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## Harvest Data Bucket

### Overview

The Harvest DataBucket is the backend application used for collecting data from flow meter sites and any call-in Harvest unit. It listens to incoming messages and populates an ftp data set appropriate to the site called in. As a background it replaces the functions previously undertaken by hilltop telemetry. The major difference in setup is that previously hilltop Telemetry defined sites by the associated IP number but Harvest DataBucket uses the HSN number of the field deployed hardware. It is therefore important to identify the Hardware type and HSN for each site setup.

### Applications

The Harvest DataBucket is installed on the hydro sever PNT-CD3 and is accessed with the Flcont user name and password.

The Server application is not required for day to day management as a web interface provides all the necessary site functions. <http://192.168.0.10/w.cgi>

Username is superuser, password horizons,1

Hilltop telemetry is required as the ftp transfer client to move the data into the Harvest\_Telemetry.hts file that lives locally in the Hilltop directory. This strips all the data out of the ftpclient and decodes the xml before populating the hts file. It is therefore important to correctly alias the HSN setup.

### Site setup

Access the Harvest DataBucket via the web portal <http://192.168.0.10/w.cgi>

On the Top Menu bar select Options, then click into database

Pick HSN's from the side toolbar and then New HSN



The setup page has three section Base profile, HSN Info and technical Info

First populate the data for HSN Info

#### HSN Info:

Add HSN

HSN:	<input type="text" value="4049"/>	
Country:	<input type="text" value="New Zealand"/>	<a href="#">Go</a>
Region:	<input type="text" value="Cherry Grove"/>	<a href="#">Go</a>
LID:	<input type="text" value="Add automatically"/>	<a href="#">Go</a> <a href="#">Order By Name</a>
HSN Name:	<input type="text" value="Horizons"/>	
Hardware Type:	<input type="text" value="ITU1"/>	

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HSN:	Set the HSN number to the desired unit serial number found either on the outside of the case or inside on the board
Country:	default New Zealand
Region:	set to the water management zone of the consent
LID	Do not edit
HSN Name	Set to Horizons
Hardware Type	Select unit type spe() or ITU (1 or 2)

Technical Info can be left as default

Finally setup the Base profile

### Base Profile

Customer:  HardwareType:  Profile:

### HSN Info:

Set Customer to horizons



Select ITUG1 or SPE as Hardware type

And the appropriate profile for the selected application and unit

Now click Add HSN to activate the install, ignore the errors and return to the .cgi page

The unit will be in the left tree under the region defined then in Sub-region you will see **Horizons** and **Not-set** your site will be as Not set.

Select the HSN number and then access the config menu (top menu bar) under **Options**

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### HSN and Menu Names

HSN	4049	Make primary
Group	Main	
Country	New Zealand	<input type="checkbox"/>
Region	Cherry Grove	
Owner / Subregion	Not Set	
Location Name	4049	LID 8
SiteName Alias (Export)		
Sort Hint	500	

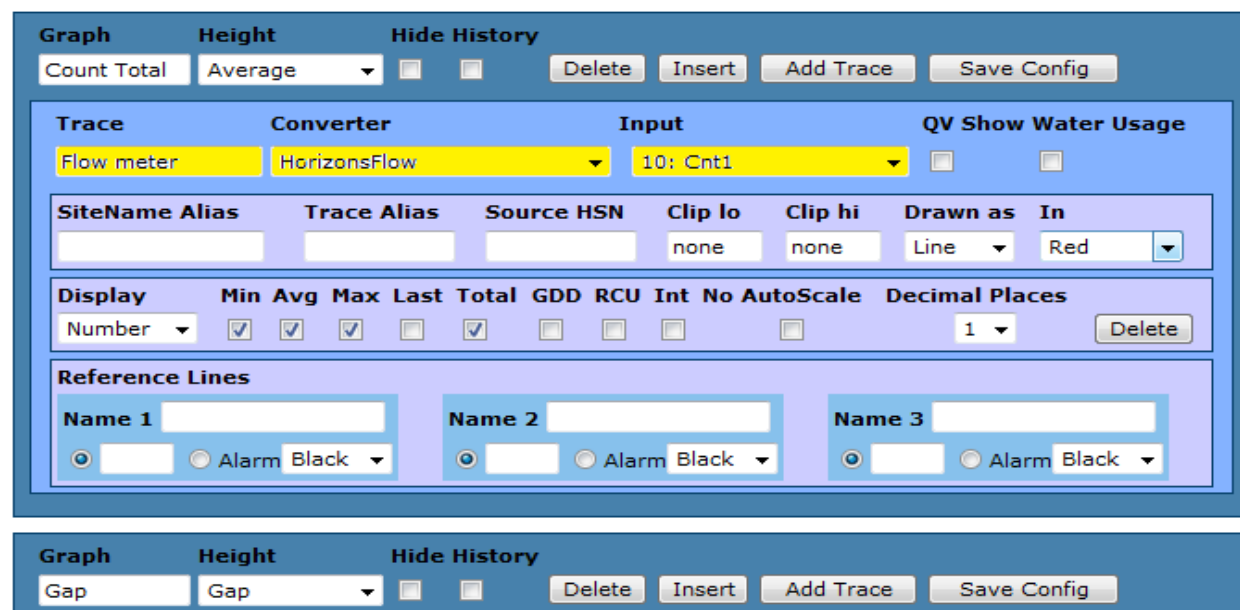
On the HSN and Menu Names make the following edits

