



Technical Tip

Event Categories and Definitions in Intelli-M® Access

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1.0 Event Categories and Definitions

When building Rules it is important to understand the events that are used to trigger the Rule. Below is a list of event categories and event definitions in Intelli-M® Access.

1.1 Credential Events

These events are generated when a credential is presented to a reader connected to a door controller. These events can range from valid credential, denied credential, unknown credential, unknown card format, and Anti Passback.

Event Name	Event Definition
AntiPassbackViolation	Anti Passback event generated when using the APB Door Type and successive card swipes by the same credential going into the same zone
CredentialExpired	Credential expired by setting the expiration date for cardholder
CredentialNotYetActive	Activation date is set to a future date
DoubleTapActive	2 valid card swipes successively within 5 seconds. This event is only available with and eIDC32 controller with firmware 2.218 or greater
InsufficientPrivileges	There are privileges on the Door, but not in the direction that the card swipe requested.
InvalidPIN	Pin entered was incorrect
UnknownCredentialFormat	Credential format not programmed in database
UnknownCredentialStatus	Credential does not exist on the door
ValidCredential	Access Granted

1.2 Door Events

These events are generated when the door status changes. These events can range from a door contact change of state, tamper, and condition not met when multiple conditions are required to unlock a door.

Event Name	Event Definition
ConnectionTest	When you run a test connect when adding a door
DeviceTamper	Tamper event occurs when faceplate is removed
DoorContactRestored	Door contact in its normal state

ExternalBuzzerActive	External buzzer is in its abnormal state
ExternalBuzzerInactive	External buzzer is in its normal state
ForcedOpen	Door forced open without using access credentials
FullDownload	Successful door update
FullDownloadDirty	The door needs to be updated again
Heartbeat	Response from controllers after a heartbeat event is sent by the IA Server
InternalBuzzerActive	Internal buzzer is in its abnormal state
LEDActive	LED is in its abnormal state
LEDInactive	LED is in its normal state
LeftOpen	Door held open longer than specified in Door Type
NeedsUpdate	Event generated when a door needs updated due to configuration changes
RelayActive	Relay is in its abnormal state
RelayInactive	Relay is in its normal state
RequestToExit	Rex device unlocks the door
ServiceConditionNotMet	Event created when conditions do not happen in proper order, i.e., the event you see when attempting to open a door that blocks card access when IN4 is active, while IN4 is currently active on that door.
UnlockDoors	Action to unlock doors in Doors Tab

1.3 Input/Output Events

These events are generated when an Input or Output has a status change on a door controller. Input and Output events are technically door events, however, we have separated them in this document because these events are typically used to trigger Rule Actions in Intelli-M® Access. These events are generated when the state of the input or output changes.

Event Name	Event Definition
InAlarm	Input alarm condition is True
Input1Active	Input 1 is in its abnormal state
Input1Restored	Input 1 restored to its abnormal state
Input2Active	Input 2 is in its abnormal state
Input2Restored	Input 2 restored to its abnormal state
Input3Active	Input 3 is in its abnormal state
Input3Restored	Input 3 restored to its abnormal state
Input4Active	Input 4 is in its abnormal state

Input4Restored	Input 4 restored to its abnormal state
Output1Active	Output 1 is in its abnormal state
Output1Inactive	Output 1 is in its normal state
Output2Active	Output 2 is in its abnormal state
Output2Inactive	Output 2 is in its normal state
OverrideActive	Output state changes due to a manual override in IA

1.4 Schedule Events

These events are generated when a schedule is Active, Inactive, or overridden.

