Gallagher Command Centre
Regulated Zones Feature 8.60

C12639

Release Note

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Contents

1   Introduction

This release note is for the 'Regulated Zones' v8.60.005 feature of Gallagher Command Centre.

1.1   Purpose

The 'Regulated Zones' feature has been created for managing Cardholders' time on site.

This feature introduces a new 'Regulated Zone' Command Centre item for monitoring Cardholders. The Regulated Zone is separate from Access Zones (but potentially encompasses one or multiple Access Zones), and is used to define the on-site area that is monitored by pre-configured time limits.

The 'Regulated Zones' feature will monitor Cardholders using the following parameters (rules):

1. **Cumulative duration:** Used to monitor Cardholders' accumulated time-on-site across multiple shifts. An event is raised when a Cardholder has been inside the Regulated Zone for a period greater than the configured cumulative shift duration, within a specified period of time.

    Example: you can configure a Cumulative duration rule to raise an alarm when a Cardholder stays in the Zone for more than 50 hours within five days.

2. **Break duration:** Used to monitor Cardholders' minimum break periods between shifts. An event is raised when a Cardholder re-enters the Regulated Zone within the minimum break period. A temporary exit grace period can be configured to define a period of time a Cardholder is allowed off-site before they are considered to be between shifts.

    Example: you can configure a Break duration rule to raise an alarm when a Cardholder enters the Zone and has not had a 48-hour break in the last 5 days. For more examples, refer to section 10 *"Examples"* later in this release note.

3. **Maximum duration:** Used to monitor Cardholders' time-on-site within a single shift (period of time). An event is raised when a Cardholder has been inside the Regulated Zone for a period of time greater than the configured shift length.

    Example: you can configure a Maximum duration rule to raise an alarm when a Cardholder stays in the Zone for longer than 10 hours. For more examples, refer to section 10 *"Examples"* later in this release note.

4. **Predictive cumulative duration:** Used to monitor Cardholder accumulated time-on-site across multiple shifts **and** predict if a Cardholder will exceed the cumulative limit (total time limit across shifts). When a Cardholder enters the Zone, a rule is checked: will the Cardholder end up at or above the cumulative limit if they stayed in the Regulated Zone for the Expected shift duration. If yes, a predictive alarm is raised.

    After the Cardholder exits the Zone, the rule checks whether they have already exceeded the cumulative limit or whether re-entering the Zone immediately would violate the predictive rule. If yes, then any configured Competency is disabled.

    Example: you can configure a Predictive cumulative duration rule to raise an alarm when a Cardholder enters a Zone, and if staying in the Zone for 10 hours would take their total time-on-site above 50 hours. For more examples, refer to section 11 *"Predictive Cumulative Duration Examples"* later in this release note.

    Note: If the Cardholder is already in breach of the Cumulative predictive duration rule and the Cardholder enters the Zone, a predictive alarm is not raised. However, after the Cardholder exits the Zone, the Competency re-enablement time is re-calculated.

5. **Shift management:** Used to monitor Cardholders' shift patterns and optionally enforce Cardholders' compliance with shift patterns. An alarm is raised when a Cardholder enters the Regulated Zone before the first day of their shift. An alarm is also raised when a Cardholder does not exit site when their shift ends. Grace periods can be configured to allow Cardholders to enter site one, two or three days before their shift starts, and leave one, two or three days after their shift ends.

    Shift patterns are composed of a Start Shift Date, an End Shift Date (optional) and Shift Pattern (e.g. 7x7). Shift Patterns define how many days a Cardholder is granted site access for before having their access disabled (their shift), and how many days must pass before they are again granted site access (their rest period).

    Example: a Cardholder has a shift pattern of 7 days working and 7 days break (7x7), with a grace period of 1 day. You can configure a Shift management rule to raise an alarm when the Cardholder enters site earlier than one day before their shift starts, or when the Cardholder has not left site after 8 days (7 days plus grace period) have passed since their shift started.

An operator can configure a Regulated Zone to automatically disable a Competency upon a rule violation. The Competency can be disabled immediately or after a configured delay. For the Break duration and the Predictive cumulative duration rules, re-enablement of the Competency will occur automatically once the Cardholder is no longer in violation of that particular rule.

An operator can configure an Activity Report to report on Regulated Zone events over a specified period of time, for all Cardholders or specific Cardholders only. Refer to the topic *"Creating Reports"* in the Gallagher Command Centre Online Help.

An operator can configure a Notifications Filter to notify Cardholders when a regulated zone event occurs. The Notifications Feature is a licensed feature of Command Centre. Refer to the topic *"Creating a Notifications Filter"* in the Gallagher Configuration Client Online Help.

1.2 Compatibility

This feature supports the following Gallagher software:

- Gallagher Command Centre vEL8.60.1270 (or later vEL8.60 release)
- Gallagher Controller 6000 vCR8.60.211012a (or later vCR8.60 release)
- Gallagher Mobile Reader

Command Centre and this feature have been tested using the following:

- Command Centre Server: Windows Server 2019
- Command Centre Workstation: Windows 10 (64-bit)
- Database: SQL Server 2019 Express

This feature has been tested in a Command Centre multi-server environment.

Gallagher Mobile readers are supported. Access and/or exit events are generated when a Cardholder is moved between Access Zones via a Mobile reader.

This feature only tracks Tagboard movements (i.e. moving Cardholders between Zones) if the Regulated Zone is configured using Access Zone(s).

2 Installation

To install this feature, perform the following procedure:

Note: If the Gallagher 'Fatigue Management' feature is installed, or a previous version of this feature is installed, this must be removed before installing this version. Refer to section 7 *"Upgrading"* later in this release note.

1. Perform a backup of your Command Centre system.

2. Ensure your Command Centre licence file contains the following entries:

   ```
   [Limits]
   Regulated Zones=X      (where X is a number)

   [Customisations]
   RegulatedZones=1
   ```

3. Store the licence file in the following folder:
   `C:\ProgramData\Gallagher\Command Centre`

4. Exit Command Centre and stop the Command Centre Services.

5. On the Command Centre Server and all Command Centre Workstations, install Command Centre vEL8.60.1270 (or later vEL8.60 release) from the Command Centre installation media, if not already installed.

6. Unzip the folder you have been provided and run the installation executable **RegulatedZonesSetup_8.60.xx.msi** on the Command Centre Server and all non-Click-Once* Configuration Client Workstations.

   *Click-Once installation
   Do not install this feature on Click-Once Workstations. Workstations deployed via Click-Once automatically download this feature from the Command Centre Server.

7. Restart the Command Centre Services and Command Centre.

8. To ensure this feature has installed correctly, check the following:

   - From the Gallagher Configuration Client menu bar, go to **Help** > **About Command Centre**. 'RegulatedZones v8.60.xxx' should be displayed in the Customisations field.

   - Open **Programs and Features** from the Windows Control Panel on the Command Centre Server. 'Gallagher Regulated Zones' should be listed as installed.

