PLANTSCAPE SERVER

APPLICATIONS ADMINISTRATION

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SESSION OBJECTIVES

At the end of this section of the course the student will be able to:

- List used and available Logical Resource Numbers
- Start a task manually and automatically
- Activate a task
- Use the Exscript task

REFERENCES

Knowledge Builder – Application Development Guide→Controlling Server Application Execution

Application Configuration

Introduction

Some PlantScape Servers will include custom tasks which were produced either by the user with the Application Programming Interface or by Honeywell.
In either case these tasks need to be started (that is, assigned a Logical Resource Number, or LRN) before they can be activated.

Tasks can be started manually at any time, or automatically whenever the Server starts.

Logical Resource Number

LRNs are allocated in the range 1 to 500.

Many of these numbers are reserved for use by internal system tasks and should not be used for custom tasks.

LRNs for custom tasks are generally allocated in the range 111 to 150 inclusive.
Available LRNs in this range can be listed by executing the utility **usrlrn**; refer to
Knowledge Builder – Application Development Guide→ Development Utilities→USRLRN.

Starting a Task Manually…..

If it is not possible to stop and restart the PlantScape Server it will be necessary to start tasks manually.

Normal Method

To start a task manually execute the utility **addtsk**:

`addtsk` *`name lrn`* `[`*`priority`*`]`

where: *name* is the executable filename of the task (without the .exe extension),
lrn is an available LRN chosen for this task (in the range 111 to 150),
priority is the task priority (use 0 as a default if you have not been informed otherwise by Honeywell).

Starting a Task Manually…..

With special precautions it is possible to use an LRN outside the range 111 to 150.

Alternative Method

In such cases the following command must be used to start the task manually:

`ct` *`lrn`* `[`*`priority`*`] -efn` *`name`*

where: *lrn* is an available LRN chosen for this task,
priority is the task priority (use 0 as a default if you have not been informed otherwise by Honeywell),
name is the executable filename of the task (without the .exe extension),

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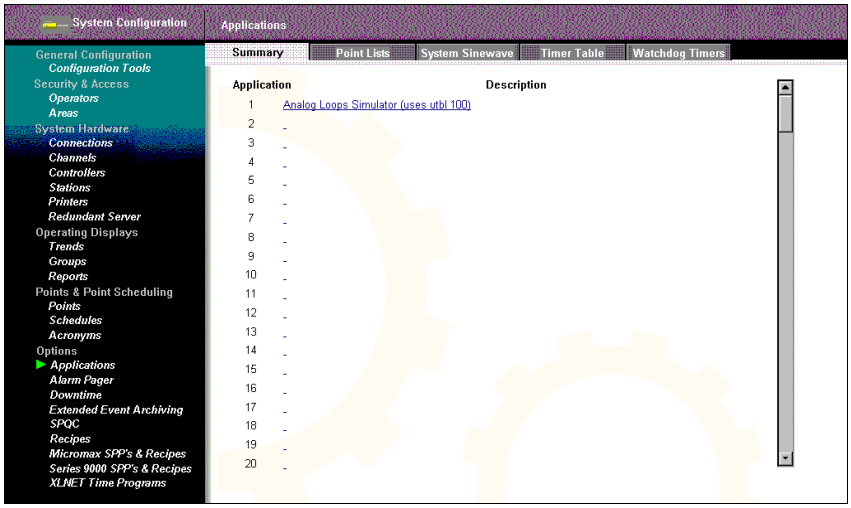
Application Configuration…..continued

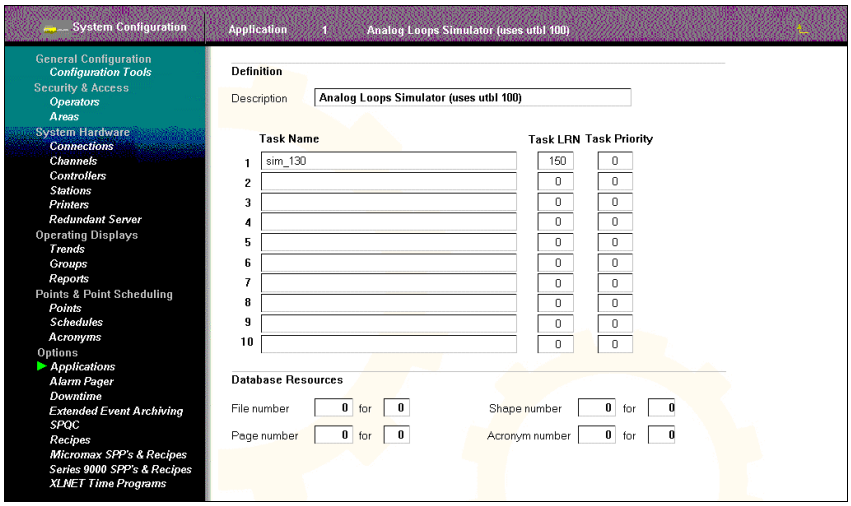
Starting a Task Automatically

To configure a task to start automatically whenever the server starts the Application Summary should be displayed by choosing:

Configure→Applications→Summary



Select the next available Application



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Application Configuration…..continued

Enter the following data:

Description	As appropriate
Task Name	The executable filename of the task (without the .exe extension). **Attention** The grouping of application tasks into different sets is at the discretion of the user. Each LRN must be unique.
Task LRN	The available LRN chosen for this task.
Task Priority	Integer value from 8 (highest priority) to 20 (lowest priority). The default value is 0 which should be used unless instructed otherwise by Honeywell.

