IPVideo Corporation

C3FUSION CONNECTOR

- HIRSCH VELOCITY SERVER ACCESS CONTROL

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Overview

The Velocity Connector program provides 1-way message connections between the Hirsch Identive Access Control system and the C3fusion Server (see Figure 1: System Overview). The Hirsch Identive system includes the **Velocity** server, which gathers events from one or more Identive panels and provides an SDK based network connection. Access Control Events are received from the Hirsch Identive panel using the provided SDK mechanism through its Velocity server network connection. These events are matched by the Connector with a specific Sensor Host, specific Sensors (doors or external), Sensor types (door and external) and Event Types (various access control events) uploaded from the C3Fusion Server. Matching events from the Hirsch SDK are converted to C3fusion EEMs and are sent back to the server.

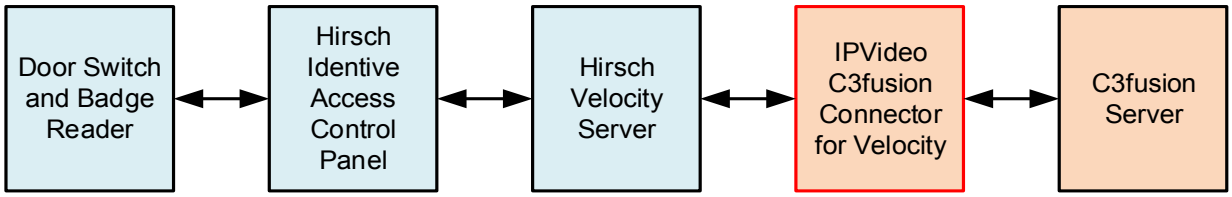

Figure 1: System Overview

The Hirsch Identive panel is a modern dedicated hardware device that supports multiple doors and readers. The device connects through the Hirsch Velocity server, which includes a published API called the **Velocity .Net SDK** which is used in the Velocity Connector design.

This connector program is designed to run as a Windows Service under Windows 7 PRO, or Windows 2012 Server. Operation on Windows 2008 R2 Server is also possible.

Hardware Considerations

The Connector program uses little computing resources but must be installed on the same physical machine as the Velocity server and generally must also be on the same network segment as the C3fusion Server.

Server Communication Protocols

The 1-way and 2-way messaging protocols used by the C3fusion Server to communicate with Connectors are standardized and implemented using a pre-defined message protocol called USCP (Unified System Communication Protocol) which is encapsulated in the API that is provided with the C3fusion Server. The C3Fusion Server program (described separately) includes that API which can be used within a managed code environment in VS2013 or VS2015. This API component provides a method for sending a defined and structured external event message (EEM) to the Server which

encapsulates and describes any *alarm input event*. This API provides all Server message communications functions for the Connector program.

The complete 2-way protocol is further described in the C3fusion Connector Whitepaper and is named Unified System Connection Protocol (**USCP**). The Connector must also obtain **Sensor Host**, **Sensor**, **Sensor Type**, and **Event Type** data from tables in the Server using the Data Access Layer (DAL) that is part of the C3fusion API.

The list of all C3fusion **Sensors** defined for a named instance of the Hirsch Velocity Server is associated with a single C3fusion **Sensor Host** record for that name and can be obtained from the Server tables. **Host type** is HirschVelocityServer (C3fusion Interface number **1500**) and **Sensor Host** Name can be any string (A-Z, a-z, 0-9) such as the existing Velocity system name.

The C3fusion **Sensor Type** Interface numbers are **2061** for HirschDoor and **2062** for HirschExt.

The list of **Event Type** GUIDs needed for Alarm Event mapping is obtained from the C3fusion Server table for any **Sensor Type** that is applied to any **Sensor** defined for the **Sensor Host** for the particular named Hirsch Velocity system.

Each **Sensor Name** is a combination of the Hirsch Identive Panel Name (or ID) and the particular Door on that panel. This concept is covered in detail later on in this document.

Features

The Hirsch Velocity connector implements messaging functionality from the Connector to the C3fusion Server as well as secure Log In and health monitor functions.

Login

The C3fusion API component provides a means for simple, secure login to the server that allows authenticated connection. Each instance of the Connector program will have its own user name and password saved locally and used for authentication any time the Connector program starts. The User account established for a Hirsch Velocity server will have the Role of Connector and is either Customer wide or Region wide in scope, depending on the system design motif.

Configuration and Debug Mode

Although the Connector program (service) normally runs invisibly, it can be launched with a visible Control Panel Applet that displays all messages derived from the Velocity SDK operation as well as all messages incoming from the C3fusion Server. This Control Panel is connected to the underlying Windows Service using Windows Named Pipes for interprocess communication.

Host System Considerations

The Connector utilizes Velocity .Net SDK network API as the source for all incoming Events.

The Connector is tested with Velocity version 3.5 and API version 3.1.644.0

Details of Operation

Event Transmission from Panel to Server

This section describes the way events are retrieved from the Hirsch Velocity server, processed into standard EEM format, and transmitted to the C3fusion Server.

Connection settings required for the Hirsch Velocity server

The Velocity .Net SDK connects directly the Velocity SQL Database. Further details on this in the installation section.

IMPORTANT:
The Windows account used for the C3fusion Velocity Connector Service must be the same as that used by the VelocitySQLwriter Service.

SDK License Key

The SDK requires a license key that must be generated externally based on the target PC machine ID. Further details on this in the installation section.

Receiving the Hirsch Velocity Alarm Events

The connector uses the VelocitySDK-3.1.644.0 to connect with the Velocity Server and receive Events for transmission to the C3fusion Server. This SDK contains a set of classes called the **VelocityAdapter** which we employ for connection.

The connection to the Velocity Server involves these steps.