3 Configuration

Regulated Zones identify the Access Zones and/or Doors that will be monitored. The Regulated Zone Rules that can be created are Break duration, Cumulative duration, Maximum duration, Predictive cumulative duration, and Shift management. Assign the rules as child items to the appropriate Regulated Zones.
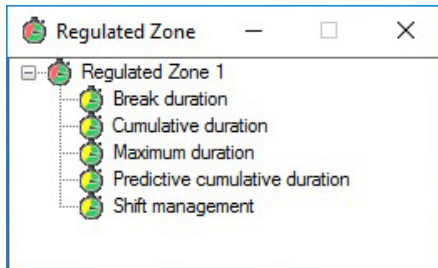
3.1 Creating a Regulated Zone

To create a Regulated Zone, perform the following procedure:

1. Click **Configure** from the menu bar, then **Regulated Zones**.
   The Regulated Zone window opens (in grid view).

2. Right-click and select **New...** > **Regulated Zone**.
   The **General** tab displays.

3. Complete the general fields as required.

4. Click the **Event Response** tab and configure as required.

5. Click the **Alarm Instructions** tab and configure as required.

6. Click the **Area Configuration** tab.
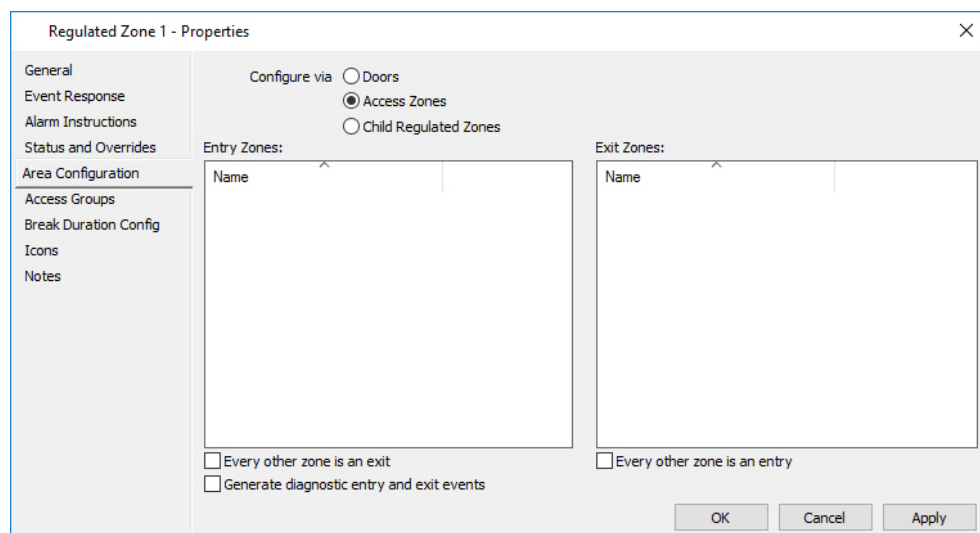
7.   Regulated Zones can be configured in three ways.

Configuration Method	Description	To configure using this method, go to step ...
Doors	Regulated Zones are configured using Doors as entry and exit points.	8
Access Zones	Regulated Zones are configured using Access Zones as entry and exit points.	11
Child Regulated Zones	Regulated Zones are configured using other Regulated Zones (parent/child relationship). **Notes:** The Access Groups of any Regulated Zones added as 'children' are ignored, and the 'parent' zone becomes responsible for membership filtering. The 'child' zones determine the physical boundaries of the parent Regulated Zone. You can (optionally) limit the rules to only apply to Cardholders who travel between child zones.	14

Configure Regulated Zones using Doors:

8.   Select the **Doors** radio button.

9.   Drag and drop the appropriate Doors into the grid.

    Notes:

    - Entering a Door will result in the Cardholder entering the Regulated Zone.

    - Leaving through a Door will result in the Cardholder exiting the Regulated Zone.

    - The Cardholder will also leave the Regulated Zone when they leave to go outside (i.e. exit through a *non-listed* door that does *not* have an Exit Zone assigned).

    - If no doors are specified, any entry or exit event will move the Cardholder in and out of the Regulated Zone.

10.   Go to Step 17.

Configure Regulated Zones using Access Zones:

11. Select the **Access Zones** radio button.

12. Drag the appropriate Access Zones into the grids as appropriate.

Notes:

- When a Cardholder enters a listed Entry Zone, they enter the Regulated Zone. Conversely, when a Cardholder enters a listed Exit Zone, they leave the Regulated Zone.

- The Cardholder will also leave the Regulated Zone when they leave to go outside (i.e. exit through a door that does not have an Exit Zone assigned).

- If you populate either the Entry Zone or the Exit Zone list and select the **Every other zone is an ...** check box below the populated grid, all other available Access Zones are treated as being in the unpopulated grid.

13. Go to Step 17.

Configure Regulated Zones using Child Regulated Zones:

14.   Select the **Child Regulated Zones** radio button.

15.   Select an option from the **Accepted Events** drop-down list:

Option...	means that rules of the 'parent zone' apply...
All	at all times.
Passed through Doors / Zones in different Regulated Zones	when the Cardholder moves between child Zones (of the same parent).
Did not pass through Doors / Zones in different Regulated Zones	if the Cardholder stays within one child Zone.

16.   Drag and drop the appropriate Regulated Zones into the grid.

        Notes:

-    Entering a child Zone will result in the Cardholder entering the parent Regulated Zone.

-    Entering a child Zone will generate an entry event (one for each zone if multiple are accessed in succession).

-    Leaving a child Zone will result in the Cardholder exiting the parent Regulated Zone unless they have entered another child Zone belonging to the same parent.

17.   Ensure the **Generate diagnostic entry and exit events** check box is deselected (unless you want to test your configuration).

18.   Click the **Access Groups** tab.

19.   Configure the Access Groups for this Regulated Zone as appropriate:

Option	Description
All Cardholders	When selected, all Cardholders are included, whether they are members of any Access Groups or not.
No Cardholders (Disabled)	When selected, all Cardholders are excluded, whether they are members of any Access Groups or not.
Specific Access Groups	When selected, the **Include Access Groups** and **Exclude Access Groups** grids are enabled, and Access Groups can be added to the grids

Specific Access Groups	
If a Cardholder is a member of multiple Access Groups and the Cardholder is in both **Include** and **Exclude** grids, the Cardholder will be *excluded* from the Zone and/or the rule. This is because exclusion takes priority over inclusion. Drag and drop the appropriate Access Groups into the **Include Access Groups** and/or **Exclude Access Groups** grids.	
Include Access Groups	**Exclude Access Groups**
Only Cardholders who are members of the included Access Groups but not members of the excluded Access Groups are included. If the grid is left empty (i.e. no Access Group is added to the **Include Access Groups** grid), then all Cardholders are included except those who are a member of the excluded Access Group(s).	All cardholders are included except those that are members of the excluded Access Groups. If the grid is left empty (i.e. no Access Group is added to the **Exclude Access Groups** grid), all Cardholders who are not a member of the included Access Group(s) are excluded.

20.   Click the **Break Duration Config** tab to view, add or remove a Break duration rule for this Regulated Zone.

21. What do you want to do?
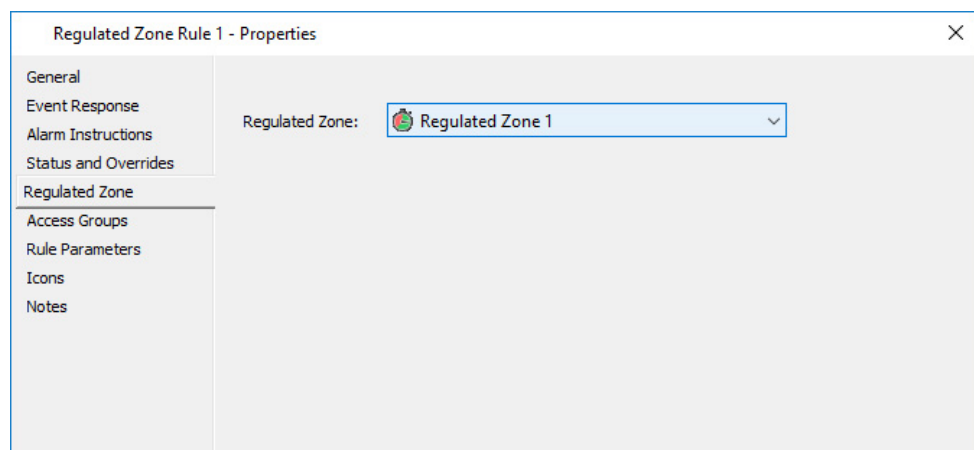
To...	then...
Add a new rule	a. Click the **Add Rule** button. A new Regulated Zone rule displays. b. To configure this rule, refer to section 3.2 "*Creating a Regulated Zone Rule*" later in this release note. **Note:** You can also add an unassigned rule to the Regulated Zone by dragging and dropping it on this grid.
Remove a rule	a. Right-click on the rule you want to remove from this Regulated Zone. b. Select **Remove from list.** The Rule is detached from the Regulated Zone and removed from the grid.
Open a rule	c. Double-click on the rule you want to open. The rule properties page display.

