

[AN018]



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Configuring a Device for InformaCast Fusion M2M

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TROUBLESHOOTING AND ADDITIONAL RESOURCES

Complete Support Site with User Guides and Help:

<http://www.anetd.com/user-support/>

Additional App Notes:

<http://www.anetd.com/user-support/technical-resources>

AND Legal Disclaimer:

<http://www.anetd.com/legal>

M2M PLUGIN OVERVIEW

Machine-to-Machine (M2M) technology allows communication between devices via the network. With M2M, an AND device triggered by an event like a contact closure input will transmit a message over the network to InformaCast, which will translate the message and trigger messages to other devices. The M2M plugin uses this technology to send Informacast broadcasts as triggered by an AND contact closure input, as well as trigger an AND contact closure output when it receives a broadcast.

Once you have configured your contact closures, you can add them to InformaCast as input and output ports:

- Input ports allow you to trigger InformaCast broadcasts from contact closure activation.
- Output ports allow you to activate a contact closure, as triggered by a broadcast (accomplished by adding the output port(s) as a recipient to InformaCast's messages).

The M2M plugin requires these prerequisites:

- Successful InformaCast installation.
- Fully configured contact closures.
- A valid M2M plugin license, included with your InformaCast license.

This document covers procedures for working with the M2M plugin including:

- Configure Contact Closure Device
- Configure Contact Closure Input Port
- Configure Contact Closure Output Port
- Contact Closure Schedules
- Trigger an InformaCast Broadcast from a Contact Closure Input
- Trigger a Contact Closure Output with an InformaCast Broadcast

CONFIGURE CONTACT CLOSURE DEVICE

Before you can use the M2M Plugin, you must add and configure the AND device with contact closures.


- 1) From the InformaCast web interface, open **Recipients** → **M2M** → **Contact Closures** to access the *List Contact Closures* page.







List Contact Closures

Lists contact closures, which are the physical devices that will interact with the M2M.

Machine-To-Machine (M2M) allows InformaCast Fusion to interact with contact closures, which includes receiving input triggers from the contact closure to initiate InformaCast Fusion notifications and triggering contact closure output ports when an InformaCast Fusion notification is sent.




 Search

NAME	DESCRIPTION	ADDRESS	INPUT PORTS	OUTPUT PORTS	
Input	TEST	10.10.6.181	1	0	 
IPSTROBE-0	Activate and Deactivate IPStrobe	10.10.7.12	0	3	 
Output	TEST	10.10.5.150	0	3	 


10 20 50 3 Total Entries




- 2) Click the *Add* button to access the *Add Contact Closure* page:

Create Contact Closure 

Create a contact closure, which will either trigger or be triggered by InformaCast broadcasts.

 Basic Information

Name	<input type="text" value="Name"/>	
Description	<input type="text" value="Description"/>	
IP Address	<input type="text" value="IP Address"/>	
SNMP Community Name	<input type="text" value="SNMP Community Name"/>	

- Name
Enter a unique name for the AND device associated with the contact closure(s). (Contact closures cannot share names.)
- Description
Enter a description of the AND device associated with the contact closure(s).
- IP Address
Enter the IP address of the AND device associated with the contact closure(s). Use DHCP address reservation to guarantee the IP address of the device remains consistent over time.
- SNMP Community Name
Enter the SNMP community name that is configured for this device. For AND devices, this value should match the **SNMP Write Community** string in the device's configuration file (see **Configure Contact Closures via the Configuration File**).

- 3) Click the *Save* button. The Maintain Contact Closures page will appear, reminding you to configure your newly added device's I/O port(s).

EDIT OR DELETE A CONTACT CLOSURE

Click the *Contact Closures* link to access the *List Contact Closures* page.

List Contact Closures ?

Lists contact closures, which are the physical devices that will interact with the M2M.

Machine-To-Machine (M2M) allows InformaCast Fusion to interact with contact closures, which includes receiving input triggers from the contact closure to initiate InformaCast Fusion notifications and triggering contact closure output ports when an InformaCast Fusion notification is sent.



