

Expression Objects (1.9 and below)



For the list of expressions available for version 1.9.1 of Continua CI see [Expression Objects](#).

What are they?

Expressions are a mechanism for the autocompletion of values which may not be known until build execution time (for example the current build number). They can also be used to autocomplete [variables](#).

Where can I use them?

Expressions can be utilised in several dialog fields throughout Continua (they are especially useful within [stage actions](#), and [build event handlers](#)).

The expansion icon (below) denotes fields that have expression capabilities. Note in some areas, such as configuration variables, you can click on this icon to disable expressions



Expression Expansion

To initiate an expansion, simply type the dollar symbol '\$' and the expression auto complete will present (*note: not all objects are available in all fields*).

Executable Path	C:\bin\myapp.exe	
This field supports query expressions. \$ and % are special characters in this field. They can be escaped by doubling the character. ie. '\$\$' or '%%'.		
Working Directory		

Executable Path	\$	
Working Directory	Workspace Build Configuration Agent Project Source Server Utils	

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\$Workspace

Name	Description	Type	Usage Examples	
N/A	Represents the full path of a build's workspace folder.	String	<code>\$Workspace\$testfolder</code>	<code>"D:\ContinuaAgent\Ws\19\"</code>

\$Build

Name	Description	Type	Usage Example	
Id	A unique Integer allocated automatically to this build	String	<code>\$Build.Id\$</code>	<code>"10"</code>
Version	A reference object for the build version (as defined below).	Version	<code>\$Build.Version\$</code>	N/A
StartedBy	The username of the user who initiated the build	String	<code>\$Build.StartedBy\$</code>	<code>"peter.toms@finalbuilder.com"</code>
IsFeatureBranchBuild	Utilised via build triggers. This expression is set to true when a build is triggered on a non-default branch	Boolean	<code>\$Build.IsFeatureBranchBuild\$</code>	<code>true</code>
BuildNumber	A zero-based auto-incremented integer allocated to this build (the first build will be build 0, the second build 1, etc)	Integer	<code>\$Build.BuildNumber\$</code>	<code>100</code>
Metrics	A reference object to the metrics associated with this build (as defined below).	Metrics	<code>\$Build.Metrics\$</code>	N/A
HasNewChanges	Does this build contain changesets which have not been associated with a previous build?	Boolean	<code>\$Build.HasNewChanges\$</code>	<code>true</code>
LinkUrl	Build details URL	String	<code>\$Build.LinkUrl\$</code>	<code>"http://SERVERNAME/New_Project_1/ci/builds/view/123"</code>

\$Configuration

Name	Description	Type	Usage Examples	
Name	Name of the configuration (as defined within the Configuration details page)	String	<code>\$Configuration.Name\$</code>	<code>"New Configuration 1"</code>
RunningBuilds	The number of currently running builds	Integer	<code>\$Configuration.RunningBuilds\$</code>	<code>1</code>
QueuedBuilds	The number of currently queued builds	Integer	<code>\$Configuration.QueuedBuilds\$</code>	<code>1</code>
InitialisingBuilds	The number of currently initialising builds	Integer	<code>\$Configuration.InitialisingBuilds\$</code>	<code>1</code>

\$Agent

Name	Description	Type	Usage Example	
Port	The port number used for agent communication	String	<code>\$Agent.Port\$</code>	<code>"9000"</code>
Hostname	The agents host name	String	<code>\$Agent.Hostname\$</code>	<code>"AGENTMACHINE"</code>
Now	The current date and time given as local to the agent	DateTime	<code>\$Agent.Now\$</code>	<code>"2014 4:51:44 PM"</code>
NowUTC	The current date and time given as UTC	DateTime	<code>\$Agent.NowUtc\$</code>	<code>"2014 6:52:25 AM"</code>
InstallPath	The installation path of the agent	String	<code>\$Agent.InstallPath\$</code>	<code>"C:\Program Files\VSoft Technologies\ContinuaCI Agent\"</code>
GetUserEnvironmentVariable	Gets the specified Windows user environment variable (relative to the agent machine's service user, and relative to the agent machine)	String	<code>\$Agent.GetUserEnvironmentVariable("TEMP")\$</code>	<code>"%USERPROFILE%\AppData\Local\Temp"</code>

