compass system identifying the user and the user's default and authorized floor selections. The Compass system then directs the user to the appropriate elevator based on the Compass configuration.

Compass System Components

The Compass system includes several computers, called nodes, and a local area network (LAN) that is used to connect them. The Compass system has three types of nodes: DEC, DES, and DER.

- DEC (Destination Entry Computer): This node controls the display that directs a user to the appropriate elevator cab. There are two types of display: touch screen and keypad.

- DES and DER (Destination Entry Servers and Destination Entry Redirectors): These nodes keep track of Compass node status and communicate that status to the SMS system. The Compass system architecture supports primary and secondary DESs and DERs, with the ability to switch between them. Within an SMS/Compass integration, there is no difference between DES and DER nodes; they perform the same functions.

In Figure 1, the configuration of DECs and DESs in the box labeled Group A shows the nodes and network topology associated with an elevator bank. The other elevator groups are also shown.

SMS Security System Components

Also shown in Figure 1 is the subset of the SMS system components that are used for elevator control. There are three SMS components: a Network Controller, a Network Node, and a card reader.

The controller acts as the central processor for the SMS system. A single controller can supervise the operation of many nodes. The controller also manages all communication between the SMS system and the Compass system.

The node is a peripheral processor that handles building security hardware, such as card readers. Although the diagram shows only one card reader, a node can control many readers.

The SMS system console is implemented via a PC-based web browser connected to the corporate LAN.

Network Components

All components in the elevator control system, with the exception of the card readers, are linked via a LAN. The LAN is divided into two logical networks, each with its own IP address space: one for the Compass system components and one for the SMS system. The architecture, including the IP addresses of the nodes and LAN subnets in the Compass network, are specified in the Otis Compass documentation.

SMS system network architecture allows more flexibility in assigning IP addresses and LAN subnet numbering. Vicon does recommend that all of its components reside in a separate VLAN, as a security precaution against denial of service attacks or other malicious behavior.

The boundary between the Compass network and the SMS network is a Layer 3 switch. This switch routes two-way data traffic between the SMS Controller and the Compass nodes.
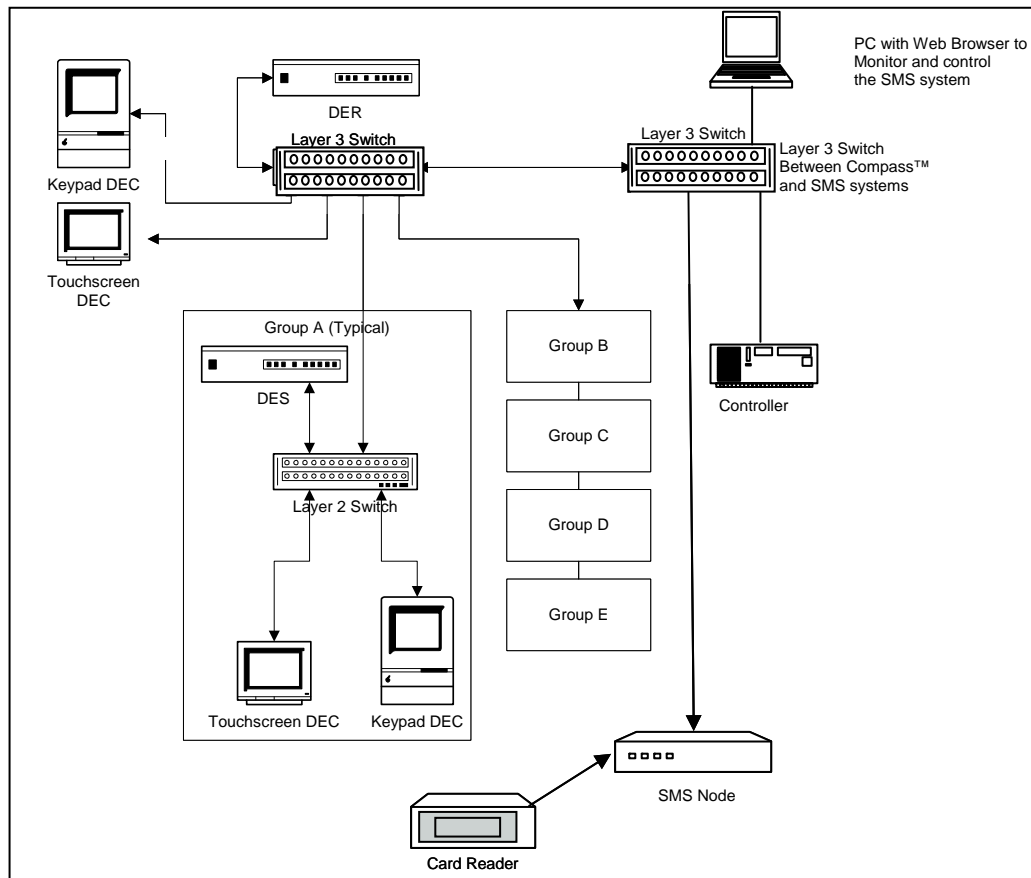

Figure 1. Network topology diagram for an SMS/Compass integration

Compass System Configuration

Instructions for configuring the Compass system can be found in the Compass documentation. Care must be taken to note the IP addresses and subnet numbers within the Compass network. This information will be needed to configure the SMS system.

SMS Security System Configuration

The SMS configuration information needed to integrate with the Compass system is as follows:

- The Compass IP network configuration information.
- The floor mapping needed to identify the building landings by name and floor number.
- The SMS event mapping
- The SMS access levels, which identify the floors a user may access.
- The default floor for each user.

The first step in configuring the Compass parameters is to activate Compass support by initializing the SMS software used to configure and monitor the SMS/Compass communication link.

To activate Compass support:

1. Enter the following address in a web browser:

    http://192.168.50.250/cgi-bin/enable_otiscomm.cgi

2. Review the resulting page to make sure the activation was successful, with no errors.

Once Compass support has been activated, you can use the Compass configuration pages within the SMS software to configure the integration.

To access the Compass configuration pages:

1. Log into the SMS security application.
2. Click the following series of links in the navigation pane:

    Setup : Access Control : Elevators : Otis Compass™ Configuration

    The Otis Compass Configuration **Status** page appears. You can use the tabs shown in the following figure to navigate to the other Compass configuration pages.
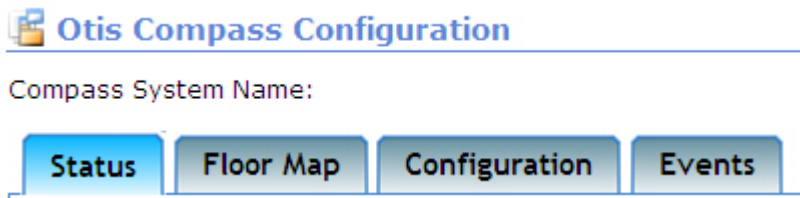

Figure 2. Tabs for the Compass configuration pages

3. Click **Help** in the upper right corner of the application window to open the online Help, which provides step-by-step instructions for configuring the SMS/Compass integration.