22. Click the **Icons** tab if you want to change the Icon Set for this Regulated Zone.

23. Click the **Notes** tab if you want to add any notes about this Regulated Zone.

24. Click **OK** to exit and save your changes.

3.2   Creating a Regulated Zone Rule
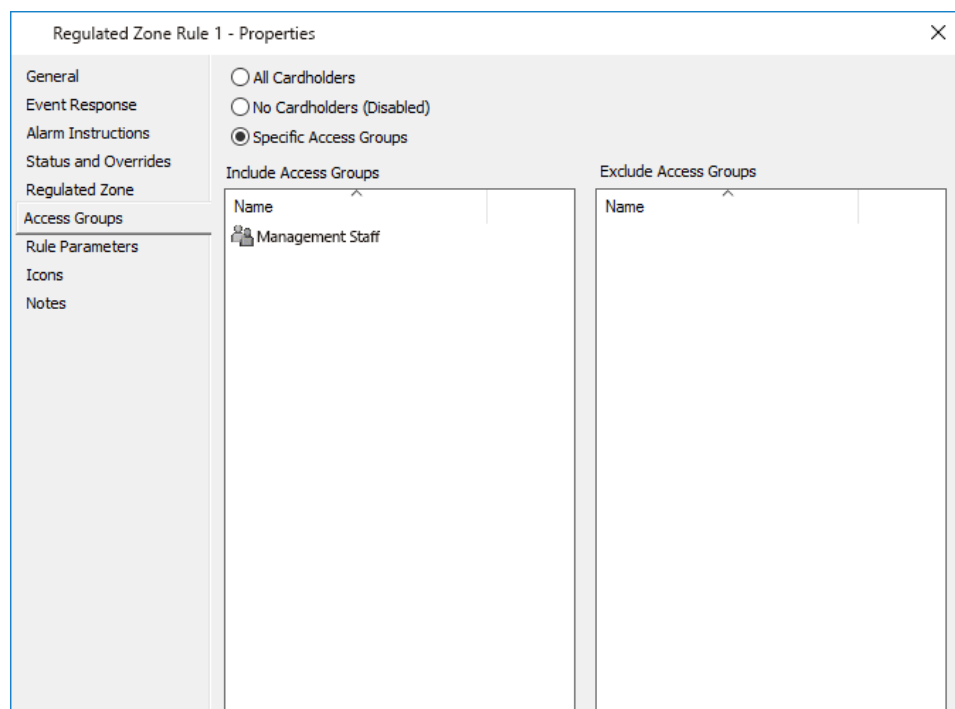
To create a Regulated Zone Rule, perform the following procedure.

1.   From the menu bar, go to **Configure** > **Regulated Zones**.
      The Regulated Zone window opens (in grid view).

2.   Right-click and select **New...** > **Regulated Zone Rule**.
      The **General** tab displays.

3.   Complete the general fields as required.

4.   Click the **Event Response** tab and configure as required.

5.   Click the **Alarm Instructions** tab and configure as required.

6.   Click the **Regulated Zone** tab.

7.   From the drop-down list, select the Regulated Zone that this rule will apply to.

8.   Click the **Access Groups** tab.

9.   Configure the Access Groups for this Regulated Zone Rule as appropriate.

Note: Adding Access Groups to the Regulated Zone Rule adds another level of conditions Cardholders need to meet in order to be tracked via Regulated Zones.

Option	Description
All Cardholders	When selected, all Cardholders who are members of any Access Group are included.
No Cardholders (Disabled)	When selected, all Cardholders who are members of any Access Group are excluded.
Specific Access Groups	When selected, the **Include Access Groups** and the **Exclude Access Groups** grids are enabled and Access Groups can be added to the grids.

Specific Access Groups	
If a Cardholder is a member of multiple Access Groups and the Cardholder is in both **Include** and **Exclude** grids, the Cardholder will be *excluded* from the Zone and/or the rule. This is because exclusion takes priority over inclusion. Drag and drop the appropriate Access Groups into the **Include Access Groups** and/or **Exclude Access Groups** grids.	
Include Access Groups	**Exclude Access Groups**
Only Cardholders who are members of the included Access Groups but not members of the excluded Access Groups are included.	All cardholders are included except those that are members of the excluded Access Groups.
If the grid is left empty (i.e. no Access Group is added to the **Include Access Groups** grid), then all Cardholders are included except those who are a member of the excluded Access Group(s).	If the grid is left empty (i.e. no Access Group is added to the **Exclude Access Groups** grid), all Cardholders who are not a member of the included Access Group(s) are excluded.

10. Click the **Rule Parameters** tab.
Regulated Zones can be configured using one of five different rules.

Rule	Description	Go to step...
Cumulative duration	Used to monitor Cardholders' accumulated time-on-site across multiple shifts.	9
Break duration	Used to monitor Cardholders' minimum break period between shifts.	11
Maximum duration	Used to monitor Cardholders' time-on-site within a single shift (period of time).	13
Predictive cumulative duration	Used to monitor Cardholders' accumulated time-on-site across multiple shifts and predict if a Cardholder will exceed the cumulative limit.	15
Shift management	Used to monitor Cardholders' shift patterns.	17

IMPORTANT: Be careful not to configure a rule that conflicts with another rule for the Regulated Zone. Rule conflicts that can occur are:

- The temporary exit **Grace period** and/or Competency **Grace period** must be less than the maximum time limit within one shift and less than the **Break** period.

- The **Maximum duration** must be less than the **Total time limit across shifts**.

- The **Total time limit across shifts** value must be less than the value of **Within last**.

- The **Time in zone** value must be less than the value of **Within last**.

Configuring a Regulated Zone Rule using Cumulative duration:

11. Select the **Cumulative duration** rule from the **Rule** drop-down list.

12. Configure the parameters as described in the table below, then go to Step 22 of this procedure.
    Note: Required parameters are indicated by a *.

Parameter	Description
Grace Period	The duration for ignoring out-of-regulated-zone exit and re-entry events for the purpose of monitoring regulated hours.
	Example: Cardholders leave the site for a break and are usually away for no longer than 10 minutes. Command Centre will ignore the exit and re-entry events, for the purpose of monitoring on-site regulated hours.
*Total time limit across shifts	The total length of time across multiple shifts before a *Regulation Cumulative duration breach* alarm is raised.
	Example: Cardholders must not exceed 70 hours on-site within one week. If a Cardholder is on-site for more than 70 hours within one week, a *Regulation Cumulative Shift breach* alarm is raised.
*Within last	The total length of time during which a Cardholder can only be in the Regulated Zone for the cumulative limit without breaching the rule.
	Example: within the last 5 days, a Cardholder can only work 70 hours.
Competency	The Competency that will be automatically disabled upon rule violation. The Competency is disabled (after the Competency Grace Period) for a Cardholder when the Cardholder is in violation, and can be manually re-enabled by an Operator.
	Use case: The Competency can be used to deny access for a Cardholder who is in breach of a rule, or to deny access during Break duration period.
Competency-Grace Period	Defines how long a Cardholder can be in violation for before their Competency is disabled.

Configuring a Regulated Zone Rule using Break duration:

13.   Select the **Break duration** rule from the **Rule** drop-down list.

14.   Configure the parameters as described in the table below, then go to Step 22 of this procedure.
      Note: Required parameters are indicated by a *.

Parameter	Description
Shift	The spanned time period that the rule applies within. Select the Shift check box to enable start and end fields. If the **start** and **end** values are the same (i.e. Start: 18:00, End:18:00), then the rule applies at all times.
Grace Period	The duration for ignoring out-of-regulated-zone exit and re-entry events for the purpose of monitoring regulated hours. Example: Cardholders leave the site for a break and are usually away for no longer than 10 minutes. Command Centre will ignore the exit and re-entry events, for the purpose of monitoring on-site regulated hours.
Time in zone	The minimum number of hours a Cardholder is in the Regulated Zone during a single shift.
Within last	The total number of days a Cardholder can be in the Regulated Zone before being required to take a break. Specifically, the maximum number of days a Cardholder can be in the Regulated Zone since 'Time in zone' during a Shift has been reached.