1. Storage and retrieval by the connector service of the connection parameters required to create the connection to Velocity

2. Login to the Velocity Server (simulates a Velocity Client) and creation of a session with a session key stored in connector memory. **The Velocity Server ID should be used at the C3F Host Name for this connector.**

3. Active polling of the Velocity Server to retrieve current Door and External alarm events including Door ID (which is mapped to a Sensor Name) with Hirsch Sensor Type “HirschDoor” and where the desired Event Types are defined in C3F for that Sensor Type or External ID (which is mapped to a Sensor Name) with Hirsch Sensor Type “HirschExt” and where the desired Event Types are defined in C3F for that Sensor Type.

More detail is provided in the following section.

Generation of EEMs

This section covers generation and transmission of External Event Messages (EEMs) from the Hirsch Velocity server to C3fusion Server. This is the standard format event message transmitted by the Connector to the C3fusion Server through the API.

The EEM is the standard format event message transmitted by the Connector to the C3Fusion Server through the API (see **Table 1:EEM Messages**).

Message	Type	Description
Event ID	GUID	This GUID is generated by the Connector and passed to the C3fusion Server.
Sensor ID	GUID	This GUID is mapped into the Sensor data loaded from the Server using a match between the Panel/Door from the Hirsh Identive panel and the C3fusion Sensor NameOnHost
Event Type ID	GUID	The Connector maps the Event Type from Velocity to an Event Type GUID which was previously assigned by the Server. Only Events which match C3fusion Event Types are transmitted to the Server.
HostEventID	GUID	UserID for the C3 Fusion Account used by the Hirsch Connector
WhenReceived	Date/Time	This is the AlarmTime (converted to GMT) from the Velocity Server
ContentChar	Char30	*Future use*
ContentXML	XML	*Future use*
ContentData	Binary	*Future use*

Table 1:EEM Messages

The Connector generates an EEM each time a new Event is parsed from the incoming Hirsch Velocity SDK event stream and matches the C3Fusion Event Types. The last event ID is always stored in memory to prevent duplication. Multiple Events may be collected from a single polling operation. These events are then sent in sequence to the C3fusion Server.

The **MessageType** of the EEM is always set to “Event”

The **Event ID** is a GUID generated by the connector.

Translation of the Hirsch Velocity server **door** or **ext** event ID values gathered from parsing the SDK output to the standardized EEM format **EventTypeId** is accomplished by use of a locally stored lookup table pre-loaded from the Server.

The value for C3fusion **EventType:NameOnHost** is matched to the values from the Hirsch Velocity server using an in-memory lookup table.

This lookup table has an entry for every Velocity *event number* expected from the polling and an associated C3fusion **EventTypeId GUID** as required by the EEM.

Note: This means there must be one or more C3 Fusion **Event Types** mapped to the Hirsch Velocity Door **Sensor Type** for every expected Hirsch Velocity server **door** Event ID. This lookup allows the event type ID used by the Hirsch Velocity system to be mapped to the EventTypeId GUID's used in the EEM. Each **Event Type** entry in C3 Fusion will have a friendly name obtained by examining the table during data entry. A similar mapping is required for any Hirsch Velocity server **ext** Event IDs of interest.

Note: There are two **Sensor Types** (HirschDoor, HirschExt) and one **Sensor Host Type** (HirschVelocityServer) assigned for the Hirsch Velocity system. Each has its own interface definition as shown below (see **Table 2: Lookup Table**).

The entry of data for C3fusion **Event Types** is discussed in the (subsequent) Section called **Connecting Events to Sensors**

The Interface numbers should already be present but Host Name and Sensor Type Names must be chosen and entered in the Server and are documented here for reference.

Parameter	Value Entered in C3fusion Server
Hirsch Velocity Host Interface Number	1500
Hirsch Velocity Host Type	HirschVelocityServer
Hirsch Velocity Door Interface Number	2061
Hirsch Identive Door Type	HirschDoor
Hirsch Identive External Interface Number	2062
Hirsch Identive External Type	HirschExt

Table 2: Lookup Table

The **Sensor ID** GUID sent is the one defined for the **Sensor Name** in the C3fusion **Sensors** table.

WhenReceived is the date and time of the event as received from Velocity .Net SDK value or local Connector time and converted to standard date-time. This is sent to the C3fusion Server as the date-time for the Event record. This allows the connector to check the last received event in the C3Fusion Events log on startup and deliver any later events that may have been delayed but are still available.

The **ContentText** is passed through as received from the Hirsch Velocity column.

Parsing the Velocity Messages

This section includes details about how the Velocity messages can be parsed.

Sensor Host Type and Sensor Type Interface Numbers

1. C3fusion requires certain definitions to be set by the Super Admin.
2. The Sensor Host Type will be **HirschVelocityServer** and will have an C3fusion interface ID assigned as 1500 and should be renamed from the former "Hirsch".
3. The primary Sensor Type will be **HirschDoor** and will have an interface ID assigned as 2061 and should be renamed from the former "Hirsch".
4. Another useful Sensor Type will be **HirschExt** and will have a new interface ID assigned as 2062

Velocity Sensor Message Schema

The "XNET" address (see
Figure 2: XNET **Addresses**) associated with each door or external input to the system is the unique pointer to that source (Sensor)

Examples

\\XNET.001.0002.001.01.DRnn
\\XNET.001.0002.001.01.BRnn
\\XNET.001.0002.001.01.BInn
\\XNET.001.0002.001.01.SMnn
\\XNET.001.0002.001.01.XInn

Figure 2: XNET Addresses

The **yellow** part of the address defines a particular Hirsch Identiv controller (panel) that operates the door.

