

# How Viewbiquity Interprets Rules

## Conditions

In the rules app, a condition is the section with the blue background above a given set of actions. When a condition is true, the Rules engine will start to run through all of the actions which are listed and enumerated below the condition and execute them. There are some important things to understand about conditions:

- 1) Most conditions will only execute their list of actions once. This means they will not execute their actions again until the condition is no longer true then becomes true again. For example, a condition that says “When the system profile is changed to Vacation then...” will only trigger the actions once when the profile is changed at the beginning of a vacation. The following events are exceptions to this, conditions based on these events will trigger their associated actions every time the device reports the notification (i.e. every time you see the event in the logs):
  - a. Detecting smoke
  - b. Detecting carbon monoxide
  - c. Door locking/unlocking
  - d. Door opening/closing
  - e. Contact sensor on/off
  - f. Request for Exit
  - g. Fob button press
  - h. Water detected/not detected
  - i. Power loss detected/not detected
  - j. Credential scanned or key code entered (access control)
  - k. Invalid credential scanned or key code entered (access control)
  - l. Vital signs measurements (pulse etc.)
  - m. Battery level updates
  - n. Lost communication to device
  - o. Activating an action set
  - p. Video recording on motion is a special case. Conditions for motion events will always re-trigger actions that record video
  - q. **As new events are added or decisions are made to change how events are interpreted by the Rule engine this list may change at any time. It is important to check back periodically for updates to this document.**

- 2) A timeout added to a condition, such as “When the door is opened for at least 20 seconds...” means that the condition must be true for the required time period before the actions associated with the condition are executed. If the event is no longer true before the time expires then the condition timer resets and the actions do not execute. For example, in a rule whose condition states “When the front door is opened for at least 20 seconds then...”, if the front door is left open for only 19 seconds and then closed the actions associated to the front door condition will not execute.
- 3) Rule conditions can be applied to multiple devices. They can be set up to require that any of the devices meet the condition or that all of the devices meet the condition.
  - a. A rule can be created to say “When the back door, side door **or** front door is opened for at least 20 seconds then...” Because this condition is set up to say “or”, any of these doors being open for 20 seconds will cause the actions associated with the condition to execute.
    - i. As explained in part 1) above, door open/close events are on the list of events that always cause a condition to reactivate the actions associated with them. So this rule will execute the actions again when another door listed in the condition is left open.
    - ii. If the event was not on the list of events in part 1), for example, a condition that states “When the downstairs thermostat or upstairs thermostat detect the temperature is below 60 degrees then...” the event would only have triggered once even if the condition was true for another device (thermostat) listed in this condition.
    - iii. Some examples of how “or” rules on multiple devices are used:
      1. Recording cameras on camera motion events
      2. Controlling how doors handle credential scans and key codes
      3. Battery level and lost communication notifications
      4. Alerts on doors being opened
      5. Alerts on motion being detected
      6. Button presses on fobs
  - b. A rule can be created to say “When the back door, side door **and** front door is closed then...” Because this condition is set up to say “and”, all of the doors must be closed for the actions associated with the condition to execute.
- 4) When Security Rules are enabled the conditions will be tested on all rules. If any of the conditions test as true then the actions for the Security Rule condition will activate. The following events are exceptions to this and will only cause the actions to activate if the event happens after the Security Rules are enabled:
  - a. Door opening/closing
  - b. Contact sensor on/off

## Actions

Actions have a charcoal background and are enumerated below the conditions. It is important to understand the following things about actions:

- 1) Actions are performed in the order listed but the system does not wait for an action to complete before the next action is executed. Some actions will be queued if the communication method cannot talk to multiple devices at the same time (z-wave for example).
- 2) Actions can be disabled if they need to be temporarily removed, instead of deleting and re-adding them.
- 3) Actions can be limited to only execute when one or more profiles are set. There are some things that are very important to understand about this:
  - a. If a condition is true but the action is limited to only run when a certain profile is set then the action will not execute until that profile is also set. If the condition is no longer true before the profile is active, then the action will not execute. For example, consider the following scenario:
    - i. Condition: "When the garage door is opened then..." Action: "When the system profile is Bed Time, send an email to...". In this scenario, if the garage door is opened when the profile is set to "Day Time" and left open, then the condition will remain in the TRUE state because the door is open. However, the action will not send the email because the system profile is not set to "Bed Time".
      1. Later, when the profile is changed to "Bed Time", if the garage is still open, then the email will be sent.
      2. If instead the garage door closes before the profile is changed to "Bed Time" then the condition will no longer be true and the email will not be sent when the system profile is changed to "Bed Time".

- b. Once an action executes it will not execute again just because a profile that it requires is set, un-set and then set again. For example, consider the following scenario:
- i. Condition: “When the system’s active profile is changed to Vacation”,  
Action: “When the system’s active profile is Night Time then turn on the outside light”. In this example and in the further discussion below, assume the profiles “Night Time” and “Day Time” are in the same profile set and “Vacation” is in a separate profile set.
    1. If the profile is currently set to “Day Time” and the user changes the active profile to “Vacation” then the light will not turn on because the action requires the active profile to be set to “Night Time”.
    2. Later when the active profile changes to “Night Time” the light will turn on.
    3. The next day, when the active profile is changed back to “Day Time” and later on that day set back to “Night Time” again then the action will not execute because the profile has stayed in “Vacation” and therefore the original condition has not retriggered the actions.
    4. If you would like to have the light turn on while you are on vacation every night, the rule should be written as, Condition: “When the system’s active profile is changed to Night Time”,  
Action: “When the system’s active profile is Vacation then turn on the outside light”. Every day the profile will change from “Day Time” to “Night Time”, causing the condition to retrigger and therefore the actions to execute. If the profile is “Vacation” then the lights will automatically turn on when the “Night Time” profile is activated.

