Overview Document

Gallagher Controller Applications Programming Interface (FTCAPI)

Gallagher Command Centre: vEL7.00.xxx
Gallagher Controller: vBT7.00//bxx

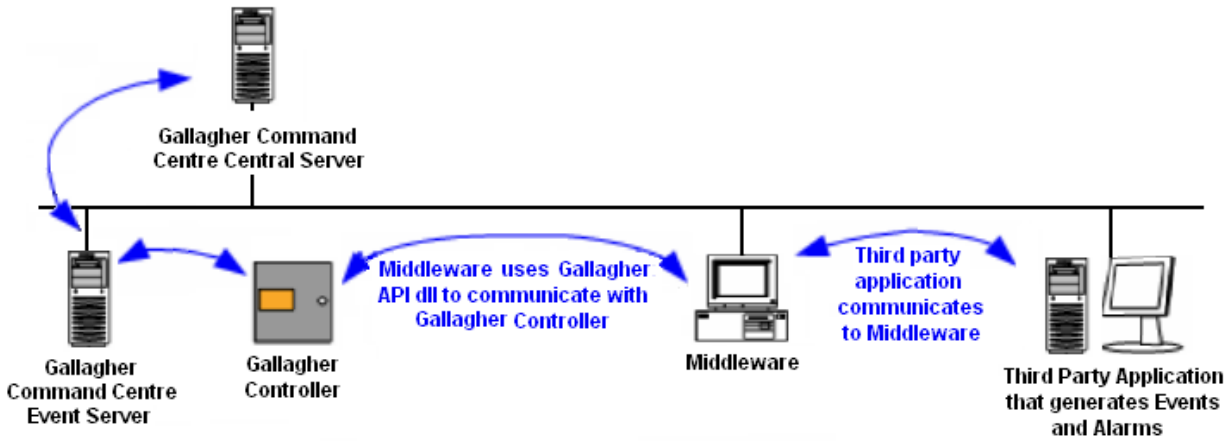
Introduction

Gallagher Command Centre can be interfaced with several external third-party systems concurrently, (e.g. Building Management, Duress, External Alarm, Fire Alarm Systems, etc.) via a bi-directional Gallagher Controller API (Applications Programming Interface). Such integrations may require middleware to be developed to conduct the protocol conversions between Gallagher Command Centre and the external system. An online help file (**FTCAPI_SDK.chm**) is available on the Gallagher Command Centre Installation DVD to assist developers with the implementation of middleware interfaces to Gallagher Command Centre.

The Gallagher Controller API (FTCAPI) is designed to run on a standalone 'middleware' machine and look after all communications, protocol, licensing, and encryption details so as to make it very simple for middleware engineers to interface to the Gallagher Command Centre system.

The FTCAPI allows external systems to easily integrate with Gallagher Command Centre, including gaining a presence within the Gallagher Command Centre workstation application, displaying text and graphical status to the Command Centre operators, and logging events and alarms into the Command Centre event system. The FTCAPI allows strings, triggered by output state changes or events, to be sent from Gallagher Command Centre to external systems. The FTCAPI also allows external card events to be used for the purpose of access in Gallagher Command Centre.

Communications Approach



Purpose

This document describes how to use version 7.00 of the FTCAPI Test Harness, installed as part of the Gallagher Controller API Installation, as an example Middleware Simulator.

Compatibility

The 7.00 version of the FTCAPI Test Harness should be used in conjunction with Gallagher Command Centre version vEL7.00.xxx and is compatible with vBT7.00//bxx of the Gallagher Controller.

FTCAPI Test Harness

This software simulates a middleware application that uses the CardaxFTCAPI.dll to communicate with Gallagher Controllers.
The Test Harness allows a user to generate external events and status and pass these through the FTCAPI to Gallagher Command Centre via a Gallagher Controller. The Test Harness will also receive and display strings generated by Gallagher Command Centre Outputs and Events.
Notes:

- The source code for the Test Harness is available after the Gallagher Controller API installation is run, and by default is located in "`c:\Program Files\Gallagher\FTCAPI\Sample Code`".
  Note: If using a 64 bit system, "`c:\Program Files(x86)\Gallagher\FTCAPI\Sample Code`" is the default location.
- An online help file (**FTCAPI_SDK.chm**) is available to assist developers with the implementation of external interfaces to Gallagher Command Centre. This help file is also on the Gallagher Command Centre installation DVD, in the "`Utilities\Gallagher Controller API`" folder (this help file should be copied to your local PC before opening).
- This Test Harness should be run from a different PC to the Gallagher Command Centre Server PC, unless the port (1072) used for Gallagher Command Centre Server to Gallagher Controller communications has been reconfigured – refer to the FTCAPI_SDK.chm → Interface Implementation →API Location section.
- The PC that will be running this simulator requires Microsoft .NET Framework 2.0 installed.
- In Gallagher Command Centre, the External System's properties need to be configured with the 'Generic' System Type on the Configuration page.
- Refer to the *Gallagher Command Centre User Guide* for details on configuring External Systems and External System Items in Gallagher Command Centre.

