Software House

OTIS Elevator integration for C•CURE v3.00 Release Notes

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This document provides important information about the installation of the C•CURE 9000 OTIS Elevator Integration v3.00 on both server and client machines. Read this document before you install the product.

Product: C•CURE 9000 OTIS Elevator Integration
- Integration Software Version: 6.0.22.22

This driver release is qualified with C•CURE 9000 v3.00, and when installed on:
- victor Unified Systems v4.00 (C•CURE v3.00 and victor v6.0)

Overview

The OTIS Compass Elevator System Integration along with the C•CURE 9000 system provides security to floors in a multi-level building by ensuring that only those who are authorized may go to a particular floor or exit from that floor. Access to floors is determined by swiping a card to a card reader. The card reader is located outside the elevator car, either near Destination Entry Computer (DEC) or inside DEC. The card reader accesses the personnel privilege assigned to a specific OTIS Elevator access configuration outside of the elevator.

Features

The C•CURE 9000 OTIS Elevator Integration offers the following features:

- Supports Multicast and Unicast Heartbeat Types.
- Supports Interface Control Document (ICD) Version 1, Version 2, Version 2.2, Version 3, and Version 3.1.
  Note: It is recommended to configure all OTIS DES hardware with same ICD versions.
- Supports Reason Codes for denied floor access.
- Supports 15 DES per C•CURE Server and 25 DEC per DES.
- Supports OTIS Configuration user interface to configure ICD version and Heartbeat Type.
- Supports secured access to floor of multi-level building by ensuring that only the authorized personnel can enter or exit on that floor.
- Supports the following Operational Modes, which can also be scheduled:
  - Mode 1 - Default Floor Only
  - Mode 2 - Access to Authorized Floors
  - Mode 3 - User Entry of Destination Floor
  - Mode 4 - User Entry of Default Floor
- Supports floor selection messages for a DEC.
- Supports a Destination Entry Server (DES) Audit display that shows the elevator activity of Personnel.
- Supports front and rear door configuration.
- Supports the use of card swipe on the inbuilt reader of the DEC.
- Supports Schedule-based floor access for all personnel.

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- Supports DEC PIN code entry. When this feature is enabled, the customer can use PIN code entry to navigate to floors in the building without needing to swipe their card.
- Supports C•CURE 9000 event configuration based on elevator communication status.
- Supports Remote Monitoring using the C•CURE 9000 Monitoring Station.
- Supports 255 floors by each elevator group, and the front and rear doors of each elevator cab.
- Supports default floor configuration.
- Supports secure or unsecure floors through Events, Schedules, or Operator menus.
- Supports the assigning of an exemption group who can access secured floors.
- Supports Maintenance mode, which is used to limit information about an object, displays on the Monitoring Station.
- Supports TLS 1.2 for security.
- Supports multiple iStar doors configuration through iStar Doors tab under DEC object.

Software and Hardware Requirements

The C•CURE 9000 OTIS Elevator System Integration product requires the following software and hardware:
- C•CURE 9000 Security and Event Management System and Software House iSTAR Controllers
- OTIS Simulator version AP131468BAK
- OTIS DEC (physical device: PN- XAA23505A) version AAA31526AAA

Installation Package Contents

The table below lists the contents of the installation package:

Table 1: Contents of Installation

File	Description
OTIS_Integration.exe	Installation program for the OTIS Elevator System integration software
UM-CC9K-OTIS-v3-00-A163816HVV-C-en.pdf	C•CURE 9000 OTIS Elevator System Integration Guide
RN-CC9K-OTIS-v3-00-A163816HV3-E-en.pdf	C•CURE 9000 OTIS Elevator System Integration Release Notes

Supported Installation Types

The C•CURE 9000 OTIS Integration supports the following installation types:
- Unified Standalone
- C•CURE 9000 Standalone
- Unified Enterprise
- C•CURE 9000 Enterprise

Installation

For installation instructions, refer to the *C•CURE 9000 v3.00 OTIS Elevator System Integration Guide*.

Upgrading the OTIS Elevator Integration

Caution:

If you have made any changes in the configuration file - OTISElevatorDriverService.exe, ensure that you back up the file before upgrading. The configuration file is located at `Tyco\CrossFire\ServerComponents`.

The 3.00 OTIS driver supports the following upgrade scenarios:
- Upgrade from v2.80 to v3.00

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- Upgrade from v2.90 to v3.00

To upgrade the OTIS driver from a version earlier than v2.80 to v3.00, follow an incremental upgrade path to get to version v2.80.
Note: You must upgrade the C•CURE 9000 installation before you upgrade the OTIS integration.

For example,
- If the current driver is C•CURE v2.60 compatible driver, upgrade incrementally to C•CURE v2.80 compatible driver, and then upgrade to C•CURE v3.00 compatible driver to maintain data integrity.
- If the current driver is a C•CURE v2.70 compatible driver, upgrade incrementally to a C•CURE v 2.80 or v2.90 compatible driver, and then upgrade to C•CURE v3.00 compatible driver to maintain data integrity.