Event Name	Event Definition
LockDoors	Event generated by Action in the Doors Tab that overrides lock schedule and locks selected doors
Lockdown	Event created by Lockdown Rule which overrides all access privileges
MomentaryUnlockDoors	Action in the Doors Tab that unlocks selected doors for 5 seconds
RequestLock	Event generated by Lock Doors Action in Doors Tab
RequestUnlock	Event generated by Unlock Doors Action in Doors Tab
RevertDoors	When doors revert to normal schedule
RevertToSchedule	Action in the Doors Tab that will revert a door back to its normal schedule
ScheduleActive	Event created when a schedule becomes Active
ScheduleActiveInMinute	Event created a minute before the schedule becomes Active
ScheduleInactive	Event created when a schedule becomes Inactive
ScheduleInactiveInMinute	Event created a minute before the schedule becomes Inactive

1.5 Exchange/Gmail Calendar Events

Whenever a Meeting or Appointment is scheduled in the Calendar of a Room Mailbox being monitored, the Intelli-M® Access Exchange integration will send Events to Intelli-M® Access informing it of these Calendar Events. A **Meeting Started** or **Attendee Meeting Started** Event will be sent to Intelli-M® Access the moment that a meeting is scheduled to begin, and **Meeting Ended** or **Attendee Meeting Ended** Events will be sent to Intelli-M® Access the moment that a meeting is scheduled to end. In addition, the plugin will also send **Meeting Reminder** or

Attendee Meeting Reminder Events to Intelli-M® Access at this time as well. These Events appear in Intelli-M® Access no differently than any other Event, and can therefore be configured for use on the Rules page like any other Event.

Event Name	Event Definition
Meeting Started	The start time of the calendar invite
Meeting Reminder	The reminder for the calendar invite
Meeting Ended	The end time of the calendar invite
Attendee Meeting Started	The start time of the calendar invite for all attendees
Attendee Meeting Reminder	The reminder for the calendar invite for all attendees
Attendee Meeting Ended	The end time of the calendar invite for all attendees

1.6 System Events

These events are created by the Intelli-M® Access Server and are not tied to a credential, or a door controller.

Event Name	Event Definition
Connected	When a peripheral is back online and connected to the server
Disconnected	When a peripheral is offline and disconnected to the server
Offline	When a device goes offline, i.e., door controller or Relay 16
Online	When a device comes online, i.e., door controller or Relay 16
Started	When one of the IA Services or the eIDC has started
Starting	When one of the IA Services is starting, but usually occurs before the Event engine is ready

1.7 IA NVR Video Events

These events are created by the IA NVR or an Intelli-M® Access Server integrated with DIGIOP VMS. These events can range from Recording started and stopped, video loss, and dropped frames.

Event Name	Event Definition
FramesDropped	Dropped frames on an IP Camera connected to server due to insufficient bandwidth or resources
RecordingServiceStarted	The service that manages recorded video has been started
RecordingStarted	The beginning of a motion sequence

RecordingStopped	The end of a motion sequence
VideoLost	Loss of connection of an IP Camera connected to the server
VideoRestored	IP camera is back online

2.0 Rules Engine Overview

The Rules Page defines the commands that control the behavior of the Door controller, as well as the behavior of Intelli-M® Access itself. Intelli-M® Access allows Admin users to configure Controller-based or Host-based rules based off of any data stored in the database. The configured Rule will perform an action, or multiple actions, when the designated condition is met. The action can be an Access Privileges, Email Event, Alarm Management, Credential Management, Energize/De-Energize Ethernet I/O Output, Energize/De-Energize OC1 and OC2, Energize/De-Energize Relay, Forward Event, Event Management, Display Web Page, etc...