The **green** part of the address defines the door component that originated the alarm. We don't care about this component because the components of a door are all "bundled" together and are considered as one Sensor. The exception to this rule are any messages where the **green** part starts with an "X" character. These may have the same **"nn"** suffix but are entirely different Sensors.

The **"nn"** suffix is a number which is the ID of each door but unique only to a particular Hirsch controller unit. There will typically be many Hirsch controller units in a system. Sensors of the type **HirschDoor** (2061) become **Sensor Name**s like

XNET.001.0002.001.01.DDnn

Where the **"DD"** indicates this is a bundle of all two-letter prefixes connected to the door **"nn"**.

Sensors of the type **HirschExt** (2062) will be named in C3F like

XNET.001.0002.001.01.XXnn

Where the "XX" indicates this is a bundle of all two-letter prefixes beginning with X that are connected to the door **"nn".**

Any incoming alarm with a two letter prefix that **is not like** X$ will be matched to DD (2061 Sensor Interface). Any incoming alarm with a two letter prefix that **is like** X$ will be matched to XX (2062 Sensor Interface).

This process matches messages down to the proper Door Sensor or External Input Sensor but does not determine the C3fusion Event Type.

Mapping Velocity Event ID Codes to C3fusion Event Types

Every Hirsch Identive door sends events (messages) with meanings defined by 4-digit Event ID codes that are part of these Velocity Event messages. Only certain of these Event ID codes are of interest to C3fusion and these are stored as **Event Types** in the C3fusion configuration. These **Event Types** are associated with the Sensor Type "HirschDoor" and/or "HirschExt" which are defined based on the Interface numbers defined in the first paragraph of this note.

Time Considerations

C3fusion always stores event times in GMT in the Events Table (see **Table 3: Events Table**). The Hirsch system provides event messages with attached times that are generated by the controllers (controller time) and are stated in time local to the controller. Translation of this controller time to GMT requires that the connector know the time zone of every controller.

The table below (part of the Velocity SQL Database) contains this information for every controller in the system (see Table 3: Events Table). A flag is provided as to usage of DST which must also be taken into account.

HTZDisplayName	HTZInfo	Address	RemoteSiteID	AutoDisconnect	CommandSetId	WhosInsideRep...	UseDST
(GMT-08:00) Pacific Time (US & Canada)	<Binary data>	\\XNET.001.0002.001.01	0	False	-1	2	True
(GMT-08:00) Pacific Time (US & Canada)	<Binary data>	\\XNET.001.0001.001.01	0	False	0	2	True
(GMT-08:00) Pacific Time (US & Canada)	<Binary data>	\\XNET.001.0001.001.02	0	False	-1	0	True
(GMT-08:00) Pacific Time (US & Canada)	<Binary data>	\\SNET.001.0005.01	0	False	0	0	True
NULL	*NULL*	*NULL*	*NULL*	*NULL*	*NULL*	*NULL*	*NULL*

Table 3: Events Table

The connector imports this data table into memory at startup and use this data to translate the incoming times to GMT. The connector will also include a global switch to allow use of local Server time (converted to GMT) in cases where the controller time strategy fails for some reason.

The controller time is preferred because it allows accurate time capture when recovering from a network outage.

Connecting Events to Sensors within C3fusion

The (2) tabs related to Event Types are found on the C3fusion Admin Web Pages

Event Priorities you expect to use (beyond the defaults provided) should be established first. This tab is found on the Settings Menu (see Figure 3: Event Priorities).

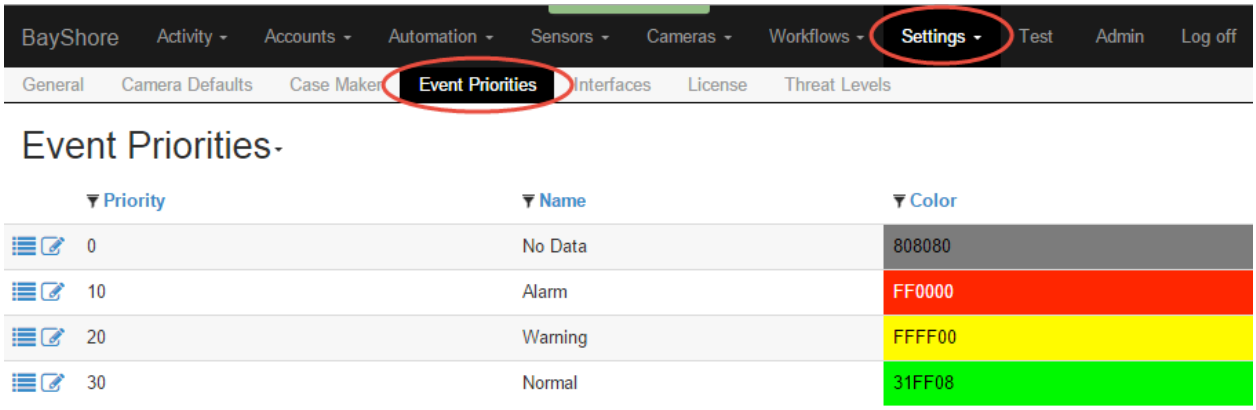

Figure 3: Event Priorities

There can be any number of different Event Priorities, each with its own number and color assigned. The lowest number will appear first in the Client Alarm list and the numbers should generally be in the range of 1 to 99.

Event Types are entered next (see Figure 4: Event Types). This tab shows a list of all existing Event Types in the system.

