

# Portrait Foundation



## Client Request Validation Overview

Edition 1.0

27 October 2014





# Portrait Foundation Client Request Validation Overview

©2014  
Copyright Portrait Software International Limited

All rights reserved. This document may contain confidential and proprietary information belonging to Portrait Software plc and/or its subsidiaries and associated companies.

Portrait Software, the Portrait Software logo, Portrait, Portrait Software's Portrait brand and Million Handshakes are the trademarks of Portrait Software International Limited and may not be used or exploited in any way without the prior express written authorization of Portrait Software International Limited.

## Acknowledgement of trademarks

Other product names, company names, marks, logos and symbols referenced herein may be the trademarks or registered trademarks of their registered owners.

## About Portrait Software

Portrait Software is now part of [Pitney Bowes Software Inc.](#)

Portrait Software enables organizations to engage with each of their customers as individuals, resulting in improved customer profitability, increased retention, reduced risk, and outstanding customer experiences. This is achieved through a suite of innovative, insight-driven applications which empower organizations to create enduring one-to-one relationships with their customers.

Portrait Software was acquired in July 2010 by Pitney Bowes to build on the broad range of capabilities at Pitney Bowes Software for helping organizations acquire, serve and grow their customer relationships more effectively. The Portrait Customer Interaction Suite combines world leading customer analytics, powerful inbound and outbound campaign management, and best-in-class business process integration to deliver real-time customer interactions that communicate precisely the right message through the right channel, at the right time.

Our 300 + customers include industry-leading organizations in customer-intensive sectors. They include 3, AAA, Bank of Tokyo Mitsubishi, Dell, Fiserv Bank Solutions, Lloyds Banking Group, Merrill Lynch, Nationwide Building Society, RACQ, RAC WA, Telenor, Tesco Bank, T-Mobile, Tryg and US Bank.

Pitney Bowes Software Inc. is a division of Pitney Bowes Inc. (NYSE: PBI).

For more information please visit: <http://www.pitneybowes.co.uk/software/>

### UK

Portrait Software  
The Smith Centre  
The Fairmile  
Henley-on-Thames  
Oxfordshire, RG9 6AB, UK

Email: [support@portraitsoftware.com](mailto:support@portraitsoftware.com)  
Tel: +44 (0)1491 416778  
Fax: +44 (0)1491 416601

### America

Portrait Software  
125 Summer Street  
16<sup>th</sup> Floor  
Boston, MA 02110  
USA

Email: [support@portraitsoftware.com](mailto:support@portraitsoftware.com)  
Tel: +1 617 457 5200  
Fax: +1 617 457 5299

### Norway

Portrait Software  
Portrait Million Handshakes AS  
Maridalsveien. 87  
0461 Oslo  
Norway

Email: [support@portraitsoftware.com](mailto:support@portraitsoftware.com)  
Tel: +47 22 38 91 00  
Fax: +47 23 40 94 99

## About this document

### Purpose of document

This document describes the new "Client Request Validation" feature that has been introduced in this release.

### Intended audience

The document is intended for anyone intending to make use of this new feature.

### Related documents

None

### Software release

Portrait Foundation 5.0 Update 1 or later.



## Contents

<b>1</b>	<b>Introduction</b>	<b>6</b>
<b>2</b>	<b>Request Validation</b>	<b>7</b>
<b>3</b>	<b>Configuration</b>	<b>8</b>
	3.1 Model class	8
<b>4</b>	<b>Custom Control XSLT</b>	<b>9</b>

## 1 Introduction

Client Request Validation provides the ability to perform a generic pre-processing step for all model based requests from the client (Portrait Foundation ASP.NET applications). This pre-processing step is run on the server and can be used to validate that the request from the client is OK to be executed. It allows **implementations to guard against "privilege escalation" attacks without having to** update a large number of process models.