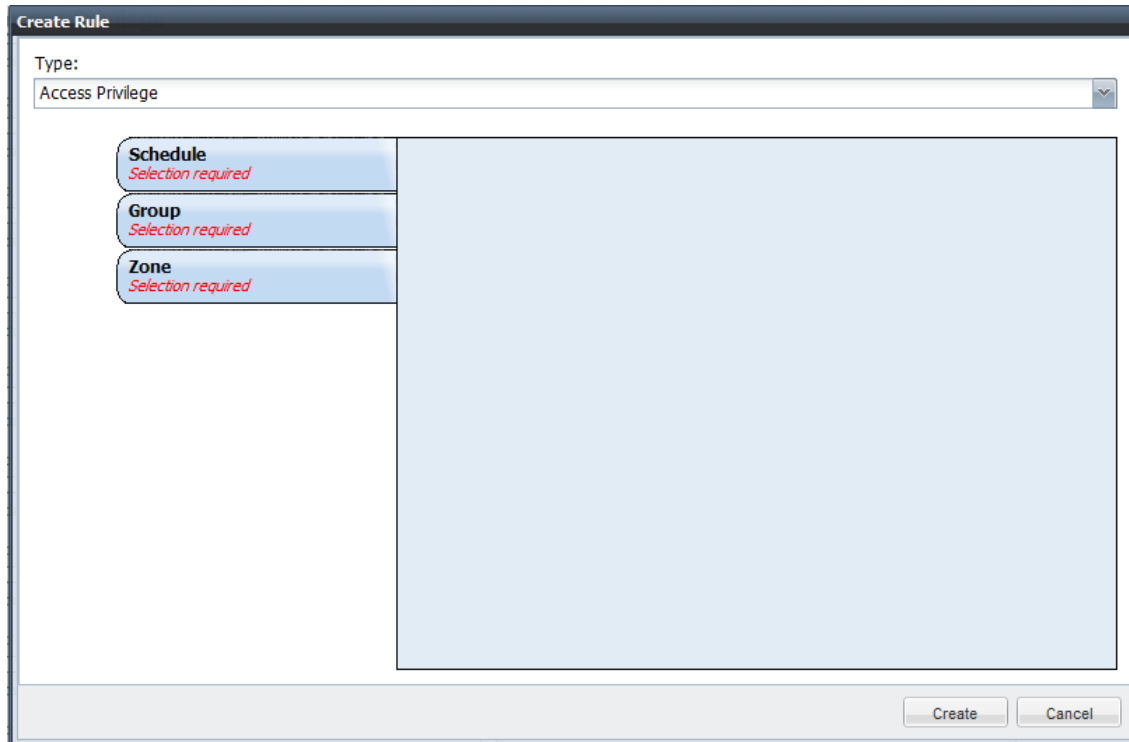
Controller-based Rule - The Access Privilege is only Door controller-based Rule. An Access Privilege is a combination of a Group ("who" has access), a Zone ("where" the Group is granted access), and a Schedule ("when" is the Group granted access). You will create one of these Access Privileges for each Group, Zone and Schedule combination for your environment. All of these Access Privileges are downloaded to the respective Door controllers when you perform the Update Action on the Doors Configuration Page. Once these Access Privileges are downloaded, the controller will operate using these rules without assistance from the Intelli-M® Access server.

Host-based Rule - All other Rules are considered Host-based Rules. This means that the processing of the specified Rule occurs on the Intelli-M Access server (i.e. the "host"). The result of the Rule may be a command to the controller (e.g. "Unlock Zone"), but the decision-making occurs on the host.

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2.1 Create a Rule

Click the **Create Rule** Action, and a Create Rule popup dialog will appear. From there, select a Rule under the **Type** drop-down box.



The screenshot shows a 'Create Rule' dialog box. At the top, there is a title bar with the text 'Create Rule'. Below the title bar, there is a 'Type:' label followed by a dropdown menu currently displaying 'Access Privilege'. To the left of a large, empty light blue rectangular area, there are three buttons: 'Schedule', 'Group', and 'Zone'. Each button has the text 'Selection required' written below it in a smaller, red font. At the bottom right of the dialog box, there are two buttons: 'Create' and 'Cancel'.

2.2 Configure the Conditions of the Rule

This is where Admin users will build the specified conditions of the Rule. The rule can be built as granular as desired. These conditions will vary upon what Action Type is selected.

- **Schedule**- Define the desired Schedule for the Rule (When the Rule is Active)
- **Group**- Defines who the Rule will be applied to (Additional filter of the Event)
- **Zone**- Defines which Zones will be used in the Rule (Additional filter of the Event)
- **Door**- Define a specific Doors instead of an entire Zone (Additional filter of the Event)
- **Reader**- Define a specific Reader on a Door (Additional filter of the Event)
- **Event**- Select which events will trigger the Rule Action to fire off
- **I/O Controller**- Select necessary Input and Output Device, or Peripheral
- **Target Group/Zone**- The group or zone that the Action is applied to (The group that receives the email or Zone that will lock or unlock)

3.0 Rule Example Using Credential Events

Most Rules are built using **Credential Events** or **Input 4** Events as the trigger for firing off a Rule Action. For example, you could use a **ValidCredential** or an **UnknownCredentialStatus** event to trigger an Email Event, Display an IP Camera Webpage, Lock Zone, Unlock Zone, Lockdown Zone, or Revert Zone Rule.

