BigFix Session Library

A Guide to the BigFix Session Inspectors

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Compatible with
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Contents

Preface

The *BigFix Session Library* is a guide to the Inspectors of the **Relevance Language**™ as applied to BES Sessions, including the BES Console and Web Reports. The BigFix Session Inspectors allow you to access information statistically collated from the BES Database. Using this information, you can then develop interactive displays, Dashboards, Wizards and powerful custom reports for display in the BES Console or Web Reports program.

This Guide is specifically targeted to developing presentations using the Session Inspectors. Client Inspectors are not available within the Session context, due to securitiy considerations. However, you can use any of the Core or Regex Inspectors, as indicated by the keyword section at the end of this document. For more information on these Inspectors, see the *Windows Inspector Library*.

Audience

This guide is for IT managers and other people who want to create customized displays and reports using the BES Databases.

IT managers use the BigFix Enterprise Suite (BES) to keep large networks of computers up to date and running smoothly without interruption. The information stored in the BES Database can also be tapped by the Session Inspectors to create interactive displays and detailed reports on all the computers in the network.

You can always create custom reports and displays using a third-party reporting engine or by directly querying the database. However, the BigFix Session Inspectors are typically easier to set up and offer greater power and flexibility. Most importantly, the resulting reports can be interactive and offer real-time display updates.

To get the most out of this manual, it helps to have some experience with the BigFix Enterprise Suite and the BigFix Relevance Language. For more information, see the *BigFix Enterprise Suite (BES) Console Operator's Guide* and the *BigFix Development Environment (BDE) Guide*.

Conventions Used in this manual

This document makes use of the following conventions and nomenclature:

Convention	Use
Bold Sans	A bold sans-serif font is used for Inspector headers.
`Mono-space`	A mono-spaced font is used to indicate expressions in the Relevance Language.
{curly braces}	Braces are used to indicate the comparison {=, !=}or arithmetic operators {+, -} that are available for a binary operation.
<angle bracket>	Angle brackets are used to indicate an object type. For instance to indicate the creation and usage of a particular object, you might see "absolute value of <integer>" which indicates that an integer is to follow the "absolute value of" keyphrase.
Italics	An inspector form. Some inspectors are simple keywords. Others are a keyword in combination with another inspector. Still other forms allow iteration through object lists. Each form is defined below
Small print	The small print beneath the description of each Inspector lists the first implementation for every relevant operating system.

Examples

Square bullets and a mono-spaced font denote examples of Inspectors as used in a Relevance Expression. If you have a color version of this file, these square bullets are also red:

- `concatenation of "light" & "year"`

  Returns "lightyear"

Diamond-shaped bullets denote generic examples. These won't execute until the generic parts (typically in angle brackets <>) are filled in:

- `html tag (<name>, <contents>)`

  Creates an html tag with the specified name and contents.

Versions

Most Inspectors have equivalent implementations on other operating systems, allowing you to write cross-platform Relevance expressions. There are exceptions, of course. To keep track of them for each Inspector and operating system, the debut BigFix version is listed at the end of the description, e.g.:

Win:1.2, RH:3.1, Sol:3.1, HPUX:4.0, AIX:4.1

These are the abbreviations for some of the current operating systems:

Win: the Windows version of the BigFix Enterprise Suite (BES).

RH: the Red Hat & Suse Linux version of BES.

Sol: the SUN Solaris operating system version of BES.

HPUX: the Hewlett-Packard Unix version of BES.

AIX: the AIX version of BES.

Mac: the Macintosh version of BES.

Introduction

This manual details the properties and operators of the BigFix Session Inspectors. Inspectors are the basis of the Relevance Language. With Inspectors, you can write Relevance expressions to query thousands of properties of any networked BES computer. Inspectors are also used to produce substituted variables in action buttons, providing great flexibility in deploying fixes and updates. In particular, Session Inspectors can be used to create reports and displays using the large BES Database, which includes fresh updates from the network as well as statistically compiled historical data. Client Inspectors are not available in the Session scope, and are not included in this guide.

You will notice that many of the keywords of the language are not unique; they get their meaning from their context. Accordingly, their definitions often include a phrase to define the context of each Inspector.

In the following pages, you will find tables defining the Inspectors of the Relevance language. The Inspectors come in seven **forms** depending upon their context:

Form	Syntax required
Cast	<object> as keyword
Global	keyword
Named	keyword "*name*" of <object>
NamedGlobal	keyword "*name*"
Numbered	keyword *number* of <object>
NumberedGlobal	keyword *number*
Plain	keyword of <object>

These differ from one another in format and in the syntax they require. Except for Cast, these forms can be used to access both single objects and *lists* of objects by using the plural form of the keyword. The plurals are listed in the Keyword section later in this document.

Creation Methods are used to create objects of the specified type, and various **Properties** are available for each object.

Operators include the binary and unary operations that are allowable with the given object type. Binary operators take two inputs and generate one output. The integer '+' (addition) operator is an example of a binary operation. Unary operators take a single input and generate a single output. The boolean 'not' operation is an example of a unary operation.

Getting Started

Introducing Session Inspectors

Session Inspectors allow users to mine data from the BES Console's data stores. These Inspectors can be used to query information about an entire BES deployment and consequently, provide extremely powerful reporting capabilities. In addition to the Session Inspectors described here, the Core Inspectors (such as string, integer, etc.) are also available. However, for security reasons, the Client Inspectors are not available in this context.

Session Inspectors return information about Console objects, not the local computers themselves. Users may probe for information regarding Fixlet messages and tasks, computers, actions, analyses, sites, wizards, and properties. These Inspectors deal with extremely large data sets and should be used with care by experienced BES content authors. For the sake of compactness and efficiency, this Guide excludes the Core and Client Inspectors of the BigFix Relevance language. For more information about the extended Relevance language, consult the **_BES Inspector Guides_**.

The Session Inspectors can be run in two environments: the BES Console and Web Reports. Using Session Inspectors, you can create dynamic displays in the BES Console to get a condensed history or a real-time view of the current network status. In Web Reports, you can create flexible reports that you can print or archive for future reference.

To tell whether your Relevance expressions are being evaluated in the BES Console or Web Reports, you can use the following global boolean properties:

- `in console context`
- `in Web Reports context`

These Inspectors will return TRUE or FALSE, depending on which environment is currently active.

Running the Presentation Debugger

The Presentation Debugger is available from the optional Debug menu in the BES Console. You can create and debug Session code from this interface. As you go through this guide, you might want to type the examples into the Presentation Debugger and click the **Evaluate** button. This is an excellent way to learn what the Session Inspectors can do for you.

If you don't already have the Debug menu installed in the BES Console, simply hold down Ctrl-Alt-Shift-D. That will bring up the Debug dialog which continuously displays information pertaining to the BES Console. Check the box labeled **Show Debug Menu** to add the Debug menu to the Console interface.

Once you've installed the Debug Menu, select Presentation Debugger and a dialog box will appear. There is a text box at the top, where you can key in Relevance expressions or simply cut and paste from any examples you have. You can also load a file with the **Open File** button. You can evaluate the expression as a string, HTML or a Presentation. Click the Evaluate button to see the results in the lower pane of the dialog.

Editing Presentations

Every time you make a change using the Presentation Debugger, you must re-import it, creating a new copy of the analysis. During extensive debugging, you may end up with multiple copies of the same analysis. This can make it difficult to keep track of the latest version, can clutter your console, and may bog down the clients with superfluous analysis evaluation.

So, although the Presentation Debugger works well for a few lines, it is inefficient for significant development projects. Some suggestions for making the process more productive are:

- Develop iteratively, a short section at a time. Use the Presentation Debugger for each short section, rather than the whole presentation, and combine the sections after debugging.

- Put the content in a Fixlet site and subscribe to it. Then you'll get content replacement automatically.

- Use the Web Reports **Edit Custom Report** feature, which allows you to make quick presentation edits and immediately view them in Web Reports.

- Make a Document Wizard XML file on your local drive, and then use the **Debug > Load Wizard** menu option to add it to the menus or navbar. The XML file will be reloaded each time you close and reopen the document.

Using Data-Store Inspectors

You can get a good overview of the available Inspectors by evaluating the following Relevance expression in the Presentation Debugger:

- ```
  properties whose (direct object type of it as string starts with
  "bes")
  ```

This will yield a list of hundreds of BES Session Inspectors. The basic types include:

- bes **fixlet**

- bes **action**

- bes **property**

- bes **computer**

These types are global iterated properties. For example:

- ```
  names of bes properties
  ```

Returns a list of the names of all the currently assigned properties.

- ```
  names of bes computers
  ```

Returns a list of the names of all the computers administered by the current user.

Using HTML Inspectors

In order to display the results of your Session Inspectors, BES provides a way to view and format them using HTML. There are a number of Inspectors that facilitate the generation of HTML text from the ordinary string and numeric literals typically returned by a Session Inspector. In particular, you may want to generate well-formed HTML from the various properties and their statistics. When generating HTML, you will be working with the "html" type. This type can be thought of as a string that carries around an indication that its contents are to be treated as HTML. This automatically keeps track of normal string characters that have special meaning in HTML (such as <, >, and &), and escapes them. Forgetting to escape these special characters when outputting text – especially when based on user input or database content – is frequently a source of errors.

The following two features help you to avoid such errors when authoring presentations:

- The Inspector conversion from string to HTML automatically converts reserved characters to the appropriate HTML entities.

- The results of evaluating relevance processing instructions are converted to HTML before being inserted in the presentation HTML.

This means that you can write Relevance expressions just as you would expect and simply use the html Inspector to convert it:

- ```
  html of "AT&T"
  ```

Returns <html>AT&T</html>

Notice that the ampersand is properly converted to HTML code, and the whole phrase is embedded between <html> tags. Or you can cast a string as an html type explicitly to achieve the same results (but without the bracketing <html> tags):

- `"<h1>Heading</h1>" as html`

Returns <h1>Heading</h1>

This syntax allow you to embed any kind of text you want in an HTML string without it being interpreted as an HTML command. But what if you actually want HTML code to be output? This can also be done with an indexed HTML command such as:

- `html "<h1>Heading</h1>"`

Returns <h1>Heading</h1>

This is very similar to the "html of" command (above), so take care to note the difference. You should try to minimize usage of the "html" indexed property, as it could potentially provide a mechanism for a malicious user to launch a script insertion attack on the Console. As an alternative to HTML string literals in Relevance expressions, consider using one of the HTML tag Inspectors described below. As an alternative to HTML formatted retrieved properties, consider reporting the results in plain text and doing the formatting from within the presentation.

If you concatenate html with strings, it will automatically escape any reserved characters:

- `html "<h1>" & "PG&E" & html "</h1>"`

Returns <h1>PG&E</h1>

Or:

- `concatenation of (html "<h1>"; "R&D" as html; html "</h1>")`

Returns <h1>R&D</h1>

Note that for concatenation, the items in the list must all have the same type, so the following will not work:

- `concatenation of (html "<h1>"; "R&D"; html "</h1>")`

Returns the error: Incompatible types (html and string).

Using HTML Tag Inspectors

Although it is possible to use the "html" indexed property (as shown above), the HTML tag Inspectors are recommended instead:

- `html tag "h1" of "Johnson & Johnson"`

  Returns <h1>Johnson & Johnson</h1>

The "html tag" takes as an index parameter the name of the HTML element with which to surround the direct object text. The direct object (the object after the "of") can be either a string or html. If it is a string, it will be HTML-escaped. The index parameter can also include attributes, separated from the element name by whitespace:

- `html tag "h1 id='Ben & Jerry'" of "Ben & Jerry"`

  Returns <h1 id='Ben & Jerry'>Ben & Jerry</h1>

Nesting tags is straightforward:

- `html tag "div id='header'" of html tag "h1" of "AT&T"`

  Returns <div id='header'><h1>AT&T</h1></div>

Most common HTML elements have a shorthand tag property:

- `h1 of "P&G"`

  Returns <h1>P&G</h1>

Like the generic html tag Inspector each shorthand tag property accepts either strings or html as a direct object. Each also accepts HTML attributes as an index parameter:

- `h1 "id='P&G' class='header'" of "P&G"`

  Returns <h1 id='P&G' class='header'>P&G</h1>

The following tags are supported:

abbr	acronym	address	anchor	b
base	big	blockquote	body	caption
cite	code	col	colgroup	dd
del	dfn	div	dt	em
h1	h2	h3	h4	h5
h6	head	html	i	ins
kbd	li	link	meta	ol
p	pre	q	samp	small
span	strong	sub	sup	table
tbody	td	tfoot	th	thead
title	tr	tt	ul	var

Since "a" is ignored by the relevance evaluator, the "a" shorthand property is replaced by "anchor".

- `anchor "href='http://www.bigfix.com'" of "bigfix"`

  Returns bigfix

Finally, there are a few special purpose aggregating properties:

- **ordered** list

- **unordered** list

- **definition** list

These produce HTML lists (of the respective types) of their plural string or html direct object:

■ `ordered list of ("<"; ">"; "&")`

Returns &lt;
&gt;
&amp;

■ `unordered list of ("<"; ">"; "&")`

Returns &lt;
&gt;
&amp;

The definition list command alternates between dt and dd elements. It is meant to be used where you have a natural set of name/value pairs:

■ `definition list of (name of it; free space of it as string) of`
`drives whose (exists free space of it)`

Returns <dl><dt>C:</dt><dd>32183602176</dd>

<dt>G:</dt><dd>4845355008</dd></dl>

Linking To Other Documents

You can use the **link** property of <bes fixlet>, <bes computer>, <bes action> and <bes user> to create a hyperlink that will open the document window for that object when it is clicked.. In the BES Console, clicking the link will open the MDI document for the given object. In Web Reports, the link opens a Web Reports page for the object. There are a few different forms of the link Inspector:

- `link of bes fixlet whose (id of it is 1)`

Returns an anchor tag of the form:

 <A href="linkid:openfixlet(2,1)">BES Clients in Seat Count Grace Mode</A>

This creates a hyperlink labeled "BES Clients in Seat Count Grace Mode" (the title of the Fixlet message) that, when clicked, will bring up the Fixlet with ID=1 in the BES Console.

You can specify the contents of the anchor tag by using an index object:

- `link "Click Here" of bes fixlet whose (id of it is 1)`

Returns <A href="linkid:openfixlet(2,1)">Click Here</A>, and:

- `link (b of "Click Here") of bes fixlet whose (id of it is 1)`

Returns <A href="linkid:openfixlet(2,1)">Click Here</A>, creating the link in bold face.

You can get just the href string using link href:

- `link href of bes fixlets whose (id of it is 0)`

Returns linkid:openfixlet(2,1).

Web Reports doesn't use the linkid: protocol, but instead interprets the code to generate its own-style links. Therefore, for portability reasons, you should try to use the link Inspector to automatically generate the proper link styles whenever possible.

Using Preprocessing in Presentations

You can evaluate relevance in presentations in two ways which are compatible with both the BES Console and Web Reports. There are certain things you can do in the BES Console, such as refreshing content, that will not work in Web Reports, but these are designed to fail gracefully. The two ways are **server** side and **client** side, although the meanings of these terms are a bit different than what you might expect. In this section we talk about the server side (preprocessing) technique; the next section will cover the client side (JavaScript).