Parameter	Description
*Break	The minimum length of time the Cardholder must take as a break between shifts before a *Regulation Break duration violation* alarm is raised. Example: Cardholders must have at least 10 hours off-site between shifts before they can come back on-site. If a Cardholder re-enters the site within these 10 hours, a *Regulation Break duration violation* alarm is raised.
Competency	The Competency that will be automatically disabled upon rule violation. If a Cardholder is in violation of the rule, the Competency is disabled (after the Grace Period and Competency Grace Period) when the Cardholder exits the Regulated Zone. The competency is re-enabled after the Break duration period. Use case: The Competency can be used to deny access for a Cardholder who is in breach of a rule, or to deny access during Break duration period.
Competency-Grace Period	Defines how long a Cardholder can be in violation for before their Competency is disabled.

Configuring a Regulated Zone Rule using Maximum duration:

15. Select the **Maximum duration** rule from the **Rule** drop-down list.

16. Configure the parameters as described in the table below, then go to Step 22 of this procedure.
     Note: Required parameters are indicated by a *.

Parameter	Description
Grace Period	The duration for ignoring out-of-regulated-zone exit and re-entry events for the purpose of monitoring regulated hours. Example: Cardholders leave the site for a break and are usually away for no longer than 10 minutes. Command Centre will ignore the exit and re-entry events, for the purpose of monitoring on-site regulated hours.
*Maximum duration	The maximum length of time for a single shift before a Regulation Shift length breach alarm is raised. Example: Cardholders are allowed on-site for 14 hours. If a Cardholder is on-site for more than 14 hours, a Regulation Maximum duration breach alarm is raised.
Competency	The Competency that will be automatically disabled upon rule violation. The Competency is disabled (after the Competency Grace Period) when the Cardholder is in violation, and can be manually re-enabled by an Operator. Use case: The Competency can be used to deny access for a Cardholder who is in breach of a rule, or to deny access during Break duration period.
Competency-Grace Period	Defines how long a Cardholder can be in violation for before their Competency is disabled.

Configuring a Regulated Zone Rule using Predictive cumulative duration:

17. Select the **Predictive cumulative duration** rule from the **Rule** drop-down list.

18. Configure the parameters as described in the table below, then go to Step 22 of this procedure.
    Note: Required parameters are indicated by a *.

Parameter	Description
Grace Period	The duration for ignoring out-of-regulated-zone exit and re-entry events for the purpose of monitoring regulated hours.
	Example: Cardholders leave the site for a break and are usually away for no longer than 10 minutes. Command Centre will ignore the exit and re-entry events, for the purpose of monitoring on-site regulated hours.
*Total time limit across shifts	The total length of time across multiple shifts.
	Example: Cardholders must not exceed 70 hours on-site within one week.
*Within last	The length of time during which a Cardholder can only be in the Regulated Zone for the cumulative limit.
	Example: to limit a Cardholder to 70 hours in 5 days, set the 'Within last' to 5 days.
*Expected Shift duration	The total number of hours a Cardholder is expected to be in a zone during a single shift.

Parameter	Description
Competency	The Competency that will be automatically disabled upon rule violation when the Cardholder is predicted to exceed the cumulative limit. If a Cardholder is in violation of the rule, the Competency is disabled (after the Grace Period) when the Cardholder exits the Regulated Zone. The Competency is re-enabled once the Cardholder cannot possibly spend more than the **Total time limit across shifts** inside the zone within the **Within last** period, even if they spent the entire remainder of the **Within last** period inside the zone. For examples, see section 11 "*Predictive Cumulative Duration Examples*" later in this release note. Use case: The Competency can be used to deny access for a Cardholder who is in breach of a rule.

Configuring a Regulated Zone Rule using Shift management:

19.   Before you configure a Regulated Zone using Shift management, ensure you have configured the following:

Personal Data Fields
Create the following Personal Data Fields (PDFs):

- 'Shift pattern'
  Create the PDF of 'Text' Data type or 'Text-List' Data type as required for the Shift patterns of your Cardholders.
  If using 'Text' Data type, Gallagher recommends that you use the following regular expression: `^\d\d?x\d\d? (x\d\d?x\d\d?) ?$`
  If using 'Text-List' Data type, add the List Values for all shift patterns that you want to be possible (e.g. 7x7, 10x10 etc.).

- 'Start shift date'
  Create the PDF of 'Date' Data type as required for the Start shift dates (first day of employment) of your Cardholders.

- 'End employment'
  Create the PDF of 'Date' Data type as required for the End employment dates (last day of employment) of your Cardholders. This PDF is optional.

- 'First allowed work day'
  Create the PDF of 'Date' Data type as required for the First allowed work day dates of your Cardholders. This PDF is only required if the First allowed work day is a later date than the Start shift date (may occur when changing a Cardholder's Shift pattern).

Refer to the topic *"Creating a new Personal Data Field"* in the Gallagher Configuration Client Online Help. If these PDFs already exist, this procedure is not applicable.

20. Select the **Shift Management** rule from the **Rule** drop-down list.

21. Configure the parameters as described in the table below, then go to Step 22 of this procedure.
Note: Required parameters are indicated by a *.

Parameter	Description
Start shift grace Period	The duration (in days) for ignoring early site access, to allow Cardholders to arrive on-site up to three days early.
End shift grace Period	The duration (in days) for ignoring late site exit, to allow Cardholders to leave the site up to three days late.
*Shift pattern	The configured Personal Data Field (PDF) for the various shift patterns of Cardholders. Each Cardholder needs their own data entry for their Shift pattern (e.g. 7x7).
*Shift start date	The configured PDF for the shift start dates of Cardholders. Each Cardholder needs their own data entry for their Shift start date (e.g. 06/04/2021).
End employment	The configured PDF for the last day of employment (if known) for Cardholders. If a Cardholder has this date set, they will not be able to access the site without raising an alarm after this date.

Parameter	Description
First allowed work day	The configured PDF for the first day a Cardholder will be allowed site access. Cardholders need only have a data entry for this PDF when it is a later date than the Start shift date. Example: if a Cardholder was changing Shift pattern from 7x7 to 5x2, according to their new Shift pattern they only need a two-day break after finishing their last seven-day shift. First allowed work day should be set to ensure that they still have seven days off after finishing the last shift of their 7x7 Shift pattern, before they begin the 5x2 pattern.
Competency	The Competency that will be automatically disabled when a Cardholder's shift - including the End shift grace period - has finished, and enabled at the start of the Start shift grace period. Use case: The Competency can be used to deny access for a Cardholder whose shift has not yet started.
Daily action time	The time of day (in 24-hour time) when the rule checks all affected Cardholders for necessary expiries, disablements or re-enablements of the Competency. Any required expiries, disablements or re-enablements are made at this time.

22. Enter an event message for the rule. If left blank, the default event message will be used. Creating a message is achieved by typing in text and selecting the appropriate "Insertable Fields" from the **Event details** drop-down list where necessary, and clicking the **Insert** button.

Default event messages are:

-   Cumulative duration:
    "Cardholder <Last Name>, <First Name> exceeded their cumulative shift duration within the Regulated Zone <Regulated Zone 1>"

-   Break duration:
    Cardholder <Last Name>, <First Name> entered the Regulated Zone <Regulated Zone 1> before the minimum break duration"

-   Maximum duration:
    "Cardholder <Last Name>, <First Name> exceeded their time within the Regulated Zone <Regulated Zone 1>"

-   Predictive cumulative duration:
    "Cardholder <Last Name>, <First Name> predicted to exceed their cumulative shift duration within the Regulated Zone <Regulated Zone 1>"

-   Shift management:
    -   Early arrival:
        "Cardholder <Last Name>, <First Name> arrived too early into Regulated Zone <Regulated Zone 1>"

    -   Late departure:
        "Cardholder <Last Name>, <First Name> has not departed from Regulated Zone <Regulated Zone 1>"

Notes:

-   The Event message field is limited to 989 characters.