To upgrade the OTIS Integration to v3.00, complete the following procedure:
1. Use the Unified installer to upgrade to C•CURE 9000 v3.00.
2. Click **Later** on the prompt that appears after you upgrade C•CURE. Do not click **Reboot**.
3. Upgrade the OTIS integration.
4. Reboot the machine.

Caution:

When you upgrade C•CURE, if you reboot the machine before you upgrade the OTIS integration, then the previous OTIS integration remains active. Before you can upgrade the OTIS integration, you must complete the following steps:

1. Open Task Manager.
2. Right-click `OTIS Elevator Driver Service.exe` and select **End Task**.

An installation or upgrade may cancel prematurely because of the following reasons:
- The remote database system is not accessible.
- A time out occurs when the setup program tries to stop the Crossfire Services.

If an installation or upgrade is cancelled prematurely, restart the process.

Scalability

This driver is qualified with 15 DES per C•CURE Server and 25 DEC per DES.

Performance Environment and Results

Note: The Performance test results (mentioned below) were conducted under ideal network conditions in a controlled environment. Actual results may vary based on the hardware used to host the software, driver, jitter and network latency in production environment.

Hardware Details:

The table below lists the hardware used in the performance environment during this version of release.

Table 2: Hardware Details

System Details	CPU	RAM	Hard disk	Operating System
Security System C•CURE 9000	4 Core	8GB	500 GB	Windows 10 Enterprise
OTIS Simulator	4 Core	16 GB	500 GB	Windows 10 Pro/Enterprise

Note:

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1. Performance testing was conducted using Elevator Simulators provided by OTIS (no actual hardware were used).
2. All the OTIS Simulators mentioned in above hardware configurations were installed using 5 systems.

Software Details:

The table below lists the software used in the performance environment during this version of release.

Table 3: Software Details

System	Type	Version
OTIS Elevators	DES (Simulator)	AP131468BAK
OTIS Elevators	DEC (Simulator)	V 1.12

Network Details:

Following configurations were used for conducting performance testing during this version of release:

- Total DES or Network Count: 15
- Total DECs Count: 25X15 = 375
- Card Swipe per DES: 2
- Total Card Swipes request to Security System across all DES: 2X15 = 30/3 Sec

The table below lists the configuration details:

Table 4: Configuration Details

System	Network or DES	Number DEC/DES	Number of Card Swipes
1	DES01	25	2 card Swipes/3 Sec
2	DES02	25	2 card Swipes/3 Sec
3	DES03	25	2 card Swipes/3 Sec
4	DES04	25	2 card Swipes/3 Sec
5	DES05	25	2 card Swipes/3 Sec
6	DES06	25	2 card Swipes/3 Sec
7	DES07	25	2 card Swipes/3 Sec
8	DES08	25	2 card Swipes/3 Sec
9	DES09	25	2 card Swipes/3 Sec
10	DES10	25	2 card Swipes/3 Sec
11	DES11	25	2 card Swipes/3 Sec
12	DES12	25	2 card Swipes/3 Sec
13	DES13	25	2 card Swipes/3 Sec
14	DES14	25	2 card Swipes/3 Sec
15	DES15	25	2 card Swipes/3 Sec

Performance Results:

- Security System Recommendations: OTIS driver supports a max of 25 card swipes every 3 seconds across all 15 Elevator Systems configured on a Single Security System. Driver performance may degrade if swipe activity exceeds this throughput. In such cases, load may have to be distributed across multiple Security System Servers.

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Table below lists the configuration and measurement details.

Table 5: Configuration and Measurement Details

Configuration							Measurements					
No of Personnel	No of Clearances per Personnel	No of Elevator Server	No of DEC per ES	No of CLM per ES	No of Landing per ES	Card Swipes per 3Sec (Virtual DEC)-Across all ES	CPU (%)	Handle Count	Thread Count	Virtual Memory (MB)	Private Bytes (MB)	Landing Dispatched for No of Card Swipe/ 3 sec (across all DES)
100K	1	15	25	1	25	30	15.3	12682	1352	6800	585	25

Note: (OTIS Elevator system Recommendations)

- Number of DEC or DET supported Per DES is 180
- Single DES is capable to process 5 card swipes/Sec

For more details, please reach out to OTIS Customer Support team.

Language Support

This driver supports the English (US) language.

Compatibility Matrix

The table below lists the Compatibility Matrix for the OTIS Elevator integration.

Table 6: Compatibility Matrix

C•CURE 9000 version 3.00	
Partner	OTIS
Partner Product	Elevator Integration/Destination Dispatch
Partner Product version	OTIS DEC version: AAA31526AAA OTIS Simulator version: AP131468BAK ICD versions: 1.0, 2.0, 2.2, 3.0, and 3.1 Heartbeat Type: Multicast and Unicast
Integration driver version	6.0.22.22
C•CURE 9000/victor License option	CC9000-OTIS
Enterprise Certified	Yes
Redundancy Certified	No
Supported Server OS	All OS supported by C•CURE 9000 server
Supported Client OS	All OS supported by C•CURE 9000 Client
Supported SQL	All SQL supported by C•CURE 9000 server

Known Issues and Limitations

This section describes the C•CURE 9000 OTIS Elevator known limitations.