Activating a Task

After a task has been started it is ready to receive requests to be activated.
Such requests can be configured in a number of ways, for example:

- From a Station Function Key,
- From a pushbutton on a custom schematic,
- On completion of a Report,
- On a repetitive basis,

and many others.

For a full list of task activation methods refer to *Knowledge Builder*: - Application Development Guide.

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Application Configuration…..continued

Removing (Deleting) a Task…..

Normal Method

If a task is no longer required it can be removed (deleted). Executing the utility **remtsk** will mark the specified task for removal (deletion) after it has completed its current action (that is, next time that task calls TRM04 or TRMTSK; see the Section: Application Programming Tools of this course.)

To remove a task execute the utility **remtsk**:

```
remtsk  lrn
```

where: *lrn* is the LRN for this task (in the range 111 to 150)

Deleting a Task…..

Alternative Method

With special precautions it is possible to delete a task with an LRN outside the range 111 to 150.
Executing the utility **dt** will mark the specified task for deletion after it has completed its current action (that is, next time that task calls TRM04 or TRMTSK; see the Section: Application Programming Tools of this course.)

In such cases the following command must be used:

```
dt lrn
```

where: *lrn* is the LRN for this task

Watchdog Timers

Introduction

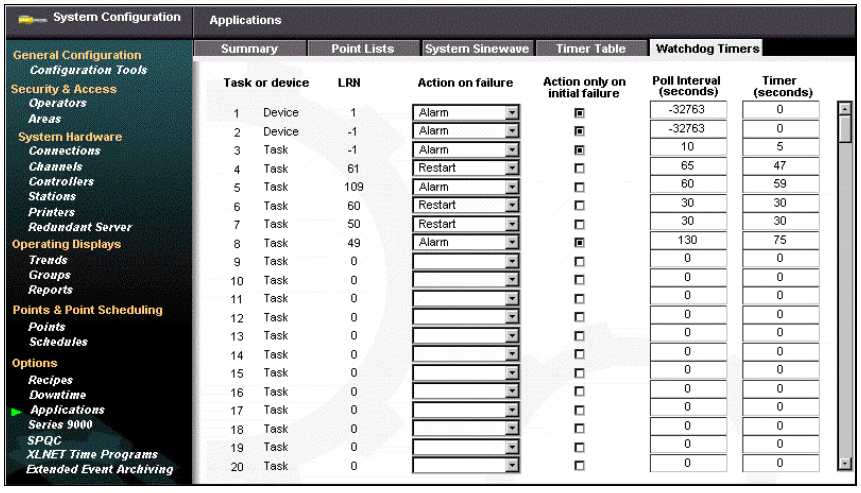
In some critical applications it may be desirable to know whether or not the task is actually working and, if not, to take predetermined actions.
Watchdog Timers are provided for this purpose.

Watchdog Timers are used to monitor tasks.
They operate a countdown timer which is periodically checked for a zero or negative value.
If the timer value is zero or negative, then the watchdog will trigger a predetermined action.
The timer value can be reset at anytime by the task associated with that timer, thus avoiding the timeout condition.

The possible predetermined actions are:

- **Alarm:** generate an alarm upon initial failure only (WDT_ALARM_ONCE), or on each failure (WDT_ALARM)
- **Reboot:** restart the Server (System Service) on failure (WDT_RESTART_SYS)
- **Restart:** restart the task on first failure and restart the System service on subsequent failures, "action only on initial failure" flag is always set (WDT_RESTART_TASK)

  NOTES:
  a) It is not possible for PSc to reboot Win NT
  b) it is virtually impossible for a task to have a "subsequent failure" since the watchdog timer is reset each time the task is restarted.



Exscript

Overview

PlantScape Server includes a task called **exscript.exe**.

This function enables a user to create a batch file, rather than a C or Fortran program, to perform a simple application such as copying a file.

The resultant task is able to be requested by an operator, or by the other task request mechanisms within PlantScape Server, without the need to access a Command Prompt.

> **Attention**
>
> Although the task can be requested from ANY station it is executed in the Server.

Implementation

The following procedure details how to use **exscript**:

1	Check for a free LRN to which to allocate your task using the utility **usrlrn**.
2	Create a text file of the required commands consistent with batch programming rules.
3	Save the text file with the path and name: **`c:\honeywell\server\run\lrn`*`xxx`*`script.bat`** where *xxx* is the free LRN selected in step 1.
4	Start the executable task **exscript** by using the utility **addtsk**.
5	In order that step 4 will not have to be repeated every time PlantScape Server is restarted configure the task **exscript** for automatic start up.
6	Configure the system to activate the chosen LRN in the required way(s).

Lab Exercises - Exscript

Introduction

Proceed with the lab exercise listed below. Ask your Course Manager for any assistance if you are not sure what you are expected to do.

Objectives

On successful completion of this exercise the student will be able to create a task from a given batch file, start the task manually, and configure it for automatic startup on subsequent starts of the PlantScape Server.

Step	Action
1	Check for a free LRN to which to allocate your task using the utility **usrlrn**. Use LRN 11# if it is free.
2	Using an editor of your choice create the following batch file: **`copy \honeywell\server\report\rpt0#2`** **`\honeywell\server\user\report#2.txt`**
3	Save as file \honeywell\server\run\lrn*xxx*script.bat where *xxx* is the LRN chosen in step 1 above.
4	Start the task by entering the command **`addtsk exscript xxx`**
5	Configure **exscript** for automatic start up as LRN *xxx*.
6	Configure a report type of your choice as Report Number #2. Configure the report to start task LRN *xxx* at its completion.
7	Check that file **report#2.txt** was created correctly.