For server side preprocessing, relevance commands are set into a special relevance tag:

- ```
  <?relevance "expression"?>
  ```

Notice that this is similar to other language declarations, such as <?xml?> or <?php?> tags. Preprocessor directives are typically handled by the server before the page is loaded and handed off to the display engine. In this implementation, that role is played by the BES Console.

In BES Consoles prior to version 6.0, these preprocessor relevance commands are ignored. However, in 6.0 the instructions are parsed out at load time and replaced by the result of evaluating the given expression. This is useful for expressions that only need to be evaluated once, or for those you need as soon as the page is loaded. In Web Reports, you might choose this technique if you want to apply an active filter.

The result is coerced into the new html Inspector type, which means that string results will be escaped so that they will not confound any surrounding HTML code.

Using JavaScript in Presentations

The second way to add relevance to your presentations is with a client-side JavaScript. This technique uses the EvaluateRelevance function, which allows you to incorporate Relevance results within JavaScripts. This functionality is provided by an external javascript file which is automatically included by console documents that support presentation functionality (including Fixlets, Tasks, Baselines, Analyses and Wizard documents). In Web Reports the included file is defined slightly differently, but provides the same functionality.

From any script code you can evaluate a Relevance expression and get the results back as a string, like this:

◆ `myDiv.innerText = EvaluateRelevance( "expression" );`

Where "expression" is a Relevance expression, just as specified in first technique. The result of EvaluateRelevance depends on whether the expression is a singular expression or a plural expression. If expression is singular, the result is a string. If it is plural, the result is an array of strings. Unlike the results of relevance in processing instructions, none of the strings are HTML-escaped unless you use the "as html" cast explicitly.

There are many advantages to working with JavaScript. One of the most important is user interactivity. For example, you can create a script that will only evaluate relevance after getting input from the BES Console user.

NOTE: If an error is encountered, EvaluateRelevance throws an exception. You can get a descriptive error string as follows:

```
try
 {
    myDiv.innerText = EvaluateRelevance( "expression" );
}
 catch (e)
 {
    window.alert( "Error encountered evaluating relevance: " + e.description );
}
```

Refreshing Relevance

NOTE: WebReports does not support refreshing relevance.

In general, users of the BES Console expect the documents to be updated as new information comes in from the database. In order to make <?relevance ?> instructions automatically update, you need to specify another pair of processing instructions to enclose the desired section of the document:

- `<?BeginRefreshRelevance?>`
- `<?EndRefreshRelevance?>`

These tags will cause every <?relevance ?> tag contained between them to be re-evaluated every time something in the BES Database changes. If the result of the relevance is unchanged, then the document is left unaltered. However, if the result of the relevance is different from the last time it was evaluated, the section of the document enclosed by the BeginRefreshRelevance and EndRefreshRelevance tags is updated to reflect the new results.

The actual implementation of this update is important because it may affect the way you need to code your HTML. The <?BeginRefreshRelevance?> tag is replaced by a tag, and the <?EndRefreshRelevance?> tag is replaced by a tag. When the BES Console detects that one of the <?relevance ?> tags has changed, it updates the entire section of the document by replacing the contents of the <span> tag with the new contents that reflect the change in the result of the relevance. The insertion of these <span> tags can affect how the HTML is rendered, so be careful where you place the BeginRefreshRelevance and EndRefreshRelevance tags.

In order to correctly identify which <span> needs to be updated the console assigns an "id" attribute to the <span> tag that it generates to replace the <?BeginRefreshRelevance?> tag. By default, that id is "__DRRSN" (an acronym for Default Refresh Relevance Section Name). You can specify a different id in the refresh tags like this:

- `<?BeginRefreshRelevance id="MyRefreshSpan"?>`
- `<?EndRefreshRelevance id="MyRefreshSpan"?>`

Note that the ids must match up. You can nest RefreshRelevance tags arbitrarily because they will be matched up using their ids. Note that since the default id is a fixed value, you cannot specify more than one RefreshRelevance section without using an id attribute (otherwise the same id would be used more than once, which would be invalid).

You can specify what types of changes will trigger a refresh, and how often by adding attributes to the BeginRefreshRelevance tag. By default, ALL types of changes will trigger a refresh no matter how long it has been since the last refresh. Here is an example:

- `<?BeginRefreshRelevance id="OpenActions" ActionResults="00:01:00" Actions="00:00:00" ?>`
- `<?relevance (link of it & " (" & (number of results of it as string) & ")" & br) of bes actions whose (state of it is "Open") ?>`

- `<?EndRefreshRelevance id="OpenActions" ?>`

The first line has an attribute called ActionResults, which determines the refresh rate. Here it is set to 00:01:00 to refresh no more than once per minute (using the standard BES TimeInterval string format). When an action result changes, the BES Console will only refresh the section if at least one minute has passed since the last action result change was detected. There is also an Actions attribute which determines the refresh rate of the action itself (whether it has been taken, stopped, restarted, etc.). The value of 00:00:00 dictates that as soon as an action changes, the section should be refreshed, regardless of elapsed time.

The second line of this example displays the open actions as a list of HTML links. Click on one to bring up the associated action document. After each link, the number of results for each action appears in parentheses, which is a rough approximation of how many applicable computers have reported on the action. The list might look something like this:

MS03-037: Flaw in Visual Basic for Apps Could Allow Code Execution (2524)

MS03-037: Vulnerability in Explorer Could Allow Remote Execution (39824)

This section only depends on the actions and their results, so the RefreshRelevance tag only needs to specify those two attributes. The other refresh attributes include:

- **Computers**: Refresh whenever a computer is added or removed (ComputerDataStore).

- **ReportTimes**: Refresh whenever a computer's last report time changes.

- **ExternalContent**: Refresh whenever external Fixlet site content changes (FixletStore).

- **CustomContent**: Refresh whenever custom content changes, not including actions (ActionSiteStore).

- **Actions**: Refresh whenever actions are taken, stopped, restarted, etc. (ActionStore).

- **ActionResults**: Refresh whenever a client reports on the status of an action (ActionResultStore).

- **FixletResults**: Refresh whenever a client reports on the relevance of a fixlet (FixletResultStore).

- **PropertyResults**: Refresh whenever a client reports a new value for a retrieved property (RPResultStore).

- **RefreshCycle**: See notes below.

- **ManualRefresh**: See notes below.

NOTE: Refreshes are actually only done at the end of each refresh cycle, not when the change is first detected. At the end of the cycle the BES Console checks to see if any of the attributes you specified has changed and if the time interval has expired. If both conditions are met, then a refresh occurs. The RefreshCycle attribute can be used to force a refresh at the end of the refresh cycle, regardless of whether anything has changed or not.

You can also create blocks that can be refreshed manually by using the ManualRefresh attribute in combination with the predefined ManualRefresh script function. For example:

- `<?BeginRefreshRelevance id="Clock" ManualRefresh="00:00:00"?>`
- `<P>The current time is: <?relevance now ?></P>`
- `<?EndRefreshRelevance id="Clock" ?>`
- `<P><Button onclick='ManualRefresh("Clock")'>Refresh</Button></P>`

NOTE: You must pass the id of "Clock" to the ManualRefresh function, or you will refresh the wrong section. If you call ManualRefresh with a blank or empty parameter, it will refresh the default section (named __DRRSN).

To refresh all the sections, use ManualRefreshAll(). So, in the following example:

- `<?BeginRefreshRelevance ManualRefresh="00:00:00"?>`
- `<?relevance now ?>`
- `<?EndRefreshRelevance?>`
- `<?BeginRefreshRelevance id="Foo" ManualRefresh="00:00:00"?>`
- `<?relevance now ?>`
- `<?EndRefreshRelevance id="Foo"?>`

Here, either ManualRefresh("") or ManualRefresh() will refresh the first clock, which has the default name. ManualRefresh("Foo") will refresh the second clock, named Foo. ManualRefreshAll() will refresh both clocks.

NOTE: If the call to the ManualRefresh script function is inside the refresh tags you run the risk of confounding your browser. IE is actually quite tolerant of this sort of thing, but it's good practice to put the call to ManualRefresh outside of the <?Refresh?> tags that it refreshes.

Statistical Aggregation

BES 6.0 maintains a set of historical databases, allowing you to display and archive long-term statistical data about your networked computers.

A good way of illustrating how this feature works may be to think about the dimensions of the data managed by BES. In BES version 5.1, property data has two dimensions: property and computer. You could envision all the property results as a two dimensional table, with each column representing a property, and each row representing a computer. A cell in this table holds the most recent result reported by a computer for the given property.

In BES version 6.0, a time dimension has been added: selected properties can be set up to track changes over time. In order to keep the size of the data manageable, statistics are aggregated over all the computers reporting on a specific property in a particular time period.

You can envision the resulting data set as another two dimensional table. Again, each column represents a single property, but now each row represents a interval of time, for example the five minute interval between 12:00 and 12:05 AM on Jan 1 2006. Each cell in this table contains a statistical summary of all the clients reporting on the given property during the specified time period. The statistics could indicate, for example, that 67 clients recorded a result during a specified five-minute period, that the average value recorded in that period was 144.32, and that the maximum value recorded was 226.

These cells are called **statistical bins**. For each enabled property, BES keeps 2048 bins of 5 minute duration, 2048 bins of 1 hour duration, and 2048 bins of 1 day duration. This is equivalent to about a week's worth of 5 minute bins, three month's worth of hour bins, and 5.5 years of day bins. The bins of a given property will never overlap and always form a contiguous range.

The Inspectors which expose this data work with statistical bins as well as **ranges** of statistical bins.

Creating Statistical Properties

There are a couple of methods you can use to get statistical properties into your deployment:

- Import an existing analysis containing properties with the **KeepStatistics** attribute set to TRUE.

- Author an analysis in a Fixlet site using hand-edited action script MIME. Add the header **X-Keep-Statistics:true** to the property headers.

The property of interest must return an integer, floating point or Boolean type in order to compile statistics. If you attempt to set the KeepStatistics attribute on a property that does not return one of these types, it will be ignored.

Plural properties work as expected. For example, "free spaces of drives" will result in statistics about all drives on all computers.

Accessing Statistics

To access the aggregated statistics for a specific property, use the statistic range Inspector:

- ◆ `statistic range of <property>`

This returns the range of statistical bins associated with the specified property. The property must have been marked for statistical aggregation. If it has not, or no clients have reported results, this Inspector throws NoSuchObject.

Inspecting Statistical Ranges

You have several tools to examine statistical ranges:

- `start of <statistic range>`

- `end of <statistic range>`

These return the starting and ending times of the specified range.

- `range <time range> of <statistic range>`

For time range = (t0, t1), returns a sub-range of bins beginning with the earliest bin containing t0 and ending with the bin just before the one containing t1. If either of these bins does not exist, it throws NoSuchObject.

- `bin at <time> of <statistic range>`

Returns the bin in the statistical range which starts before and ends after the specified time range. If no such bin exists, it throws NoSuchObject.

- `total of <statistic range>`

Statistically totals the bins in the specified range, producing a single bin covering the same range. Primarily useful after constraining the range.

- `totals <time interval> of <statistic range>`

Used for downsampling (condensing) bins. Totals over the specified range, producing a new series of bins with length determined by the time interval. The resulting range will start and end on a multiple of the time interval. For example if you ask for day bins, the result will start and end at midnight. If the time interval is not a multiple of the the length of the starting bin of the range, this Inspector throws NoSuchObject. For example, you cannot get 6-hour totals of a range which starts with day bins.

- `bins of <statistic range>`

Iterates over the individual bins in the range. Primarily useful after downsampling.

Using Linear Projections

A bin represents two-dimensional data: values collected over a range of time. When the time range for a bin is large, we can look for trends in the way the values change over time. The "linear fit of <statistical bin>" Inspector uses the least-squares method to fit a line through the data in the bin. The linear projection it returns has the following floating-point properties:

- `correlation coefficient of <linear projection>`

   This provides a measure of how well the projection fits the data. The value ranges from -1 to 1, where -1 represents a perfect inverse correlation, 1 is a perfect direct correlation, and 0 represents no correlation at all.

- `extrapolation (<time>) of <linear projection>`

   This is the projected value at a given time.

- `rate of <linear projection>`

   This represents the slope of the line. Multiply this by a time interval to compute the projected growth over a period of that length.

Using Exponential Projections

The "exponential fit of <statistical bin>" function is similar to the linear projection. It uses the least-squares method to fit a line through the logarithms of the values in the bin. It is therefore only useful for positive data. The exponential projection it returns has the following floating-point properties:

- `correlation coefficient of <exponential projection>`

   This provides a measure of how well the projection fits the data. The value ranges from -1 to 1, where -1 represents a perfect inverse correlation, 1 is a perfect direct correlation, and 0 represents no correlation at all. Remember this is a correlation to the logs, not the values themselves.

- `extrapolation (<time>) of <exponential projection>`

   This is the projected value at a given time.

- `rate (<time interval>) of <exponential projection>`

   This is the factor by which the value is projected to increase over the given time interval.

Examples

The following sample code will populate a JavaScript array named 'statistics' with summary statistics for the last 30 days in 1 day chunks:

- ```
  javascript array "statistics" of totals (1 * day) of range ((now
  - (30 * day)) & (now)) of statistic ranges of bes properties
  whose (id of it as string = 100)
  ```

That is the basic relevance clause. To use it in a presentation, you can use the server-side or client-side techniques. To have BES do a server-side substitution, use a script like this:

- ```
  <script> <?relevance javascript array "statistics" of totals (1 *
  day) of range ((now - (30 * day)) & (now)) of statistic ranges of
  bes properties whose (id of it as string = 100) ?>
  alert(statistics.length); </script>
  ```

Or, if you want to use JavaScript to add interactivity, use the client-side technique:

- ```
  <script> eval(EvaluateRelevance('javascript array "statistics" of
  totals (1 * day) of range ((now - (30 * day)) & (now)) of
  statistic ranges of bes properties whose (id of it as string =
  100)')); alert(statistics.length); </script>
  ```

Provided that statistics have been collected on the given property for the last 30 days, either technique will produce a JavaScript array with 30 entries. Each entry holds multiple statistics (mean, variance, standard deviation, etc.) for each day. When this command is executed, a new section of code will be embedded in the script, containing assignment statements to set the values of the array.