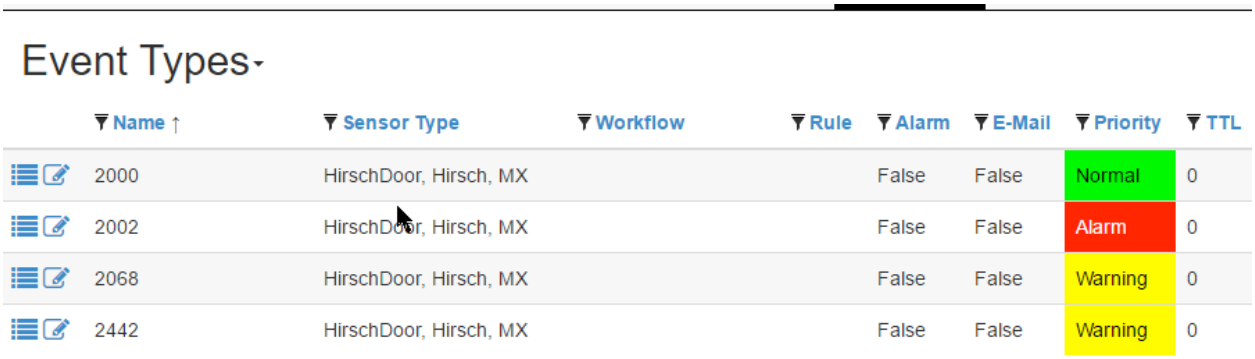

Figure 4: Event Types

Event Types are entered and/or Edited on the Edit Screen opened using the Edit link at the left of each line or opened when you click the Create New link.

Below is the Edit screen open for a particular Event Type (see Figure 5: Edit screen for an Event Type).

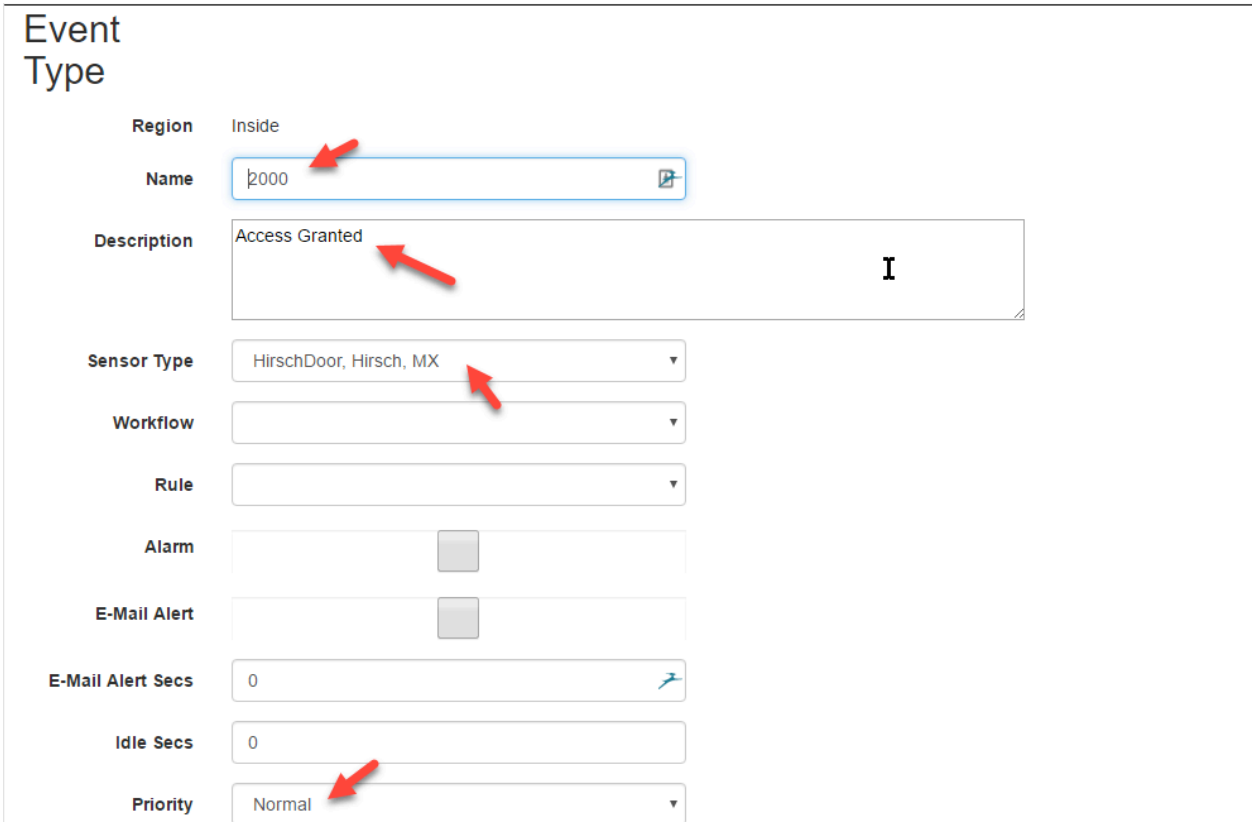

Figure 5: Edit screen for an Event Type

Note that the **Name** is used by the Connector to match with the actual Type name of the Event in the external system. The **Sensor Type** selection links this Event Type to a particular Sensor Type. This further automatically associates this Event Type with every sensor of the selected Sensor Type. Multiple different Event Types can be (and often are) linked to any single Sensor Type.

Thus, the system can have a single *HirschDoor* **Sensor Type** which recognizes several **Event Types**. This **Sensor Type** can in turn be linked to many Door or Ext **Sensors** on one or even multiple **Sensor Hosts**.

Connector Configuration

Although the Connector runs as a Windows service, a standard Windows Form administration application is included with buttons to Start and Stop this Service. This form also allows for entry of configuration values. The Connector control panel is shown below (see **Figure 6: Connector Control Panel**).