GetMachineEnvironmentVariable	Gets the specified Windows machine environment variable (relative to the agent machine)	String	\$Agent.GetMachineEnvironmentVariable("NUMBER_OF_PROCESSORS")\$	"8"
N/A	Within the Agent object is a list of the current agent property collectors	Property Collector	\$Agent.NuGet.Default.Path\$	"C:\Program Files\NuGet\NuGet.exe"

\$Project

Name	Description	Type	Usage Example	
Name	The name of the project the current configuration is a part of (as provided on the Project details page)	String	\$Project.Name\$	"New Project 1"
Description	The description of the project the current configuration is a part of (as provided on the Project details page)	String	\$Project.Description\$	"This is a description for new project 1"
Slug	A shortened version of the project name which is safe to use within URLs and other whitespace sensitive identifiers.	String	\$Project.Slug\$	"New_Project_1"

\$Source

Name	Description	Type	Usage Example	
N/A	A list of repositories associated with the current configuration	Repository	\$Source.Reponame\$	"Mercurial_Test_1"

\$Server

Name	Description	Type	Usage Example	
Now	The current date and time given as local to the server	DateTime	\$Server.Now\$	"01/01/2014 5:03:18 PM"
NowUtc	The date and time given as UTC	DateTime	\$Server.NowUtc\$	"01/01/2014 7:04:01 AM"
Hostname	The Continua server hostname	String	\$Server.Hostname\$	"SERVERMACHINE"
InstallPath	The Continua server install path	String	\$Server.InstallPath\$	"C:\Program Files\VSoft Technologies\ContinuaCI\"
Url	The web service URL	String	\$Server.Url\$	"http://SERVERNAME:8080"

\$Utils

Name	Description	Type	Usage Example	
NewGuid	Create a new randomly generated GUID	Guid	\$Utils.NewGuid\$	"da47b2d6-3580-48ed-b27a-f152da2345e6"
Random Number	Generate a new random integer value If one parameter is provided it designates a random number in the range of greater than or equal to zero and the number provided will be generated If two parameters are provided they designate the range for the generated number. If no parameters are provided a 32-bit integer greater than or equal to zero and less than Int32 max value (2,147,483,647) will be generated.	Integer	\$Utils.RandomNumber("1", "10")\$ \$Utils.RandomNumber("10")\$ \$Utils.RandomNumber\$	5 2 1906529119

Repository (used by [\\$Source](#))

Name	Description	Type	Usage Example	
Branch	The full name of the branch associated with the build for the given repository	String	\$Source.RepoName.Branch\$	"/branches/a_test_branch"

BranchName	The branch name of the branch associated with the build for the given repository	String	<code>\$\$Source.RepoName.BranchName\$</code>	"a_test_branch"
BuiltChangeset	A reference object to the changeset information related to the changeset which is being built for the given repository (as defined below)	Change set	<code>\$\$Source.RepoName.BuiltChangeset.TagNames\$</code>	"tag1,tag2,tag3"
CommitsSinceLatestTag	The number of commits listed in the changeset history for the current branch of the given repository since the latest tag	Integer	<code>\$\$Source.RepoName.CommitsSinceLatestTag\$</code>	3
LatestChangeSet	A reference object to the changeset information related to the most recent change set for the given repository (as defined below).	Change set	<code>\$\$Source.RepoName.LatestChangeset.Comment\$</code>	"a comment from the last commit"
LatestTagName	The latest tag name (if one exists) listed in the changeset history for the current branch of the given repository	String	<code>\$\$Source.RepoName.LatestTagName\$</code>	"tag3"
LatestTriggeringChangeset	A reference object to the changeset information related to the latest changeset for the given repository which triggered this build (as defined below)	Change set	<code>\$\$Source.RepoName.BuiltChangeset.BranchName\$</code>	"master"
Path	The disk location of the source associated with the build for the given repository	String	<code>\$\$Source.RepoName.Path\$</code>	"C:\ContinuaAgent\Ws\44\Source\"
Tag	The tag name (if one exists) associated with the build for the given repository	String	<code>\$\$Source.RepoName.Tag\$</code>	"v3-release"
Type	The repository product being used	String	<code>\$\$Source.RepoName.Type\$</code>	"Mercurial"
Url	The URL of the repository in question (as defined within the repository preferences)	String	<code>\$\$Source.RepoName.Url\$</code>	" https://github.com/VSoftTechnologies/Delphi-Mocks.git "