Search

NAME	DESCRIPTION	ADDRESS	INPUT PORTS	OUTPUT PORTS	
Input	TEST	10.10.6.181	1	0	
IPSTROBE-O	Activate and Deactivate IPStrobe	10.10.7.12	0	3	
Output	TEST	10.10.5.150	0	3	

10 20 50 3 Total Entries



- To delete, click the *Trash Can* button for the contact closure you want to delete, and click the *OK* button on the dialog box that appears to confirm.
- To edit, click the *Pencil* button for the contact closure to bring up the *Contact Closure Details* page. Make your desired changes, and click the *Save* button.

Contact Closure Details ?

View/edit a contact closure, its details, input ports, and output ports.

Basic Information

Name

Description

IP Address

SNMP Community Name

CANCEL SAVE

CONFIGURE CONTACT CLOSURES VIA THE CONFIGURATION FILE

For the MAC-specific file option:

Edit the AND device's specific configuration file, *InformaCastSpeaker2046f9010203.cfg*, where 2046f9010203 is the MAC address of the device to configure.

For the global configuration file option:

Edit the global configuration file, e.g., *InformaCastSpeaker.cfg*.

Config File Settings:

- For output contact control, in the *SNMP* tag, set the *write_community* parameter. This value should match the contact closure *SNMP Community Name* configured in the M2M plugin for this device.
- For input contact triggers, in the *SNMP* tag, add a trap manager pointing to the InformaCast server (10.10.3.4 in this example) using the contact closure password configured in M2M. Also, the respective input trap must be turned on in the *GPIO* tag.
- Reset the AND device to begin using the new settings.

SNMP tag:

```
<SNMP write_community="myM2Mpassword" read_community="public" >  
  <TrapManager  
    addr="10.10.3.4" port="162" pdu_version="1" community="myM2Mpassword"  
  />  
</SNMP>
```

GPIO tag:

```
<GPIO snmp_trap_for_input_gpio0="1" snmp_trap_for_input_gpio1="1" />
```

CONFIGURE CONTACT CLOSURE INPUT PORT

After you add a contact closure device, you can add its input port(s). Configuring a contact closure's input ports allows you to trigger an InformaCast broadcast when that contact closure has been activated or deactivated, depending on your configuration.

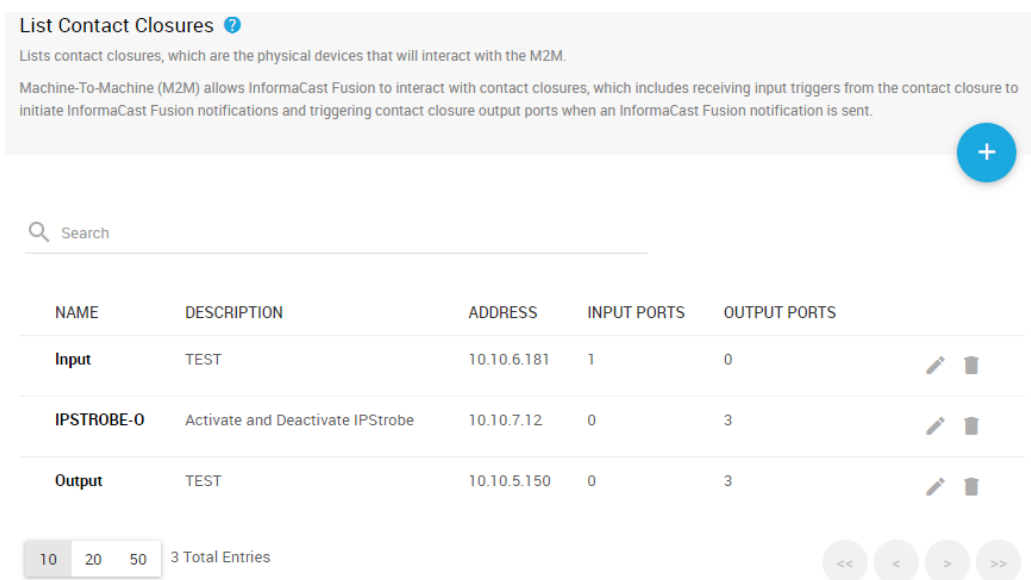
- 1) Turn on the SNMP trap for the respective input contact in the configuration file:


```
<GPIO snmp_trap_for_input_gpio0="1"
      snmp_trap_for_input_gpio1="1" />
```