Files required

A Gallagher Command Centre licence file is required, containing the following option:

```
[Limits]
Event Sources=<number>*
```

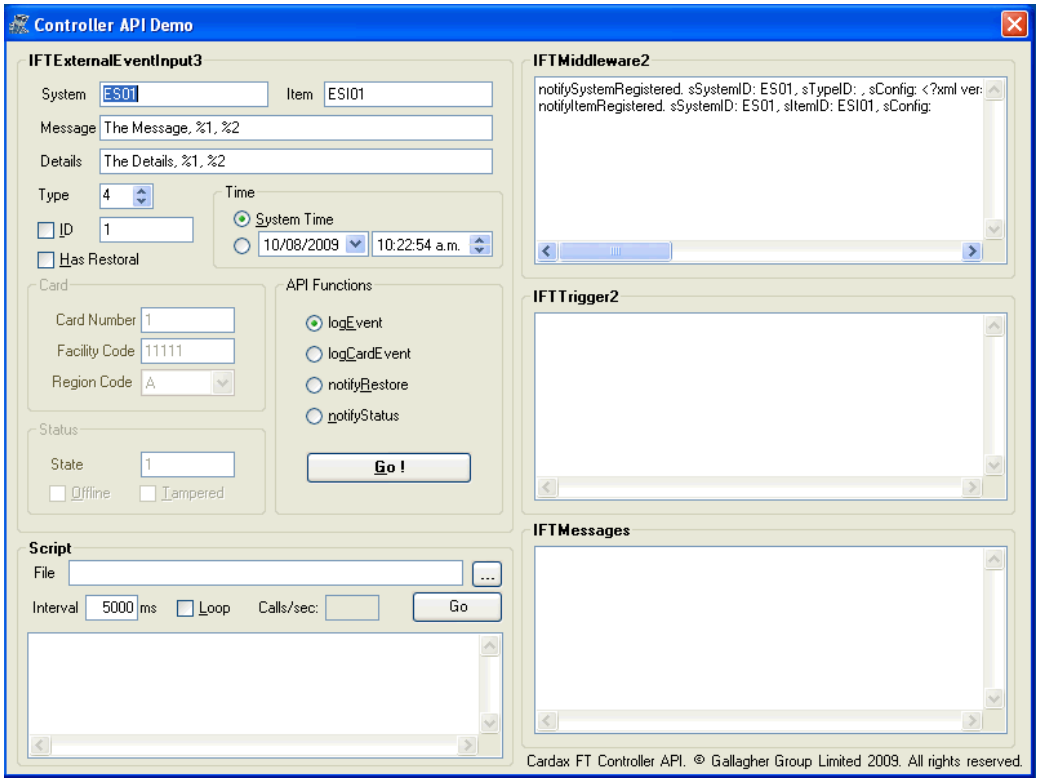
* <number> representing the number of External System Items your site is licensed for.

Setup

1. Install the Microsoft .NET Framework 2.0
2. From the Gallagher Command Centre Server, copy the **CommandCentre.lic** licence file to the Middleware PCs C:\Windows directory.
3. Run the **setup.exe** file to install the test harness.

Running the simulator

1. Run the exe file **FTCAPI Test Harness.exe** (installed to "`C:\Program Files\Gallagher\FTCAPI`" by default).
   Note: If using a 64 bit system, it is installed to "`c:\Program Files(x86)\Gallagher\FTCAPI`" by default.
   The Test Harness window displays:



2. Complete the fields on this screen as required:

'IFTExternalEventInput3' section:

Field	Description
System	This is a 64 character text field that should match the identity string of an External System (or DVR System) configured in Gallagher Command Centre. If an invalid System string (External System identity) is entered, then an error message displays when you click the **Go!** Button.
Item	This is a 64 character text field that should match the Identification string of an External System Item (or DVR Camera) configured in Gallagher Command Centre.

Field	Description
	If an invalid Item string (External System Item identification) is entered, then an error message displays when you click the **Go!** Button.
Message	This is a **100** character text field that allows entry of the Event Message that will display in the Event/Alarm Viewer in Gallagher Command Centre, when the event is received. **Note:** %1 and %2 can be used in the message and will be transposed in Gallagher Command Centre, (i.e. %1 = External System Item name, and %2 = Cardholders name). To show an actual percentage, %% should be used. If sending a notifyStatus message then only the first **63** characters of this text field will display for the External System Item's status in the Status Viewer and the item's **Status and Overrides** tab.

Field	Description
Details	This is a **200** character text field that allows entry of text to that will display in Event/Alarm properties details tab when the event is received in Gallagher Command Centre. **Note:** %1 and %2 can be used in the details and will be transposed as per the message field above.
Type	This is a **1** digit numeric field that allows values 0-9 that determine the priority of the event/alarm sent to Gallagher Command Centre.
ID	This is a checkbox and **8** digit numeric field. When the checkbox is checked, the contents of the ID field are returned to the simulator when the alarm is acknowledged or processed in Gallagher Command Centre.
Has Restoral	When this checkbox is checked, the alarm is sent to Gallagher Command Centre in an active state (bell icon), until a notify restore event is received for that source or event group.
Time	This field determines if the event is either date stamped with the current system date and time, or a defined date and time.