- If configuring a Regulated Zone using Shift management, Event message has separate messages for Early arrival and Late departure. Enter messages for both, one of, or neither event types (if left blank, the default messages will be used).

23. Click the **Icons** tab if you want to change the Icon Set for this Regulated Zone Rule.

24. Click the **Notes** tab if you want to add any notes about this Regulated Zone Rule.

25. Click **OK** to exit and save your changes.

4   Regulated Zone status

To view the status of the Regulated Zone and the Regulated Zone Rules in Command Centre, you need to add the Regulated Zone and the Regulated Zone Rules to a Status Tile. Refer to the topic *"Configuring a Status Tile"* in the Gallagher Command Centre Online Help.

Notes:

- Gallagher recommends that you order items in the Status tile so that the rules applicable for a Zone are placed directly below that Zone.

- There may be a short time delay between Cardholders' movements and the Status tile updating to reflect those movements.

Status			
Name	Status		Updated
Regulated Zone 1	Cardholders inside the Regulated Zone: 0		10/01/2020 11:20:55
Break Duration	Break duration. Cardholders monitored and without violations: 0. In exit grace period: 0. In rule violation: 0. Monitored by break duration: 0.		10/01/2020 11:20:58
Predictive Cumulative Duration	Cumulative duration. Cardholders monitored and without violations: 0. In exit grace period: 0. In rule violation: 0.		10/01/2020 11:20:58
Cumulative Duration	Cumulative duration. Cardholders monitored and without violations: 0. In exit grace period: 0. In rule violation: 0.		10/01/2020 11:20:58
Maximum Duration	Maximum duration. Cardholders monitored and without violations: 0. In exit grace period: 0. In rule violation: 0.		10/01/2020 11:20:58
Shift Management	Shift management. Cardholders monitored and without violations: 0. In rule violation: 0.		10/01/2020 11:20:58

The following table describes the Regulated Zone Command Centre Item status:

Status	Description
Cardholders inside the Regulated Zone [x]	Displays the number of Cardholders within the Regulated Zone.
Maximum duration [x]	Displays the number of Cardholders within the Regulated Zone that are currently exceeding the maximum time limit for a single shift.
Cumulative duration [x]	Displays the number of Cardholders within the Regulated Zone that are currently exceeding the total time limit across multiple shifts.
Break duration [x]	Displays the number of Cardholders within the Regulated Zone who have breached the Break duration rule upon starting their current shift.
Predictive cumulative duration [x]	Displays the number of Cardholders within the Regulated Zone who have breached the Predictive cumulative duration rule upon starting their current shift.
Shift management [x]	Displays the number of Cardholders within the Regulated Zone who have accessed the Zone before their Start shift grace period or have not left since the end of their End shift grace period.
[x] In exit grace period	Displays the number of Cardholders who have exited the Regulated Zone, but are within the temporary exit grace period.

In addition, the Regulated Zone Command Centre Item can be added to a Site Plan. Refer to the topic *"Editing a Site Plan"* in the Gallagher Configuration Client Online Help. The example below monitors Cardholders' time in the chiller.
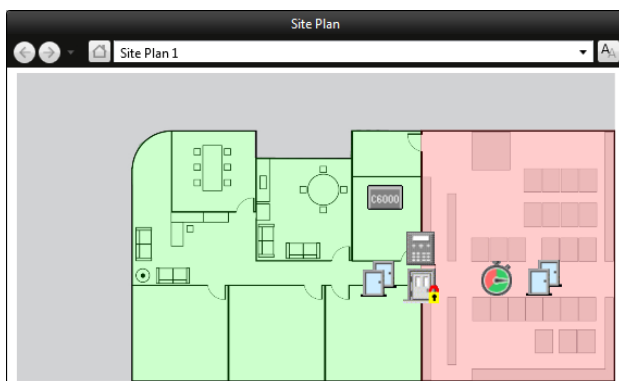
5   Regulation events

This feature introduces the following regulation events:

1.   Regulation Maximum duration breach
      This event is raised when a Cardholder has been inside the Regulated Zone for a period of time greater than the configured Maximum duration.
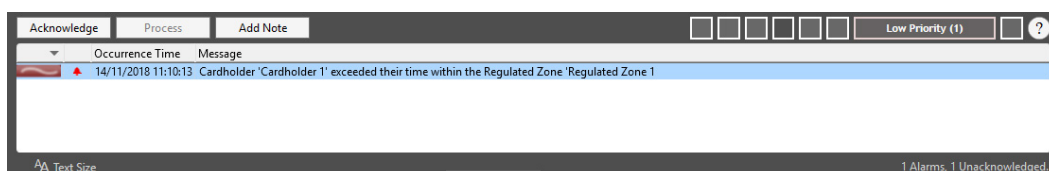
The event will remain active until the Cardholder leaves the Regulated Zone and the temporary exit grace period has expired.

2.   Regulation Break duration breach
      This event is raised when a Cardholder re-enters the Regulated Zone after the temporary exit grace period has expired, but before the Break duration has ended.
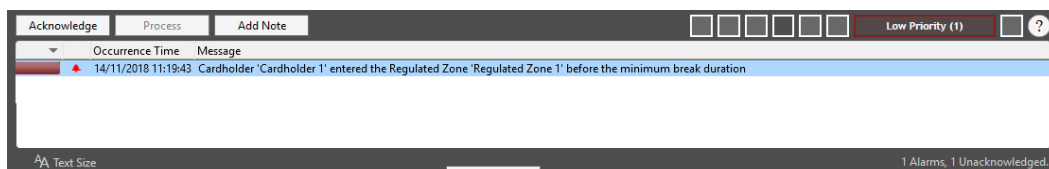
The event will remain active until the Cardholder leaves the Regulated Zone and the temporary exit grace period has expired.

3. Regulation Cumulative duration Shift breach
    This event is raised when a Cardholder has been inside the Regulated Zone for a period greater than the configured Cumulative shift duration, within a specified period.
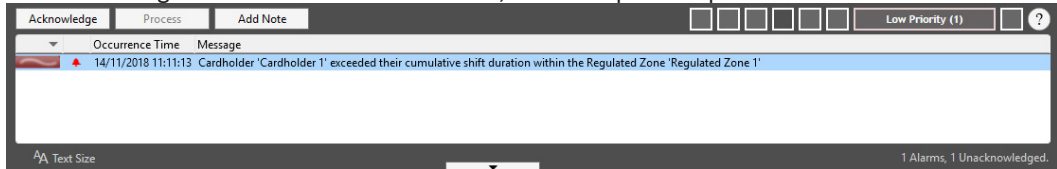
    The event will remain active until the Cardholder leaves the Regulated Zone and the temporary exit grace period has expired.

4. Regulation Cumulative predictive duration breach
    This event is raised when a Cardholder is predicted to exceed the configured cumulative limit (total time limit across shifts).
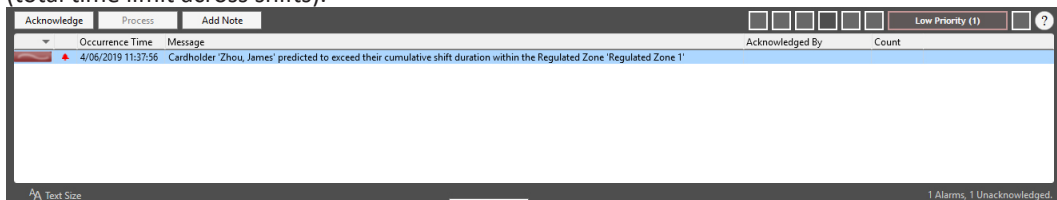
    The event will remain active until the Cardholder leaves the Regulated Zone and the temporary exit grace period has expired.