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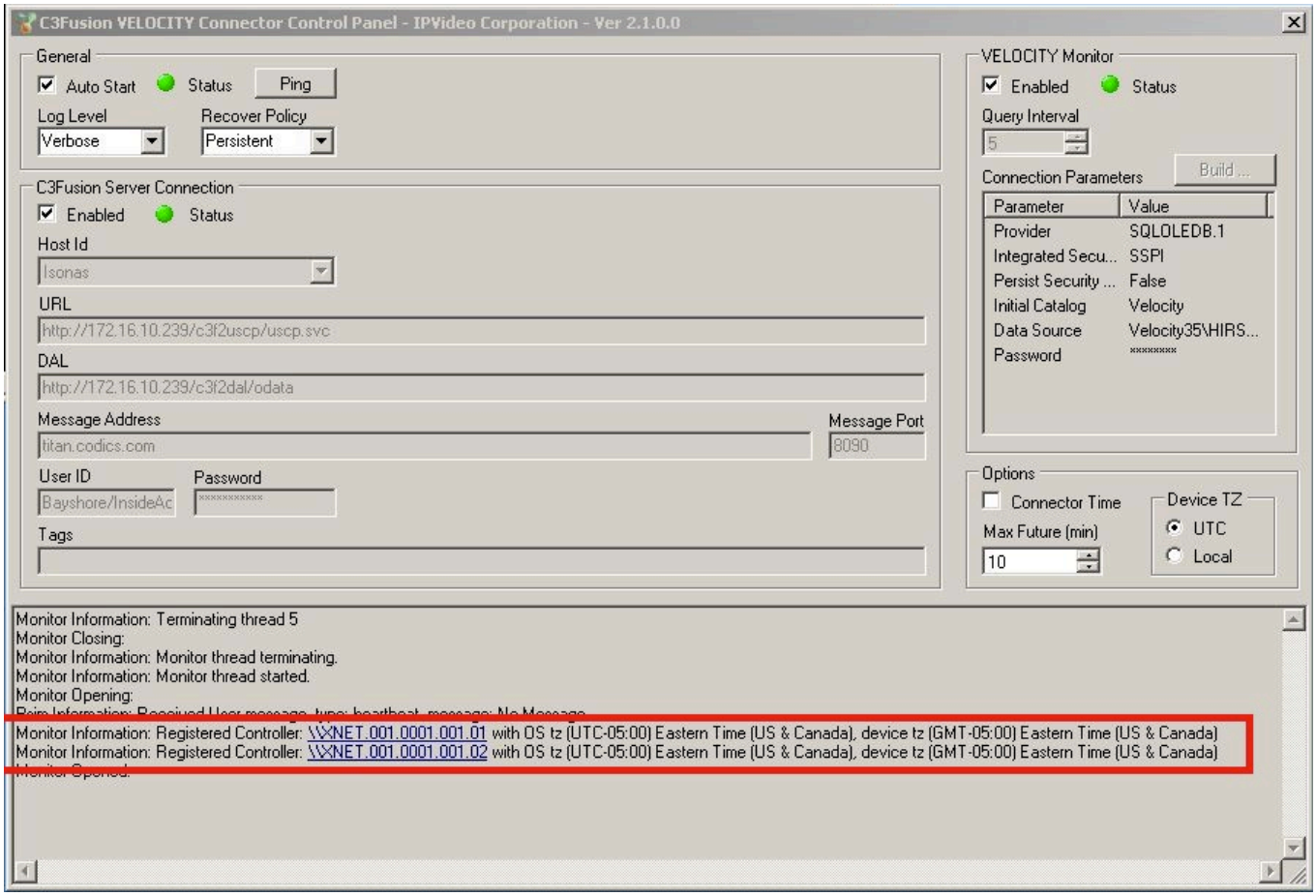

Figure 6: Connector Control Panel

A Ping tests the connection between the Control Panel and the running Connector. Log Level and Recovery Policy may be set as desired, but they are usually set to Info level once proper operation is confirmed and configuration is complete.

Connection to the C3fusion Message Server

The User entered for the Server account for this connector must have the Role of *Connector*. The User ID could be Hirsch1 or anything else that will help you remember the purpose of that User. The User must belong to a *Customer* and may have a *Region* assigned. If a Region is assigned, then Events will be limited to Sensor Host's Sensors with the same region.

Address information and Login Credentials for the C3fusion Server entered are stored using the Control Panel shown above (see

Figure 6: Connector Control Panel)and stored (or updated) in the local registry each time the Enabled box is checked. When this connection is enabled, you should see configuration data for the expected Sensors scroll into the log area at the bottom of the Window. A green dot indicates success.

When the connection is made to the C3 Fusion Server there will be a running Server Session for the User ID and Password for the User entered above. You may need to manually stop the Connector Service to replace an incorrect entry before re-entering the corrected data.

Connection to the Hirsch Velocity Server

These steps are required to properly connect to the Velocity Server.

License Key

The license tool **PSGLicenseManager.NET.exe** can be found in the Third Party folder in the Connector installation. Use this tool to obtain the machine foot print which can sent to the Hirsch Velocity Server to get the license key for the particular machine. Do not use the tool to install the license.

Instead, copy the license key file **sdklicense.txt** into the Connector's program folder (the place where the Connector's "exe" file is located).

Data Link Properties

With the Velocity Monitor section disabled, click the Build button to open the Data Link Properties dialog (see **Figure 7: Data Link Properties**). Select the SQL Provider as shown below:

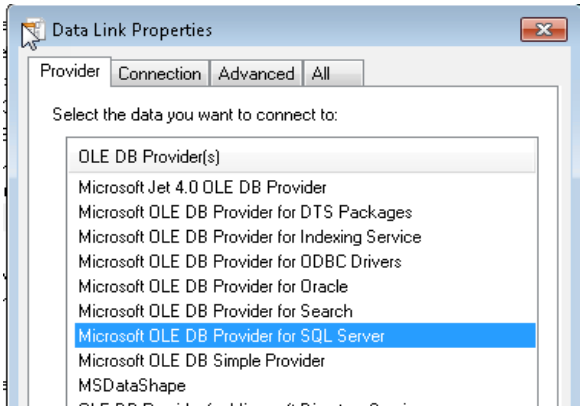

Figure 7: Data Link Properties

Set the Connection values as shown below (see **Figure 8: Connection Values**). The entry selected for "server name" may look a bit different and depends on the particular Velocity SQL server setup.

