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ENTERPRISESMS PARTITIONING

Abstract...

This technical bulletin describes the two types of data partitioning available within EnterpriseSMS (Message Routing Partitioning and Database Partitioning) and how they are set up.

TYPES OF PARTITIONING

There are two types of partitioning available within EnterpriseSMS:

- *Message Routing Partitioning* provides selective event message routing and selective feature availability to user stations and other modules.
- *Database Partitioning* provides the ability to restrict views of the database so operators can update and manage different sets of data within a single database and cannot view or edit data managed by others.

MESSAGE ROUTING PARTITIONING

Message routing partitioning controls which alarms or events are transmitted to user stations and operators logged in to those stations. This type of partitioning also controls which options are presented to user station operators on pull-down menus, thus limiting operator control to a particular set of devices, and a particular set of commands. Message routing partitioning is standard on all systems, and is activated by proper data definition by the system administrator.

To implement this partitioning within the system:

- A *Reception Code* must be assigned to every device in the system. This assignment is made when devices are connected to a security point. Once defined, all messages generated by a device will contain its reception code. Each distinct reception code constitutes a message partition.
- A *Reception List* consists of a list of reception codes. A reception list must be associated with each operator, user station, and message recipient (such as an alarm printer) within the system. Operators will only be able to view alarms and events containing reception codes included in his/her associated reception list(s). User Stations will only receive alarms and events included in its reception list(s); pull-down menus at user stations will include only those actions enabled, by reception list, at that station.

In addition, the reception list definition limits operators permissions to acknowledge alarms, perform device and door control, and/or request event execution from a user station. The optional feature *Two-Person Approval*, which provides the ability for a second operator to approve a command requested by a first operator before its execution, is also controlled by the permissions granted to the reception list.

When the EnterpriseSMS Server processes distribute event messages, a particular event message is sent to only those user stations where BOTH the logged-in operator AND the user station are granted permission to the message's reception code via their reception lists. The reception code in the message is the reception code of the device generating the event.

Selection lists presented to the operator at a User Station for door control, device control, event execution (server macros), as well as the permission to acknowledge alarms, are limited by the permissions assigned to BOTH the logged-in operator and the user station he is utilizing.

EXAMPLE

A system includes two Operator Command Stations. One is located in the central command center, while the other is located at a remote shipping facility operating during normal working hours only. Since the shipping facility cannot effectively process alarms from the main facility, it is desirable to limit messages sent to the shipping facility OCS to those originating from devices in that facility.

Two reception lists are defined: CENTRAL and SHIPPING. Messages from devices located in the shipping facility will include the reception code SHIP, while all other system devices include the reception code MAIN. The CENTRAL reception list contains the reception codes ALL, MAIN, and SHIP, while the SHIPPING reception list contains the reception codes ALL and SHIP. In this plan, alarms from devices located at the shipping facility will route to both the central command OCS and on the shipping OCS. Alarms from all other system devices will route to the central command OCS only.

NOTE: System-generated messages contain the default reception code ALL. Therefore, ALL should be contained in all reception lists and should not be used as a user defined code for data partitioning.

DATABASE PARTITIONING

Database Partitioning permits different operators to manage different sets of records contained in the Oracle database. Database Partitioning is managed using reception lists and reception codes. The number of partitions (reception lists) that may exist within the database are unlimited. If desired, data records can be viewed in multiple partitions.

Each partition is defined as a reception list. Each data record in the database is assigned a reception code. For a record to be viewable within a partition, that record's reception code must be present in the partition's reception list.

By default, EnterpriseSMS systems install with database partitioning turned OFF. When partitioning is OFF, the reception code field for individual records is dimmed and filled with the default value 'ALL'.

NOTE: With database partitioning OFF, reception codes are still used by some records for User Station partitioning. For this purpose, certain records permit the entry of a reception code (e.g. the Point form). Also, some database records do not require entry of reception code. These records are available globally for all operators.

To activate database partitioning on a system:

- In the Data Control Station PREFERENCES form, check the *Database Partitioning* box in the *Database* section. Exit the DCS. When the DCS restarts, database partitioning will be active.
- Enter the reception codes to be assigned to data records in the Data Control Station SYSADMIN-SYSTEM CODES-RECEPTION CODES form.
- Enter the reception lists that will define each partition, and the set of reception codes contained in each, in the Data Control Station SYSADMIN-RECEPTION LISTS form.
- When defining operators, enter the reception list that represents the partition of data the operator will be permitted to access.

NOTE: A database *Role* is assigned to all Data Control Station users. The user's role determines different functional privileges within the database (e.g. badging operator, system DBA, security officer, engineering DBA, security supervisor). The ability to view specific data entry forms, and privileges of updating or deleting data, are enforced in addition to the a user's partitioning privileges.

- Enter records into the database. As records are entered, select the appropriate reception code to be assigned to that record. Since each operator has his or her own reception list, the list of reception codes that can be assigned to data records by the operator will be limited to the set of reception codes defined in their reception list.
- If there is data in the database prior to setting up database partitioning, those records will have the reception code ALL assigned to them. These records must be updated with the appropriate reception code.

EXAMPLE

A facility with multiple tenants has two tenants, ABC Corp. and XYZ Corp., who wish to manage their own badgeholder populations. All other tenants permit the system administrator to manage their populations.

Define a reception code for each tenant wishing to manage a separate badge population, such as ABC and XYZ. Define a reception code, such as GENL, for tenants who do not wish to manage their own badge populations. Then, define a reception list for each tenant who will manage his or her own data. Finally, define a reception list for the system administrator.

The reception list for ABC Corp. should contain the reception code ABC. The reception list for XYZ Corp should contain the reception code XYZ. The reception list for the system administrator should contain the reception codes ALL, ABC, XYZ, and GENL. With this scheme, employees at ABC and XYZ Corporations will be able to manage their own populations, and will not be able to view badgeholders from other populations, or view other system activity.

If it is required that the system administrator NOT have access to ABC and XYZ Corporation's records, define another reception list, such as GENLADMIN, omitting the ABC and XYZ reception codes, and assign that list to the system administrator. Then, the system administrator can still assign himself GENL at a later date if it becomes necessary to view all system records and activity for maintenance or troubleshooting purposes.