Owner/Subregion	Set to Horizons
Location Name	Set to RC Number in the following format RC_XXXXXX



### Single pump setup

For setting up for a single flow meter you have to make sure the **Trace**, **Converter**, and **Input** are set up to the following settings in the picture below.

If you are using a SPE the input for voltage needs to be changed to **Ana3**



The screenshot shows the configuration interface for a single pump setup. The 'Trace' section is set to 'Flow meter', 'Converter' is set to 'HorizonsFlow', and 'Input' is set to '10: Cnt1'. The 'QV Show Water Usage' section has checkboxes for 'Show Water Usage' and 'Show Water Usage' (both unchecked). The 'SiteName Alias' section has fields for 'SiteName Alias', 'Trace Alias', and 'Source HSN'. The 'Clip lo' and 'Clip hi' fields are set to 'none'. The 'Drawn as' field is set to 'Line' and the 'In' field is set to 'Red'. The 'Display' section has a 'Number' dropdown and checkboxes for 'Min', 'Avg', 'Max', 'Last', 'Total', 'GDD', 'RCU', 'Int', 'No', and 'AutoScale'. The 'Decimal Places' field is set to '1'. The 'Reference Lines' section has three fields for 'Name 1', 'Name 2', and 'Name 3', each with a radio button for 'Alarm' and a dropdown for 'Black'.

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Graph
Height
Hide History

Voltage
Short
Delete
Insert
Add Trace
Save Config

Trace
Converter
Input
QV Show
Water Usage

Voltage
Supply\_V
Supply: 9: Ana9

SiteName Alias
Trace Alias
Source HSN
Clip lo
Clip hi
Drawn as
In

Display
Min Avg Max Last Total GDD RCU Int No AutoScale
Decimal Places

Number
Delete

Reference Lines

Name 1
Name 2
Name 3

Graph
Height
Hide History

Time
Time Axis
Delete
Insert
Add Trace
Save Config

## Data export

To make the data export you have to add these settings in at the bottom of the page

Data Export

Client
Traces
Formats
Log Frequency
Schedule
Start Day/Hour

horizons
count Total:Flow meter
Remove
HilltopXML.UTC
Remove
All
Per Call
None



voltage:Voltage
Add Trace

Add Format

Add Data Export

Go to 'Manual Export' page

## Notes for Multiple Pump sites

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For setting up multiple pumps ensure that the SiteName Alias is set appropriately for all meters and voltage. The format should be that of the Hilltop site name RC\_XXXXXX Pump 1

<b>Graph</b>		<b>Height</b>		<b>Hide History</b>											
Count Total		Average		<input type="checkbox"/>		<input type="checkbox"/>		Delete		Insert		Add Trace		Save Config	
<b>Trace</b>		<b>Converter</b>		<b>Input</b>		<b>QV Show</b>									
Flow meter		HorizonsFlow		10: Cnt1		<input type="checkbox"/>									
<b>SiteName Alias</b>		<b>Trace Alias</b>		<b>Source HSN</b>		<b>Clip lo</b>		<b>Clip hi</b>		<b>Drawn as</b>		<b>In</b>			
RC_987654 Pump 1						none		none		Line		Red			
<b>Display</b>		<b>Min Avg</b>		<b>Max Last</b>		<b>Total GDD</b>		<b>RCU Int</b>		<b>No AutoScale</b>		<b>XML Export</b>		<b>Decimal Places</b>	
Number		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input checked="" type="checkbox"/>		1	
														Delete	

To add two different Converters first Define a new custom converter by adding a name, input type and scale. Save the site configuration, then reopen and select the new converter for the flow meter (as shown above)

### Custom Converters

Converters fetch a value from a raw log field, check it against low and high error values, optionally scale it by delta time in seconds (for converters like wind km/h), multiply it by scale (in units/count), and add offset (in given unit). Enter "none" in numeric fields to ignore them. To enable a custom converter, enter its details here and then save the configuration. The Following Java Script formula is used:

```
var X1 = Y1*(4096/Range); so X1 and X2 have units of Counts
```

```
var X2 = Y2*(4096/Range);
```

```
var Scale = (Y2-Y1)/(X2-X1); and scale has units of Units/Count, where Units is the physical thing being measured such as meters, percentage, mA m/s etc
```

```
var offset = Y1 - (X1*Scale);
```