Here is the code that is created and embedded for the first day in the range:

- ```
  var statistics = new Array();
  ```
- ```
  statistics[0] = new Object();
  ```
- ```
  statistics[0].StartTime = new Date( 1151020800000 );
  ```
- ```
  statistics[0].EndTime = new Date( 1151107200000 );
  ```
- ```
  statistics[0].MeanComputerCount = 7.6700694444444448;
  ```
- ```
  statistics[0].MeanSuccessfulComputerCount = 7.6700694444444448;
  ```
- ```
  statistics[0].MeanFailingComputerCount = 0.0000000000000000;
  ```
- ```
  statistics[0].SuccessRate = 1.0000000000000000;
  ```
- ```
  statistics[0].FailureRate = 0.0000000000000000;
  ```
- ```
  statistics[0].MeanValueCount = 1.0000000000000000;
  ```
- ```
  statistics[0].MeanZeroCount = .5507836195891317;
  ```
- ```
  statistics[0].MeanNonzeroCount = .44921638041086840;
  ```
- ```
  statistics[0].Mean = .44921638041086840;
  ```
- ```
  statistics[0].Variance = .24742102398142636;
  ```
- ```
  statistics[0].StandardDeviation = .49741433833518144;
  ```
- ```
  statistics[0].Skewness = .20419041300297692;
  ```
- ```
  statistics[0].Kurtosis = -1.9583062752376728;
  ```

- ■ `statistics[0].LogMean = 0.0000000000000000;`
- ■ `statistics[0].LogVariance = 0.0000000000000000;`
- ■ `statistics[0].LogStandardDeviation = 0.0000000000000000;`
- ■ `statistics[0].LogSkewness = Number.NaN;`
- ■ `statistics[0].LogKurtosis = Number.NaN;`
- ■ `statistics[0].GeometricMean = 1.0000000000000000;`
- ■ `statistics[0].MinimumValue = 0.0000000000000000;`
- ■ `statistics[0].MaximumValue = 1.0000000000000000;`
- ■ `statistics[0].MinimumSingleComputerTotal = 0.0000000000000000;`
- ■ `statistics[0].MaximumSingleComputerTotal = 1.0000000000000000;`
- ■ `statistics[0].MeanTotal = 3.4455208333333332;`
- ■ `statistics[0].TotalLowerBound = 3.0000000000000000;`
- ■ `statistics[0].TotalUpperBound = 4.0000000000000000;`
- ■ `statistics[1].....`

A value is available for each statistic recorded for each day. Note that a time range object is created by concatenating a start and an end time:

- ■ `(now - (30 * day)) & (now)`

You can also access statistics in individual bins. For example this will give you the mean of the values reported for the bin at the specified time:

- ■ `mean total of bin at ("Thu, 29 Jun 2006 18:30:00 -0700" as time) of statistic ranges of bes properties whose (id of it as string = "1624")`

There is also information available about the bins themselves, such as start and end date:

- ■ `(start of it as string & " - " & end of it as string & " - " & length of it as string) of bins of statistic ranges of bes properties whose (id of it as string = "1624")`

Session Objects

These Inspectors retrieve information about properties of the BES Client computers. They allow you to access information in the BES databases and display it in the Console and the Web Reports program. As well as current statistics, the BES database also maintains historical statistics that can be used to create long-term reports.

BES Action

These Inspectors are used to access information about the actions which have been issued by the BES Operators. You can iterate over the actions to create lists. Each action may have several properties that can be examined.

Creation Methods

Key Phrase	Form	Description
action dependency of <bes action>	*Plain*	For an end action, this Inspector iterates over the list of <action> objects that make up the group. For a middle action of a group, this returns the start action. Win:6.0
action of <bes action result>	*Plain*	Returns the action corresponding to the action result. Win:6.0
bes action	*PlainGlobal*	Returns all actions, except those that are normally hidden in the console, such as subscription actions, management rights actions, etc. Win:6.0
hidden bes action	*PlainGlobal*	Returns all actions that are normally hidden by the console, such as subscription actions, management rights actions, etc. Win:6.0
middle action of <bes action>	*Plain*	For a start action this iterates over the list of <action> objects that make up the group. Win:6.0
top level bes action	*PlainGlobal*	Returns all top-level actions. Does not include actions that are normally hidden or sub-actions of a multiple action group. Win:6.0

Properties

Key Phrase	Form	Return Type	Description
action dependency of <bes action>	*Plain*	<bes action>	For an end action, this Inspector iterates over the list of <action> objects that make up the group. For a middle action of a group, this returns the start action. Win:6.0
action script of <bes action>	*Plain*	<string>	Returns the script behind the specified action as a string. Win:6.0
action script type of <bes action>	*Plain*	<string>	Returns the MIME type of the specified action as a string. Win:6.0
applicability relevance of <bes action>	*Plain*	<string>	Returns the relevance statement as a string. This string is included in the targeting relevance expression but is maintained separately because it comes from the relevance of the original analysis fixlet. Win:6.0
computer group flag of <bes action>	*Plain*	<boolean>	Returns TRUE if the specified action is a computer group action. Win:6.0
constrain by property name of <bes action>	*Plain*	<string>	Returns the 'constrain by property name' setting, one of the property constraints of the action. Win:6.0
constrain by property relation of <bes action>	*Plain*	<string>	Returns the 'constrain by property relation' setting, one of the property constraints of the action. Win:6.0
constrain by property value of <bes action>	*Plain*	<string>	Returns the 'constrain by property value' setting, one of the property constraints of the action. Win:6.0
custom success relevance of <bes action>	*Plain*	<string>	Returns the custom relevance expression for this action, if it exists. Win:6.0

Key Phrase	*Form*	Return Type	Description
database id of <bes action>	*Plain*	<integer>	In a Web Reports context, this Inspector returns the ID (as an integer) of the database in which the specified BES action resides. Win:6.0
database name of <bes action>	*Plain*	<string>	In a Web Reports context, this Inspector returns the name (as a string) of the database containing the specified action. Win:6.0
date range end of <bes action>	*Plain*	<date>	Returns the ending <date> for the specified action. Along with the starting date, this defines the allowed time range for execution of the action. Win:6.0
date range start of <bes action>	*Plain*	<date>	Returns the starting <date> for the specified action. Along with the ending date, this defines the allowed time range for execution of the action. Win:6.0
end date of <bes action>	*Plain*	<date>	Returns the ending <date> for the specified action. Along with the start date, this defines the allowed time range for execution of the action. Win:6.0
end flag of <bes action>	*Plain*	<boolean>	Returns TRUE if the specified action is an end action. Win:6.0
end time_of_day of <bes action>	*Plain*	<time of day>	Returns the ending <time of day> for the specified action. Along with the start time of day, this defines the allowed time range for execution of the action. Win:6.0
expiration flag of <bes action>	*Plain*	<boolean>	Returns TRUE if the expiration flag of the specified action is set. Win:6.0
expiration time of <bes action>	*Plain*	<time>	Returns the <time> when the specified action is set to expire (if the expiration flag is set). Win:6.0

Key Phrase	*Form*	Return Type	Description
group member flag of <bes action>	*Plain*	<boolean>	Returns TRUE if the specified action is a group member action. Win:6.0
hidden flag of <bes action>	*Plain*	<boolean>	Returns TRUE if the specified action is a hiding action. Win:6.0
id of <bes action>	*Plain*	<integer>	Returns the ID number of the specified action. Win:6.0
issuer of <bes action>	*Plain*	<bes user>	Returns the BES user object corresponding to the issuer of the specified action. Win:6.0
link <html> of <bes action>	*Indexed*	<html>	Returns an HTML string containing an <A> tag including the supplied HTML description that, when clicked, will open the given action's document (in the BES Console) or description page (in Web Reports). Win:6.0
link <string> of <bes action>	*Named*	<html>	Returns an HTML string containing an <A> tag including the supplied descriptive string that, when clicked, will open the given action's document (in the BES Console) or description page (in Web Reports). Win:6.0
link href of <bes action>	*Plain*	<string>	Returns a <string> that can be embedded into an <A> tag that, when clicked, will open the given action's document (in the BES Console) or description page (in Web Reports). Note that link href returns a normal string, not an HTML string. Win:6.0
link of <bes action>	*Plain*	<html>	Returns an HTML string containing an <A> tag that, when clicked, will open the given action's document (in the BES Console) or description page (in Web Reports). Win:6.0
management rights flag of <bes action>	*Plain*	<boolean>	Returns TRUE if the specified action is a management rights action. Win:6.0

Key Phrase	*Form*	Return Type	Description
message action button flag of <bes action>	*Plain*	<boolean>	Returns the value of the message action button flag, one of the settings that control the pre-action user interface. Win:6.0
message allow cancel flag of <bes action>	*Plain*	<boolean>	Returns the value of the message allow cancel flag, one of the settings that control the pre-action user interface. Win:6.0
message postpone delay of <bes action>	*Plain*	<time interval>	Returns the value of the message postpone delay flag, one of the settings that control the pre-action user interface. Win:6.0
message text of <bes action>	*Plain*	<string>	Returns the value of the message text flag, one of the settings that control the pre-action user interface. Win:6.0
message timeout delay of <bes action>	*Plain*	<time interval>	Returns the timeout delay assigned to the action message: 'Automatically close message box and run action after…'. The time can vary from 1 minute to 30 days. Win:6.0
message title of <bes action>	*Plain*	<string>	Returns the value of the message title flag, one of the settings that control the pre-action user interface. Win:6.0
middle action of <bes action>	*Plain*	<bes action>	For a start action this iterates over the list of <action> objects that make up the group. Win:6.0
multiple flag of <bes action>	*Plain*	<boolean>	Returns TRUE if the specified action is a multiple action (see single flag of <bes action>). Win:6.0
name of <bes action>	*Plain*	<string>	Returns the name of the specified BES action. Win:6.0
operator site flag of <bes action>	*Plain*	<boolean>	Returns TRUE if the action is propagated from a non-master operator's site. Win:6.0

Key Phrase	*Form*	Return Type	Description
postaction allow cancel flag of <bes action>	*Plain*	<boolean>	Returns the value of the allow cancel flag, one of the settings that control the post-action user interface. Win:6.0
postaction force delay of <bes action>	*Plain*	<time interval>	Returns the value of the force delay flag, one of the settings that control the post-action user interface. Win:6.0
postaction message text of <bes action>	*Plain*	<string>	Returns the value of the message text flag, one of the settings that control the post-action user interface. Win:6.0
postaction message title of <bes action>	*Plain*	<string>	Returns the value of the message title flag, one of the settings that control the post-action user interface. Win:6.0
postaction postpone delay of <bes action>	*Plain*	<time interval>	Returns the value of the postpone delay flag, one of the settings that control the post-action user interface. Win:6.0
reapplication limit of <bes action>	*Plain*	<integer>	Returns the maximum number of times the action will be reapplied. If the action is not set to be reapplied, then this will return a "non-existent" error. Win:6.0
require user absence of <bes action>	*Plain*	<boolean>	Returns TRUE if the action requires that the user be absent to execute the specified action. Win:6.0
require user presence of <bes action>	*Plain*	<boolean>	Returns TRUE if the action requires that the user be present to execute the specified action. Win:6.0
restart flag of <bes action>	*Plain*	<boolean>	Returns the value of the reset flag, one of the settings that control the post-action user interface. Win:6.0

Key Phrase	*Form*	Return Type	Description
result from <bes computer> of <bes action>	*Indexed*	<bes action result>	Returns a bes action result object for the given computer and action. This command is a variant of other result Inspectors, such as result <(bes action, bes computer)>. Win:6.0
result of <bes action>	*Plain*	<bes action result>	Returns a bes action result object for each computer which has reported on the specified action. Win:6.0
retry delay of <bes action>	*Plain*	<time interval>	Returns the <time interval> object that represents the amount of time to wait before retrying after a failure. If the action is not set to delay for a time interval before retrying then this will return a "non-existent" error. Win:6.0
retry limit of <bes action>	*Plain*	<integer>	Returns the maximum number of times the action will be retried after failure. If the action is not set to be retried, then this will return a "non-existent" error. Win:6.0
running message text of <bes action>	*Plain*	<string>	Returns the value of the running message text, one of the user interfaces that is displayed while the action is running. Win:6.0
running message title of <bes action>	*Plain*	<string>	Returns the value of the running message title, one of the user interfaces that is displayed while the action is running. Win:6.0
selected groups string of <bes action>	*Plain*	<string>	If the specified action is targeted by property, then this returns a string that contains a tree representation of the items that were selected. Win:6.0
settings flag of <bes action>	*Plain*	<boolean>	Returns TRUE if the specified action is a settings action. Win:6.0

Key Phrase	*Form*	Return Type	Description
show message flag of <bes action>	*Plain*	<boolean>	Returns the value of the message flag, one of the settings that control the pre-action user interface. Win:6.0
show running message flag of <bes action>	*Plain*	<boolean>	Returns the value of the running message flag, one of the user interfaces that is displayed while the action is running. Win:6.0
shutdown flag of <bes action>	*Plain*	<boolean>	Returns the value of the shutdown flag, one of the settings that control the post-action user interface. Win:6.0
single flag of <bes action>	*Plain*	<boolean>	Returns TRUE if the specified action is a single action (see multiple flag of <bes action>). Win:6.0
source fixlet of <bes action>	*Plain*	<bes fixlet>	Returns the <bes fixlet> object that was the source of the specified action. Win:6.0
source relevance of <bes action>	*Plain*	<string>	Returns the original relevance expression for this action. Win:6.0
start date of <bes action>	*Plain*	<date>	Returns the starting <date> for the specified action. Along with the end date, this defines the allowed time range for execution of the action. Win:6.0
start flag of <bes action>	*Plain*	<boolean>	Returns TRUE if the specified action is a start action. Win:6.0
start time_of_day of <bes action>	*Plain*	<time of day>	Returns the starting <time of day> for the specified action. Along with the end time of day, this defines the allowed time range for execution of the action. Win:6.0
state of <bes action>	*Plain*	<string>	Returns the current state of the specified action as a string. It should be one of the following: • Open • Stopped • Expired. Win:6.0

Key Phrase	*Form*	Return Type	Description
subscription flag of <bes action>	*Plain*	<boolean>	Returns TRUE if the specified action is a subscription action. Win:6.0
success on custom relevance of <bes action>	*Plain*	<boolean>	Returns TRUE if the success of the action is determined by the custom relevance becoming false (no longer relevant). Win:6.0
success on original relevance of <bes action>	*Plain*	<boolean>	Returns TRUE if the success of the action is determined by the original relevance becoming false (no longer relevant). Win:6.0
success on run to completion of <bes action>	*Plain*	<boolean>	Returns TRUE if the success of the action is determined by the completion of all lines of the action script. Win:6.0
targeted by id flag of <bes action>	*Plain*	<boolean>	Returns a boolean TRUE if the specified action is targeted by an ID Flag. Win:6.0
targeted by list flag of <bes action>	*Plain*	<boolean>	Returns a boolean TRUE if the specified action is targeted by a List Flag. Win:6.0
targeted by property flag of <bes action>	*Plain*	<boolean>	Returns a boolean TRUE if the specified action is targeted by a Property Flag. Win:6.0
targeted computer of <bes action>	*Plain*	<bes computer>	If the specified action is targeted by ID, then this Inspector returns an iterated list of the targeted BES computer objects. Win:6.0
targeted list of <bes action>	*Plain*	<string>	If the specified action is targeted by list, then this returns the relevant BES computer names, concatenated into a single string. Win:6.0
targeted name of <bes action>	*Plain*	<string>	If the specified action is targeted by list, then this returns the relevant BES computer names as an iterated list with one string for each name. Win:6.0

Key Phrase	*Form*	Return Type	Description
targeting method of <bes action>	*Plain*	<string>	Returns one of the strings "By Property", "By Computer ID", "By List", or "Untargeted". Win:6.0
targeting relevance of <bes action>	*Plain*	<string>	Returns the relevance string that is being used to target the action. Win:6.0
temporal distribution of <bes action>	*Plain*	<time interval>	Returns the <time interval> over which the execution (and file downloads) of this action will be distributed. Win:6.0
time issued of <bes action>	*Plain*	<time>	Returns the time when the action was issued. Win:6.0
time range end of <bes action>	*Plain*	<time of day>	Returns the ending <time of day> for the specified action. Along with the starting time of day, this defines the allowed time range for execution of the action. Win:6.0
time range start of <bes action>	*Plain*	<time of day>	Returns the starting <time of day> for the specified action. Along with the ending time of day, this defines the allowed time range for execution of the action. Win:6.0
untargeted flag of <bes action>	*Plain*	<boolean>	Returns a boolean TRUE if the specified action is untargeted. Win:6.0
urgent flag of <bes action>	*Plain*	<boolean>	Returns TRUE if the specified action is marked urgent, which means that it will be executed by the client before all non-urgent actions. Win:6.0

Examples

- ■ `links (h1 of name of it) of bes actions`
- ▶ Creates clickable links listing all the current BES Actions, displaying the Action names in headline format.