- 2) Add an SNMP Trap Manager pointing to the InformaCast server (10.10.3.4 in this example):

```
<SNMP ... >
  <TrapManager
    addr="10.10.3.4" port="162" pdu_version="1" community="myM2Mpassword"
  />
</SNMP>
```


- 3) From the InformaCast web interface, select **Plugins** → **M2M** → **Contact Closures** to access the *List Contact Closures* page.










List Contact Closures 





Lists contact closures, which are the physical devices that will interact with the M2M.

Machine-To-Machine (M2M) allows InformaCast Fusion to interact with contact closures, which includes receiving input triggers from the contact closure to initiate InformaCast Fusion notifications and triggering contact closure output ports when an InformaCast Fusion notification is sent.



Search 

NAME	DESCRIPTION	ADDRESS	INPUT PORTS	OUTPUT PORTS	
Input	TEST	10.10.6.181	1	0	 
IPSTROBE-0	Activate and Deactivate IPStrobe	10.10.7.12	0	3	 
Output	TEST	10.10.5.150	0	3	 



10 20 50 3 Total Entries    

- 4) Click the Pencil Icon next to the contact closure you wish to to add an input port to bring up the *Contact Closure Details* page, then scroll to the Input Ports section of the page.

Input Ports

+

Search

NAME	STATUS	MESSAGE TEMPLATE	
Input0	ACTIVE	Emergency Lockdown	 


10 20 50 1 Total Entries





<< < > >>


- 5) Click the *Plus* icon to bring up the *Create Input Port* page.



Create Input Port

Create an input port, which allows you to trigger an InformaCast broadcast when the contact closure has been activated or deactivated, depending on your configuration.

 Basic Information

Name	Name	
Monitoring Status	ACTIVE	
Time Schedule	Always On	
Port Identifier (OID)	Port Identifier (OID)	
Port Switch On/Off (OID Value)	Port Switch On/Off (OID Value)	
Message Template	Message Templates	

 Recipients

Device Groups	Device Groups	
Field is required to send to on-premises recipients; device groups assigned to the message template are always ignored.		
Distribution Lists	Distribution Lists	
Field is required to send to users' on-premises IP phones; for cloud recipients, distribution lists assigned here will override those assigned to the message template.		


- Name
Enter a unique name for your contact closure port (contact closure ports cannot share names).
- Monitoring Status
Select *Active* to enable monitoring of the device's input port. Select *Disabled* to disable monitoring.
- Time Schedule
Select the schedule you wish to use for monitoring purposes from the drop-down menu.
Select *Always On* to set the input port for continuous monitoring.
- Port Identifier (OID)
Set the OID of the input contact to monitor:
First input: **1.3.6.1.4.1.39866.3.1.4.10.1.3.1**
Second input: **1.3.6.1.4.1.39866.3.1.4.10.1.3.2**
- Port Switch On/Off (OID Value)
Set this field to "1" to trigger the InformaCast broadcast upon input activation. Set this field to "0" to trigger the InformaCast broadcast upon input deactivation.
- Message Template
Using the drop-down menu, select the message to broadcast upon the triggered contact closure.
Note: The contact closure's input ports only support Text, Text and Pre-recorded Audio, and Pre-recorded Audio messages.
- Recipients
Select the device group(s) or Distribution Lists to receive the broadcast.

5) Click *Save*.