- To upgrade the driver to the current version, you must use the User Account that was used to install the earlier version of OTIS Elevator integration.
- If there are multiple clearances assigned to a personnel record, the landing matrix will display all clearances, including expired clearances associated with that personnel record.
- OTIS Elevator Integration does not include the following access control functions:
  - **Antipassback**
  - **Area Lockout**
  - **Area Configuration**
  - **Occupancy Counting**
  - **Intrusion Zones**
- The C•CURE 9000 Master Application Server (MAS) Client Monitoring Station does not display the title for OTIS objects present in the Group Dynamic View.
- When group manual actions are cancelled from the C•CURE 9000 MAS Client Activity Viewer, no actions are performed.
- Synchronized audit and journal log messages on a C•CURE 9000 MAS do not show the complete details of objects configured.
- For deactivated and cancelled manual actions, the operator icon is displayed instead of the manual action icon in the Journal Log Messages.
- Manual Actions performed on OTIS Landing objects in the C•CURE 9000 MAS Remote Client do not work.
- Validation of Parity bit is not supported during the processing of card read data received from OTIS DEC.
- You must select the ICD version manually. It is not automatically configured based on the system version in the Destination Entry Server (DES).
- You must reboot the DES after changing the ICD version. This ensures that C•CURE 9000 reflects the allowed floors in the DES.
- After the upgrade you must set the ICD version and Heartbeat Type to the appropriate values.
- The card format configured with the issue code field must be linked with the CHUID configured with the issue code field.
- Do not configure personnel with identical card numbers if card formats of same data length and format fields are associated with the DEC.
- If the OTIS driver is restarted during a bulk import of credentials, a scenario could occur where cards might not be admitted at DECs. If this occurs, wait for bulk import to finish, and restart the driver.
- You must import mapped card formats to DEC while the OTIS driver is fully running. If you import these mapped card formats when the driver is not running, you must remap the same card formats to the DEC again when the driver is running.
- The configuration of OTIS objects on your system does not migrate when you perform an upgrade of the integration driver from CCURE v2.20 or earlier. Following an upgrade, you must re-configure the OTIS objects on your system. The migration does not occur due to changes in design and database structures. Older versions of the driver were closely coupled with iSTAR objects. This made it difficult to configure and required extra licenses for the additional iSTAR inputs. This release of the driver uses specific elevator objects making it simple to configure and does not require extra licenses. As a result of this change, this new object structure makes it difficult to migrate from older versions to more recent versions of the driver since a direct mapping cannot be performed between these objects. If you require assistance during the upgrade process, contact Software House Technical Support.
- The OTIS Elevator Integration with C•CURE 2.40 onwards does not support EMC AutoStart or RepliStor products due to their End-Of-Life status. Also, OTIS Elevator integration does not support everRun MX.
- Migration of a standalone machine with an OTIS Driver to SAS is not supported.
- After changing the IP address of Elevator System, you must restart the OTIS driver service.

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- If you install the OTIS Elevator Integration on remote clients, the Integration Setup dialogue box appears, and you may be prompted to select an Installation Option for Redundancy sever. Ignore this message and click **Next** to continue with installation.
- If you select the Redundancy sever installation using supported third-party redundancy check box, provide the virtual server location, and then click **Next**, this selection is ignored and there is no functional impact.
- Deployment of combination of ES integrations (OTIS, ThyssenKrupp, KONE and Schindler) on the same C•CURE 9000 system is not supported.
- In a system that is configured for failover, if the failover of a physical machine takes longer time, it may cause communication loss for an OTIS elevator system.
- Victor specific Heartbeat configuration is not supported.
- If **Connection Strings Encrypted** checkbox is selected at C•CURE v2.8/v2.9, then after upgrading to v3.0 and, when v3.0 compatible OTIS Integration is installed, **Connection Strings Encrypted** check box is de-selected.
  - **Workaround**: Enable the check-box **Connection Strings Encrypted** again.
- When upgrade is performed from C•CURE v2.8/v2.9 with multiple Integrations and post C•CURE v3.0 upgrade, then upgrade of all Integrations is mandatory. If any of the Integrations is not upgraded, then it may lead to malfunctioning of other integration services or CF services. User must perform the upgrade of all the integrations.
- In victor, Config file or Heartbeat config UI is not supported.
- In victor, multiple iStar door configuration under DEC is not supported.
- In victor hardware tree, objects like Clearance Landing Matrix, Default Landing Matrix are not getting displayed.
- In victor activity viewer, landing related messages are not getting displayed.
- If the number of card swipes increases beyond 25 on every 3 seconds, then the duplicate DEC security credential data packet (type 0x40) may initiate from DES for same card swipe request.

Defects Fixed

The following table lists the defects that are fixed in this version of the software:

Table 7: Defects Fixes

Category	SPAR Number	SPAR Description
OTIS Driver	876462	Enabling the **Expiring Clearance per Person** checkbox during Clearance setup will lead to card rejections and gets admitted only after the OTIS driver restarts.
OTIS Driver	876744	The Disabled Card fails (due to inactivity) to function upon re-enabling.

End of Release Notes

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