Changeset (used by [\\$Source](#))

Name	Description	Type	Usage Example	
Id	A unique identifier given to this changeset	String	<code>\$\$Source.RepoName.BuiltChangeset.Id\$</code>	"a4ae66dffe5342e47c3aaf987bcd4e9a320559e"
Comment	This comment associated with this changeset	String	<code>\$\$Source.RepoName.BuiltChangeset.Comment\$</code>	"This is a test commit"
RepositoryUsername	The username of the repository user who committed this changeset	String	<code>\$\$Source.RepoName.BuiltChangeset.RepositoryUsername\$</code>	"Peter Toms"
Branch	The full branch path of the latest changeset associated with this repository	String	<code>\$\$Source.RepoName.BuiltChangeset.Branch\$</code>	"/branches/a_test_branch"
BranchName	The branch name of the latest changeset associated with this repository	String	<code>\$\$Source.RepoName.BuiltChangeset.BranchName\$</code>	"a_test_branch"
Created	The date and time when the changeset was committed or created within the source repository	DateTime	<code>\$\$Source.RepoName.BuiltChangeset.Created\$</code>	"11/09/2014 1:48:36 AM"
FileCount	The number of file changes associated with this commit	Integer	<code>\$\$Source.RepoName.BuiltChangeset.FileCount\$</code>	1
CommitterUserName	The username of the Continua User who committed this changeset (if one exists based on user repository mappings)	String	<code>\$\$Source.RepoName.BuiltChangeset.CommitterUserName\$</code>	"peter.toms@finalbuilder.com"
CommitterFullName	The full name of the Continua user who committed this changeset (if one exists based on user repository mappings)	String	<code>\$\$Source.RepoName.BuiltChangeset.CommitterFullName\$</code>	"Peter Toms"
FirstTagName	The name of the first (or earliest) tag associated with this changeset	String	<code>\$\$Source.RepoName.BuiltChangeset.FirstTagName\$</code>	"tag1"
LatestTagName	The name of the latest tag associated with this changeset	String	<code>\$\$Source.RepoName.BuiltChangeset.LatestTagName\$</code>	"tag3"
TagNames	A comma-delimited list of tags associated with this changeset	String	<code>\$\$Source.RepoName.BuiltChangeset.TagNames\$</code>	"tag1,tag2,tag3"
ChangedTagName	The name of the tag which was changed by this changeset	String	<code>\$\$Source.RepoName.LatestTriggeringChangeset.ChangedTagName\$</code>	"tag3"

Stage (used by [\\$Build](#))

Name	Description	Type	Usage Example
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Name	The stage name as defined within the workflow editor	String	\$Build.Stage.Name	"this is a test stage"
Metrics	A reference object to the metrics associated with this build (as defined below).	Metrics	\$Build.Stage.Metrics	N/A

Metrics (used by [\\$Build](#))

Name	Description	Type	Usage Example	
Compiler.Warning	The total number of compiler warnings for the current build (eg MSBuild or Visual Studio build warnings)	Integer	\$Build.Metrics.Compiler.Warning\$	5
Compiler.Error	The total number of compiler errors for the current build (eg MSBuild or Visual Studio build errors)	Integer	\$Build.Metrics.Compiler.Error\$	5
UnitTests	A reference object for the unit test metric details (as defined below)	UnitTests	\$Build.Metrics.UnitTests	N /A