EDIT OR DELETE A CONTACT CLOSURE INPUT PORT


- 1) Click the *Contact Closures* link to access the *List Contact Closures* page.
- 2) Click the link in the *Pencil Icon* next to the contact closure you wish to edit or delete, which brings up the *Contact Closure Details* page. Scroll down to the *Input Ports* section of the page:

Input Ports



Search

NAME	STATUS	MESSAGE TEMPLATE	
Input0	ACTIVE	Emergency Lockdown	 






10 20 50 1 Total Entries 

- To delete, click on the corresponding *Trash Can* icon. Click the *OK* button to confirm the delete.
- To edit, click the Pencil Icon next to the input port you wish to edit, make changes on the *Edit Contact Closure Input Port* page, and press the *Save* button.



Create Input Port [?](#)

Create an input port, which allows you to trigger an InformaCast broadcast when the contact closure has been activated or deactivated, depending on your configuration.

[?](#) Basic Information

Name	Name 
Monitoring Status	ACTIVE 
Time Schedule	Always On 
Port Identifier (OID) 	Port Identifier (OID)
Port Switch On/Off (OID Value)	Port Switch On/Off (OID Value)
Message Template	Message Templates 

Recipients

Device Groups	Device Groups 
	Field is required to send to on-premises recipients; device groups assigned to the message template are always ignored.
Distribution Lists	Distribution Lists 
	Field is required to send to users' on-premises IP phones; for cloud recipients, distribution lists assigned here will override those assigned to the message template.

CONFIGURE CONTACT CLOSURE OUTPUT PORT

You can add an output port as a recipient to an InformaCast broadcast, thus activating or deactivating a contact closure upon receipt of a specific broadcast. Make sure to create two actions for an output port: one to turn on the device connected to the output port, and one to turn it off (e.g., Strobe Light On and Strobe Light Off).

Firmware 1.6 and above supports a GPIO output pulse option, which activates the respective GPIO output for the specified number of milliseconds, then de-activates the output automatically. If using the pulsed output, only one action is necessary.

- 1) Set the SNMP Write Community string in the configuration file to match the selected *SNMP Community Name* used in the M2M contact closure:

```
<SNMP
  write_community="myM2Mpassword" >
  ...
</SNMP>
```

- 2) To enable the pulse option, set up the pulse width in milliseconds in your configuration file:

```
<GPIO
  gpio0_when_input_gpio0="1"
  removal_time_ms_input_gpio0="1000"
  pulse_ms_output_gpio0="1000"
/>
```


- 3) From the InformaCast web interface, select **Plugins → M2M → Contact Closures** to access the *List Contact Closures* page.







List Contact Closures

Lists contact closures, which are the physical devices that will interact with the M2M.

Machine-To-Machine (M2M) allows InformaCast Fusion to interact with contact closures, which includes receiving input triggers from the contact closure to initiate InformaCast Fusion notifications and triggering contact closure output ports when an InformaCast Fusion notification is sent.



 Search

NAME	DESCRIPTION	ADDRESS	INPUT PORTS	OUTPUT PORTS	
Input	TEST	10.10.6.181	1	0	 
IPSTROBE-0	Activate and Deactivate IPStrobe	10.10.7.12	0	3	 
Output	TEST	10.10.5.150	0	3	 


10 20 50 3 Total Entries



- 4) Click the Pencil Icon next to the device you want to add an output port to bring up the *Contact Closure Details* page. Scroll down to the Output Ports section of the page:

Output Ports






 Search

- 5) Click the *Plus* button to bring up the *Create Output Port* page.

Create Output Port ?

Create an output port, which allows you to trigger an InformaCast broadcast when the contact closure has been activated or deactivated. You will need to create two actions: one to turn on the device and one to turn it off.