3.1 Email Event Rule Triggered by an Unknown Credential

In this example, we will build a Rule that will send an email to anyone in the **Indy Employees** Group when there is an **UnknownCredentialStatus** Event on the **Elevator** Door.

Conditions of Email Event Rule:

- **Schedule**- Always (When the Rule is Active)
- **Group**- N/A (Additional filter of the Event)
- **Zone**- N/A (Additional filter of the Event)
- **Door**- Elevator Door (Additional filter of the Event)
- **Reader**- N/A (Additional filter of the Event)
- **Event**- UnknownCredentialStatus
- **Target Group**- Indy Employees (The group that receives the email)

Create Rule

Type: Email Event

Schedule
Always

Group

Zone

Door
Elevator Door

Event
UnknownCredentialStatus

Action

Target Group
Indy Employees

<input type="checkbox"/> Normal	<input type="checkbox"/> Offline	<input type="checkbox"/> Output1Active
<input type="checkbox"/> Online	<input type="checkbox"/> Output1Inactive	<input type="checkbox"/> Output2Active
<input type="checkbox"/> Output2Inactive	<input type="checkbox"/> OverrideInactive	<input type="checkbox"/> OverrideActive
<input type="checkbox"/> Procedure	<input type="checkbox"/> Rebooted	<input type="checkbox"/> PreventCardAccess
<input type="checkbox"/> RelayInactive	<input type="checkbox"/> RequestToExit	<input type="checkbox"/> RaisedAlarm
<input type="checkbox"/> Restored	<input type="checkbox"/> Reverted	<input type="checkbox"/> RelayActive
<input type="checkbox"/> RevertToSchedule	<input type="checkbox"/> RequestToExit	<input type="checkbox"/> RequestLock
<input type="checkbox"/> ScheduleActive	<input type="checkbox"/> Restored	<input type="checkbox"/> RequestUnlock
<input type="checkbox"/> ScheduleInactive	<input type="checkbox"/> RevertToSchedule	<input type="checkbox"/> RevertDoors
<input type="checkbox"/> ServiceConditionNotMet	<input type="checkbox"/> ScheduleActive	<input type="checkbox"/> REX
<input type="checkbox"/> ShutdownSignaled	<input type="checkbox"/> ScheduleInactive	<input type="checkbox"/> ScheduleActiveInMinute
<input type="checkbox"/> Starting	<input type="checkbox"/> ServiceConditionNotMet	<input type="checkbox"/> ScheduleInactiveInMinute
<input type="checkbox"/> TooManyRetries	<input type="checkbox"/> ShutdownSignaled	<input type="checkbox"/> ShutdownCompleted
<input checked="" type="checkbox"/> UnknownCredentialStatus	<input type="checkbox"/> Starting	<input type="checkbox"/> Started
<input type="checkbox"/> UnlockDoors	<input type="checkbox"/> TooManyRetries	<input type="checkbox"/> TimeSchedule
<input type="checkbox"/> ValidCredential	<input type="checkbox"/> UnknownCredentialStatus	<input type="checkbox"/> UnknownCredentialFormat
	<input type="checkbox"/> ValidCredential	<input type="checkbox"/> UnknownError
		<input type="checkbox"/> UpdateCredentialStatus
		<input type="checkbox"/> VoidedCredential

Sends an email to one or more Groups based on an Event. Choose your desired Event, and choose the Target Group that contains the people who are to receive the emails.

Create Cancel

For more information on configuring email notifications, please refer to the “**Email Event Rule**” Technical Tip on the infinias website.