5. Regulation Shift management breach - Early arrival
    This event is raised when a Cardholder enters the Regulated Zone before the start of the Start shift grace period.
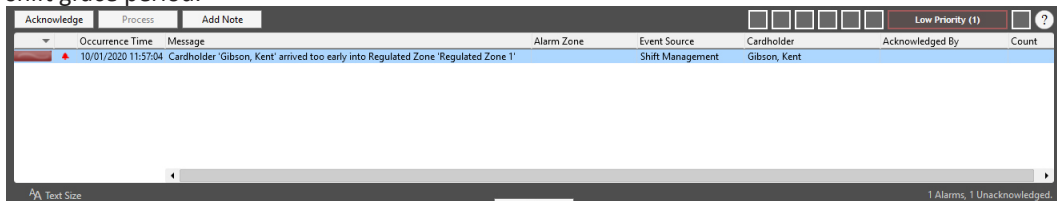
    The event will remain active until the Cardholder leaves the Regulated Zone.

6. Regulation Shift management breach - Late departure
    This event is raised when a Cardholder has not left the Regulated Zone before the end of the End shift grace period.
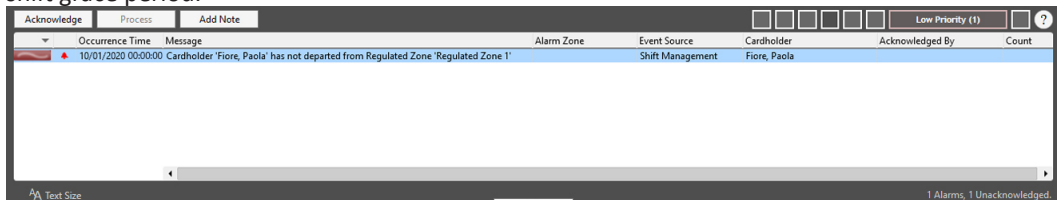
    The event will remain active until the Cardholder leaves the Regulated Zone.

7. Entry Diagnostic event

8. Exit Diagnostic event

6   Re-configuration

- If a rule is changed and no Cardholders are in the Regulated Zone, the status becomes unknown.

- If a rule is changed and a Cardholder is in the Regulated Zone, the status is updated and the rule will come into effect shortly afterwards.

- If a Cardholder has a violation and is within the grace time when the grace time is changed, the violation will use the previous grace time (i.e. the grace time as it was set when it started).

- Adding to the list of Doors, Access Zones or Child Regulated Zones only affects future events. Historical events at those Doors or Zones are not re-introduced into the system.

- Removing excluded Access Groups from the Regulated Zone only affects future events. Historical events for Cardholders that are no longer excluded are not re-introduced into the system if the event has already been processed.

- Activating a rule while a Cardholder is outside the affected Regulated Zone and in violation of that rule will not raise an event until they move through a Door.

7   Upgrading

Before you begin

- In the 7.40 version of this feature, the rules are configured within the Regulated Zone item. However, in the 7.50 version and onwards, the rules are configured as separate items assigned to the Regulated Zone. If you are upgrading this feature from 7.40, Regulated Zone items will be automatically created in Command Centre for any rules that had previously been enabled. The upgrade will automatically append a unique digit to the name of each rule to distinguish it from other rules. The rule description will state "Auto-created during upgrade". After upgrading, you can rename the rules or create additional rules as required.

- In the 7.40 version of this feature, when the shift duration (now known as Maximum duration) rule is breached, an active alarm is raised; and when an inter-shift (now known as Break duration) or consecutive shift (now known as Cumulative duration) rule is breached, an inactive alarm is raised. After upgrading, all active Maximum duration alarms will become inactive. The system will re-calculate the rules violation and raise a new active alarm for each rule breach.

7.1   Upgrading from vEL8.50 (or earlier) to vEL8.60

1.   Perform a backup of your Command Centre system.

2.   Exit Command Centre, stop the Command Centre Services, and stop the FTCAPI Router Service.

3.   Using the Windows **Programs and Features** utility, remove the program 'Gallagher Regulated Zones' from the Command Centre Server and all Command Centre Workstations.

4.   Upgrade Command Centre to vEL8.60.1270 (or later vEL8.60 release). Refer to the document *"3E0068 Release Note Command Centre vEL8.60.1270 (Upgrade Procedures).pdf"* located on the Command Centre installation media.

5.   Install the new 'Gallagher Regulated Zones' feature you have been provided. Refer to section 2 *"Installation"* earlier in this release note.

7.2   Upgrading on vEL8.60

1.   Perform a backup of your Command Centre system.

2.   Exit Command Centre, stop the Command Centre Services, and stop the FTCAPI Router Service.

3.   Using the Windows **Programs and Features** utility, remove the program 'Gallagher Regulated Zones' from the Command Centre Server and all Command Centre Workstations.

4.   Install the new 'Gallagher Regulated Zones' feature you have been provided. Refer to section 2 *"Installation"* earlier in this release note.

8　Uninstallation

To uninstall this feature, perform the following procedure:

1. Delete all Regulated Zone Command Centre Items.

2. Exit Command Centre and stop the Command Centre Services.

3. Using the Windows **Programs and Features** utility, remove the program 'Gallagher Regulated Zones' from the Command Centre Server and all Command Centre Workstations.

4. Restart the Command Centre Services and Command Centre.

9　Known issues

- If a large number of alarms remain unprocessed, this may result in performance issues. Gallagher advises that alarms are processed accordingly.

- To turn a Regulated Zone Rule ON or OFF, you must remove the Regulated Zone assignment from the Regulated Zone Rule (when removed, the rule will display as un-configured; a blue jigsaw overlay appears on the icon).

- Be careful not to configure a rule that conflicts with another rule for the Regulated Zone. The system does not check all rule conflicts between rule items.

- If you log on as "system operator" in a Command Centre multi-server environment, you will see alarms from all Servers. To view local alarms only, configure a local operator group for the local Server.

- If a Cardholder exits through a Door that has no Access Zone, Command Centre does not update Regulated Zone correctly (i.e. it does not reduce the total number of Cardholders by 1).

- If you change the **Configuration via** option on a Regulated Zone (between Access Zones, Doors, or Child Regulated Zones), the new configuration will immediately take effect, but the items set in the previous **Configuration via** grid(s) will remain linked to the Regulated Zone.

  If you try to delete a Child Regulated Zone, Access Zone, or Door that isn't used by the Regulated Zone any more but is still linked to the previous **Configuration via** option, you may get an error message such as "this item cannot be deleted as there is a Regulated Zone that depends upon it for proper operation". The item you are trying to delete is still a child of the Regulated Zone, even though the Regulated Zone has been reconfigured. If you want to delete an item that is in use by a Regulated Zone, follow this procedure:

  1. Change the **Configuration via** option of the Regulated Zone to use the item type you are trying to delete (e.g. if you want to delete a Door, reconfigure the Regulated Zone to use Doors).

     Do not click Apply yet.

  2. Remove the item (e.g. the Door) that you want to delete.

  3. Change the **Configuration via** option back to how it was before.

  4. Click **OK**.

  5. Delete the item from the system.

10 Examples

The following examples provide an explanation of how the Maximum duration and Break duration rules work when both applied to a local Access Zone.

Key:

⟷ Working

⟷ Resting

↓ Maximum duration rule Competency is disabled

↓ Alarm raised

↑ Break duration rule Competency is enabled

↓ Break duration rule Competency is disabled

⟵--→ 2 hours Grace Period

⟵--→ 8 hours

Example 1

The site is configured to have 14 hours of work time followed by 10 hours of rest time.

Configuration

Two different rules are configured.

