

# Environment and Session Variables

## Introduction

Environment and Session variables are product features that provide easy and centralised configuration and control of Blue Prism solutions within an environment.

It is expected that every Blue Prism solution created will utilise Environment and Session variables.

## Environment Variables

Environment variables should be used to store any process or application information required to work the business process that may be subject to change either between environments (development/test/production) or over time.

The reason to use environment variables is so that minor changes to the configuration of a solution can be made without the need make development changes to the objects or processes.

Examples of Environment Variables include:

- The URL for a browser based application
- A file path to use to collect a file
- A file path to save reports to
- A profile name to use for an email interface
- Global timeout numbers for an application so they can be amended easily
- The System or Environment Name to select when logging into an application
- Email addresses for who email alerts should be emailed to
- A Whitelist of email addresses that are valid for receiving an email from
- A process variable that may need amending in future, such as a maximum transaction limit

## Environment Variable naming

It is important to name environment variables so that the process or system they are related to is obvious. This will make searching for and amending an environment variable easier.

The correct naming convention to use should be part of your own organisations best practices, but usually the name of an environment variable is prefixed with the name of the process or application the variable is related to. For better organisation, the name might also be prefixed with the organisation department or global region to which the variable belongs.

If an environment variable is named 'Excel File Path' it will be meaningless in the wider context of an environment containing hundreds of completed processes across a large organisation.

Some examples of Environment Variable names:

- "Fraud Account Closures File Path" – this variable name includes the department name
- "SAP System Name" – this variable name includes the application name
- "CRM System URL" – this variable includes the application name
- "NA\_HR Holiday Requests File Path" – this variable name includes region, department, process name

## Creating an Environment Variable

To create an Environment Variable simply do the following:

- Go to the System – Processes – Environment Variables area of the product.
- Click on the Add Variable link [➔ Add Variable](#)
- Type in the name, data item type, description, and value of you environment variable

The Lifecycle Orientation solution includes a number of Environment Variables, importing that solution into your own training environment and evaluating it is part of the developer training path.

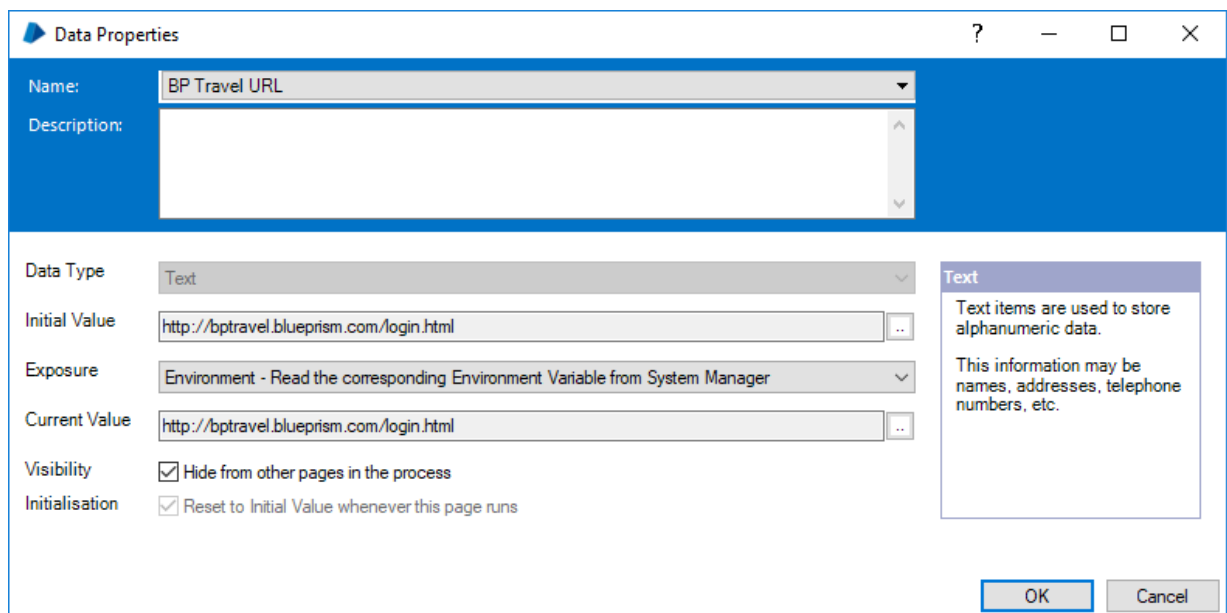
### Processes - Environment Variables

Name	Type	Description	Value	
BP Travel URL	Text	The URL for BP Travel for this BP envi...	http://bptravel.blueprism.com/login.html	<a href="#">➔ Add Variable</a> <a href="#">➔ Remove Variable</a> <a href="#">➔ Find References</a>

## Using an Environment Variable

Once an environment variable has been created it is available for use in Object or Process Studio. To use an environment variable:

- Add a new data item to your Process or Object
- Open the Data Properties form
- In the 'Exposure' combo box select the 'Environment' option
- The 'Name' edit box at the top of the screen will become a combo box. Select the Environment Variable you want to use from the combo list
- Click OK



