

Ultimus Test Limits

Specification of test limits for Ultimus BPM Suite 7.1

This document outlines the limits to which each module in Ultimus BPM Suite 7.1 has been tested. This document was updated on September 2, 2009.

Introduction

As part of every release, Ultimus BPM Suite is extensively load and stress tested. This document outlines the testing limits reached as part of those tests. The testing limits described in this document belong to three categories:

- Ultimus BPM Suite programmatic limits
- Programmatic limits imposed by third-party applications with which Ultimus BPM Suite integrates
- Non-programmatic limits in Ultimus BPM Suite reached during testing

In this document, programmatic limits are listed explicitly. Non-programmatic limits are listed as “Tested up to xxxx,” indicating that Ultimus has tested proper operation up to xxxx. In the case where the expected level of usage exceeds the “Tested up to xxxx” limit, Ultimus BPM Suite should continue to function effectively. If an issue is encountered in Ultimus BPM Suite, Ultimus will make every effort to identify and resolve any reported issue.

As with any area of stress or high-usage in any software application environment, Ultimus strongly recommends that customers test the stressed or high-usage components in a non-production BPM environment first.

Conventions used in this document

The following conventions are used throughout this document:

bold	Bold text denotes items that you must select or click on in an application, such as menu options, dialog box options, and dialog box output. Bold text is also used to designate labels within table columns or to add emphasis in a list.
<i>italic</i>	Italic text denotes variables, emphasis, and document, chapter, and section titles. This also denotes text that is a place holder for a word or value that you must supply.

Ultimus Test Limits

Ultimus Administrator tested limitations

monospace

Text in this font denotes text or characters that you should input to an application, application output, sections of code, programming examples, and syntax examples. This is also used for the proper names of disk drives, paths, directories, device names, file names, file extensions, code excerpts, and URLs.



This icon denotes a note, which alerts you to important information.

Ultimus Administrator tested limitations

Table 1 outlines the tested limitations for Ultimus Administrator.

Table 1. Ultimus Administrator tested limitations

Limits	
Number of installed processes	Determined by licenses purchased
Number of versions installed of a process	Tested up to 505
Number of incident filters	Tested up to 200
Number of step filters	Tested up to 200
Number of characters in a incident/step filter name	100
Number of characters in a log filter name	Tested up to 200
Number of incidents listed in a single incident filter	Tested up to 6,000
Number of steps listed in a single step filter	Tested up to 6,000
Number of log filters	Tested up to 200

Ultimus BPM Server tested limitations

Table 2 outlines the tested limitations for Ultimus BPM Server.

Table 2. Ultimus BPM Server tested limitations

Limits	
Number of active incidents recorded in an Ultimus BPM Database	Tested up to 15,000
Number of total incidents recorded in an Ultimus BPM Database	Tested up to 150,000
Number of late tasks for Housekeeping	Tested up to 200
Number of concurrent clients working simultaneously	Tested up to 500

Table 2. Ultimus BPM Server tested limitations (Continued)

Limits	
Number of Recordsets open simultaneously	Tested up to 125
Number of text command files to launch processes simultaneously	Tested up to 1,000
Number of clustered Ultimus BPM Servers	64

Ultimus BPM Studio Client tested limitations (general)

Table 3 outlines general tested limitations for Ultimus BPM Studio Client.

Table 3. Ultimus BPM Studio Client general tested limitations

Limits	
Number of processes in a Repository	Tested up to 35
Number of custom editors	Tested up to 5
Number of characters for process “Comments”	255
Number of FOL libraries in a Repository	Tested up to 200
Number of FOL objects inside a FOL library	Tested up to 100
Number of characters in a FOL variable name	30
Number of characters in a FOL object name	30
Number of characters in a FOL file name	30
Number of characters in a FOL folder name	30
Number of .Net Codes in an Action node	25
Number of Web Services in an Action node	25

Ultimus BPM Studio Client tested limitations in build mode

Table 4 outlines tested limitations for Ultimus BPM Studio Client in build mode.

Table 4. Ultimus BPM Studio Client tested limitations in build mode

Limits	
Number of steps in a process	200
Number of characters in a variable name	30

Ultimus Test Limits

Ultimus BPM Studio Client tested limitations in model mode

Table 4. Ultimus BPM Studio Client tested limitations in build mode (Continued)

Limits	
Number of characters in a spreadsheet cell	8,000
Number of global variables defined in a workflow process	Tested up to 500
Number of single-byte characters in a process name	30
Number of double-byte characters in a process name	15
Number of characters in a step name	30
Number of characters in the recipient name	30
Number of actions in event condition tables	9,999
Number of variables in event condition tables	250
Maximum size of a process map file	Tested up to 6.5 MB
Number of characters in a process description field	255
Number of characters in an incident summary	Tested up to 259
Number of columns in a spreadsheet	256
Number of rows in a spreadsheet	9,999
Number of nested IF statements used in a spreadsheet formula	25
Number of linked steps to a Junction step	Tested up to 25
Maximum size of a step spreadsheet	Tested up to 800 KB
Number of library objects inside a form	Tested up to 100
Number of methods in a .NET Code file when called from event conditions	Tested up to 30
Number of methods in a Web service when called from event conditions	Tested up to 20

Ultimus BPM Studio Client tested limitations in model mode

Table 5 outlines tested limitations for Ultimus BPM Studio Client in model mode.

