

PLANTSCAPE SERVER

RECIPE MANAGER

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SESSION OBJECTIVES

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

- Configure points for use with Recipes
- Configure a Recipe
- Load a Recipe

REFERENCES

Knowledge Builder: Server and Client Configuration Guide→Configuring Recipes

Recipe Manager

Overview

A “recipe” is a set of Point parameters together with values that are to be loaded into those parameters.

The PlantScape Server Recipe Manager option enables simple batch operations to be performed by configuring recipes consisting of up to 30 ingredients.

Although this option is intended for simple batch applications, larger recipes can be configured by chaining individual recipes together.

Use the Recipe Manager option only for small batch applications. For advanced batch applications the Total Plant Batch option should be used.

Configuring Points for use in Recipes

The Recipe Manager option enables recipes to be loaded to different units.

The unit code can be any two alphanumeric characters.

In many cases, there will only be one unit.

When configuring points that will be used in recipes, the first two characters of the point ID should be the unit code.

When the operator requests a recipe to be loaded, the Recipe Manager combines the unit code and the name of the ingredient point in the recipe to determine the point ID that should be loaded.

You need to configure points for each unit code and ingredient combination that you want to use.

For example, if there were two units (“01” and “AB”) to be used with a recipe that contained an ingredient point of “WATER”, the points 01WATER and ABWATER would need to be configured.

Attention

A point can be included in any Recipe, regardless of the Area to which the point is assigned; that is, Recipes are NOT restricted by Areas.

You may optionally configure a point with the name “*uu*RECIPE”, where *uu* is the unit number.

Whenever a recipe is run, its corresponding point *uu*RECIPE will have its SP and Description updated to reflect the recipe's number and name respectively.

Recipe Manager.....continued

Configuring Recipes To configure recipes, you need to be using Station at an access level of Supv or higher.

Choose:

Configuration Menu→**Recipes**→ Select the desired Recipe

and define the Recipe fields as described below.

Description	Recipe description or title
Scale for recipe ingredients	(can be specified at Oper level) Ingredients in a recipe can be scaled to less than 100% so that a partial batch can be produced. To configure the scale factor for the recipe, enter it in the Scale % field. When the recipe is loaded, all ingredients with Scaled set to “Yes” (in the list of ingredients below) will be scaled by the specified percentage value.
Unit to which to load the recipe	(can be specified at Oper level) A “unit” is all production equipment used to produce a batch. Operators can load recipes to different units by entering a valid two character code.

Recipe Manager.....continued

Ingredients

Each Recipe can contain up to 30 ingredients, although two or more can be chained together if more than 30 are required.

Each ingredient has the following attributes:
(blank lines may be left in the list of ingredients)

Point to be loaded	Enter the last 14 characters of the Point ID to be loaded (the first two characters are taken from the unit no.)
Parameter to be loaded	SP, OP etc <div>Attention The Recipe must set the Mode Attribute of Hybrid Controller Control Modules to Program before they change any other parameter values. The Recipe can then return the Mode Attribute to Operator if required.</div>
Description to be loaded	Enter the ingredient description. The contents of this field can be used when producing batch reports.
Master Value	Enter the usual value for the ingredient. This value is for operator information only.
Minimum Value	Enter the minimum value for the ingredient. The recipe will not be loaded if the operator enters a Working value that is less than this value.
Maximum Value	Enter the maximum value for the ingredient. The recipe will not be loaded if the operator enters a Working value that is greater than this value.
Working Value	(can be specified at Oper level) Enter the value to be loaded. This value will be scaled by the percentage specified in the Scale field if the Scaled field for this ingredient has been set to "Yes".
Scaled	Enter "Yes" if the Working Value should be scaled by the Scale percentage, otherwise enter "No".

Recipe Manager.....continued

Chaining Recipes Together

For a simple recipe consisting of 30 or less ingredients the combobox at the top of the list of ingredients should be set to BEGIN and the combobox at the bottom should be set to END. If more than 30 ingredients are required in a recipe they can be chained together by using different settings on the BEGIN and END comboboxes at the top and bottom of each ingredients list.

For example, if it is required to chain two recipes together the following settings should be used:

	Top Combobox	Bottom Combobox
Recipe 1	BEGIN	CONTINUED
Recipe 2	CONTINUED	END

Monitoring Batches and Producing Batch Reports

You can use custom displays to monitor the progress of a batch. Custom displays can show values from controllers that are used to control batch production.

You can use the Free Format Report Writer, or MS Excel Data Exchange, or ODBC Data Exchange to produce batch reports. These reports can be configured to run at the end of the batch by using a status point plus the Status Change Report Request algorithm.

You will be doing this in later section of this course.

Loading Recipes

After a recipe has been configured, operators can run the batch process by “loading” the recipe. Operators load recipes by choosing either:

Configuration Menu→Recipes→ Select the desired Recipe→**Load**
or:

Action→Load Recipe→ Select the desired Recipe→**Load**

Load Fail

If one of the Recipe ingredients fails to load a “control fail” message will be displayed in the message zone and no further ingredients will be loaded

Lab Exercise - Recipe Manager

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.

Configure and load a recipe

On successful completion of this exercise the student will be able to configure and load a simple recipe.

Step	Action		
1	Use Quick Builder to open the file training_r300_srv1.qdb, Save As team#.qdb, and create the following points:		
	<ul style="list-style-type: none"> • in Area A# • use Controller 5 (DBase_Cont) • all parameters on 2sec scan period (if required) • undefined parameters not required 		
	Type	Name	Range/ States
	ANA	U#RECIPE	default
	ANA	U#PIC100	0-10 kPa
	STA	U#VLV100	0 = Closed 1 = Open
2	STA	U#EndOfBatch	0 = OFF 1 = ON
	<div style="border: 1px solid black; padding: 10px; text-align: center;"> Attention When downloading the points use “selected items only”. </div>		
3	Put all the points in Group 1#.		
4	Select the details for Recipe Number 1#.		

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Lab Exercise – Recipe Manager.....(continued)

5	Configure ingredients to change: <ul style="list-style-type: none">• the SP of PIC100• the OP of VLV100• the OP of EndOfBatch to ON
6	Load your Recipe to Unit U#. Experiment with different Working and Scale values
7	Monitor Group 1# to check your Recipe load. What happens to the SP and Description of U#RECIPE?
8	Make adjustments and reload the Recipe as required. Reset the OP of the point EndOfBatch to OFF prior to each time the Recipe is loaded so that you can verify that all three ingredients have been loaded.