- ` links (name of it & "(" & id of it as string & ")")) of bes actions`
  ‣ Creates clickable links listing all the current BES Actions, formated as name and ID.

- ` (br & html "Click <A href='" & link href of it & html "'>here</A> to open action " & id of it as string) of bes actions`
  ‣ Creates clickable links listing all the current BES Actions, formated with a descriptive prompt and an embedded link, such as:
  - Click here to open action 123456.

- ` detailed status of result from (bes computer whose (id of it is 1234567)) of (bes action whose (id of it is 1234))`
  ‣ Returns the detailed status of the specified action on the given computer.

- ` detailed statuses of results of (bes action whose (id of it is 1234))`
  ‣ Returns a detailed status list containing the results of bes actions with the specified id.

BES Action Status

These Inspectors return information about the status of BES actions, such as whether it is running, evaluating, expired, etc.

Creation Methods

Key Phrase	*Form*	Description
bes action status constrained	*PlainGlobal*	Returns the BES action status corresponding to constraints. This result can be cast to a <string> format to give the text as shown in the console. Win:6.0
bes action status download failed	*PlainGlobal*	Returns the BES action status corresponding to failed downloads. This result can be cast to a <string> format to give the text as shown in the console. Win:6.0
bes action status error	*PlainGlobal*	Returns the BES action status corresponding to errors. This result can be cast to a <string> format to give the text as shown in the console. Win:6.0
bes action status evaluating	*PlainGlobal*	Returns the BES action status corresponding to evaluation. This result can be cast to a <string> format to give the text as shown in the console. Win:6.0

Key Phrase	*Form*	Description
bes action status expired	*PlainGlobal*	Returns the BES action status corresponding to expiration. This result can be cast to a <string> format to give the text as shown in the console. Win:6.0
bes action status failed	*PlainGlobal*	Returns the BES action status corresponding to failure. This result can be cast to a <string> format to give the text as shown in the console. Win:6.0
bes action status fixed	*PlainGlobal*	Returns the BES action status corresponding to successful fixes. This result can be cast to a <string> format to give the text as shown in the console. Win:6.0
bes action status invalid signature	*PlainGlobal*	Returns the BES action status corresponding to invalid signatures. This result can be cast to a <string> format to give the text as shown in the console. Win:6.0
bes action status irrelevant	*PlainGlobal*	Returns the BES action status corresponding to irrelevance This result can be cast to a <string> format to give the text as shown in the console. Win:6.0
bes action status locked	*PlainGlobal*	Returns the BES action status corresponding to locking. This result can be cast to a <string> format to give the text as shown in the console. Win:6.0
bes action status pending downloads	*PlainGlobal*	Returns the BES action status corresponding to pending downloads. This result can be cast to a <string> format to give the text as shown in the console. Win:6.0
bes action status pending login	*PlainGlobal*	Returns the BES action status corresponding to pending logins. This result can be cast to a <string> format to give the text as shown in the console. Win:6.0
bes action status pending message	*PlainGlobal*	Returns the BES action status corresponding to pending messages. This result can be cast to a <string> format to give the text as shown in the console. Win:6.0

Key Phrase	*Form*	Description
bes action status pending restart	*PlainGlobal*	Returns the BES action status corresponding to pending restarts. This result can be cast to a <string> format to give the text as shown in the console. Win:6.0
bes action status postponed	*PlainGlobal*	Returns the BES action status corresponding to postponements. This result can be cast to a <string> format to give the text as shown in the console. Win:6.0
bes action status running	*PlainGlobal*	Returns the BES action status corresponding to whether or not it is running. This result can be cast to a <string> format to give the text as shown in the console. Win:6.0
bes action status unreported	*PlainGlobal*	Returns a constant representing an action status of 'not reported'. Win:6.0
bes action status user cancelled	*PlainGlobal*	Returns the BES action status corresponding to user cancelation. This result can be cast to a <string> format to give the text as shown in the console. Win:6.0
bes action status waiting	*PlainGlobal*	Returns the BES action status corresponding to waiting. This result can be cast to a <string> format to give the text as shown in the console. Win:6.0
status of <bes action result>	*Plain*	Returns the <bes action state> object corresponding to the specified action result on the client computer. Win:6.0

Note

The status returned from a BES Action can be cast into a string format to give the text shown in the console. This can be compared for equality using the following constants:

bes action status fixed
bes action status running
bes action status evaluating
bes action status failed
bes action status user cancelled
bes action status download failed
bes action status locked
bes action status waiting
bes action status pending downloads
bes action status pending restart
bes action status pending message
bes action status pending login
bes action status constrained
bes action status expired
bes action status postponed
bes action status invalid signature
bes action status error
bes action status not relevant
bes action status not reported

Properties

Key Phrase	*Form*	Return Type	Description
<bes action status> as string	*Cast*	<string>	Casts an action status as a string. Win:6.0

Operators

Key phrase	Return Type	Description
<bes action status> = <bes action status>	*<boolean>*	Compares two action status objects, and returns a boolean TRUE or FALSE. Win:6.0

BES Action Result

These Inspectors examine the results of BES Actions, which can be used to make reports.

Creation Methods

Key Phrase	*Form*	Description
action result of <bes computer>	*Plain*	Returns the results of BES actions that have occurred on the specified computer. Win:6.0
result <(bes action, bes computer)>	*IndexedGlobal*	Returns a bes action result object for the given computer and action. This command is a variant of other result Inspectors, such as result from <bes action> of <bes computer>. Win:6.0
result <(bes computer, bes action)>	*IndexedGlobal*	Returns a bes action result object for the given computer and action. This command is a variant of other result Inspectors, such as result from <bes action> of <bes computer>. Win:6.0
result from <bes action> of <bes computer>	*Indexed*	Returns a bes action result object for the given computer and action. This command is a variant of other result Inspectors, such as result <(bes action, bes computer)>. Win:6.0

Key Phrase	Form	Description
result from \<bes computer> of \<bes action>	*Indexed*	Returns a bes action result object for the given computer and action. This command is a variant of other result Inspectors, such as result <(bes action, bes computer)>. Win:6.0
result of \<bes action>	*Plain*	Returns a bes action result object for each computer which has reported on the specified action. Win:6.0

Properties

Key Phrase	Form	Return Type	Description
action of \<bes action result>	*Plain*	\<bes action>	Returns the action corresponding to the specified action result. Win:6.0
apply count of \<bes action result>	*Plain*	\<integer>	Returns the number of times (as an integer) that the specified BES action result has been initiated on the client. Win:6.0
computer of \<bes action result>	*Plain*	\<bes computer>	Returns the computer(s) that the specified action result applies to. Win:6.0
detailed status of \<bes action result>	*Plain*	\<string>	Returns a string describing the detailed status of the specified action result on this computer. Win:6.0
line number of \<bes action result>	*Plain*	\<integer>	Returns the current line number of the action script that is being executed on the client computer. Win:6.0
retry count of \<bes action result>	*Plain*	\<integer>	Returns the number of times (as an integer) that the specified BES action result has been retried on the client. Win:6.0
status of \<bes action result>	*Plain*	\<bes action status>	Returns the \<bes action state> object corresponding to the specified action result on the client computer. Win:6.0

BES Activation

These Inspectors examine the various Analyses that have been activated on the networked BES Clients.

Creation Methods

Key Phrase	*Form*	Description
activation of <bes fixlet>	*Plain*	If the specified Fixlet message is from an analysis, this Inspector returns a list of all of its activations. Win:6.0
best activation of <bes fixlet>	*Plain*	If the specified Fixlet message is from an analysis, then this Inspector returns the activation which is most appropriate for the current console user. Win:6.0

Properties

Key Phrase	*Form*	Return Type	Description
active flag of <bes activation>	*Plain*	<boolean>	Returns TRUE if the specified activation is active, FALSE if it has been stopped. Win:6.0
analysis of <bes activation>	*Plain*	<bes fixlet>	Returns the source analysis fixlet that spawned the specified activation. Win:6.0
database id of <bes activation>	*Plain*	<integer>	In the Web Reports environment, this Inspector returns the numeric ID of the database in which this activation resides. Win:6.0
id of <bes activation>	*Plain*	<integer>	Returns the numeric ID of the activation object. Win:6.0
issuer of <bes activation>	*Plain*	<bes user>	Returns the <bes user> object corresponding to the user who issued the specified activation. Win:6.0
name of <bes activation>	*Plain*	<string>	Returns the name of the specified BES activation as a string. Win:6.0

BES Computer

These Inspectors return lists of the computers currently visible through the BES Console.

Creation Methods

Key Phrase	Form	Description
applicable computer of <bes fixlet>	*Plain*	Returns a list of all of the <bes computer> objects reporting that the specified Fixlet message is relevant. Win:6.0
bes computer	*PlainGlobal*	Returns a list of all the BES computers visible to the current console user. Win:6.0
computer of <bes action result>	*Plain*	Returns the computer(s) that the specified action result applies to. Win:6.0
computer of <bes fixlet result>	*Plain*	Returns the BES computer associated with the specified Fixlet result. Win:6.0
computer of <bes property result>	*Plain*	Returns the computer corresponding to the specified BES property result. Win:6.0
current computer	*PlainGlobal*	This Inspector returns the corresponding <computer> object if this evaluation is occurring in the context of a computer document. • Note: This is a Console-only Inspector. Win:6.0
targeted computer of <bes action>	*Plain*	If the specified action is targeted by ID, then this Inspector returns an iterated list of the targeted BES computer objects. Win:6.0

Properties

Key Phrase	Form	Return Type	Description
action result of <bes computer>	*Plain*	<bes action result>	Returns the results of BES actions that have occurred on the specified computer. Win:6.0
database id of <bes computer>	*Plain*	<integer>	In the Web Reports environment, this Inspector returns the numeric ID of the database containing the specified BES computer. Win:6.0
database name of <bes computer>	*Plain*	<string>	In a Web Reports context, this Inspector returns the name (as a string) of the database containing the specified computer. Win:6.0
id of <bes computer>	*Plain*	<integer>	Returns the numeric ID unique to the specified BES computer. Win:6.0
last report time of <bes computer>	*Plain*	<time>	Returns the time of the last report submitted by the specified BES computer. Win:6.0
link <html> of <bes computer>	*Indexed*	<html>	Returns an HTML string containing an <A> tag including the supplied HTML description that, when clicked, will open the given computer's document (in the BES Console) or its description page (in Web Reports). Win:6.0
link <string> of <bes computer>	*Named*	<html>	Returns an HTML string containing an <A> tag including the supplied descriptive string that, when clicked, will open the given computer's document (in the BES Console) or its description page (in Web Reports). Win:6.0
link href of <bes computer>	*Plain*	<string>	The link href property does not return an <A> tag but rather returns the value of the href attribute of the <A> tag that would be constructed by the other link inspectors. This allows you to create more flexible linking formats. (See link of <bes computer>). Note that link href returns a string, not an HTML string. Win:6.0

Key Phrase	*Form*	Return Type	Description
link of <bes computer>	*Plain*	<html>	Returns an HTML string containing an <A> tag that when clicked will open the given computer's document (in the BES Console) or its description page (in Web Reports). Win:6.0
name of <bes computer>	*Plain*	<string>	Returns the value of the specified 'Computer Name' property for the specified BES computer. Win:6.0
property result of <bes computer>	*Plain*	<bes property result>	Returns a list of all of the <bes property result> objects that the specified BES computer has reported. Win:6.0
relevant <bes fixlet> of <bes computer>	*Indexed*	<boolean>	Returns TRUE if the given Fixlet message is relevant on the specified computer. Win:6.0
relevant fixlet of <bes computer>	*Plain*	<bes fixlet>	Returns a list of all the <bes fixlet> objects that the specified computer has reported are relevant. Win:6.0
result from <bes action> of <bes computer>	*Indexed*	<bes action result>	Returns a bes action result object for the given computer and action. This command is a variant of other result Inspectors, such as result <(bes action, bes computer)>. Win:6.0
result from <bes property> of <bes computer>	*Indexed*	<bes property result>	Returns the result of the specified BES property and computer. Win:6.0

Examples

■ `links (h1 of name of it) of bes computers`
▸ Returns a list of HTML strings, each with an HTML link named after the BES computer and formatted as a header (h1).

■ `links (name of it & "(" & id of it as string & ")"))` of bes computers
▸ Returns an HTML string that will print the name and ID of the computer inside a clickable <A> tag.

- ▪ `(br & html "Click <A href='" & link href of it & html "'>here</A> to open computer " & id of it as string) of bes computers`
▸ Returns an html string such as 'Click here to open computer 89201' message that, when clicked, will open the corresponding BES computer document.

- ▪ `[edit]`
▸ Returns a list of HTML links to BES computers that, when clicked, will bring up information about the specified computer.

- ▪ `detailed status of result from (bes action whose (id of it is 1234)) of (bes computer whose (id of it is 1234567))`
▸ Returns the detailed status of the specified action on the given computer.

BES Custom Site

These Inspectors allow you to look at the properties of BES Custom Sites, such as the name and description.