Table 5. Ultimus BPM Studio Client tested limitations in model mode

Limits	
Number of steps in a process	200
Number of actions in event condition tables	Tested up to 100

Table 5. Ultimus BPM Studio Client tested limitations in model mode (Continued)

Limits	
Size of a process map file	Tested up to 6.5 MB
Number of characters in a step name	30
Number of characters in a process file name	30
Number of characters in a scenario file name	30
Number of characters in a report file name exported as an Excel spreadsheet	30
Number of steps that can be cut and pasted back with undo	10
Number of characters in the Recipient(s) text box in the Begin step's Step Properties dialog box	Tested up to 500,000
Number of characters in the Description text box in the Begin step properties dialog box	Tested up to 500,000
Number of characters in the description text box of an event condition	Tested up to 500
Number of digits in Task Rate text box on the Scenario Properties dialog box	6
Number of digits in Task Time Mean and Sigma or Min/Max text and combo boxes in the Scenario Properties dialog box	6
Number of characters in the Recipient(s) text box on a User Step Properties dialog box	Tested up to 500,000
Number of characters in the Description text box on a User step's Step Properties dialog box	Tested up to 500,000
Number of characters in the Description text box on a Maplet step's Step Properties dialog box	Tested up to 500,000
Number of characters in the Description text box on the Scenario Settings dialog box	Tested up to 500,000
Number of characters in the Completion Time text box on a User step's Step Properties dialog box	Tested up to 500,000
Number of characters in the Extension Time text box on a User step's Step Properties dialog box (Properties tab)	Tested up to 500,000
Number of characters in the Delay Time text box on a User step's Step Properties dialog box (Properties tab)	Tested up to 500,000
Number of digits in the Completion Time text box on a User step's Step Properties dialog box (Scenario Properties tab)	6

Ultimus Test Limits

Ultimus BPM Studio Client tested limitations in model mode

Table 5. Ultimus BPM Studio Client tested limitations in model mode (Continued)

Limits	
Number of digits in the Extension Time text box on a User step's Step Properties dialog box (Scenario Properties tab)	6
Number of digits in the Delay Time text box on a User step's Step Properties dialog box (Scenario Properties tab)	6
Number of characters in step Inputs text box	Tested up to 500,000
Number of characters in step Actions text box	Tested up to 500,000
Number of characters in step Outputs text box	Tested up to 500,000
Number of entries in Resource table	Tested up to 100
Number of characters in Resource name	Tested up to 100
Number of digits in the Resource Management dialog box in the Step Properties dialog box (Scenario Properties tab)	6
Number of digits in the % Resubmitted text box in the Step Properties dialog box (Scenario Properties tab)	6
Number of digits in the Task Time Mean and Sigma text boxes in the Step Properties dialog box (Scenario Properties tab)	6
Number of variables in the Scenario Settings dialog box (Variables tab)	30
Number of list items in the Expression column of the Step Properties dialog box (Scenario Conditions tab)	Tested up to 500
Number of incidents that can be modeled	2,000
Number of preload incidents	2,000
Number of characters in a variable name	Tested up to 30
Number of characters in a process description field	Tested up to 255
Number of rows in an event condition table spreadsheet	9,999
Number of linked steps to a Junction step	Tested up to 50
Number of Histogram bins (graphical reports) that can be selected	5 to 100
Number of characters from the edit (model) fields Step Inputs , Actions , and Outputs that are inserted into process documentation	Tested up to 14,000

Ultimus BPM Studio Configuration tested limitations

Table 6 outlines the tested limitations for Ultimus BPM Studio Configuration.

Table 6. Ultimus BPM Studio Configuration tested limitations

Limits	
Number of Repositories	Tested up to 10
Number of Ultimus BPM Servers	Tested up to 5
Number of users listed under Access Rights	Tested up to 10

Ultimus Director tested limitations

Table 7 outlines tested limitations for the Ultimus Director.