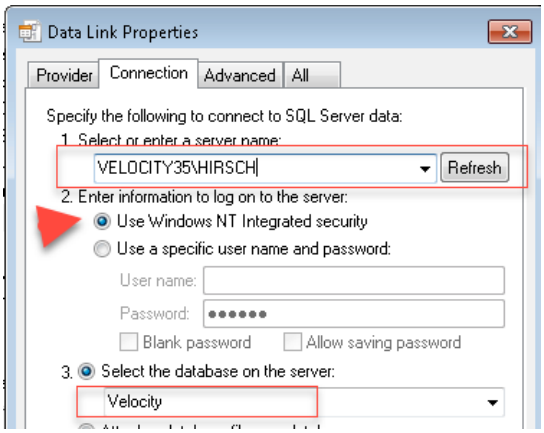

Figure 8: Connection Values

Test and complete the Data Link configuration as shown below (see Figure 9: Data Link **Configuration**).

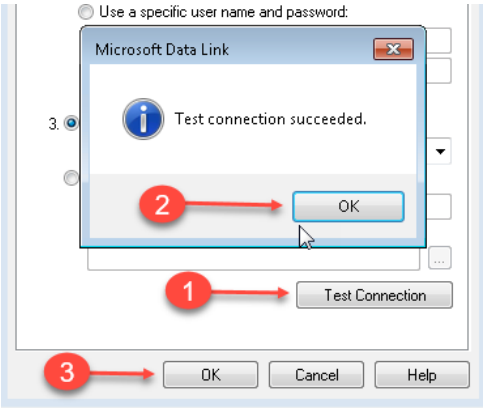

Figure 9: Data Link Configuration

Check settings 1, 2 and 3. Then check enabled (4) and observe the green light (5). If the indicator (5) is red, disable again and recheck all the settings in this section (See Figure 10: Velocity Monitor).

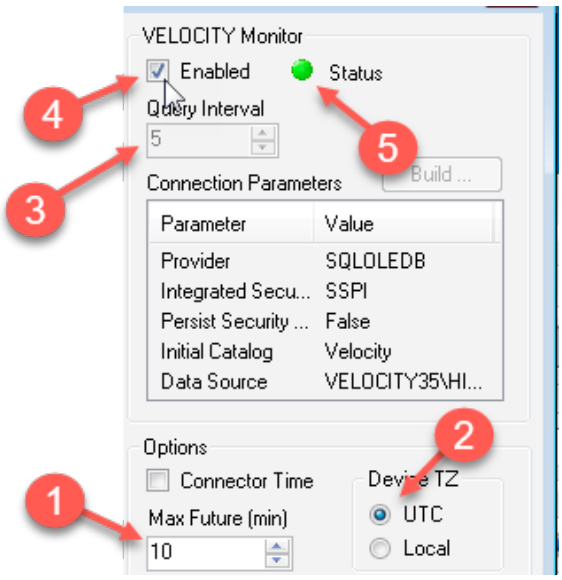

Figure 10: Velocity Monitor

Completion of an Administration Session

When the administration Control Panel of the Connector Service is closed or the settings are applied, the settings are saved in a set of keys in the local registry.

When the Connector service is stopped normally, it is logged out of the Server automatically (after a few minutes) by the Server because of failure of the server's connector pinging function.

Heartbeat for Health Monitor

The USCP includes a short message that is transmitted by all logged in external devices to the Server at regular intervals. This is implemented in the API. This message includes the User ID of the transmitting Connector, a flag for failure of the associated External Device and a Char field that optionally describes any problems with the External Device.

Reference Note: The data received by the Server for all logged in External Devices is maintained as part of the Logged-In Users table in the Server and can be tested by the Server to implement a System health monitor.

Considerations of the Design

This design implements the following functions

- Login of Connector to C3fusion Server
- Translation and Transmission of Messages from Hirsch Velocity Server to the C3fusion Server
- Health Monitoring of the Connector

- Health Monitoring of the Hirsch Velocity Server's general operation

Setup and Commissioning

Once the Connector is seen as operational, the overall system must be configured. The Velocity Server GUI Panel implements tools for both configuration of the Hirsch system and for event generation for end-to-end testing. C3fusion is configured through its Admin Web portal.

Summary of Setup Process

Here is a simplified list of the setup steps, details follow in sections below.

Hirsch Velocity Setup

1. Set the DIP switches on the Hirsch MX4 Access Control panel.
2. Use the SNIB2 Utility to set up the TCP/IP mode, IP and Port on the MX4 panel.
3. Use the Velocity Admin to establish a matching port in the server. Events should then start flowing through.
4. Use the Velocity Admin to configure some doors.

C3fusion Setup

5. Add a Sensor Host Type to C3fusion for Velocity.
6. Add a Sensor Host to C3fusion for the Velocity server.
7. Add a Sensor Type for Hirsh Door to C3fusion.
8. Add some Event Types for the Hirsch Door Sensor Type which match desired Velocity Event ID codes to C3fusion.
9. Add some Sensors which match Velocity Door Addresses to C3fusion.

Generation of Events by Velocity

Once the Hirsch system is configured, events may be generated from the management application screen.