Name	Name	
Monitoring Status	ACTIVE	
Time Schedule	Always On	
Port Identifier (OID)	Port Identifier (OID)	
Field Type	Integer	
Port Switch On/Off (OID Value)	Port Switch On/Off (OID Value)	

- Name
Enter a unique name for your contact closure port (contact closure ports cannot share names).
- Monitoring Status
Select *Active* to enable monitoring of the device's output port. Select *Disabled* to disable it.
- Time Schedule
Select the schedule you wish to use for monitoring purposes from the drop-down menu.
Select *Always On* to set the output port for continuous monitoring.
- Port Identifier (OID)
Set the OID of the output contact to control:
First output: **1.3.6.1.4.1.39866.3.1.4.11.1.21.1**

If using the pulsed output option, also set the OID of the output contact to control as follows:
First output: **1.3.6.1.4.1.39866.3.1.4.11.1.22.1**
- Field Type
Set this field to "Integer".
- Port Switch On/Off (OID Value)
Set this field to
"1" to activate the contact closure
"0" to deactivate the contact closure

6) Click *Save*.

Once you save your settings, you can add the output contact to a recipient group to activate or deactivate the contact closure with an *InformaCast Message*.

Each output port will appear as an InformaCast recipient, listed as follows:

M2M Output Port: <Contact Closure Name>: <Output Port Name>

<Contact Closure Name> Name entered on the *Add/Edit Contact Closure* page

<Output Port Name> Name entered on the *Add/Edit Contact Closure Output Port* page.

EDIT OR DELETE A CONTACT CLOSURE OUTPUT PORT

- 1) Click the *Contact Closures* link to access the *List Contact Closures* page.
- 2) Click the Pencil Icon next to the contact closure for which you'd like to edit or delete the Output port, which brings up the *Maintain Contact Closure Details* page. Scroll down to the Output Ports section of the page:

Output Ports



 Search

- To delete, click on the corresponding *Trash Can* icon. Click the *OK* button on the confirmation window that appears to confirm the delete.
- To edit, click the Pencil Icon next to the output port to edit, make changes on the *Edit Contact Closure Output Port* page, and press the *Save* button.

Create Output Port ?

Create an output port, which allows you to trigger an InformaCast broadcast when the contact closure has been activated or deactivated. You will need to create two actions: one to turn on the device and one to turn it off.

Name	Name 📄
Monitoring Status	ACTIVE ▲
Time Schedule	Always On ▲
Port Identifier (OID) ?	Port Identifier (OID)
Field Type	Integer ▲
Port Switch On/Off (OID Value)	Port Switch On/Off (OID Value)

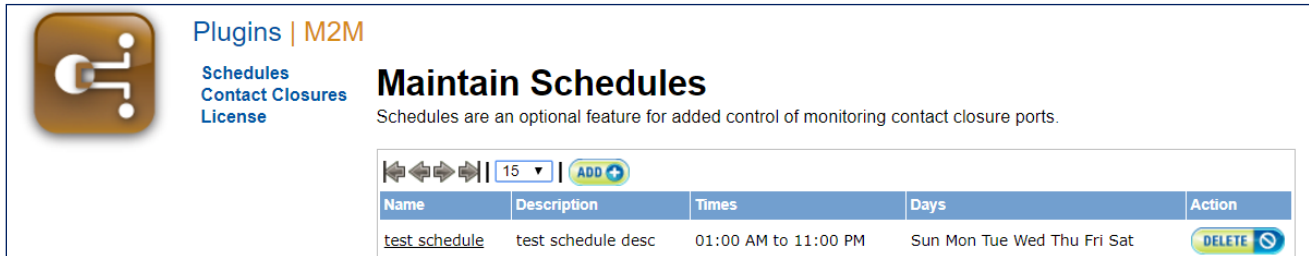
CANCEL

SAVE

CONTACT CLOSURE SCHEDULES

You can use the M2M Plugin to monitor contact closures based on a set schedule.

- 1) Select **Plugins** → **M2M** → **Schedules** to access the *Maintain Schedules* page.