Table 7. Ultimus Director tested limitations

Limits	
Number of expressions in a single rule	Tested up to 30
Number of actions performed on a single rule	Tested up to 30
Number of rules applied on a single Unruly Event (rules added to an event of a step)	Tested up to 25
Number of process-level rules referenced in a single step-level rule	Tested up to 20
Number of rules in a single process	Tested up to 200
Number of rules against a single step	Tested up to 50
Number of rules applied to processes at a single time	Tested up to 10
Number of rules applied to Unruly Events at one time	Tested up to 200
Number of functions (methods) called in a single custom action	Tested up to 10
Number of displayed rule lines for a single Unruly Event in Process Map View play back history	Tested up to 70

Ultimus EIK tested limitations

Table 8 outlines tested limitations for the Ultimus EIK.

Table 8. Ultimus EIK tested limitations

Limits	
Number of incidents launched back-to-back through the method <code>LaunchIncident()</code> of process level Web services	Tested up to 2,000
Number of incidents launched back-to-back through the method <code>Task.Send()</code> as a "Queue Send"	Tested up to 2,000
Number of tasks loaded through the method <code>TaskList.LoadAssignedTasks()</code>	Tested up to 12,000
Number of Tasks loaded through the method <code>TaskList.LoadFilteredTasks()</code>	Tested up to 12,000
Number of Tasks loaded through the method <code>TaskList.LoadQueueTasks()</code>	Tested up to 2,000
Number of Tasks loaded through the method <code>TaskList.LoadViewTasks()</code>	Tested up to 12,000
Number of task assigned through the method <code>User.AssignAllCurrentTasks()</code>	Tested up to 12,000
Number of OC members retrieved through the method <code>OrgChart.GetAllOCMembers()</code>	Tested up to 2,000
Number of variables retrieved through the method <code>Task.GetAllTaskVariables()</code>	Tested up to 250
Number of variables set through the method <code>Task.SetAllTaskVariables()</code>	Tested up to 250
Number of Incidents launched back-to-back through the method <code>Task.Send()</code> as a "Transaction Send"	Tested up to 2,000
Number of incidents completed back-to-back through the method <code>Task.Send()</code> as a "Transaction Send"	Tested up to 2,000
Number of incidents completed back-to-back through the method <code>Task.Send()</code> as a "Queue Send"	Tested up to 2,000
Number of incidents returned back-to-back through the method <code>Task.Return()</code> as a "Transaction Return"	Tested up to 2,000



Table 8. Ultimus EIK tested limitations (Continued)

Limits	
Number of incidents initialized and then completed back-to-back through the methods <code>Task.InitializeFromNextQueueTask()</code> and <code>Task.Send()</code>	Tested up to 2,000
Number of department members retrieved through the method <code>OrgChart.GetDepartmentMembers()</code>	Tested up to 1,000

Ultimus Flobots and Ultimus FloStation tested limitations

Table 9 outlines tested limitations for the Ultimus Flobots and Ultimus FloStation.

Table 9. Ultimus Flobots and FloStation tested limitations

Limits	
Number of Ultimus FloStations	Determined by licenses purchased
Number of variables that can be transferred (linked) to a Flobot	Tested up to 250
ASCII Flobot: Number of characters passed to the ASCII Flobot through a workflow variable	8,000
Database Flobot: Number of characters in a database table or column name (actual SQL limit is 128)  Note: Since Ultimus BPM Suite 7.0, for SQL column names formatted as <code>[username].[column_name]</code> , Ultimus considers the characters in the <code>[username]</code> value and the actual period character as part of the column name.	128
Database Flobot: Number of characters in a database table or column name (actual Oracle limit is 30)  Note: Since Ultimus BPM Suite 7.0, for SQL column names formatted as <code>[username].[column_name]</code> , Ultimus considers the characters in the <code>[username]</code> value and the actual period character as part of the column name.	30
Database Flobot: Number of actions	Tested up to 30
Database Flobot: Number of connections	Tested up to 20
Database Flobot: Maximum number of characters able to be returned into a range variable	Tested up to 8,000
E-mail Flobot: Number of attachments in e-mail	Tested up to 33

Ultimus Test Limits

Ultimus Org Chart tested limitations

Table 9. Ultimus Flobots and FloStation tested limitations (Continued)

Limits	
E-mail Flobot: Number of characters in message body of e-mail (as passed through linked workflow variables)	Tested up to 16,000
E-mail Flobot: Number of characters in message body of e-mail (as directly typed in E-mail Flobot trainer)	Tested up to 4,095 characters
E-mail Flobot: Number of characters in subject field of e-mail	Tested up to 255
E-mail Flobot: Number of characters in the To field	Tested up to 3219
Exchange Flobot: Number of attachments in e-mail	Tested up to 25
Exchange Flobot: Number of actions	Tested up to 19
Excel Flobot: Number of cells in a range variable passed to an Excel spreadsheet	Tested up to 100
Excel Flobot: Number of characters passed from a single Ultimus workflow variable to an Excel spreadsheet	8,000
.NET Code Flobot: Number of actions	Tested up to 15
.NET Code Flobot: Number of methods in an single action	Tested up to 25
Web Services Flobot: Number of actions	Tested up to 16

Ultimus Org Chart tested limitations

Table 10 outlines the tested limitations for Ultimus Org Chart.