Name	Unit	Input type	Err lo	Err hi	Delta	Scale	Offset	Display	Zero
HorizonsFlow	m3	Count	none	none	none	1	0	Calc	<input type="checkbox"/>
HorizonsFlow(2	m3	Count	none	none	none	0.1	0	Calc	<input type="checkbox"/>
		Analog	none	none	none	1	0	Calc	<input type="checkbox"/>

### Copy These Settings to Another Unit

### Main Config

### Base Profile

Customer: Horizons HardwareType: ITUG1 Profile: Flow meter



Change Profile Save As New Profile

Save Configuration PP (Your Initials)

[HSN/Menus](#) | [Basic Info](#) | [Graphs](#) | [Converters](#) | [Copy Settings](#) | [Quick View](#) | [Alarms](#)

Initial then click the Save Configuration button.

### Maptable

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The maptable needs to be checked to ensure that the setup is correct.  
Access the Maptable configuration from the top menu under Options



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### Horizons—RC\_104170—Horizons

LogMapTable 1 created 20/01/2011 12:51:40 (Current)

#### Base Profile

Customer:  HardwareType:  Profile:



(MapTable will not be sent to SPE)

PP (Your Initials)

<a href="#">Input</a>	<a href="#">Input Class</a>	<a href="#">DeviceID</a>	<a href="#">DataPoint</a>	<a href="#">DataSet</a>	<a href="#">Threshold</a>	<a href="#">Description</a>	<a href="#">Display</a>
-----------------------	-----------------------------	--------------------------	---------------------------	-------------------------	---------------------------	-----------------------------	-------------------------

The LogMapTable should be greater than 1, if LogMapTable 0 then simply Save as new LogMapTable. This should complete the install.

The unit should now be setup correctly in the tree and ready to receive and export data.

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### Deleting Units

If the site is closed or the unit is removed to store then delete the unit from the system

Access the harvestDB and select the HSN menu then all HSN's  
Select the unit for deletion and you will get the summary page

### HSN: 1612–Horizons

[LID 9 – RC\\_1612](#)

[Graphs](#)  
[Config](#)  
[Logs](#)

#### Notes:

#### Config Notes:

2010/11/15 12:26:06 PP: Config 8 saved  
2010/11/15 12:25:27 PP: Config 7 saved  
2010/11/15 12:24:52 PP: Config 6 saved  
2010/11/15 12:23:47 PP: Config 5 saved  
2010/11/15 12:21:06 PP: Config 4 saved  
2010/11/15 12:18:12 PP: Config 3 saved  
2010/11/15 11:59:45 PP: Config 2 saved  
2010/11/15 11:57:48 PP: Config 1 saved

#### HSN Info:

Save HSN

Delete HSN

Delete From Units.txt

Simple click Delete HSN and the unit will be removed



### Managing HSN changes

If a unit is to be changed for any reason then the HarvestDB needs to be amended to reflect the unit at site

This can be simple achieved from the office, as the Harvest DataBucket does not care what the IP for the site is then two HSN's can be setup to the same RC\_Number.

WARNING: they can not be the same Location Name if in the same Region. Set the replacement unit up in Office Test.

Once the field change has occurred, Delete the old unit and move the new unit into the correct Region (Edit the Config)

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### Viewing and changing Settings

The SPE Menu from the top menu bar shows the current settings loaded into a unit

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## Horizons—RC\_123456—Horizons

### SPE Settings

(Your Initials)

### Base Profile

**Customer:** 
**HardwareType:** 
**Profile:**

SPE code version is [ITU\\_1.04.27i](#). Click setting name to compare its value across all units. Click any '?' for help with associated SPE command.

Setting	Value
<a href="#">AFE ?</a>	<input type="text" value="1"/>
<a href="#">AFS ?</a>	<input type="text" value="HSN,HRTC"/>
<a href="#">AG1 ?</a>	<input type="text" value="0,0,0"/>

The interface allows for both firmware and setting changes

To update the current settings then the unit can be “flushed”, this will retrieve all settings on the next call.

### Flush Settings

Click this button to ask SPE to send through its settings file next time it calls in. Generally this happens automatically (when there is no settings file or after a code download).

### Download Code to SPE

Current code version is [ITU\\_1.04.27i](#).

To leave an SPE code download for this unit, select the code version you want and click "Pend Code Download". (Code files must be in the **flash** sub-folder and named **VERSION.txt**, where VERSION is the SPE version as given by the AT^HVER command.)

**Version**

Firmware upgrades can also be attempted and will update on the next call.