4.0 Rule Example Using Door Events

Door Events are rarely used when building practical Rules. However, you can use **ForcedOpen**, **LeftOpen**, **DoorContactRestored**, or **DeviceTamper** Event to trigger an Email Event, Display Web Page, Lock Zone, Unlock Zone, Lockdown Zone, or Revert Zone Rule.

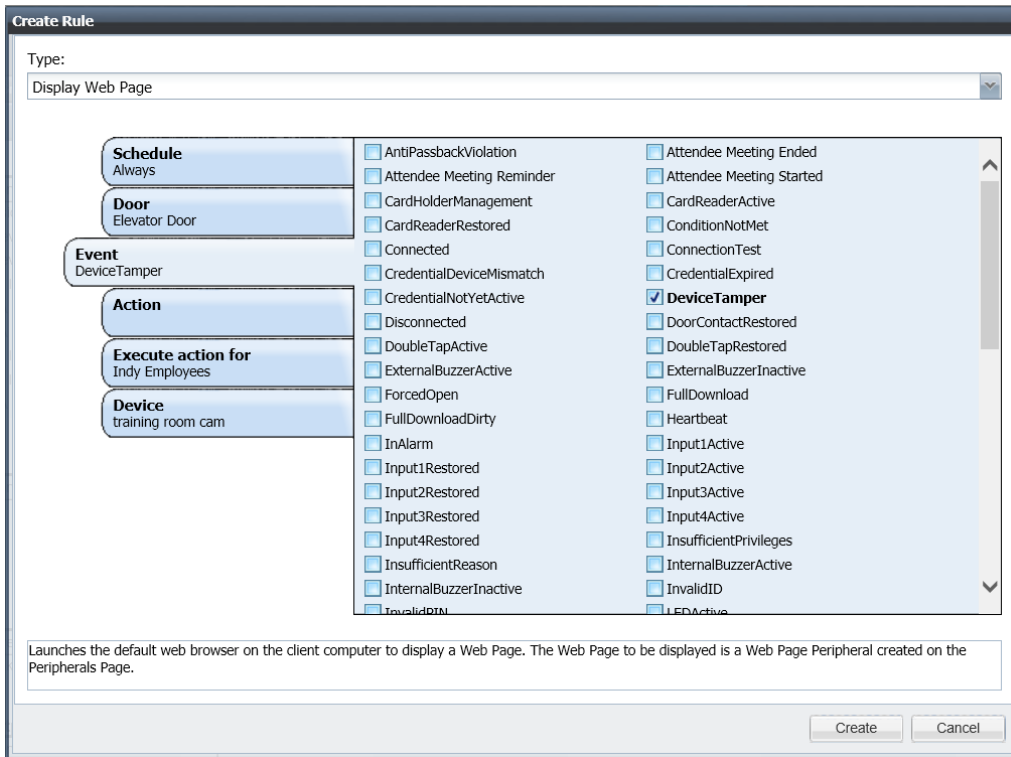
4.1 Display Web Page Rule Triggered by a Device Tamper

This Rule will leverage a previously created Generic Peripheral for your IP Camera. For more information on configuring email notifications, please refer to the “**Display Web Page Rule**” Technical Tip on the infinias website.

In this example, we will build a Rule that will display our **training room cam** Peripheral when there is a **DeviceTamper** Event on the **Elevator** Door. Furthermore, this Web Page will only display for People that are logged into the software and are a member of the **Indy Employees** Group.

Conditions of Display Web Page Rule:

- **Schedule**- Always (When the Rule is Active)
- **Door**- Elevator Door (Additional filter of the Event)
- **Event**- UnknownCredentialStatus
- **Action**- N/A
- **Execute Action For**- Indy Employees (The group that receives the Web Page pop-up- similar to Target Group in example above)
- **Device**- training room cam (The name of the Peripheral that was created for the IP Camera)



5.0 Rule Example Using Input/Output Events

Input4Active and ***Input4Restored*** are typically the only IO Events that will ever be used for firing off a Rule Action. As previously mentioned, Input 4 Events and Credential Events are the two most commonly used rule types for building Rules logic. You can wire a push button or toggle switch to IN4 of the eIDC³² and then use ***Input4Active***, , or ***Input4Restored*** Event to trigger an Email Event, Display Web Page, Lock Zone, Unlock Zone, Lockdown Zone, or Revert Zone Rule.