Plugins | M2M

Schedules
Contact Closures
License

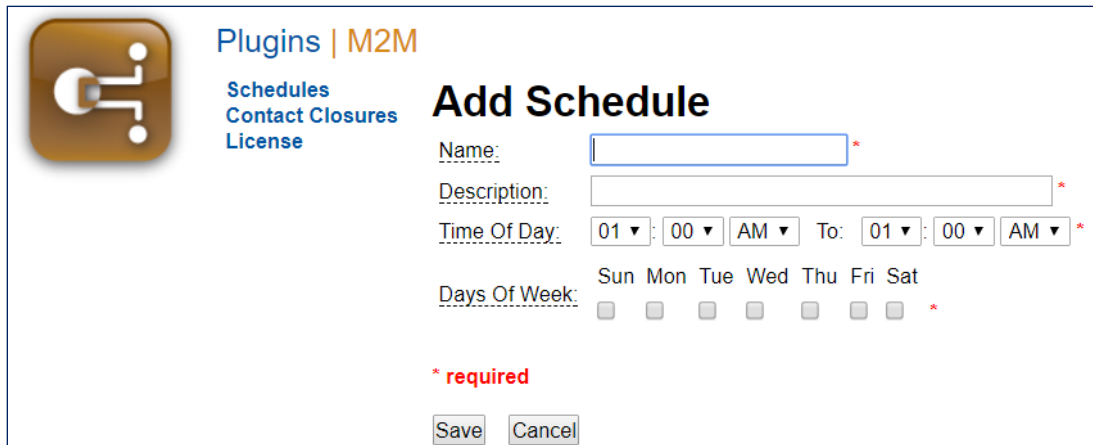
Maintain Schedules

Schedules are an optional feature for added control of monitoring contact closure ports.

15 | ADD +

Name	Description	Times	Days	Action
test_schedule	test schedule desc	01:00 AM to 11:00 PM	Sun Mon Tue Wed Thu Fri Sat	DELETE

- 2) Click the *Add* button to bring up the *Add Schedule* page:



Plugins | M2M

Schedules
Contact Closures
License

Add Schedule

Name: *

Description: *

Time Of Day: 01 : 00 AM To: 01 : 00 AM *

Days Of Week: Sun Mon Tue Wed Thu Fri Sat

*

* required

Save Cancel

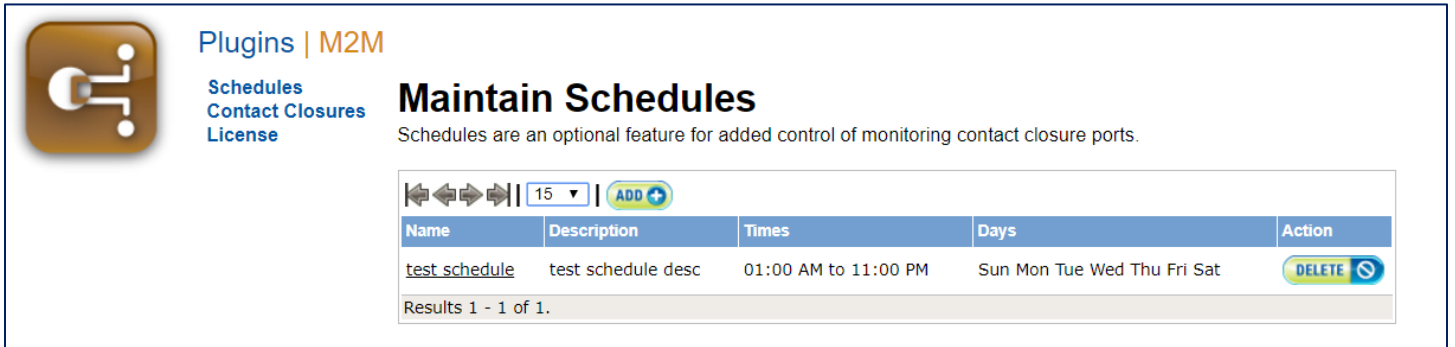
- Name
Enter the name of your new schedule (e.g. Weekday Monitoring).
- Description
Enter a description of your new schedule.
- Time of Day
Use these fields and dropdown menus to enter the start and end time for monitoring a contact closure. The time of day can extend into the following day.
- Day(s) of Week Checkboxes
Enter the days of the week to which this schedule pertains. The starting time is tied to the selected day of the week; the ending time may extend into the next day.