Creation Methods

Key Phrase	*Form*	Description
bes custom site	*PlainGlobal*	Returns a list of all the BES Fixlet objects. Win:6.0
custom site of <bes fixlet>	*Plain*	If the specified Fixlet message resides in a custom site, this Inspector returns the corresponding custom site object. Win:6.0

Properties

Key Phrase	*Form*	Return Type	Description
creation date of <bes custom site>	*Plain*	<time>	Returns the time when the BES custom site was created. Win:6.0
creator of <bes custom site>	*Plain*	<bes user>	Returns the <bes user> who created the specified custom site. Win:6.0
description of <bes custom site>	*Plain*	<string>	Returns the description of the BES custom site, as specified by the creator. Win:6.0

Key Phrase	*Form*	Return Type	Description
name of <bes custom site>	*Plain*	<string>	Returns the name of the specified BES custom site. Win:6.0
owner flag <bes user> of <bes custom site>	*Indexed*	<boolean>	Returns TRUE if the given BES user is an owner of the specified custom site. Notice that "owner flag (creator of it) of it of <custom site>" returns false, i.e., the creator is not considered to be an owner of the site. • Note: This is a Console-only Inspector. Win:6.0
owner of <bes custom site>	*Plain*	<bes user>	Returns a list of BES users that have been granted ownership of the specified custom site. Notice that the creator of this site is not included in the owner list. • Note: This is a Console-only Inspector. Win:6.0
reader of <bes custom site>	*Plain*	<bes user>	Returns a list of BES users that have been granted reading privileges on the specified custom site. Notice that the creator, owners (unless explicitly added) and writers of this site are not included in this reader list. • Note: This is a Console-only Inspector. Win:6.0
writer of <bes custom site>	*Plain*	<bes user>	Returns a list of BES users that have been granted writing privileges on the specified custom site. Notice that the creator and owners (unless explicitly added) of this site are not included in this reader list. • Note: This is a Console-only Inspector. Win:6.0

BES Fixlet Action

These Inspectors let you examine BES Actions that are attached to Fixlet messages.

Creation Methods

Key Phrase	Form	Description
action <integer> of <bes fixlet>	*Numbered*	Returns an object representing the nth action for the specified Fixlet message. Win:6.0
action <string> of <bes fixlet>	*Named*	Returns an object representing the named action for the specified Fixlet message. Win:6.0
action of <bes fixlet>	*Plain*	Returns a list of all the Fixlet actions associated with the specified Fixlet message. Win:6.0
default action of <bes fixlet>	*Plain*	Returns an object representing the default action for the specified Fixlet message. Win:6.0

Properties

Key Phrase	Form	Return Type	Description
content id of <bes fixlet action>	*Plain*	<string>	Returns the content ID field for the specified Fixlet action. Win:6.0
script of <bes fixlet action>	*Plain*	<string>	Returns the script for the specified Fixlet action. Win:6.0
script type of <bes fixlet action>	*Plain*	<string>	Returns the MIME type of the specified Fixlet action. Win:6.0

BES Fixlet Result

These Inspectors allow you to inspect the results of BES Fixlet messages, including relevance and affected computers.

Creation Methods

Key Phrase	*Form*	Description
result of <bes fixlet>	*Plain*	Returns a list of all <bes fixlet result> objects for all computers that have reported on the specified Fixlet message. Win:6.0

Properties

Key Phrase	*Form*	Return Type	Description
computer of <bes fixlet result>	*Plain*	<bes computer>	Returns the BES computer associated with the specified Fixlet result. Win:6.0
first became relevant of <bes fixlet result>	*Plain*	<time>	Returns the time when the Fixlet result first became relevant. • Note: This is a Web Reports-only Inspector. Win:6.0
fixlet of <bes fixlet result>	*Plain*	<bes fixlet>	Returns the Fixlet message associated with the specified Fixlet result. Win:6.0
last became nonrelevant of <bes fixlet result>	*Plain*	<time>	Returns the time when the Fixlet result last became non-relevant. This may be tied to the successful completion of the Fixlet message. • Note: This is a Web Reports-only Inspector. Win:6.0
last became relevant of <bes fixlet result>	*Plain*	<time>	Returns the time when the Fixlet result last became relevant. • Note: This is a Web Reports-only Inspector. Win:6.0
relevant flag of <bes fixlet result>	*Plain*	<boolean>	Returns TRUE if the computer reports that the given Fixlet result is relevant, and FALSE otherwise. Win:6.0

BES Fixlet

These Inspectors allow you to iterate over the BES Fixlet messages to create lists of various Fixlet properties such as name, ID, site, etc.

Creation Methods

Key Phrase	*Form*	Description
analysis of <bes activation>	*Plain*	Returns the source analysis fixlet that spawned the specified activation. Win:6.0
bes fixlet	*PlainGlobal*	Returns a list of all the BES custom site objects. Win:6.0
current analysis	*PlainGlobal*	When this Inspector is evaluated in the context of an analysis, it returns the associated Fixlet object. • Note: This is a Console-only Inspector. Win:6.0
current fixlet	*PlainGlobal*	When this Inspector is evaluated in the context of a Fixlet message, it returns the associated Fixlet object. • Note: This is a Console-only Inspector. Win:6.0
current task	*PlainGlobal*	When this Inspector is evaluated in the context of a Task, it returns the associated Fixlet object. • Note: This is a Console-only Inspector. Win:6.0
fixlet <integer> of <bes site>	*Numbered*	Returns the Fixlet with the specified ID from the given BES site. Win:6.0
fixlet of <bes fixlet result>	*Plain*	Returns the Fixlet message associated with the specified Fixlet result. Win:6.0
fixlet of <bes site>	*Plain*	Returns a list all of the Fixlet objects in the given BES site. Win:6.0
relevant fixlet of <bes computer>	*Plain*	Returns a list of all the <bes fixlet> objects that the specified computer has reported are relevant. Win:6.0

Key Phrase	Form	Description
source analysis of <bes property>	*Plain*	Returns the <bes fixlet> object corresponding to the analysis that defines the specified property. Win:6.0
source fixlet of <bes action>	*Plain*	Returns the <bes fixlet> object that was the source of the specified action. Win:6.0

Properties

Key Phrase	Form	Return Type	Description
action <integer> of <bes fixlet>	*Numbered*	<bes fixlet action>	Returns an object representing the nth action for the specified Fixlet message. Win:6.0
action <string> of <bes fixlet>	*Named*	<bes fixlet action>	Returns an object representing the named action for the specified Fixlet message. Win:6.0
action of <bes fixlet>	*Plain*	<bes fixlet action>	Returns a list of all the Fixlet actions associated with the specified Fixlet message. Win:6.0
activation of <bes fixlet>	*Plain*	<bes activation>	If the specified Fixlet message is from an analysis, this Inspector returns a list of all of its activations. Win:6.0
analysis flag of <bes fixlet>	*Plain*	<boolean>	Returns TRUE if the specified BES Fixlet message originates from an Analysis. Win:6.0
applicable computer count of <bes fixlet>	*Plain*	<integer>	Returns the number of computers (regardless of locking) that have reported that the specified Fixlet message is relevant. Win:6.0
applicable computer of <bes fixlet>	*Plain*	<bes computer>	Returns a list of all of the <bes computer> objects reporting that the specified Fixlet message is relevant. Win:6.0

Key Phrase	*Form*	Return Type	Description
baseline flag of <bes fixlet>	*Plain*	<boolean>	Returns TRUE if the specified BES Fixlet message originates from a Baseline. Win:6.0
best activation of <bes fixlet>	*Plain*	<bes activation>	If the specified Fixlet message is from an analysis, then this Inspector returns the activation which is most appropriate for the current console user. Win:6.0
body of <bes fixlet>	*Plain*	<html>	Returns an HTML string containing the body of the Fixlet message. Win:6.0
category of <bes fixlet>	*Plain*	<string>	Returns the category of the given Fixlet message as a string value, such as "Security Hotfix", "Service Pack", "Upgrade", etc. Win:6.0
charset of <bes fixlet>	*Plain*	<string>	Returns the character set to be used when displaying the body or text of the specified Fixlet message. Win:6.0
components xml of <bes fixlet>	*Plain*	<string>	If the specified Fixlet message is a baseline, then this Inspector returns the XML representation of the baseline components. Win:6.0
custom flag of <bes fixlet>	*Plain*	<boolean>	Returns TRUE if the specified BES Fixlet message is custom. Win:6.0
custom site flag of <bes fixlet>	*Plain*	<boolean>	Returns true if and only if the specified Fixlet message resides in a custom site. Win:6.0
custom site of <bes fixlet>	*Plain*	<bes custom site>	If the specified Fixlet message resides in a custom site, this Inspector returns the corresponding custom site object. Win:6.0

Key Phrase	*Form*	Return Type	Description
cve id list of <bes fixlet>	*Plain*	<string>	Returns a string containing the list of CVE (Common Vulnerabilities and Exposures) ID numbers associated with the specified Fixlet message. Win:6.0
default action of <bes fixlet>	*Plain*	<bes fixlet action>	Returns an object representing the default action for the specified Fixlet message. Win:6.0
digest file name of <bes fixlet>	*Plain*	<string>	Returns the file name of the .fxf file that contains this Fixlet message, or the empty string if the Fixlet message does not come from a digest file (i.e., it is a custom Fixlet). Win:6.0
download size of <bes fixlet>	*Plain*	<integer>	Returns the size of the download associated with this Fixlet message, in bytes. Win:6.0
fixlet flag of <bes fixlet>	*Plain*	<boolean>	Returns TRUE if the specified BES Fixlet message originates from an ordinary Fixlet site. Win:6.0
globally visible flag of <bes fixlet>	*Plain*	<boolean>	Returns TRUE if the specified Fixlet message is globally visible. Win:6.0
group flag of <bes fixlet>	*Plain*	<boolean>	Returns TRUE if the specified BES Fixlet message originates from a Group. Win:6.0
id of <bes fixlet>	*Plain*	<integer>	Returns the numeric ID unique to the specified Fixlet message. Win:6.0
issuer of <bes fixlet>	*Plain*	<bes user>	Returns the <bes user> object corresponding to the author of the specified fixlet. Win:6.0
link <html> of <bes fixlet>	*Indexed*	<html>	Returns an HTML string containing an <A> tag including the supplied HTML description that, when clicked, will open the specified Fixlet document (in the BES Console) or its description page (in Web Reports). Win:6.0

Key Phrase	*Form*	Return Type	Description
link \<string\> of \<bes fixlet\>	*Named*	\<html\>	Returns an HTML string containing an \<A\> tag including the supplied descriptive string that, when clicked, will open the specified Fixlet document (in the BES Console) or its description page (in Web Reports). Win:6.0
link href of \<bes fixlet\>	*Plain*	\<string\>	The link href property does not return an \<A\> tag but rather returns the value of the href attribute of the \<A\> tag that would be constructed by the other link inspectors. This allows you to create more flexible linking formats. (See link of \<bes fixlet\>). Note that link href returns a normal string, not an HTML string. Win:6.0
link of \<bes fixlet\>	*Plain*	\<html\>	Returns an HTML string containing an \<A\> tag that when clicked will open the specified BES user's document (in the BES Console) or its description page (in Web Reports). Win:6.0
locally visible flag of \<bes fixlet\>	*Plain*	\<boolean\>	Returns TRUE if the specified Fixlet message is locally visible. • Note: This is a Console-only Inspector. Win:6.0
master site flag of \<bes fixlet\>	*Plain*	\<boolean\>	Returns TRUE if the specified Fixlet message is from the Master site. Win:6.0
message of \<bes fixlet\>	*Plain*	\<html\>	Returns an HTML string containing the text of the Fixlet message. Win:6.0
name of \<bes fixlet\>	*Plain*	\<string\>	Returns the name of the specified BES Fixlet. Win:6.0
open action count of \<bes fixlet\>	*Plain*	\<integer\>	Returns the number of open actions whose source is the specified Fixlet message. Win:6.0
operator site flag of \<bes fixlet\>	*Plain*	\<boolean\>	Returns TRUE if and only if the specified Fixlet message resides in a non-master operator site. Win:6.0

Key Phrase	*Form*	Return Type	Description
property <integer> of <bes fixlet>	*Numbered*	<bes property>	If the specified Fixlet is from an analysis, this Inspector returns the property with the ID given by <integer>. Win:6.0
property of <bes fixlet>	*Plain*	<bes property>	If the specified Fixlet is from an analysis, this Inspector returns a list of all of the <bes property> objects associated with it. Win:6.0
relevance of <bes fixlet>	*Plain*	<string>	Returns the relevance expression used to determine if the specified Fixlet message is applicable on a client computer. Win:6.0
relevant <bes computer> of <bes fixlet>	*Indexed*	<boolean>	Returns TRUE if the given Fixlet message is relevant on the specified computer. Win:6.0
result of <bes fixlet>	*Plain*	<bes fixlet result>	Returns a list of all <bes fixlet result> objects for all computers that have reported on the specified Fixlet message. Win:6.0
sans id list of <bes fixlet>	*Plain*	<string>	Returns a string containing the list of SANS (SysAdmin, Audit, Network, Security) ID numbers associated with the specified Fixlet message. Win:6.0
site of <bes fixlet>	*Plain*	<bes site>	Returns the <bes site> object which contains the specified fixlet. Win:6.0
source id of <bes fixlet>	*Plain*	<string>	Returns the source ID of the given Fixlet message as a string value. Win:6.0
source of <bes fixlet>	*Plain*	<string>	Returns the source of the given Fixlet message as a string value. Win:6.0

Key Phrase	*Form*	Return Type	Description
source release date of <bes fixlet>	*Plain*	<date>	Returns the <date> object that represents the source release date of the specified Fixlet message. Win:6.0
source severity of <bes fixlet>	*Plain*	<string>	Returns the source severity of the given Fixlet message as a string value. Win:6.0
task flag of <bes fixlet>	*Plain*	<boolean>	Returns TRUE if the specified BES Fixlet message originates from a Task. Win:6.0
type of <bes fixlet>	*Plain*	<string>	Returns the type of the specified Fixlet message, which can have values such as "Fixlet", "Task", "Analysis", "ComputerGroup" or "Baseline". Win:6.0
unlocked computer count of <bes fixlet>	*Plain*	<integer>	Returns the number of computers that are not locked and that have reported that the specified Fixlet message is relevant. • Note: This is a Console-only Inspector. Win:6.0
wizard data of <bes fixlet>	*Plain*	<html>	If the specified Fixlet message was created with a Wizard then this Inspector returns the HTML string representing the DataStore element of that Wizard. • Note: This is a Console-only Inspector. Win:6.0
wizard link of <bes fixlet>	*Plain*	<string>	If the specified Fixlet message was created with a Wizard then this Inspector returns the HTML string representing the link of that Wizard. • Note: This is a Console-only Inspector. Win:6.0
wizard name of <bes fixlet>	*Plain*	<string>	If the specified Fixlet message was created with a Wizard then this Inspector returns the HTML string representing the name of that Wizard. • Note: This is a Console-only Inspector. Win:6.0

Examples

- `links (h1 of name of it) of bes fixlets`
▶ Returns a list of HTML strings, each with an HTML link named after the Fixlet message and formatted as a header (h1).

- `links (name of it & "(" & id of it as string & ")")) of bes fixlets`
▶ Returns an HTML string that will print the name and ID of the Fixlet message inside a clickable <A> tag.

- `(br & html "Click <A href='" & link href of it & html "'>here</A> to open fixlet " & id of it as string) of bes fixlets`
▶ Returns an html string such as 'Click here to open fixlet 12345' message that, when clicked, will open the corresponding BES Fixlet document.

- `links of bes fixlets`
▶ Returns a list of all the BES Fixlets formated as links in an HTML string.