NOTE: Input 4 events cannot use the ***Group*** filter because Groups are tied to credentials only. We are simply monitoring the state of the input. Therefore, it is impossible to determine who toggled the input. If you select a Group as a filter of your Event, the Rule will never fire off.

5.1 Lockdown Zone Rule Triggered by an Input 4 Active

In this example, we will build a Lockdown Zone Rule that will lockdown all Zones when there is an ***Input4Active*** Event on the ***Elevator*** Door. We will also build a corresponding Revert Zone Rule to revert all Zones when there is an ***Input4Restored*** on the ***Elevator*** Door.

Conditions of Lockdown Zone Rule:

- **Schedule**- Always (When the Rule is Active)
- **Group**- Not used with Input Events (Additional filter of the Event)
- **Zone**- N/A (Additional filter of the Event)
- **Door**- Elevator Door (Additional filter of the Event)
- **Reader**- N/A (Additional filter of the Event)
- **Event**- Input4Active
- **Target Zones**- Elevator, Inside, and Outside (The zones that will Lockdown)

Create Rule

Type: Lockdown Zone

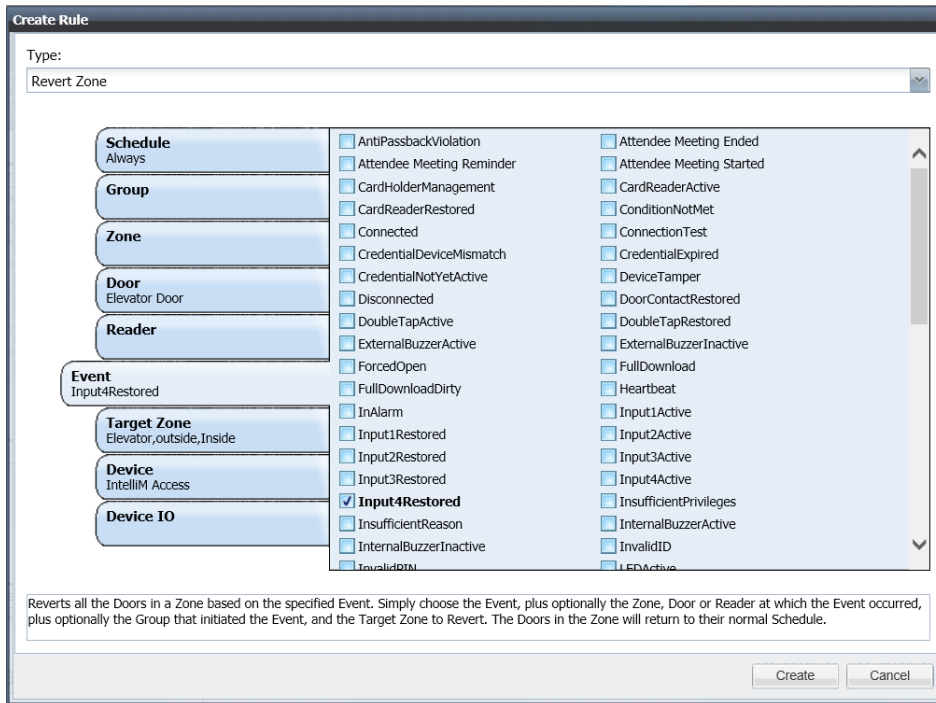
Schedule Always	<input type="checkbox"/> AntiPassbackViolation	<input type="checkbox"/> Attendee Meeting Ended
Group	<input type="checkbox"/> Attendee Meeting Reminder	<input type="checkbox"/> Attendee Meeting Started
Zone	<input type="checkbox"/> CardHolderManagement	<input type="checkbox"/> CardReaderActive
Door Elevator Door	<input type="checkbox"/> CardReaderRestored	<input type="checkbox"/> ConditionNotMet
Reader	<input type="checkbox"/> Connected	<input type="checkbox"/> ConnectionTest
Event Input4Active	<input type="checkbox"/> CredentialDeviceMismatch	<input type="checkbox"/> CredentialExpired
Target Zone Elevator, outside, Inside	<input type="checkbox"/> CredentialNotYetActive	<input type="checkbox"/> DeviceTamper
Previous Rule	<input type="checkbox"/> Disconnected	<input type="checkbox"/> DoorContactRestored
	<input type="checkbox"/> DoubleTapActive	<input type="checkbox"/> DoubleTapRestored
	<input type="checkbox"/> ExternalBuzzerActive	<input type="checkbox"/> ExternalBuzzerInactive
	<input type="checkbox"/> ForcedOpen	<input type="checkbox"/> FullDownload
	<input type="checkbox"/> FullDownloadDirty	<input type="checkbox"/> Heartbeat
	<input type="checkbox"/> InAlarm	<input type="checkbox"/> Input1Active
	<input type="checkbox"/> Input1Restored	<input type="checkbox"/> Input2Active
	<input type="checkbox"/> Input2Restored	<input type="checkbox"/> Input3Active
	<input type="checkbox"/> Input3Restored	<input checked="" type="checkbox"/> Input4Active
	<input type="checkbox"/> Input4Restored	<input type="checkbox"/> InsufficientPrivileges
	<input type="checkbox"/> InsufficientReason	<input type="checkbox"/> InternalBuzzerActive
	<input type="checkbox"/> InternalBuzzerInactive	<input type="checkbox"/> InvalidID
	<input type="checkbox"/> InvalidPIN	<input type="checkbox"/> LEDActive