## 2 Request Validation

To make use of this feature, the following settings must be added to the AIT.Porrait.Web section in Web.Config:

```

<!-- PORTRAIT WEB APPLICATION CONFIGURATION -->
<AIT.Porrait.Web>
  ...
  ...
  <!-- Client Request Validation allows model pre-processing to be enabled for the
following types of request from the client.
    - CustomControl [via UIEXML.amc]
    - Model          [via StartModel.amc]
    - Operation      [via StartOperation.amc]
  By default model pre-processing is disabled. To enable pre-processing, set the value
of the relevant request type to "true". -->
  <add key="RequestValidation">
    <add key="CustomControl" value="false"/>
    <add key="Model" value="false"/>
    <add key="Operation" value="false"/>
  </add>
</AIT.Porrait.Web>

```

There are separate setting for each request type. By default pre-processing is disabled for all request types. To enable pre-processing, set the value of the relevant request type to "true".

Once enabled, the server will first run the pre-processing model using the **"Request type"** as the model class member. **If the "Request validation" model** class does not contain a matching member it will return a **"Pre-processing error"** (Request validation) data object with the following properties:

- Message [string]
- Reason [string]
- Request name [string]
- Request type [string]

**When the "Fail" outcome is returned by this pre-processing model** an error is also written to the Application Event log:

```

1:\amc2000\system\messaging\handlers\messagehandlerbase.cpp[CMessageHandlerBase::ValidateR
equest]
501
10:01:09.054 27-10-2014 UTC
0x80070005
ValidateRequest: Validation failed - suspicious attempt to run a model.
ValidateRequest: Validation failed - suspicious attempt to run a model.

```

## 3 Configuration

### 3.1 Model class

There is a model class called "Request validation" that is defined in the Portrait Platform - Process modelling (Foundations) package. Customers must provide their own pre-processing business logic by implementing the following model class members:

- CustomControl
- Model
- Operation

Only request types that have Client Request Validation enabled in Web.Config require a model class member.

#### 3.1.1 Inputs

The model class has 2 inputs "Request type" and "Request name" which can contain the following values:

Request type	Request name
<b>CustomControl</b>	Custom control system name sent from the client
<b>Model</b>	Model system name sent from the client
<b>Operation</b>	Operation system name sent from the client

#### 3.1.2 Outcomes

There are 2 outcomes "OK" and "Fail". If the model class member returns an "OK" outcome, then the client request is valid and Portrait Foundation will execute the relevant custom control, model or operation. If the "Fail" outcome is returned, the request will **not** be run and control will be returned back to the client.

#### 3.1.3 Outputs

The "Fail" outcome returns a "Pre-processing error" (Request validation) data object that can be used to pass back details about this validation failure to the client.

#### 3.1.4 Class members

For Operations, the model class member can include Client UI nodes to give feedback to the user if the request is not valid.

For Custom Controls, Client UI nodes are **not** permitted. Failures can be displayed in the client by updating Custom Control Transforms (XSLT) to output the data returned by the "Pre-processing error" data object. If the model class member does contain UI, the model will never complete and return an "OK" or "Fail" outcome.

For Models, Client UI nodes are **not** permitted. If the model class member returns a "Fail" outcome, this will cause an "Access is denied (E\_ACCESSDENIED)" system error. If it does contain UI, a "Catastrophic failure (E\_UNEXPECTED)" system error will occur.



## 4 Custom Control XSLT

As it is not possible to display Client UI when running "Custom Control" request validation, some XSLT transforms may need to be updated to render a useful message on the client. A template match similar to this is required:

```
<xsl:template match="uie/_OUTPUTS/PreprocessingError">
  ...
  <span style="color:#FF0000;"><xsl:value-of select="Message" /></span>
  <xsl:text> - </xsl:text><xsl:value-of select="Reason" />
  ...
</xsl:template>
```

If the XSLT is not updated, the unformatted contents of the "Pre-processing error" data object may be rendered.

#### Details

Client request validation failedRequest validation model class member not found.RetrievePartyContactFullEmailAddressCustomControl

By applying a template match in the XSLT, a more user readable message can be achieved on the client.

#### Details

Client request validation failed  
Request validation model class member not found.

Please refer to the following web files in "All Applications" for more examples:

- AIT\_HRZ\_Case\_SearchForKeyAssociationDetail.xslt
- AIT\_HRZ\_SCRetrievePartyContactFullEmailAddress.xslt
- AIT\_HRZ\_SCRetrievePartyContactFullPostalAddress.xslt
- AIT\_HRZ\_SCRetrievePartyContactFullTelephoneNumber.xslt