BES Property Result

These Inspectors return the results derived from the given properties of the specified BES Client computers.

Creation Methods

Key Phrase	Form	Description
property result of <bes computer>	*Plain*	Returns a list of all of the <bes property result> objects that the specified BES computer has reported. Win:6.0
result <(bes computer, bes property)>	*IndexedGlobal*	Returns the result of the specified BES property and computer. Win:6.0
result <(bes property, bes computer)>	*IndexedGlobal*	Returns the result of the specified BES property and computer. Win:6.0
result from <bes computer> of <bes property>	*Indexed*	Returns the result of the specified BES property and computer. Win:6.0
result from <bes property> of <bes computer>	*Indexed*	Returns the result of the specified BES property and computer. Win:6.0

Key Phrase	*Form*	Description
result of \<bes property>	*Plain*	Returns a list of the BES property results for every computer reporting a result for the specified property. Win:6.0

Properties

Key Phrase	*Form*	Return Type	Description
computer of \<bes property result>	*Plain*	\<bes computer>	Returns the computer corresponding to the specified BES property result. Win:6.0
error flag of \<bes property result>	*Plain*	\<boolean>	Returns TRUE if the specified BES property result is an error. Win:6.0
error message of \<bes property result>	*Plain*	\<string>	If the specified BES property result is an error, this Inspector returns the error message. Win:6.0
plural flag of \<bes property result>	*Plain*	\<boolean>	Returns TRUE if the specified BES property result is a multiple result. Win:6.0
property of \<bes property result>	*Plain*	\<bes property>	Returns the property corresponding to the specified BES property result. Win:6.0
value count of \<bes property result>	*Plain*	\<integer>	Returns the number of values reported by this computer for the specified property result. Win:6.0
value of \<bes property result>	*Plain*	\<string>	Returns a list of the \<string> values reported by this computer for the specified property result. Win:6.0

BES Property

These Inspectors return information about the properties of BES Client computers. Properties --
along with their names, IDs and definitions -- can be iterated to produce property lists of all your
networked BES computers.

Creation Methods

Key Phrase	*Form*	Description
bes property	*PlainGlobal*	Returns a list of all the BES custom site objects. Win:6.0
bes property <string>	*NamedGlobal*	Returns the first property whose name matches the given string. Note that it is not safe to assume that there is only one property with a given name. Win:6.0
property <integer> of <bes fixlet>	*Numbered*	If the specified Fixlet is from an analysis, this Inspector returns the property with the ID given by <integer>. Win:6.0
property of <bes fixlet>	*Plain*	If the specified Fixlet is from an analysis, this Inspector returns a list of all of the <bes property> objects associated with it. Win:6.0
property of <bes property result>	*Plain*	Returns the property corresponding to the specified BES property result. Win:6.0

Properties

Key Phrase	*Form*	Return Type	Description
analysis flag of <bes property>	*Plain*	<boolean>	Returns TRUE if the specified BES property is an analysis property. Win:6.0
custom flag of <bes property>	*Plain*	<boolean>	Returns TRUE if the specified BES property is custom. Win:6.0

Key Phrase	Form	Return Type	Description
database id of <bes property>	*Plain*	<integer>	In the Web Reports environment, this Inspector returns the numeric ID of the database containing the specified BES property. Win:6.0
default flag of <bes property>	*Plain*	<boolean>	Returns TRUE if the specified BES property is the default. Win:6.0
definition of <bes property>	*Plain*	<string>	Returns the relevance expression which defines the specified property. Win:6.0
evaluation period of <bes property>	*Plain*	<time interval>	Returns the <time interval> that controls how frequently clients will submit reports for the specified property. Win:6.0
id of <bes property>	*Plain*	<integer>	Returns the numeric ID unique to the specified BES property. Win:6.0
name of <bes property>	*Plain*	<string>	Returns the name of the specified BES property. This name is not guaranteed to be unique. Win:6.0
reserved flag of <bes property>	*Plain*	<boolean>	Returns TRUE if the specified BES property is reserved. Win:6.0
result from <bes computer> of <bes property>	*Indexed*	<bes property result>	Returns the result of the specified BES property and computer. Win:6.0
result of <bes property>	*Plain*	<bes property result>	Returns a list of the BES property results for every computer reporting a result for the specified property. Win:6.0
source analysis of <bes property>	*Plain*	<bes fixlet>	Returns the <bes fixlet> object corresponding to the analysis that defines the specified property. Win:6.0

Key Phrase	Form	Return Type	Description
source evaluation period of <bes property>	*Plain*	<time interval>	Returns the period of the property as specified by the analysis that defines it. This period is not necessarily the same as the period of the property. Win:6.0
source id of <bes property>	*Plain*	<integer>	Returns the ID of the property as specified by the analysis that defines it. This is not the same as the unique property ID. Win:6.0
source name of <bes property>	*Plain*	<string>	Returns the name of the property as specified by the analysis that defines it. This name is not necessarily the same as the name of the property. Win:6.0
statistic range of <bes property>	*Plain*	<statistic range>	Returns the range of statistical bins associated with the given property. The property must be marked for statistical aggregation. If not, or if no clients have reported results, it throws NoSuchObject. Win:6.0

BES Site

The site Inspectors return the names and IDs of the specified site objects.

Creation Methods

Key Phrase	Form	Description
bes site	*PlainGlobal*	Returns a list of all the BES sites. Win:6.0
site of <bes fixlet>	*Plain*	Returns the <bes site> object which contains the specified fixlet. Win:6.0

Properties

Key Phrase	*Form*	Return Type	Description
fixlet <integer> of <bes site>	*Numbered*	<bes fixlet>	Returns the Fixlet with the specified ID from the given BES site. Win:6.0
fixlet of <bes site>	*Plain*	<bes fixlet>	Returns a list all of the Fixlet objects in the given BES site. Win:6.0
id of <bes site>	*Plain*	<integer>	Returns the numeric ID unique to the specified BES site. Win:6.0
name of <bes site>	*Plain*	<string>	Returns the name of the specified BES site (undecorated). Win:6.0

BES User

These Inspectors let you keep track of the users authorized to use the BES Console. You can iterate over the users, producing lists containing information such as the name and authorization level.

Creation Methods

Key Phrase	*Form*	Description
bes user	*PlainGlobal*	Returns a list of all the BES users. Win:6.0
creator of <bes custom site>	*Plain*	Returns the <bes user> who created the specified custom site. Win:6.0
current console user	*PlainGlobal*	Returns a user object for the user currently logged into the BES Console. Win:6.0
issuer of <bes action>	*Plain*	Returns the BES user object corresponding to the issuer of the specified action. Win:6.0

Key Phrase	*Form*	Description
issuer of <bes activation>	*Plain*	Returns the <bes user> object corresponding to the user who issued the specified activation. Win:6.0
issuer of <bes fixlet>	*Plain*	Returns the <bes user> object corresponding to the author of the specified fixlet. Win:6.0
owner of <bes custom site>	*Plain*	Returns a list of BES users that have been granted ownership of the specified custom site. Notice that the creator of this site is not included in the owner list. • Note: This is a Console-only Inspector. Win:6.0
reader of <bes custom site>	*Plain*	Returns a list of BES users that have been granted reading privileges on the specified custom site. Notice that the creator, owners (unless explicitly added) and writers of this site are not included in this reader list. • Note: This is a Console-only Inspector. Win:6.0
writer of <bes custom site>	*Plain*	Returns a list of BES users that have been granted writing privileges on the specified custom site. Notice that the creator and owners (unless explicitly added) of this site are not included in this reader list. • Note: This is a Console-only Inspector. Win:6.0

Properties

Key Phrase	*Form*	Return Type	Description
creation time of <bes user>	*Plain*	<time>	Returns the time when the specified user was created. Win:6.0
custom content flag of <bes user>	*Plain*	<boolean>	Returns TRUE if the user has been granted the privilege to author custom content/actions. Win:6.0
last login time of <bes user>	*Plain*	<time>	Returns the time of the specified user's most recent database login. Win:6.0

Key Phrase	Form	Return Type	Description
link <html> of <bes user>	*Indexed*	<html>	Returns an HTML string containing an <A> tag including the supplied HTML description that, when clicked, will open the specified user document (in the BES Console) or its description page (in Web Reports). Win:6.0
link <string> of <bes user>	*Named*	<html>	Returns an HTML string containing an <A> tag including the supplied descriptive string that, when clicked, will open the given user document (in the BES Console) or description page (in Web Reports). Win:6.0
link href of <bes user>	*Plain*	<string>	The link href property does not return an <A> tag but rather returns the value of the href attribute of the <A> tag that would be constructed by the other link inspectors. This allows you to create more flexible linking formats. (See link of <bes user>). Note that link href returns a normal string, not an HTML string. Win:6.0
link of <bes user>	*Plain*	<html>	Returns an HTML string containing an <A> tag that when clicked will open the specified Fixlet document (in the BES Console) or its description page (in Web Reports). Win:6.0
master flag of <bes user>	*Plain*	<boolean>	Returns TRUE if the user is a master administrator. Win:6.0
name of <bes user>	*Plain*	<string>	Returns the name of the specified BES user (database login name). Win:6.0

Examples

- ▪ `links (h1 of name of it) of bes users`
- ▶ Returns a list of HTML strings, each with an HTML link named after the user and formatted as a header (h1).

- `links (name of it & "(" & master flag of it as string & ")")) of bes users`
▸ Returns an HTML string that will print the name and master status of the user inside a clickable <A> tag.

- `(br & html "Click <A href='" & link href of it & html "'>here</A> to open user " & name of it as string) of bes users`
▸ Returns an html string such as 'Click here to open user John' message that, when clicked, will open the corresponding BES user document.

- `links of bes users`
▸ Returns a list of all the BES users formated as links in an HTML string.

BES Wizard

These are Console-only Inspectors that return a list of the available BES Wizards.

Creation Methods

Key Phrase	*Form*	Description
bes wizard	*PlainGlobal*	Returns a list of all the available BES Wizards. • Note: This is a Console-only Inspector. Win:6.0
current wizard	*PlainGlobal*	If this Inspector is being evaluated in the context of a Wizard, then it returns the corresponding <bes wizard> object. Win:6.0

Properties

Key Phrase	*Form*	Return Type	Description
charset of <bes wizard>	*Plain*	<string>	Returns the charset that should be used when displaying the specified Wizard. Win:6.0
database id of <bes wizard>	*Plain*	<integer>	Returns the numeric ID of the database containing the specified BES Wizard. Win:6.0
database name of <bes wizard>	*Plain*	<string>	Returns the name (as a string) of the database containing the specified Wizard. Win:6.0

Key Phrase	*Form*	Return Type	Description
default page name of <bes wizard>	*Plain*	<string>	Returns the name of the first page to display when launching the specified Wizard. Win:6.0
dialog flag of <bes wizard>	*Plain*	<boolean>	Returns TRUE if the specified Wizard launches in a dialog box. Win:6.0
document flag of <bes wizard>	*Plain*	<boolean>	Returns TRUE if the specified Wizard launches in an MDI document window. Win:6.0
link <html> of <bes wizard>	*Indexed*	<html>	Returns an HTML string containing an <A> tag including the supplied HTML description that, when clicked, will open the specified Wizard. • Note: This is a Console-only Inspector. Win:6.0
link <string> of <bes wizard>	*Named*	<html>	Returns an HTML string containing an <A> tag including the supplied descriptive string that, when clicked, will open the specified Wizard. • Note: This is a Console-only Inspector. Win:6.0
link href of <bes wizard>	*Plain*	<string>	The link href property does not return an <A> tag but rather returns the value of the href attribute of the <A> tag that would be constructed by the other link inspectors. This allows you to create more flexible linking formats. (See link of <bes wizard>). Notice that link href returns a normal string, not an HTML string. • Note: This is a Console-only Inspector. Win:6.0
link of <bes wizard>	*Plain*	<html>	Returns an HTML string containing an <A> tag that when clicked will open the specified Wizard. • Note: This is a Console-only Inspector. Win:6.0
menu path of <bes wizard>	*Plain*	<string>	Returns the path of the menu containing the menu item that launches the specified Wizard. Win:6.0

Key Phrase	*Form*	Return Type	Description
name of <bes wizard>	*Plain*	<string>	Returns the name of the specified BES Wizard. • Note: This is a Console-only Inspector. _{Win:6.0}
navbar name of <bes wizard>	*Plain*	<string>	Returns the name of the specified BES Wizard as listed in the Navigation Bar. _{Win:6.0}
pre60 flag of <bes wizard>	*Plain*	<boolean>	Returns TRUE if this wizard is an "old" (prior to version 6.0) style of Wizard. _{Win:6.0}
requires authoring flag of <bes wizard>	*Plain*	<boolean>	Returns TRUE if access to the specified Wizard requires that the user have the 'Authoring' bit set in their credentials. _{Win:6.0}
url of <bes wizard>	*Plain*	<string>	Returns the URL of the specified Wizard. For ordinary Wizards, this is of the form "siteid:<id>,<filename>", but for Wizards that were added using the "Debug->Load Wizard..." dialog this is of the form "file:///<fullpath>". _{Win:6.0}

Examples

■ `links (h1 of name of it) of bes wizards`
▶ Returns a list of HTML strings, each with an HTML link named for the Wizard and formatted as a header (h1).

■ `links (name of it & "(" & dialog flag of it as string & ")")) of bes wizards`
▶ Returns an HTML string that will print the name and dialog flag of the Wizard inside a clickable <A> tag.

■ `(br & html "Click <A href='" & link href of it & html "'>here</A> to open wizard " & name of it as string) of bes wizards`
▶ Returns an html string such as 'Click here to open wizard Windows Registry Wizard' that, when clicked, will open the corresponding Wizard.

Fixlet Count Pair

These Inspectors return information about the Fixlet count pair objects for each severity level.

Creation Methods

Key Phrase	*Form*	Description
count map of <historical fixlet count>	*Plain*	Returns all of the <fixlet count pair> objects (one for each severity level) that were saved with the specified historical Fixlet count. Win:6.0

Properties

Key Phrase	*Form*	Return Type	Description
count of <fixlet count pair>	*Plain*	<integer>	Returns the Fixlet count for each severity level of the Fixlet count pairs. Win:6.0
source severity of <fixlet count pair>	*Plain*	<string>	Returns the severity level corresponding to the given Fixlet count pair. Win:6.0

Historical Computer Count

These Inspectors provide information about historical computer count objects.

Creation Methods

Key Phrase	*Form*	Description
all computer count	*PlainGlobal*	Returns a list of all <historical_computer_count> objects. Win:6.0

Properties

Key Phrase	*Form*	Return Type	Description
count of <historical computer count>	*Plain*	<integer>	Returns the count when the specified historical computer count was last archived. Win:6.0
database id of <historical computer count>	*Plain*	<integer>	Returns the numeric ID of the database tracking the specified historical BES computer count. Win:6.0

Key Phrase	*Form*	Return Type	Description
time of <historical computer count>	*Plain*	<time>	Returns the time when the specified count was archived. Win:6.0

Historical Fixlet Count

These provide historical information about the number of Fixlets at different severity levels.