- 3) Click the *Save* button.

EDIT OR DELETE A CONTACT CLOSURE SCHEDULE

To modify or delete a schedule:

- 1) Click the *Schedules* link to access the *Maintain Schedules* page.

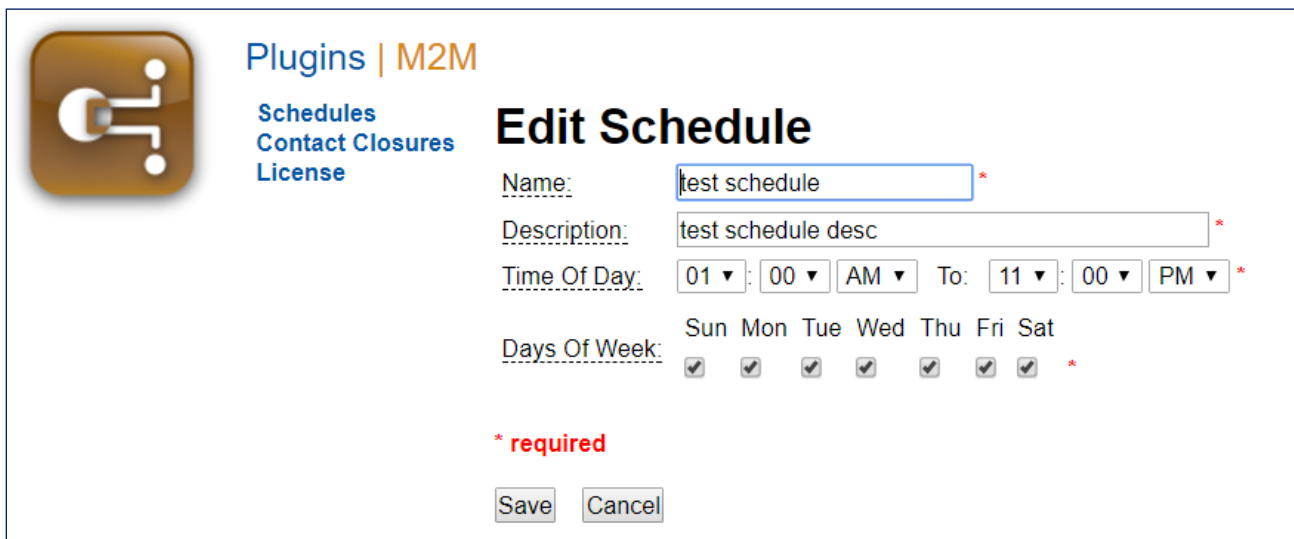


The screenshot shows the 'Maintain Schedules' page. On the left, there is a navigation menu with 'Schedules', 'Contact Closures', and 'License'. The main heading is 'Maintain Schedules' with a sub-heading 'Schedules are an optional feature for added control of monitoring contact closure ports.' Below this is a table with columns: Name, Description, Times, Days, and Action. The table contains one entry: 'test_schedule' with description 'test schedule desc', times '01:00 AM to 11:00 PM', and days 'Sun Mon Tue Wed Thu Fri Sat'. There is a 'DELETE' button in the Action column. Above the table is a pagination control showing '15' items and an 'ADD +' button. Below the table, it says 'Results 1 - 1 of 1.'

- 2) To delete, click on the corresponding *Delete* button, and then click *OK* on the pop-up window to confirm the delete.

Note: You cannot delete any schedules associated with an input port or an output port. You must first remove the schedule from the port and then delete the schedule.

- 3) To edit, select the *Name* link of the schedule, make needed changes on the Edit Schedule page, and press the *Save* button.