Table 10. Ultimus Org Chart tested limitations

Limits	
Number of groups	500
Number of members in a group	Tested up to 5,000
Number of nodes in a single chart	100
Number of names in a job function group (JFG)	Tested up to 5,000
Number of characters in a job function name	100
Number of characters in a job function group name	250
Number of characters in a group name	250

Table 10. Ultimus Org Chart tested limitations (Continued)

Limits	
Number of characters in a user's full name (tested on Windows 2000 Advanced Server)	100
Number of characters in a user's short name (tested on Windows 2000 Advanced Server)	20
Number of nested sub-charts from a main organization chart	50

Ultimus Reports tested limitations

Table 11 outlines the tested limitations for Ultimus Reports.

Table 11. Ultimus Reports tested limitations

Limits	
Number of reports	Tested up to 35
Number of characters in a report name	50

Ultimus Standard Client tested limitations

Table 12 outlines the tested limitations for Ultimus Standard Client.

Table 12. Ultimus Standard Client tested limitations

Limits	
Number of subordinates in view	Tested up to 25
Number of tasks in queue	Tested up to 2,250
Number of customized views	Tested up to 70
Number of databound views	Tested up to 35
Number of characters in a customized view name	Tested up to 50

Ultimus Standard Forms tested limitations

Table 13 outlines tested limitations for the Ultimus Standard Forms.

Table 13. Ultimus Standard Forms tested limitations





Limits	
Number of controls in one page of a form	Tested up to 200
Number of pages, sub-pages in a form	Tested up to 100
Number of Recordsets in a form	Tested up to 30
Number of characters in a Recordset name (single-byte or double-byte characters)	50
Number of actions in a form (from a single Recordset connection)	Tested up to 30
Number of Recordset connections	Tested up to 10
Number of cells in a range variable	Tested up to 100
Number of characters in a SQL table name (actual SQL limit is 128)  Note: Since Ultimus BPM Suite 7.0, for SQL table names formatted as [username] . [table_name], Ultimus considers the characters in the [username] value and the actual period character as part of the column name.	127
Number of characters in an Oracle table name (actual Oracle limit is 30)  Note: Since Ultimus BPM Suite 7.0, for Oracle table names formatted as [username] . [table_name], Ultimus considers the characters in the [username] value and the actual period character as part of the column name.	29
Number of characters in a SQL column name (actual SQL limit is 128)  Note: Since Ultimus BPM Suite 7.0, for SQL table names formatted as [username] . [table_name] . [column_name], Ultimus considers the characters in the [username] value and the actual period character as part of the column name.	127
Number of characters in an Oracle table name (actual Oracle limit is 30)  Note: Since Ultimus BPM Suite 7.0, for Oracle table names formatted as [username] . [table_name] . [column_name], Ultimus considers the characters in the [username] value and the actual period character as part of the column name.	29

Table 13. Ultimus Standard Forms tested limitations (Continued)

Limits	
Number of characters in a SQL database name (actual SQL limit is 128). (This is required because the OLE DB connection string contains the SQL database name.)	127
Number of characters in an Oracle service name. (This is required because the Oracle OLE DB connection string contains the Oracle service name.)	Tested up to 30
Number of rows in a grid control	10,000
Number of columns in a grid control	255
Number of attachments in a single attachment control	Tested up to 30
Size of attached file with attachment control	Tested up to 40 MB
Number of characters in the full path file name for an attachment in the attachment control	100
Number of methods in a .NET Code file when called from event actions	Tested up to 25
Number of methods in a Web service when called from event actions	Tested up to 25

Ultimus Thin Forms tested limitations

Table 14 outlines the tested limitations for Ultimus Thin Forms.

Table 14. Ultimus Thin Forms tested limitations

Limits	
Number of characters in a control name	255
Number of characters in a page name	30
Number of attachments in a single attachment control	Tested up to 30
Size of attached file with attachment control	Tested up to 40 MB

Ultimus Test Limits

Ultimus third-party form tested limitations

Ultimus third-party form tested limitations

Table 15 outlines the tested limitations for Ultimus third-party form tested limitations.

Table 15. Ultimus Thin third-party form tested limitations

Limits	
Number of controls on an InfoPath form	Tested up to 30
Number of controls on a PDF form	Tested up to 30