Creation Methods

Key Phrase	*Form*	Description
all fixlet count	*PlainGlobal*	Returns a list of all the historical Fixlet counts. • Note: This is a Web Reports-only Inspector. Win:6.0

Properties

Key Phrase	*Form*	Return Type	Description
count map of <historical fixlet count>	*Plain*	<fixlet count pair>	Returns all of the <fixlet count pair> objects (one for each severity level) that were saved with the specified historical Fixlet count. Win:6.0
database id of <historical fixlet count>	*Plain*	<integer>	In the Web Reports environment, this Inspector returns the numeric ID of the database containing the specified historical Fixlet count. Win:6.0
time of <historical fixlet count>	*Plain*	<time>	Returns the time when the specified historical Fixlet count was calculated. Win:6.0

Statistic Range

Statistical ranges are time intervals used to examine particular statistical bins.

Creation Methods

Key Phrase	Form	Description
range <time range> of <statistic range>	*Indexed*	For the duration of the specified time range, (time0 to time1), this Inspector returns a sub-range of bins beginning with earliest bin containing time0 and going up to (but not including) the bin containing time1. If either of these bins does not exist, it throws NoSuchObject. Win:6.0
statistic range of <bes property>	*Plain*	Returns the range of statistical bins associated with the given property. The property must be marked for statistical aggregation. If not, or if no clients have reported results, it throws NoSuchObject. Win:6.0

Properties

Key Phrase	Form	Return Type	Description
bin at <time> of <statistic range>	*Indexed*	<statistical bin>	Returns the bin in the specified statistical range which brackets the given time. If no such bin exists, it throws NoSuchObject. Win:6.0
bin of <statistic range>	*Plain*	<statistical bin>	Returns a list of the individual bins in the specified range. Primarily useful after downsampling (see total <time interval> of <statistic range>). Win:6.0
end of <statistic range>	*Plain*	<time>	Returns the ending time of the statistical range. Win:6.0

Key Phrase	*Form*	Return Type	Description
range \<time range\> of \<statistic range\>	*Indexed*	\<statistic range\>	For the duration of the specified time range, (time0 to time1), this Inspector returns a sub-range of bins beginning with earliest bin containing time0 and going up to (but not including) the bin containing time1. If either of these bins does not exist, it throws NoSuchObject. Win:6.0
start of \<statistic range\>	*Plain*	\<time\>	Returns the starting time of the statistical range. Win:6.0
total \<time interval\> of \<statistic range\>	*Indexed*	\<statistical bin\>	This Inspector can be used to downsample or consolidate bins. It statistically totals over the given range, producing a new series of bins broken down by the (larger) specified time interval. The resulting range will start and end on a multiple of the interval. For example, if you ask for day bins, the results will start and end at midnight. If the specified time interval is not a multiple of the length of the starting bin of the range, this Inspector throws NoSuchObject. For example, you cannot get 6 hour totals of a range which starts with day bins. Win:6.0
total of \<statistic range\>	*Plain*	\<statistical bin\>	Totals the bins over the specified range, producing a single summary bin. This allows you to reduce the data by constraining the range. Win:6.0

Examples

■ `mean of total of range ((now - day) & now) of statistics of property 1 of current analysis`
▶ Returns the mean (average) value across all reported values in the last day. Note that this might fail if there have been no reports in the last day.

Statistical Bin

Statistical bins contain property information summed over all computers in a given time period.

Creation Methods

Key Phrase	Form	Description
bin at <time> of <statistic range>	*Indexed*	Returns the bin in the specified statistical range which brackets the given time. If no such bin exists, it throws NoSuchObject. Win:6.0
bin of <statistic range>	*Plain*	Returns a list of the individual bins in the specified range. Primarily useful after downsampling (see total <time interval> of <statistic range>). Win:6.0
total <time interval> of <statistic range>	*Indexed*	This Inspector can be used to downsample or consolidate bins. It statistically totals over the given range, producing a new series of bins broken down by the (larger) specified time interval. The resulting range will start and end on a multiple of the interval. For example, if you ask for day bins, the results will start and end at midnight. If the specified time interval is not a multiple of the length of the starting bin of the range, this Inspector throws NoSuchObject. For example, you cannot get 6 hour totals of a range which starts with day bins. Win:6.0
total of <statistic range>	*Plain*	Totals the bins over the specified range, producing a single summary bin. This allows you to reduce the data by constraining the range. Win:6.0

Properties

Key Phrase	Form	Return Type	Description
end of <statistical bin>	*Plain*	<time>	Returns the ending time of the specified statistical bin. Win:6.0
exponential fit of <statistical bin>	*Plain*	<exponential projection>	Calculates a least-squares fit on the sum of the logarithms of the absolute values of the values. This provides a way to extrapolate an exponential change of values. Win:6.0
failure rate of <statistical bin>	*Plain*	<floating point>	The integral over time of the number of failing computers divided by the integral over time of the number of reporting computers. Win:6.0
geometric mean of <statistical bin>	*Plain*	<floating point>	Returns the geometric mean of the specified statistical bin. Win:6.0
javascript array <string> of <statistical bin>	*Named*	<html>	Produces a section of JavaScript which initializes the named array of objects, one for each input bin. Each object in the array has JavaScript properties which match the above bin data properties. For each inspector property, the equivalent JavaScript property is named by CamelCasing the name of the inspector property. Win:6.0
kurtosis of <statistical bin>	*Plain*	<floating point>	Returns the kurtosis (a measure of the "narrowness" of the distribution) of the specified statistical bin. Win:6.0
length of <statistical bin>	*Plain*	<time interval>	Returns a time interval corresponding to the length (or period) of the specified bin. Win:6.0
linear fit of <statistical bin>	*Plain*	<linear projection>	Calculates a least-squares fit on the values, providing a tool for extrapolating a linear change of values. Win:6.0

Key Phrase	*Form*	Return Type	Description
logarithm kurtosis of <statistical bin>	*Plain*	<floating point>	The kurtosis of the logarithms of the absolute values of the nonzero reported values. Win:6.0
logarithm skewness of <statistical bin>	*Plain*	<floating point>	The skewness of the logarithms of the absolute values of the nonzero reported values. Win:6.0
logarithm standard deviation of <statistical bin>	*Plain*	<floating point>	The standard deviation of the logarithms of the absolute values of the nonzero reported values. Win:6.0
logarithm variance of <statistical bin>	*Plain*	<floating point>	The variance of the logarithms of the absolute values of the nonzero reported values. Win:6.0
maximum single computer total of <statistical bin>	*Plain*	<floating point>	Returns a floating point number representing the largest computer total in the specified bin. Win:6.0
maximum value of <statistical bin>	*Plain*	<floating point>	The maximum single value reported by any computer over the duration of the bin. Win:6.0
mean computer count of <statistical bin>	*Plain*	<floating point>	This is the integral over time of the number of computers reporting this property divided by the duration of the bin. It might be fractional if computers started or stopped reporting this property during the interval of the bin. Win:6.0
mean failing computer count of <statistical bin>	*Plain*	<floating point>	Returns the mean count of the computers where the inspection has failed. Win:6.0
mean logarithm of <statistical bin>	*Plain*	<floating point>	The integral over time of the sum of the logarithms of the absolute values of all nonzero reported values, divided by the integral over time of the number of nonzero reported values. Win:6.0

Key Phrase	*Form*	Return Type	Description
mean nonzero value count of <statistical bin>	*Plain*	<floating point>	Provides a measure of nonzero values, which is useful in interpreting the logarithmic results, which ignore zero values. The logarithmic results generally aren't interesting for any property that can be zero, so this Inspector can be used to validate property statistics. Win:6.0
mean of <statistical bin>	*Plain*	<floating point>	The integral over time of the sum of all reported values, divided by the integral over time of the number of reported values. The variance, standard deviation, skewness, and kurtosis inspectors have this same domain. In particular, computers that fail and computers that report no values don't affect these statistics. Win:6.0
mean sample interval of <statistical bin>	*Plain*	<time interval>	The sample interval is the time between consecutive samples on a single computer. The mean sample interval is the integral over time of the sum over computers of the sample interval divided by the integral over time of the number of reporting computers. This is the inverse of the mean sample rate. Win:6.0
mean sample rate of <statistical bin>	*Plain*	<rate>	This is the inverse of the mean sample interval. Win:6.0
mean successful computer count of <statistical bin>	*Plain*	<floating point>	Returns the mean count of the computers where the inspection has succeeded. Win:6.0
mean total of <statistical bin>	*Plain*	<floating point>	The integral over time of the sum of all values reported divided by the integral over time of the number of computers reporting this property (successfully or failing). Win:6.0
mean value count of <statistical bin>	*Plain*	<floating point>	This is the integral over time of the number of values reported divided by the integral over time of the number of computers reporting. That is, this is a mean over both time and computers. Win:6.0

Key Phrase	*Form*	Return Type	Description
mean zero value count of <statistical bin>	*Plain*	<floating point>	Provides a measure of zero values, which is useful in interpreting the logarithmic results, which ignore zero values. The logarithmic results generally aren't interesting for any property that can be zero, so this Inspector can be used to test for that issue. Win:6.0
minimum single computer total of <statistical bin>	*Plain*	<floating point>	The minimum over time and computers of the total of simultaneous values. (Thus, for a singular property, the same as "minimum value."). Win:6.0
minimum value of <statistical bin>	*Plain*	<floating point>	The minimum single value reported by any computer over the duration of the bin. Win:6.0
skewness of <statistical bin>	*Plain*	<floating point>	Returns a floating point number representing the skewness (a measure the assymetry of the data) over the specified bin. Win:6.0
standard deviation of <statistical bin>	*Plain*	<floating point>	Returns a floating point number representing the standard deviation of the data over the specified bin. Win:6.0
start of <statistical bin>	*Plain*	<time>	Returns the starting time of the statistical bin. Win:6.0
success rate of <statistical bin>	*Plain*	<floating point>	The integral over time of the number of successful computers divided by the integral over time of the number of reporting computers. Win:6.0
total lower bound of <statistical bin>	*Plain*	<floating point>	Returns the lower bound of a group of statistical bins. Win:6.0
total upper bound of <statistical bin>	*Plain*	<floating point>	Returns the upper bound of a group of statistical bins. Win:6.0
variance of <statistical bin>	*Plain*	<floating point>	Returns the variance of the specified statistical bin. Win:6.0

Examples

- `javascript array "statistics" of totals (6*hour) of statistics of property 1 of current analysis`
▸ Produces a JavaScript variable named "statistics" which holds an array of objects representing the statistical data for 6-hour periods across the entire range of data for the specified property. Make sure to restrict the range to a known size, so that the resulting array is not too big. For this example, the range must be 5-minute or hour bins, since day bins cannot be downsampled to 6-hour periods.

Rate

Rates are floating point numbers divided by time intervals. These Inspectors let you examine and convert rate objects.

Creation Methods

Key Phrase	*Form*	Description
mean sample rate of <statistical bin>	*Plain*	For instantaneous data, BES keeps sample-rate statistics to provide a gauge of how well-reported the data is. The sample interval is the time between consecutive samples on a single computer; the sample rate is the reciprocal of that time interval. Win:6.0
rate of <linear projection>	*Plain*	 Win:6.0

Properties

Key Phrase	*Form*	Return Type	Description
<rate> as string	*Cast*	<string>	Casts a rate as a string. Win:6.0

Operators

Key phrase	Return Type	Description
- <rate>	*<rate>*	Returns the negative of the given rate. Win:6.0
<rate> * <time interval>	*<floating point>*	Multiplies a <rate> by a <time interval>, producing a floating point number. Win:6.0

Key phrase	Return Type	Description
<rate> {cmp} <rate>	*<boolean>*	Compare two rates, returning a boolean TRUE or FALSE, where {cmp} is one of: <, <=, =. Win:6.0
<rate> {op} <rate>	*<rate>*	Operate on two rates, returning a new rate, where {op} is one of: -, +. Win:6.0
<time interval> * <rate>	*<floating point>*	Multiplies a <time interval> by a <rate>, producing a floating point number. Win:6.0

Linear Projection

These Inspectors return statistical correlation information about the linearity of specific aggregated properties.

Creation Methods

Key Phrase	*Form*	Description
linear fit of <statistical bin>	*Plain*	This Inspector calculates a least-squares fit on the sum of the values to project how that sum might change with time. Win:6.0

Properties

Key Phrase	*Form*	Return Type	Description
correlation coefficient of <linear projection>	*Plain*	<floating point>	Returns a floating-point number between -1 and 1, representing how well a linear projection fits the data. Win:6.0
extrapolation <time> of <linear projection>	*Indexed*	<floating point>	Returns the projected value at the specified time, assuming a linear projection. Win:6.0
rate of <linear projection>	*Plain*	<rate>	Returns the slope of the linear projection. Multiply this by a time interval to compute the projected growth over that period. Win:6.0

Exponential Projection

These Inspectors return statistical correlation information about the logarithms of the aggregated properties.

Creation Methods

Key Phrase	Form	Description
exponential fit of <statistical bin>	*Plain*	Calculates a least-squares fit on the sum of the logarithms of the absolute values of the values. This provides a way to extrapolate an exponential change of values. Win:6.0

Properties

Key Phrase	Form	Return Type	Description
correlation coefficient of <exponential projection>	*Plain*	<floating point>	Returns a floating-point number between -1 and 1, representing how well an exponential projection fits the data. Win:6.0
extrapolation <time> of <exponential projection>	*Indexed*	<floating point>	Returns the projected value at the specified time, assuming an exponential projection. Win:6.0
rate <time interval> of <exponential projection>	*Indexed*	<floating point>	Returns the slope of the exponential projection over the specified time interval. Win:6.0

Key Phrases (Inspectors)

This chapter provides an alphabetical list of the Inspector keywords and their casting operators. Both lists include the context object type (From an object), and the resulting object type (Creates an object). These lists are not all-inclusive; they only include those Inspectors that are relevant to the context of the current Guide.

Key phrases

This is a list of the key phrases relevant to this document, sorted alphabetically. This list includes the Session Inspectors, the Regex and Core Inspectors.