Performs lockdown on all the Doors in a Zone based on the specified Event - NO CARD SWIPES ALLOWED. Simply choose the Event, plus optionally the Zone, Door or Reader at which the Event occurred, plus optionally the Group that initiated the Event, and the Target Zone to Lockdown. The Zone is locked in an overridden state until Reverted to its normal Schedule.

Create Cancel

Conditions of Revert Zone Rule:

- **Schedule**- Always (When the Rule is Active)
- **Group**- Not used with Input Events (Additional filter of the Event)
- **Zone**- N/A (Additional filter of the Event)
- **Door**- Elevator Door (Additional filter of the Event)
- **Reader**- N/A (Additional filter of the Event)
- **Event**- Input4Restored
- **Target Zones**- Elevator, Inside, and Outside (The zones that will Lockdown)



For more information on Lockdown scenarios, please refer to the “**Lockdown in Intelli-m Access**” Technical Tip on the infinias website.

6.0 Rule Example Using Schedule Events

Schedule Events are generated when the schedule is Active, Inactive, or overridden. For example, you could use a **ScheduleActive**, **ScheduleInactive**, **ScheduleActiveInMinute**, or **ScheduleInactiveInMinute** Event to trigger a Lock Zone, Unlock Zone, Lockdown Zone, Revert Zone, or Update Modified Doors Rule.