1. Break duration

Shift	Time in zone	Within last	Break
			10 hrs

2. Maximum duration

Maximum duration
14 hrs

Site configuration:

14 hrs — 10 hrs — 14 hrs — 10 hrs — 14 hrs

Example 1:

8 hrs — 12 hrs — 15 hrs
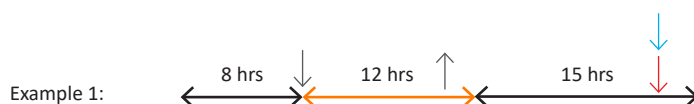
The Cardholder works for 8 hours, rests for 12 hours, then works for 15 hours. An alarm is raised due to the Cardholder working longer than the set 14 hours during a shift.

0900h	Cardholder starts work
1600h	Cardholder leaves; Break duration rule Competency disables
0200h	Break duration rule Competency enables
0400h	Cardholder starts work
1900h	Maximum duration rule Competency disables; alarm is raised

Example 2

As in Example 1, the site is configured to have 14 hours of work time followed by 10 hours of rest time; and the Cardholder works for 8 hours, rests for 12 hours, then works for 15 hours.

The Break duration Grace Period is 2 hours.

When the Cardholder badges out after 8 hours, the 2-hour Break duration Grace Period starts. At the end of the Grace Period, the Break duration rule Competency is disabled, and re-enables after another 8 hours.

An alarm is raised due to the Cardholder working longer than 14 hours during a shift.

Example 2:
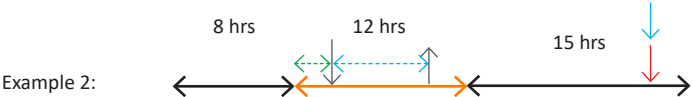
0900h	Cardholder starts work
1600h	Cardholder leaves; grace period starts
1900h	Break duration rule Competency disables; grace period ends
0200h	Break duration rule Competency enables
0400h	Cardholder starts work
1900h	Maximum duration rule Competency disables; alarm is raised

Break duration (only)

The site is configured to have 10 hours (or longer) of work between 07:00 and 17:00. After 4 days, 24 hours of rest is required.

Note: In this example, there is no Maximum duration rule configured.

Shift	Time in zone	Within last	Break
07:00-19:00	10 hours	4 days	24 hours
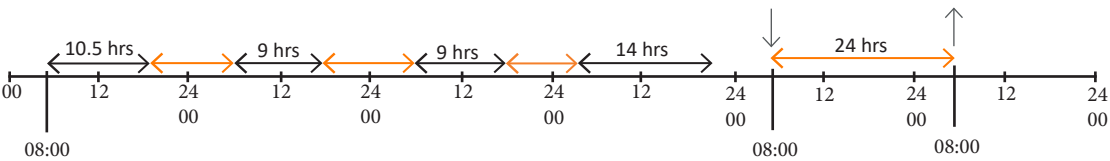
0800h	Cardholder starts work
1830h	Cardholder leaves; Break duration rule Competency stays enabled
0900h	Cardholder starts work
1800h	Cardholder leaves; Break duration rule Competency stays enabled
0900h	Cardholder starts work
1800h	Cardholder leaves; Break duration rule Competency stays enabled
0700h	Cardholder starts work
2100h	Cardholder leaves; Break duration rule Competency stays enabled
0800h	Break duration rule Competency disables; alarm is raised

Note: In this example, all the rest periods between the shifts are less than 24 hours. Since the Cardholder went 4 days with no 24-hour break and did at least one shift longer than 10 hours between 07:00 and 19:00 during this time, the Cardholder is required to take a 24-hour break.

11 Predictive Cumulative Duration Examples

Key:

← → Working

← → Resting

↓ Alarm raised

↑ Predictive cumulative duration rule Competency is enabled

↓ Predictive cumulative duration rule Competency is disabled

■ A period during which a Competency is disabled, and the Cardholder should be off-site

■ A period during which a Zone can be entered without breaching the rule

Example 1: Configured using Competency

The site is configured as:

Parameter	Value
Total time limit across shifts	70 hours
Within last	5 days
Expected shift duration	14 hours
Competency	Yes - Competency 1

Note: You can configure a Competency against the Predictive cumulative duration rule to assist with the enforcement of the rule. The Competency is disabled when the Cardholder is predicted to exceed the Total time across multiple shifts, therefore denying access to the Cardholder (if the Competency is used on the Access Zone).
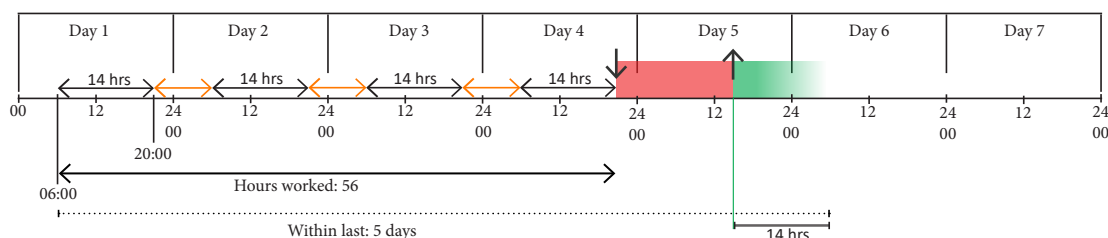
Day 1	0600h	Cardholder starts work
	2000h	Cardholder leaves; Predictive Cumulative Duration rule Competency stays enabled
Day 2	0600h	Cardholder starts work
	2000h	Cardholder leaves; Predictive Cumulative Duration rule Competency stays enabled
Day 3	0600h	Cardholder starts work
	2000h	Cardholder leaves; Predictive Cumulative Duration rule Competency stays enabled
Day 4	0600h	Cardholder starts work
	2000h	Cardholder leaves, Cardholder has been in the Zone for 56 hours; Predictive cumulative duration rule Competency disables
Day 5	1600h	After 20 hours off-site; Predictive cumulative duration rule Competency is enabled. At this time, the Cardholder can not possibly spend more than 70 hours in the zone within 5 days of when they entered on day 1, even if they spend all the remaining 14 hours of the 5-day period in the zone. They are therefore predicted to not violate the rule.

Example: Configured without a Competency

The site is configured as:

Parameter	Value
Total time limit across shifts	70 hours
Within last	5 days
Expected shift duration	14 hours
Competency	No

Note: When the Predictive rule is configured without a Competency, then a Competency is not disabled when a Cardholder is predicted to exceed the limit or when the Predictive rule is breached. Therefore, such configuration should only be used if you do not need to deny access to the site when the Predictive rule is breached.
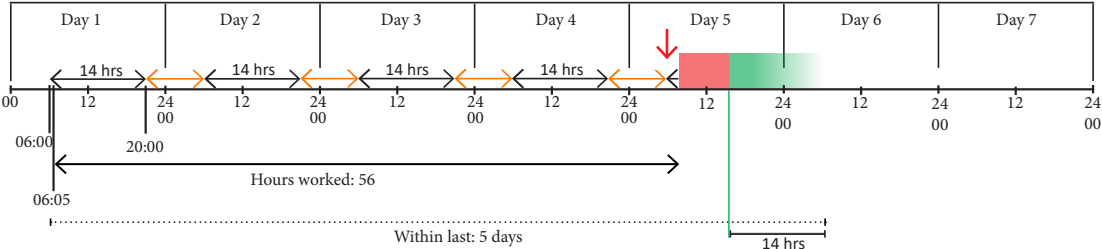
Day 1	0600h		Cardholder starts work
	2000h		Cardholder leaves
Day 2	0600h		Cardholder starts work
	2000h		Cardholder leaves
Day 3	0600h		Cardholder starts work
	2000h		Cardholder leaves
Day 4	0600h		Cardholder starts work
	2000h		Cardholder leaves; The Cardholder is predicted to exceed the 70 hour limit if they enter again before 5 days have passed since they entered on day 1.
Day 5	0600h		Cardholder enters the Zone; Predictive cumulative duration alarm is raised
	0605h		Cardholder leaves
Day 5	1605h		Cardholder can enter the Zone without violating the rule. At this time, the Cardholder can not possibly spend more than 70 hours in the zone within 5 days of when they entered on day 1, even if they spend all the remaining 14 hours of the 5-day period in the zone. They are therefore predicted to not violate the rule.