- c. Similar to device limits in conditions, profile limits in actions can be set to “or” or “and”. When a condition is met, an “or” list of profiles in an action requires that any of the selected profiles be active to execute the action. The “and” list of profiles requires that all of the selected profiles to be active when the condition is met to execute the action. For example:
  - i. An action can be set up to require that both the “Away” and “Night Time” profiles are active in order to limit an action to only turn on a light when it’s night time and the user is coming home. Condition: “When the foyer motion sensor detects motion then...” Action: “When the system profile is Away and Night Time, turn on the front lights”
  - ii. An action can be set up to require that either “Work Hours” or “Temporary Access” profiles are set so that an access control door will let someone in if either of these profiles are activate. Condition: “When the front door scans a credential for the Employees group then...” Action: “When the system profile is Work Hours or Temporary Access, unlock the front door”.
- 4) Timeouts set to actions are delays until the action is executed, meaning the action will not occur until the delay period expires. This is very different from timeouts on conditions which are requirements for how long the condition must be true for a set of actions to be executed. For example:
  - a. Condition: “When the back door is open...” Action: “Always wait 10 seconds then take a snapshot from the back door camera”. In this scenario, when the door is opened for even 1 second then a snapshot will be taken 10 seconds later.
  - b. Compare the scenario above to the following, Condition: “When the back door is open for at least 10 seconds”, Action: “Take a snapshot from the back door camera”. Under this rule the door must be open for 10 seconds for the snapshot to be taken at all.
- 5) Actions of Security Rules will only execute if the Security Rules are enabled at the time the action is attempting to run. Adding delays on the security rule actions can be used to provide time for someone to disable the rules before the actions execute. For example:
  - a. Security Rule Condition “When the front door is open...” Action: “Always wait 60 seconds then turn on the siren”. Under this rule, the 60 second timer for the action will only start if the Security Rules are enabled when the front door is opened. But, if the Security Rules are disabled when the 60 second timer expires then the siren will not turn on.
- 6) Profile limits on actions are checked before the timer for an action is initiated. This means that once the timer for an action is initiated, the profile at the time the timer expires will not affect whether the action executes. This is one of the ways in which Security Rules operate differently than using profiles alone.

- 7) Actions can be applied to multiple devices. For example, a single action can be created to turn on multiple lights.

- 8) There is a special setting on actions that only applies when the device in the condition is also the device in the action. In this scenario the action can be set up to use the “triggering device”, which is the device in the condition which had the event occur to cause the condition to be true. When a “Triggering Device” is set on an action it will read in the rules as “the same device” in the action. For example, consider the following use cases:
- a. Condition: “When the front door camera or back door camera detects motion”, Action: “Always start recording on **the same device**”. In this scenario we can make a single rule that starts recording on the same camera that detected motion. If the back door camera detects motion then “the same device” in the action is the back door camera. As stated earlier, this will work because video recording on motion events is an example of an event that executes the action associated with the condition every time the event occurs. Using the Triggering Device feature allows you to simplify your rules. Imagine, for example, if you had ten different cameras instead of two where you would like to record on motion.
  - b. Condition: “When the front door, back door or side door scan a credential for The Employees Group”, Action: “Always unlock **the same device**”. This is another example where multiple access control doors are being managed by the same condition and action. When the back door scans a valid credential then only the back door will open because it is “the same device” that caused the condition to be true.

## Rules and Secure Devices

Some devices and actions are considered “secure” and can only be initiated from other secure devices or actions. The following actions are considered to be secure:

- 1) Locking/unlocking doors
- 2) Opening/closing doors (garage, gates etc.)
- 3) Enabling/disabling security rules

Secure actions can only be performed through the following methods:

- 1) Conditions based on events from secure devices, including:
  - a. Events from locks
  - b. Events from access control readers
  - c. Button presses from authenticated key fobs (VBKCB2)
- 2) Conditions for when security rules are enabled/disabled, for example:
  - a. When the system security state is changed to armed then 1) lock the front door  
2) Close the garage
- 3) Direct control from apps when logged into the system on a computer, phone, tablet, Roompad etc.

## Text Messages and IVR call limits

The following limits are currently set on how frequently text messages and text to speech phone calls will be sent. **This may be changed at any time without notice.**

Text messages are limited per condition so this applies to how often a text message from a specific rule will be sent, not how often text messages will be sent per gateway or user.

- 50 maximum SMS messages per day

- 10 maximum SMS messages per hour

- 1 maximum SMS message per minute

Text messages are limited per gateway as well.

- 400 maximum SMS messages per month

IVR phone calls are limited per condition so this applies to how often a call from a specific rule will be sent, not how often text messages will be sent per gateway or user.

- 4 maximum IVR phone calls per hour

- 1 maximum IVR phone call per 10 minutes