UnitTests (used by [\\$Build.Metrics](#))

Name	Description	Type	Usage Example	
FixtureCount	The total number of test fixtures	Integer	\$Build.Metrics.UnitTests.FixtureCount\$	5
CaseCount	The total number of test cases	Integer	\$Build.Metrics.UnitTests.CaseCount\$	5
Passed	The number of passed tests	Integer	\$Build.Metrics.UnitTests.Passed\$	10
Failed	The number of failed tests	Integer	\$Build.Metrics.UnitTests.Failed\$	5
Error	The number of tests in error	Integer	\$Build.Metrics.UnitTests.Error\$	1
NotRun	The number of tests not run	Integer	\$Build.Metrics.UnitTests.NotRun\$	1
Inconclusive	The number of inconclusive tests	Integer	\$Build.Metrics.UnitTests.Inconclusive\$	1
Ignored	The number of ignored tests	Integer	\$Build.Metrics.UnitTests.Ignored\$	1
Invalid	The number of invalid tests	Integer	\$Build.Metrics.UnitTests.Invalid\$	1
Skipped	The number of skipped tests	Integer	\$Build.Metrics.UnitTests.Skipped\$	1

Version (used by [\\$Build.Version](#))

Name	Description	Type	Usage Example	
Default	A reference object for the default version	Default	\$Build.Version.Default	N/A
DotNet	A reference object for the .Net version	DotNet	\$Build.Version.DotNet	N/A

Default (used by [\\$Build.Version.Default](#))

Name	Description	Type	Usage Example	
Major	The version major portion of the version number	Integer	\$Build.Version.Default.Major\$	"1" (given "1.2.3.4")
Minor	The version minor portion of the version number	Integer	\$Build.Version.Default.Minor\$	"2" (given "1.2.3.4")
Build	The version build portion of the version number	Integer	\$Build.Version.Default.Build\$	"3" (given "1.2.3.4")
Revision	The version revision portion of the version number	Integer	\$Build.Version.Default.Revision\$	"4" (given "1.2.3.4")

DotNet (used by [\\$Build.Version.DotNet](#))

Name	Description	Type	Usage Example	
Major	The version major portion of the version number	Integer	\$Build.Version.DotNet.Major\$	"1" (given "1.2.0.1287")
Minor	The version minor portion of the version number	Integer	\$Build.Version.DotNet.Minor\$	"2" (given "1.2.0.1287")

Build	The version build portion of the version number	Integer	<code>\$Build.Version.DotNet.Build\$</code>	"0" (given "1.2.0.1287")
Revision	The version revision portion of the version number	Integer	<code>\$Build.Version.DotNet.Revision\$</code>	"1287" (given "1.2.0.1287")

General Functions (used by DateTime and String objects)

Name	Description	Type	Usage Examples	
Format	Formats a date or time value using standard or custom .Net formatting strings	String	<code>\$Server.Now.Format("hh:mm")\$</code>	"23:55" (given the date time "31/12 /2000 23:55:333")
ToLower	Converts a string to lowercase	String	<code>\$Source.RepoName.Branch.ToLower\$</code>	"version 1.5" (given "Version 1.5")
ToUpper	Converts a string to uppercase	String	<code>\$Project.Name.ToUpper\$</code>	"PROJECT X" (given "Project X")
Trim	Removes all leading and trailing occurrences of whitespace or the characters in the string provided	String	<code>\$Build.Version.Trim\$</code> <code>\$Build.Version.Trim(".,")\$</code>	"a b c d" (given " a b c d ") "a.b.c.d" (given ",a.b.c.d.")
Replace	Replaces all occurrences of the first specified string in the current string with the second specified string	String	<code>\$Configuration.Name.Replace("v.", "version")\$</code>	"Test Config version 10" (given "Test Config v. 10")