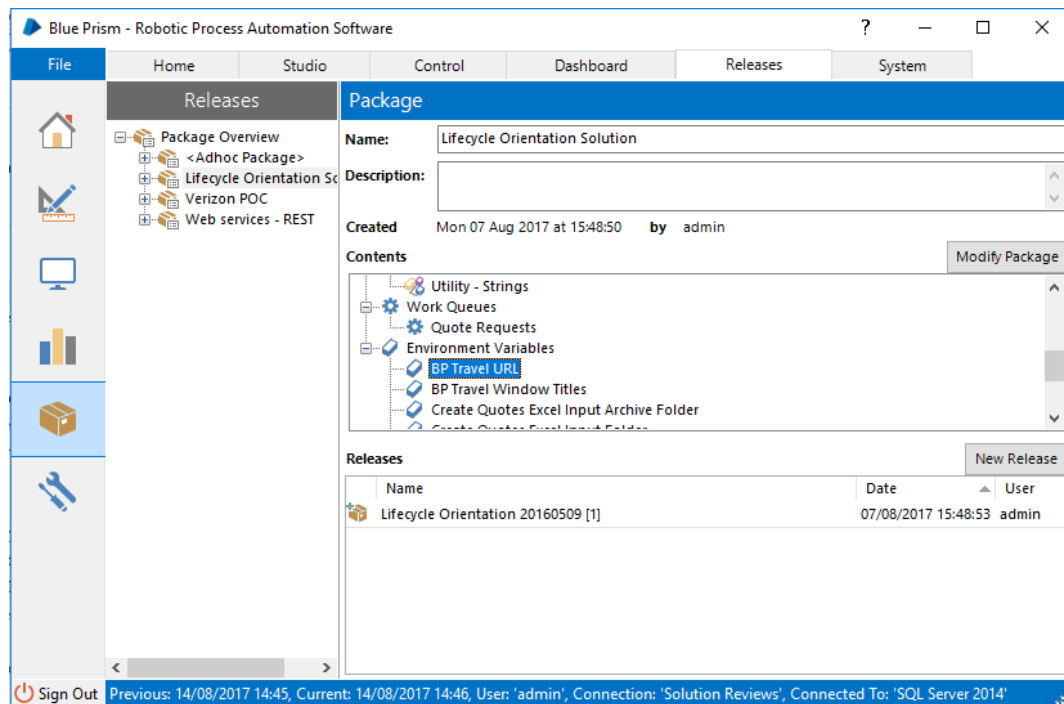
The image shows the 'Data Properties' dialog box in Blue Prism. The 'Name' field is a dropdown menu showing 'BP Travel URL'. The 'Description' field is empty. The 'Data Type' is set to 'Text'. The 'Initial Value' and 'Current Value' fields both contain 'http://bptravel.blueprism.com/login.html'. The 'Exposure' dropdown is set to 'Environment - Read the corresponding Environment Variable from System Manager'. The 'Visibility' checkbox 'Hide from other pages in the process' is checked. The 'Initialisation' checkbox 'Reset to Initial Value whenever this page runs' is checked. On the right, there is a 'Text' box with the text: 'Text items are used to store alphanumeric data. This information may be names, addresses, telephone numbers, etc.' At the bottom right are 'OK' and 'Cancel' buttons.

An Environment Variable can be used in your flow just like any other data item, the difference being:

1. The Initial Value will be set based upon value of the variable on the System-Processes screen when the Process or Object started.
2. The Current Value of an Environment Variable cannot be amended in a Calculation stage.

## Release Manager

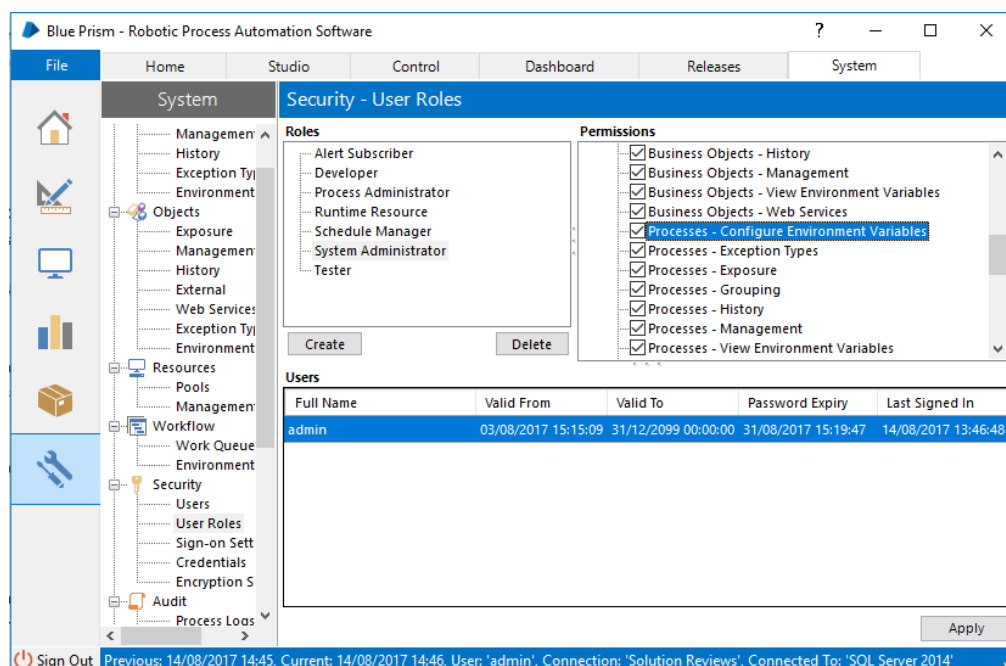
Environment Variables are copied between environments along with all other solution components using Release Manager. Please refer to the Release Manager tutorials on the portal for instructions about how that feature works.