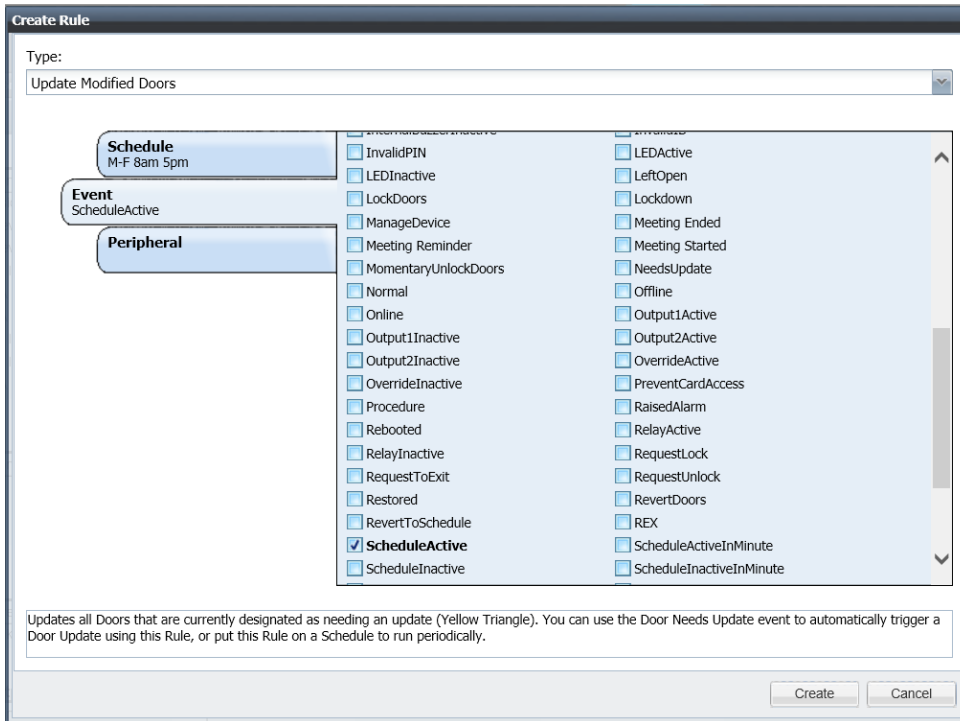
6.1 Update Modify Doors Rule Triggered by Schedule Active

In this example, we will build an Update Modified Doors Rule that push up-to-date server information to all Doors requiring changes, when my 8-5 schedule is Active. This is beneficial in the scenario of a technician creating access privileges and forgetting to push that data down to the door controller.

NOTE: It is recommended that this rule scenario is programed to run during office hours. This is in case someone mistakenly makes changes that affect access privileges or anything settings that pertain to the door controller.

Conditions of Update Modified Doors Rule:

- **Schedule-** M-F 8am 5pm (When the Rule is Active)
- **Event-** ScheduleActive (The moment the schedule goes Active, which is 8am on Monday –Friday)



7.0 Rule Example Using Calendar Events

Calendar Events are generated when a Meeting or Appointment is scheduled in the Calendar of a Room Mailbox being monitored, the Intelli-M® Access Exchange integration will send Events to Intelli-M® Access informing it of these Calendar Events. These events are only available in the IA Pro and IA Corp licensed versions. For example, you could use a **Meeting Started** or **Meeting Reminder** Event, to trigger a Lock Zone, Unlock Zone, or Lockdown Zone; and a **Meeting Ended** Event to trigger a Revert Zone Rule.

For more information on Exchange or Gmail Calendar integration, please refer to the “**Intelli-M Access Professional**” Manual on the infinias website.

8.0 Rule Example Using System Events

System Events are rarely used to drive Rules logic. The most practical example is to trigger a Rule Action based off of an **Offline** Event. This event is generated whenever a door controller goes offline or is not communicating to the server.

8.1 Email Event Rule Triggered by a Door Controller Offline

In this example, we will build a Rule that will send an email to anyone in the **Indy Employees** Group when there is an **Offline** Event on any Door.

Conditions of Email Event Rule:

- **Schedule**- Always (When the Rule is Active)
- **Group**- N/A (Additional filter of the Event)
- **Zone**- N/A (Additional filter of the Event)
- **Door**- N/A (Additional filter of the Event)
- **Reader**- N/A (Additional filter of the Event)
- **Event**- Offline
- **Target Group**- Indy Employees (The group that receives the email)

The screenshot shows the 'Create Rule' dialog box. At the top, the title is 'Create Rule'. Below it, there is a 'Type:' dropdown menu with 'Email Event' selected. To the left of a large central area, there is a list of rule components, each in a blue box with a white border. The components are: 'Schedule' (Always), 'Group', 'Zone', 'Door', 'Event' (Offline), 'Action', and 'Target Group' (Indy Employees). The central area is empty. At the bottom of the dialog, there is a text box containing the description: 'Sends an email to one or more Groups based on an Event. Choose your desired Event, and choose the Target Group that contains the people who are to receive the emails.' Below the text box are two buttons: 'Create' and 'Cancel'.