12   Break Duration Scenarios

Scenario	Time in zone	Shift	Within last	Break
1	10 hours	18:00-06:00	4 days	24 hours
2	6	18:00-06:00		12 hours
3	32		3 days	24 hours
4	14 hours			10 hours
5		18:00-06:00	6 days	12 hours
6		18:00-06:00		6 hours
7			5 days	48 hours
8				24 hours

Scenario	Time in zone	Shift	Within last	Break
1	10 hours	18:00-06:00	4 days	24 hours

If a Cardholder does a 10-hour shift or longer, between 18:00 and 06:00, and it has been 4 days since the Cardholder took a 24-hour break, then the Cardholder must take 24 hours break after exiting the Regulated Zone.

As soon as the condition above is met, then the following events take place:

1.   When the Cardholder exits the Regulated Zone, the Competency is disabled for 24 hours.

2.   If a Competency is not configured against the rule, and the Cardholder enters the zone before the break period ends, then an alarm is raised.

3.   After 24 hours, the Competency is enabled to allow the Cardholder to access the Regulated Zone.

Scenario	Time in zone	Shift	Within last	Break
2	6	18:00-06:00		12 hours

If a Cardholder does a 6-hour shift or longer, between 18:00 and 06:00, then the Cardholder must take 12 hours break after exiting the Regulated Zone.

As soon as the condition above is met, then the following events take place:

1.   When the Cardholder exits the Regulated Zone, the Competency is disabled for 12 hours.

2.   If a Competency is not configured against the rule, and the Cardholder enters the zone before the break period ends, then an alarm is raised.

3.   After 12 hours, the Competency is enabled to allow the Cardholder to access the Regulated Zone.

Scenario	Time in zone	Shift	Within last	Break
3	32		3 days	24 hours

If a Cardholder does a 32-hour shift or longer, and it has been 3 days since the Cardholder took a break of 24 hours, then the Cardholder must take 24 hours break after exiting the Regulated Zone.

As soon as the condition above is met, then the following events take place:

1. When the Cardholder exits the Regulated Zone, the Competency is disabled for 32 hours.

2. If a Competency is not configured against the rule, and the Cardholder enters the zone before the break period ends, then an alarm is raised.

3. After 32 hours, the Competency is enabled to allow the Cardholder to access the Regulated Zone.

Scenario	Time in zone	Shift	Within last	Break
4	14 hours			10 hours

If a Cardholder does a 14-hour shift or longer, then the Cardholder must take 10 hours break after exiting the Regulated Zone.

As soon as the condition above is met, then the following events take place:

1. When the Cardholder exits the Regulated Zone, the Competency is disabled for 10 hours.

2. If a Competency is not configured against the rule, and the Cardholder enters the zone before the break period ends, then an alarm is raised.

3. After 10 hours, the Competency is enabled to allow the Cardholder to access the Regulated Zone.

Scenario	Time in zone	Shift	Within last	Break
5		18:00-06:00	6 days	12 hours

If a Cardholder spends any time in the Regulated Zone, between 18:00 and 06:00, and it has been 6 days since the Cardholder took a break of 12 hours, then the Cardholder must take 12 hours break after exiting the Regulated Zone.

As soon as the condition above is met, then the following events take place:

4. When the Cardholder exits the Regulated Zone, the Competency is disabled for 12 hours.

5. If a Competency is not configured against the rule, and the Cardholder enters the zone before the break period ends, then an alarm is raised.

6. After 12 hours, the Competency is enabled to allow the Cardholder to access the Regulated Zone.

Scenario	Time in zone	Shift	Within last	Break
6		18:00-06:00		6 hours

If a Cardholder spends any time in the Regulated Zone, between 18:00 and 06:00, then the Cardholder must take 6 hours break after exiting the Regulated Zone.

As soon as the condition above is met, then the following events take place:

1. When the Cardholder exits the Regulated Zone, the Competency is disabled for 6 hours.

2. If a Competency is not configured against the rule, and the Cardholder enters the zone before the break period ends, then an alarm is raised.

3. After 6 hours, the Competency is enabled to allow the Cardholder to access the Regulated Zone.

Scenario	Time in zone	Shift	Within last	Break
7			5 days	48 hours

If a Cardholder spends any time in the Regulated Zone, and it has been 5 days since the Cardholder took a break of 48 hours, then the Cardholder must take 48 hours break after exiting the Regulated Zone.

As soon as the condition above is met, then the following events take place:

1. When the Cardholder exits the Regulated Zone, the Competency is disabled for 48 hours.

2. If a Competency is not configured against the rule, and the Cardholder enters the zone before the break period ends, then an alarm is raised.

3. After 48 hours, the Competency is enabled to allow the Cardholder to access the Regulated Zone.

Scenario	Time in zone	Shift	Within last	Break
8				24 hours

If a Cardholder spends any time in the Regulated Zone, then the Cardholder must take a 24-hour break after exiting the Regulated Zone.

As soon as the condition above is met, then the following events take place:

1. When the Cardholder exits the Regulated Zone, the Competency is disabled for 24 hours.

2. If a Competency is not configured against the rule, and the Cardholder enters the zone before the break period ends, then an alarm is raised.

3. After 24 hours, the Competency is enabled to allow the Cardholder to access the Regulated Zone.

13   Shift Management Scenarios

Scenario 1:

In this scenario, the Cardholder has a 7x7 Shift pattern (seven days work, seven days break).

Start shift grace period	1 day	**First allowed work day**	
End shift grace period	1 day	**Competency**	Site Access
Shift pattern	7x7	**Daily action time**	23:00
Start shift date	06/04/2021	**Early arrival**	
End employment		**Late departure**	

With the Cardholder assigned the above values, if the Cardholder has had the Site Access Competency manually assigned to them before their Start shift date, they can access the Regulated Zone with no alarms raised until they are set to start on 06/04/2021. After this date, the Site Access Competency is only enabled for them during their shifts and grace periods.

If the Cardholder accesses the Regulated Zone on 05/04/2021 (Start shift grace period), and they work from 06/04/2021 to the end of 12/04/2021 (seven days work), they need to leave the Regulated Zone before the end of 13/04/2021 (i.e. 00:00 on 14/04/2021) when their End shift grace period ends. At the end of their End shift grace period, their competency is disabled. If they do not leave the Regulated Zone before this time, an alarm is raised.

After a further six days have passed (their break, less the Start shift grace period), on 19/04/2021 at 00:00 (12:00 a.m.) their Site Access competency is re-enabled.

Scenario 2:

In this scenario, the Cardholder is changing from Shift pattern 1 (7x7) to Shift pattern 2 (5x2).

Shift pattern 1:

Start shift grace period	1 day	**First allowed work day**	
End shift grace period	1 day	**Competency**	Site Access
Shift pattern	7x7	**Daily action time**	23:00
Start shift date	06/04/2021	**Early arrival**	
End employment		**Late departure**	

Shift pattern 2:

Start shift grace period	1 day	**First allowed work day**	20/04/2021
End shift grace period	1 day	**Competency**	Site Access
Shift pattern	5x2	**Daily action time**	23:00
Start shift date	15/04/2021	**Early arrival**	
End employment		**Late departure**	

The Cardholder has worked one shift from their first Shift pattern, and is now, on 13/04/2021, changing their Shift pattern to 5x2. The new Shift pattern states the Cardholder requires two days break, so can start after having two days break after his past shift has ended (last day of past shift was 12/04/2021, break for two days, start on 15/04/20). He should, however, take a seven-day break because this is what was required of his last Shift pattern.

First allowed work day (20/04/2021) has been set, as required, after seven days break after his last shift ended on 12/04/2021. The Cardholder will not be able to access the Regulated Zone until 00:00 (12:00 a.m.) on 19/04/2021; the day before First allowed work day (due to Start shift grace period).