## Environment Variable Security

Environment Variables are stored centrally and securely in the Blue Prism database. Access to the database should be secured by your organisations database administrators.

Access to configure or view Environment Variables within the product is governed by the Roles and Permissions given to each role in an environment. To be able to add or amend an Environment Variable a Blue Prism user needs to be given the 'Processes – Configure Environment Variables' permission.



## Session Variables

Session variables are data items that can be modified at run time from Control Room. Any configuration that may need changing whilst a process session is running can be exposed as a Session variable.

### Template Session Variables

The standard Process Template that should be the basis for all Blue Prism processes includes a Stop? decision that after each work item is completed decides if the process should stop. The Stop? decision includes the following Session Variables:

Data Item Name	Data Item Type	Description
Stop After Time	Session Variable	<p>The initial value should be set the time the process should stop running. It might be set to a time before a system used by the process is no longer available, or a time when another process needs to be started instead.</p> <p>This session variable can be changed by a Blue Prism Controller at run time if there is an operational reason that a running session should finish at a different time to the default.</p>
Stop After Items	Session Variable	<p>This data items allows the developer to configure the process to only work a pre-defined number of cases. The template has the initial value set to 9999999999, which effectively means that the process will work all items.</p> <p>This session variable can be changed by a Blue Prism Controller at run time if here is an operational reason to only work a set number of cases before completing.</p>
Stop ASAP	Session Variable	<p>This session variable can be changed from False to True by a Blue Prism Controller to stop the process.</p> <p>If set to True the process will stop cleanly, if a case is currently being worked it will be completed before stopping.</p> <p><b><i>NOTE: The Stop ASAP Session Variable has been superseded in Version 5 of Blue Prism with the Request Stop control room functionality and IsStopRequested function.</i></b></p>

A session variable should be considered as an option if you have a solution where communication is required from the Controller team to the running process session. If there is a configuration that may need changing during the working day whilst the solution is in use the Session Variable allows it to be done without the need to stop, change, and restart the running session or having multiple versions of the same process.

### Creating a Session Variable

A Session Variable is created by simply changing the Exposure option for a data item in the Data Properties window from None to Session.

**Data Properties**

Name: Stop After Time

Description: Used by the process to decide whether to keep working or close itself down. This value can be modified from Control Room to bring a session to an early finish.

Data Type: Time

Initial Value: 18:30:00

Exposure: Session - Expose the data item to Control Room

Current Value: 18:30:00

Visibility: ☒ Hide from other pages in the process

Initialisation: ☒ Reset to Initial Value whenever this page runs

**Time**  
Time items are used to store time data. Values can range from 00:00:00 to 23:59:59. They are similar to DateTime items, but Time items cannot store date data.  
For example a time item may store the time of day at which a processing batch begins.

OK Cancel

To amend a Session Variable whilst a process session is running simply select the session in Control Room and click on the 'Show Session Variables' link.

**Environment** - Control processes using the start and stop links [Start selection](#) [Stop selection](#) [Show Session Variables](#)

ID	Process	Resource	User	Status	Start Time
4	Session Variable Example	BP0077	admin	Running	15/08/2017 11:39:39

The Session Variables available in the Process will be displayed. Right click on the Session Variable you want to modify and click on Edit Value.

**Environment** - Control processes using the start and stop links [Start selection](#) [Stop selection](#) [Hide Session Variables](#)

ID	Process	Resource	User	Status	Start Time
4	Session Variable Example	BP0077	admin	Running	15/08/2017 11:39:39

ID	Name	Type	Value	Description
4	Stop Af...	Number	9999999668	Used by the process to decide whe...
4	Stop Af...	Time	18:30:00	Used by the process to decide whe...
4	Stop A...	Flag	False	Used by the process to decide whe...

Edit Value

A Session Variable screen will be shown where the value of the variable can be changed. Click the Modify button to update the Session Variable with a new value.

The screenshot shows a window titled "Session Variables" with standard Windows window controls (minimize, maximize, close). Below the title bar is a blue header bar with the text "Set new values for the selected session variables". The main content area contains a table with one row. The first column of the table is labeled "Stop After Items" and the second column is labeled "Number". The value "5" is entered in the "Number" field. At the bottom of the window, there are three buttons: "Help", "Modify", and "Cancel". A mouse cursor is hovering over the "Modify" button.

Stop After Items	Number
	5