'Card' section:

Field	Description
Card Number	This is an **606** digit numeric field that defines the card number sent to Gallagher Command Centre.
Facility Code	This is a **5** digit numeric field that defines the cards facility code sent to Gallagher Command Centre.
Region Code	This drop-down list contains letters A-P, and combines with the facility code sent to Gallagher Command Centre. **Note:** If a cardholder exists in Gallagher Command Centre with the defined card number and facility code, then this cardholder will appear in the Gallagher Command Centre events properties.

'Status' section:

Field	Description
State	This is a **1** digit numeric field. Only **0** and **1** are valid numbers - **0** sets the External System Item's icon in Gallagher Command Centre to Open (up) and **1** sets it to Closed (down).
Offline	When this checkbox is checked, the status icon of the External System Item in Gallagher Command Centre changes to Off-line, (i.e. the red circle). This takes precedence over the tamper state.
Tampered	When this checkbox is checked the status icon of the External System Item in Gallagher Command Centre changes to Tampered, (i.e. the screwdriver overlay).

'API Functions' section:

Field	Description
logEvent	When this radio button is selected all fields in the *IFTExternalEventInput3* section of the screen are enabled, (i.e. the **System**, **Item**, **Message**, **Details**, **Type**, **ID**, **Has Restoral**, and **Time** fields). When the **Go!** button is clicked an event is sent to Gallagher Command Centre using the configured settings.
logCardEvent	When this radio button is selected, the fields in the *Card* section of the screen are also enabled, (i.e. the **Card Number**, **Facility Code** and **Region Code** fields). When the **Go!** button is clicked a card event is sent to Gallagher Command Centre using the configured settings.
notifyRestore	When this radio button is selected only the **System**, **Item** and **Type** fields are enabled. When the **Go!** button is clicked, ALL active alarms from the selected External System Item of the selected priority/type in Gallagher Command Centre are changed to inactive, (i.e. the alarms bell icon is removed).
notifyStatus	When this radio button is selected only the **System**, **Item**, **Message** and **Status** fields are enabled. When the **Go!** button is clicked, the status text and icon of the External System Item in Gallagher Command Centre matching the System/Item ID are changed.

'Script' section:

The supplied script file (**ScriptExample.txt**) provides an example script for generating different events and status changes.

Field	Description
File	Clicking the build button … beside this field opens a window that enables the selection of a **.txt** file.
Interval	This is a **5** digit field which determines the time in milliseconds between each command in the script file.
Loop	When this is checked the script will continuously loop.

Field	Description
Calls/sec	A 'read only' field. When the script is running this will show the number of script calls per second.
Go button	When this button is clicked the selected script is executed. **Note:** This button changes to **Stop** when executing.

'IFTMiddleware2' section:
If Gallagher Command Centre has been configured correctly after approximately 45 seconds the IFTMiddleware2 section should display registered messages for each External System (DVR System) and External System Item (DVR Camera) configured in Gallagher Command Centre, e.g:

```
notifySystemRegistered. sSystemID: XS2, sTypeID: , sConfig:
notifyItemRegistered. sSystemID: XS2, sItemID: 1, sConfig:
```

The IFTMiddleware field also displays the EventID when an external system items alarm (that was assigned an EventID) is acknowledged or processed in Gallagher Command Centre, e.g:

```
notifyAlarmAcknowledged. EventID: 123
```

'IFTTrigger2' section:
This section displays strings sent via triggered outputs changing state and the source External System and External System Items identifiers, e.g:

```
triggerOutput. sSystemID: XS1, sItem: 1, lState: 0, sTrigger:
Output Off
```

And strings triggered by events and the source identifiers, e.g:

```
triggerEvent. sSystemID: XS2, sItem: 1, sTrigger: Tigger Event
String
```

'IFTMessages' section:
This section displays strings including the source ESIs identifier, prompt id and related parameters when an ESI is assigned in place of reader, e.g:

```
displayMessage. sSystemID: ES01, sItemID: ESI01, lMessageID:
36, bClearDisplay: 1, params: 1, Card
```

3. The Test Harness can be stopped by clicking the windows **X** or pressing <**Alt+F4**>.

Notes

- If you want to write your own middleware simulator, check out the **FTCAPI_SDK.chm** file on the Gallagher Command Centre installation DVD, in the "`Utilities\Event Alarm API`" folder. This help file should be copied to your local PC before opening.
- You can simulate alarm flooding using the simulator by clicking the **Go** button faster than the Tolerance for the selected Priority set in the **Alarm Flooding** tab of the Server Properties.
- If the Simulator will not run or starts with any error messages, try re-registering CardaxFTCAPI.dll and check the Command Centre licence file is present and correct.