Door Access Functions

These events will have a format that makes them appear to have been generated by the hardware panel (see

Figure 11: Door Access Functions).

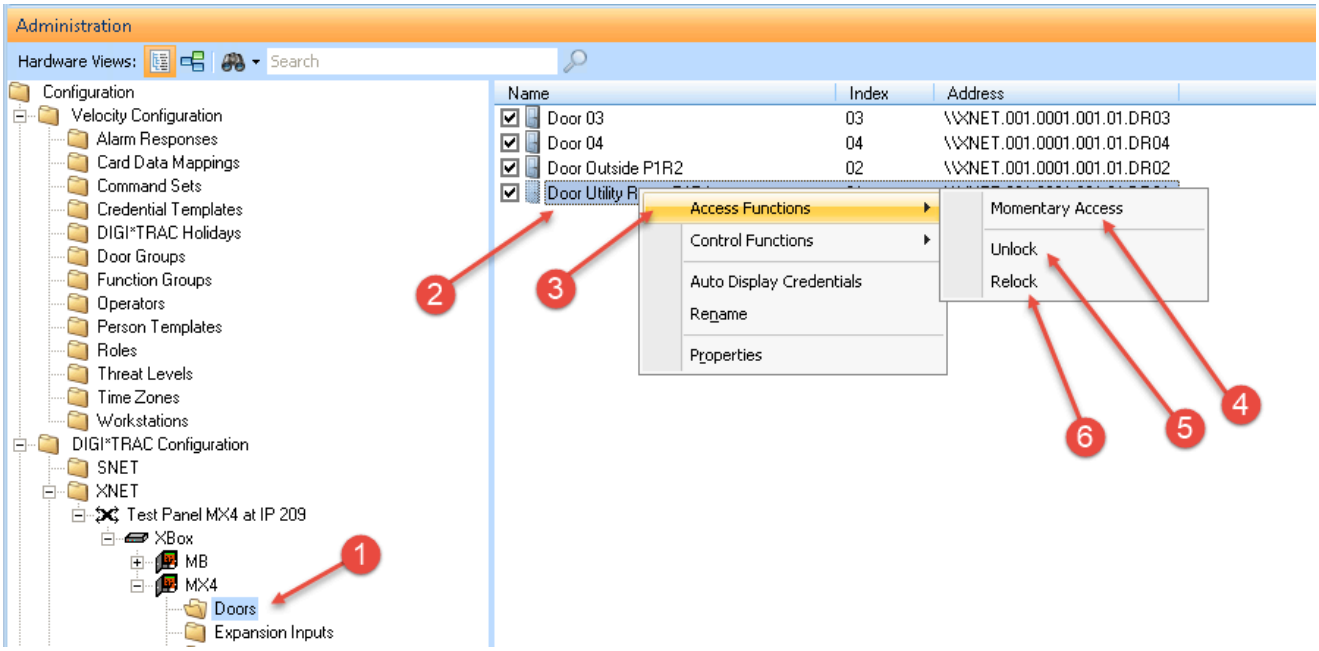

Figure 11: Door Access Functions

1. Click Doors in the tree.
2. Right-click a Door
3. Click Access Functions
4. Click Momentary Access to get an Event ID = **2000** in the log
5. Click Unlock to get an Event ID = **2068** in the log
6. Click Relock to get an Event ID = **2442** in the log

(See

Figure 12: Door Access Function Events)

Relock granted: Operator Administrator Door Utility Room P1R1-Door Utility Room P1R1	\\XNET.001.0001.001.01.SM01	DIGI*TRAC Transaction	2442
Operator Administrator locked door Door Utility Room P1R1 from workstation VELOCITY35	\\VELOCITY35.001	Software	6012
Unlock granted: Operator Administrator Door Utility Room P1R1-Door Utility Room P1R1	\\XNET.001.0001.001.01.SM01	DIGI*TRAC Transaction	2068
Operator Administrator unlocked door Door Utility Room P1R1 from workstation VELOCITY35	\\VELOCITY35.001	Software	6011
Access granted: Operator Administrator Door Utility Room P1R1-Door Utility Room P1R1	\\XNET.001.0001.001.01.SM01	DIGI*TRAC Transaction	2000

Figure 12: Door Access Function Events

Orange are the software events, but the violet are the events that look like hardware events.

Velocity Door Control Functions

Similarly Door Control functions can be used, but these controls generate software events, not events that look like they came from the hardware (see
Figure 13: Velocity Door Control **Functions**).