The screenshot shows the 'Edit Schedule' page. On the left, there is a navigation menu with 'Schedules', 'Contact Closures', and 'License'. The main heading is 'Edit Schedule'. Below this are several form fields: 'Name:' with a text box containing 'test schedule' and a red asterisk; 'Description:' with a text box containing 'test schedule desc' and a red asterisk; 'Time Of Day:' with dropdown menus for '01', '00', 'AM', 'To:', '11', '00', 'PM' and a red asterisk; 'Days Of Week:' with checkboxes for 'Sun', 'Mon', 'Tue', 'Wed', 'Thu', 'Fri', 'Sat' and a red asterisk. Below the form fields, there is a red asterisk and the text '* required'. At the bottom, there are 'Save' and 'Cancel' buttons.

TRIGGER AN INFORMACAST BROADCAST FROM A CONTACT CLOSURE

By configuring a contact closure's input port(s), you can trigger an InformaCast broadcast upon activation or deactivation of that contact closure, depending on your configuration. Whenever the contact closure is triggered, the message that you selected from the *InformaCast Message* drop-down menu will broadcast to the recipients you selected in the *InformaCast Recipients* field.

Create schedules to limit when messages broadcast. A broadcast can include text, text and pre-recorded audio, or pre-recorded audio message types only. Make sure to select *Active* from the *Monitoring Status* drop-down menu to enable the InformaCast broadcast.

- 1) Set up the *InformaCast Message* (audio and/or text) that you want broadcast when pressing the button.
- 2) Set up the *InformaCast Recipient* group of speakers, phones, and/or displays that should broadcast the message.
- 3) Add the contact closure device to InformaCast (see **Configure Contact Closure Device**).
- 4) Add the contact closure's input port to InformaCast. Link the contact closure input port to the *InformaCast Message* (the audio and/or text event), and set up the AND device to report the button press to InformaCast via SNMP (see **Configure Contact Closure Input Port**).

The contact closure's input should now trigger the *InformaCast Message* when pressed.

TRIGGER A CONTACT CLOSURE OUTPUT WITH AN INFORMACAST BROADCAST

Configuring a contact closure's output port allows you to add that output port as a recipient to an InformaCast broadcast, thus activating/deactivating a contact closure upon receipt of a specific broadcast. You will need to create two actions for an output port: one to turn on the device connected to the output port, and one to turn it off (e.g., Strobe Light On and Strobe Light Off). Also, make sure you have configured the output port as *Active* in the *Monitoring Status* drop-down menu.

- 1) Add the contact closure device to InformaCast (see **Configure Contact Closure Device**).
- 2) Add the contact closure's output port to InformaCast, and configure the AND device's *SNMP Write Community* string (see **Configure Contact Closure Output Port**).
- 3) In the InformaCast web interface, select **Recipients** → **Edit Recipient Groups** to access the *Edit Recipient Groups* page, where you can edit an existing recipient group or create a new recipient group.
- 4) Determine how you will select your recipients:
 - If you choose to select recipients individually, your output port(s) will appear as *M2M Output Port* with your contact closure and port's name following a colon in the *Select Individual Recipients* pop-up window.
 - If you choose to select existing recipient groups, make sure to select a recipient group that already includes your output port(s).
 - If you choose to make rules, you can select the following on the *Add/Edit Recipient Group* page:

First drop-down menu	<i>InformaCast Device Type</i>
Second drop-down	<i>Does</i>
Third drop-down	<i>Equal</i>
Fourth drop-down	<i>M2M</i>
 - Click the *View* button to verify the list of matching recipients includes your contact closure.
- 5) Click the *Update* button to save your changes.
- 6) Go to **Messages** → **Send or Edit Messages** to access the *Send or Edit Messages* page.
- 7) Click the *Send* button for the message that you want to broadcast to bring up the *Send Message* page.
- 8) Select the recipient group(s) that contain your contact closure output port(s), and click the *Send* button.