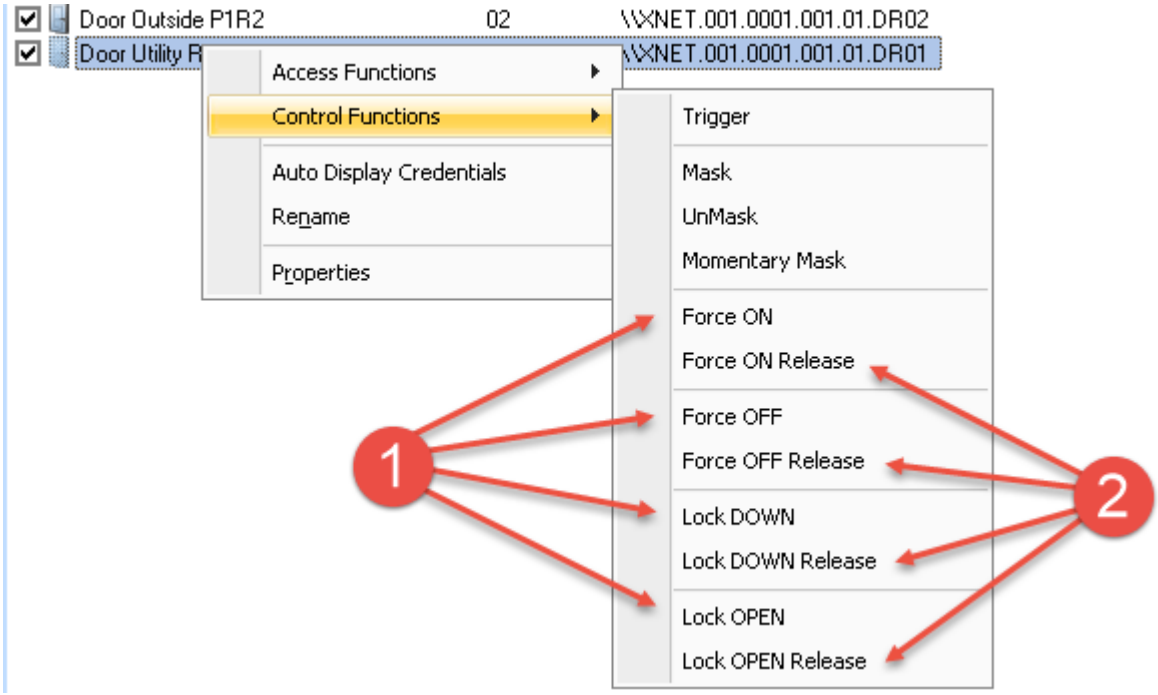

Figure 13: Velocity Door Control Functions

1. These are “God” controls and cannot be overwritten by any other means.
2. They **must be released** by these controls.

C3fusion Setup

Here are the actual types and devices to setup within C3fusion for test (see **Figure 14: Setup within C3fusion for test**).

Sensor Host Type

SensorHost	1500	HIrschVelocityServer

Sensor Host

BayShore	HIrschVelocityServer	Velocity1	172.16.10.239	80	connector_hirsch	1

Sensor Types

BayShore	2061	HirschDoor	Hirsch MX Door	Hirsch	MX	0
BayShore	2062	HirschExt	Hirsch MX External	Hirsch	MX	0

Figure 14: Setup within C3fusion for test

Sensors

Note that all **door events** are matched with type **2061** Sensor types and all **external events** with **2062** Sensor Types (see Figure 15: Sensor Setup). The **DD01** Sensor Name suffix means Door 1 with the “DD” as a placeholder that is not parsed out of the Sensor name.

Host	Type	Ordinal	Name	Name On Host
FACIALRECOGNITION	Aureus3DFaceMatch, Cyber Extruder, Aureus3D	1	FACIALRECOGNITION Sensor 1	*
FACIALRECOGNITION	Aureus3DFaceMatch, Cyber Extruder, Aureus3D	2	FACIALRECOGNITION Sensor 2	172_16_16_248
HirschVelocity	HirschDoor, Hirsch, MX	1	XNET.001.0001.001.01.DD01	\\XNET.001.0001.001.01.??01
HirschVelocity	HirschDoor, Hirsch, MX	2	XNET.001.0001.001.01.DD02	\\XNET.001.0001.001.01.??02
HirschVelocity	HirschDoor, Hirsch, MX	3	XNET.001.0001.001.01.DD03	\\XNET.001.0001.001.01.??03
HirschVelocity	HirschDoor, Hirsch, MX	4	XNET.001.0001.001.01.DD04	\\XNET.001.0001.001.01.??04
HirschVelocity	HirschExt, Hirsch, MX	5	XNET.001.0001.001.01.XX01	\\XNET.001.0001.001.01.X?01

Figure 15: Sensor Setup

Event Types

These match the 4-digit numeric codes that arrive with the events (see Figure 16: Event Types). The may be many more Event types for a Door or External sensor which can be found listed in the Velocity Customization Manager tool.

BayShore	2000	HirschDoor, Hirsch, MX	False	False	Normal
BayShore	2068	HirschDoor, Hirsch, MX	False	False	Warning
BayShore	2442	HirschDoor, Hirsch, MX	False	False	Warning

Figure 16: Event Types

Commissioning Tests

Once all of the Velocity, C3fusion and Connector configuration has been completed, the commissioning tests should proceed in these four main steps.

Connector

1. Check that the General section of the control panel shows a green status when Auto Start is checked.
2. Check that the C3fusion section of the control panel shows a green status when Enable is checked and that the expected Sensors are shown in the results window.
3. Check that the Velocity Monitor section of the control panel shows a green status when Enable is checked.

Velocity Server Events

Trigger events in the Velocity server and check that the expected messages appear in the window of the Connector.

C3fusion Server

Examine the Events log in the Server and make sure the Events triggered in the Velocity Server appear in the log as expected.

C3fusion Client

1. Start an instance of the Client and log in with a user of the same region as the Connector.
2. Observe that Events triggered in the Velocity Server appear in the Client's Alarm list.
3. Observe that Events triggered in the Velocity Server cause related maps to be displayed and that the Sensor Icons indicate Alarms where expected.
4. Start a Case for one of the triggered events in the list and set that CaseMaker opens with the expected Workflow displayed.
5. Process the Workflow making sure the associated cameras are displayed.

CONTACT US

Call Technical Support: On phone-enabled devices, this setting will call the C3fusion main office number. Once connected, please request to be connected with technical support.

Email Technical Support: For devices with an email client enabled, this setting will allow a user to send an email to C3fusion Technical Support personnel.

IMPORTANT LINKS

Online Documentation: This links to the C3fusion web page for User Support with links to the available User Guides and Manuals.

Tutorial: This setting starts the in-app Tutorial providing an overview of app functionality

CONTACT US

Hours of Operation:

8:00 AM - 6:00 PM EST, Monday – Friday

By Phone: 631-647-9970

866-797-1300

Sales Department:

631-969-2601