Key Phrase	Plural	Creates a	From a	*Form*
absolute value of <hertz>	absolute values	<hertz>	<hertz>	*Plain*
absolute value of <integer>	absolute values	<integer>	<integer>	*Plain*
absolute value of <time interval>	absolute values	<time interval>	<time interval>	*Plain*
action <integer> of <bes fixlet>	actions	<bes fixlet action>	<bes fixlet>	*Numbered*
action <string> of <bes fixlet>	actions	<bes fixlet action>	<bes fixlet>	*Named*
action dependency of <bes action>	action dependencies	<bes action>	<bes action>	*Plain*
action of <bes action result>	actions	<bes action>	<bes action result>	*Plain*
action of <bes fixlet>	actions	<bes fixlet action>	<bes fixlet>	*Plain*
action result of <bes computer>	action results	<bes action result>	<bes computer>	*Plain*
action script of <bes action>	action scripts	<string>	<bes action>	*Plain*
action script type of <bes action>	action script types	<string>	<bes action>	*Plain*
activation of <bes fixlet>	activations	<bes activation>	<bes fixlet>	*Plain*
active flag of <bes activation>	active flags	<boolean>	<bes activation>	*Plain*
all computer count	all computer counts	<historical computer count>	<world>	*PlainGlobal*
all fixlet count	all fixlet counts	<historical fixlet count>	<world>	*PlainGlobal*

Key Phrase	Plural	Creates a	From a	*Form*
analysis flag of <bes fixlet>	analysis flags	<boolean>	<bes fixlet>	*Plain*
analysis flag of <bes property>	analysis flags	<boolean>	<bes property>	*Plain*
analysis of <bes activation>	analyses	<bes fixlet>	<bes activation>	*Plain*
applicability relevance of <bes action>	applicability relevances	<string>	<bes action>	*Plain*
applicable computer count of <bes fixlet>	applicable computer counts	<integer>	<bes fixlet>	*Plain*
applicable computer of <bes fixlet>	applicable computers	<bes computer>	<bes fixlet>	*Plain*
apply count of <bes action result>	apply counts	<integer>	<bes action result>	*Plain*
april	aprils	<month>	<world>	*PlainGlobal*
april <integer>	aprils	<day of year>	<world>	*NumberedGlobal*
april <integer> of <integer>	aprils	<date>	<integer>	*Numbered*
april of <integer>	aprils	<month and year>	<integer>	*Plain*
attribute <integer> of <xml dom node>	attributes	<xml dom node>	<xml dom node>	*Numbered*
attribute <string> of <xml dom node>	attributes	<xml dom node>	<xml dom node>	*Named*
attribute of <xml dom node>	attributes	<xml dom node>	<xml dom node>	*Plain*
august	augusts	<month>	<world>	*PlainGlobal*
august <integer>	augusts	<day of year>	<world>	*NumberedGlobal*
august <integer> of <integer>	augusts	<date>	<integer>	*Numbered*
august of <integer>	augusts	<month and year>	<integer>	*Plain*
baseline flag of <bes fixlet>	baseline flags	<boolean>	<bes fixlet>	*Plain*
bes action	bes actions	<bes action>	<world>	*PlainGlobal*
bes action status constrained	bes action statuses constrained	<bes action status>	<world>	*PlainGlobal*
bes action status download failed	bes action statuses download failed	<bes action status>	<world>	*PlainGlobal*
bes action status error	bes action statuses error	<bes action status>	<world>	*PlainGlobal*
bes action status evaluating	bes action statuses evaluating	<bes action status>	<world>	*PlainGlobal*

Key Phrase	Plural	Creates a	From a	Form
bes action status expired	bes action statuses expired	\<bes action status\>	\<world\>	*PlainGlobal*
bes action status failed	bes action statuses failed	\<bes action status\>	\<world\>	*PlainGlobal*
bes action status fixed	bes action statuses fixed	\<bes action status\>	\<world\>	*PlainGlobal*
bes action status invalid signature	bes action statuses invalid signature	\<bes action status\>	\<world\>	*PlainGlobal*
bes action status irrelevant	bes action statuses irrelevant	\<bes action status\>	\<world\>	*PlainGlobal*
bes action status locked	bes action statuses locked	\<bes action status\>	\<world\>	*PlainGlobal*
bes action status pending downloads	bes action statuses pending downloads	\<bes action status\>	\<world\>	*PlainGlobal*
bes action status pending login	bes action statuses pending login	\<bes action status\>	\<world\>	*PlainGlobal*
bes action status pending message	bes action statuses pending message	\<bes action status\>	\<world\>	*PlainGlobal*
bes action status pending restart	bes action statuses pending restart	\<bes action status\>	\<world\>	*PlainGlobal*
bes action status postponed	bes action statuses postponed	\<bes action status\>	\<world\>	*PlainGlobal*
bes action status running	bes action statuses running	\<bes action status\>	\<world\>	*PlainGlobal*
bes action status unreported	bes action statuses unreported	\<bes action status\>	\<world\>	*PlainGlobal*
bes action status user cancelled	bes action statuses user cancelled	\<bes action status\>	\<world\>	*PlainGlobal*
bes action status waiting	bes action statuses waiting	\<bes action status\>	\<world\>	*PlainGlobal*
bes computer	bes computers	\<bes computer\>	\<world\>	*PlainGlobal*
bes custom site	bes custom sites	\<bes custom site\>	\<world\>	*PlainGlobal*
bes fixlet	bes fixlets	\<bes fixlet\>	\<world\>	*PlainGlobal*
bes property	bes properties	\<bes property\>	\<world\>	*PlainGlobal*
bes property \<string\>	bes properties	\<bes property\>	\<world\>	*NamedGlobal*
bes site	bes sites	\<bes site\>	\<world\>	*PlainGlobal*

Key Phrase	Plural	Creates a	From a	*Form*
bes user	bes users	<bes user>	<world>	*PlainGlobal*
bes wizard	bes wizards	<bes wizard>	<world>	*PlainGlobal*
best activation of <bes fixlet>	best activations	<bes activation>	<bes fixlet>	*Plain*
bin at <time> of <statistic range>	bins at	<statistical bin>	<statistic range>	*Indexed*
bin of <statistic range>	bins	<statistical bin>	<statistic range>	*Plain*
binary operator <string>	binary operators	<binary operator>	<world>	*NamedGlobal*
binary operator returning <type>	binary operators returning	<binary operator>	<world>	*IndexedGlobal*
bit <integer>	bits	<bit set>	<world>	*NumberedGlobal*
bit <integer> of <bit set>	bits	<boolean>	<bit set>	*Numbered*
bit <integer> of <integer>	bits	<boolean>	<integer>	*Numbered*
bit set <string>	bit sets	<bit set>	<world>	*NamedGlobal*
body of <bes fixlet>	bodies	<html>	<bes fixlet>	*Plain*
boolean <string>	booleans	<boolean>	<world>	*NamedGlobal*
case insensitive regex <string>	case insensitive regexes	<regular expression>	<world>	*NamedGlobal*
case insensitive regular expression <string>	case insensitive regular expressions	<regular expression>	<world>	*NamedGlobal*
cast <string>	casts	<cast>	<world>	*NamedGlobal*
cast from of <type>	casts from	<cast>	<type>	*Plain*
cast returning <type>	casts returning	<cast>	<world>	*IndexedGlobal*
category of <bes fixlet>	categories	<string>	<bes fixlet>	*Plain*
character <integer>	characters	<string>	<world>	*NumberedGlobal*
character <integer> of <string>	characters	<substring>	<string>	*Numbered*
character of <string>	characters	<substring>	<string>	*Plain*
charset of <bes fixlet>	charsets	<string>	<bes fixlet>	*Plain*
charset of <bes wizard>	charsets	<string>	<bes wizard>	*Plain*
child node <integer> of <xml dom node>	child nodes	<xml dom node>	<xml dom node>	*Numbered*
child node of <xml dom node>	child nodes	<xml dom node>	<xml dom node>	*Plain*
components xml of <bes fixlet>	components xmls	<string>	<bes fixlet>	*Plain*

Key Phrase	Plural	Creates a	From a	*Form*
computer group flag of <bes action>	computer group flags	<boolean>	<bes action>	*Plain*
computer of <bes action result>	computers	<bes computer>	<bes action result>	*Plain*
computer of <bes fixlet result>	computers	<bes computer>	<bes fixlet result>	*Plain*
computer of <bes property result>	computers	<bes computer>	<bes property result>	*Plain*
concatenation <string> of <string>	concatenations	<string>	<string>	*Named*
concatenation of <string>	concatenations	<string>	<string>	*Plain*
conjunction of <boolean>	conjunctions	<boolean>	<boolean>	*Plain*
constrain by property name of <bes action>	constrain by property names	<string>	<bes action>	*Plain*
constrain by property relation of <bes action>	constrain by property relations	<string>	<bes action>	*Plain*
constrain by property value of <bes action>	constrain by property values	<string>	<bes action>	*Plain*
content id of <bes fixlet action>	content ids	<string>	<bes fixlet action>	*Plain*
correlation coefficient of <exponential projection>	correlation coefficients	<floating point>	<exponential projection>	*Plain*
correlation coefficient of <linear projection>	correlation coefficients	<floating point>	<linear projection>	*Plain*
count map of <historical fixlet count>	count maps	<fixlet count pair>	<historical fixlet count>	*Plain*
count of <fixlet count pair>	counts	<integer>	<fixlet count pair>	*Plain*
count of <historical computer count>	counts	<integer>	<historical computer count>	*Plain*
creation date of <bes custom site>	creation dates	<time>	<bes custom site>	*Plain*
creation time of <bes user>	creation times	<time>	<bes user>	*Plain*
creator of <bes custom site>	creators	<bes user>	<bes custom site>	*Plain*
current analysis	current analyses	<bes fixlet>	<world>	*PlainGlobal*
current computer	current computers	<bes computer>	<world>	*PlainGlobal*
current console user	current console users	<bes user>	<world>	*PlainGlobal*
current date	current dates	<date>	<world>	*PlainGlobal*

Key Phrase	Plural	Creates a	From a	Form
current day_of_month	current days_of_month	<day of month>	<world>	*PlainGlobal*
current day_of_week	current days_of_week	<day of week>	<world>	*PlainGlobal*
current day_of_year	current days_of_year	<day of year>	<world>	*PlainGlobal*
current fixlet	current fixlets	<bes fixlet>	<world>	*PlainGlobal*
current month	current months	<month>	<world>	*PlainGlobal*
current month_and_year	current months_and_years	<month and year>	<world>	*PlainGlobal*
current task	current tasks	<bes fixlet>	<world>	*PlainGlobal*
current wizard	current wizards	<bes wizard>	<world>	*PlainGlobal*
current year	current years	<year>	<world>	*PlainGlobal*
custom content flag of <bes user>	custom content flags	<boolean>	<bes user>	*Plain*
custom flag of <bes fixlet>	custom flags	<boolean>	<bes fixlet>	*Plain*
custom flag of <bes property>	custom flags	<boolean>	<bes property>	*Plain*
custom site flag of <bes fixlet>	custom site flags	<boolean>	<bes fixlet>	*Plain*
custom site of <bes fixlet>	custom sites	<bes custom site>	<bes fixlet>	*Plain*
custom success relevance of <bes action>	custom success relevances	<string>	<bes action>	*Plain*
cve id list of <bes fixlet>	cve id lists	<string>	<bes fixlet>	*Plain*
database id of <bes action>	database ids	<integer>	<bes action>	*Plain*
database id of <bes activation>	database ids	<integer>	<bes activation>	*Plain*
database id of <bes computer>	database ids	<integer>	<bes computer>	*Plain*
database id of <bes property>	database ids	<integer>	<bes property>	*Plain*
database id of <bes wizard>	database ids	<integer>	<bes wizard>	*Plain*
database id of <historical computer count>	database ids	<integer>	<historical computer count>	*Plain*
database id of <historical fixlet count>	database ids	<integer>	<historical fixlet count>	*Plain*
database name of <bes action>	database names	<string>	<bes action>	*Plain*
database name of <bes computer>	database names	<string>	<bes computer>	*Plain*

Key Phrase	Plural	Creates a	From a	*Form*
database name of <bes wizard>	database names	<string>	<bes wizard>	*Plain*
date <string>	dates	<date>	<world>	*NamedGlobal*
date <time zone> of <time>	dates	<date>	<time>	*Indexed*
date range end of <bes action>	date range ends	<date>	<bes action>	*Plain*
date range start of <bes action>	date range starts	<date>	<bes action>	*Plain*
day	days	<time interval>	<world>	*PlainGlobal*
day of <day of year>	days	<day of month>	<day of year>	*Plain*
day_of_month <integer>	days_of_month	<day of month>	<world>	*NumberedGlobal*
day_of_month <string>	days_of_month	<day of month>	<world>	*NamedGlobal*
day_of_month of <date>	days_of_month	<day of month>	<date>	*Plain*
day_of_week <string>	days_of_week	<day of week>	<world>	*NamedGlobal*
day_of_week of <date>	days_of_week	<day of week>	<date>	*Plain*
day_of_year of <date>	days_of_year	<day of year>	<date>	*Plain*
december	decembers	<month>	<world>	*PlainGlobal*
december <integer>	decembers	<day of year>	<world>	*NumberedGlobal*
december <integer> of <integer>	decembers	<date>	<integer>	*Numbered*
december of <integer>	decembers	<month and year>	<integer>	*Plain*
default action of <bes fixlet>	default actions	<bes fixlet action>	<bes fixlet>	*Plain*
default flag of <bes property>	default flags	<boolean>	<bes property>	*Plain*
default page name of <bes wizard>	default page names	<string>	<bes wizard>	*Plain*
definition of <bes property>	definitions	<string>	<bes property>	*Plain*
description of <bes custom site>	descriptions	<string>	<bes custom site>	*Plain*
detailed status of <bes action result>	detailed statuses	<string>	<bes action result>	*Plain*
dialog flag of <bes wizard>	dialog flags	<boolean>	<bes wizard>	*Plain*
digest file name of <bes fixlet>	digest file names	<string>	<bes fixlet>	*Plain*

Key Phrase	Plural	Creates a	From a	*Form*
direct object type of <property>	direct object types	<type>	<property>	*Plain*
disjunction of <boolean>	disjunctions	<boolean>	<boolean>	*Plain*
divided by zero of <floating point>	divided by zeroes	<boolean>	<floating point>	*Plain*
document flag of <bes wizard>	document flags	<boolean>	<bes wizard>	*Plain*
download size of <bes fixlet>	download sizes	<integer>	<bes fixlet>	*Plain*
end date of <bes action>	end dates	<date>	<bes action>	*Plain*
end flag of <bes action>	end flags	<boolean>	<bes action>	*Plain*
end of <statistic range>	ends	<time>	<statistic range>	*Plain*
end of <statistical bin>	ends	<time>	<statistical bin>	*Plain*
end of <substring>	ends	<string position>	<substring>	*Plain*
end of <time range>	ends	<time>	<time range>	*Plain*
end time_of_day of <bes action>	end times_of_day	<time of day>	<bes action>	*Plain*
error <string>	errors	<undefined>	<world>	*NamedGlobal*
error flag of <bes property result>	error flags	<boolean>	<bes property result>	*Plain*
error message of <bes property result>	error messages	<string>	<bes property result>	*Plain*
evaluation period of <bes property>	evaluation periods	<time interval>	<bes property>	*Plain*
expiration flag of <bes action>	expiration flags	<boolean>	<bes action>	*Plain*
expiration time of <bes action>	expiration times	<time>	<bes action>	*Plain*
exponential fit of <statistical bin>	exponential fits	<exponential projection>	<statistical bin>	*Plain*
extrapolation <time> of <exponential projection>	extrapolations	<floating point>	<exponential projection>	*Indexed*
extrapolation <time> of <linear projection>	extrapolations	<floating point>	<linear projection>	*Indexed*
failure rate of <statistical bin>	failure rates	<floating point>	<statistical bin>	*Plain*
false	falses	<boolean>	<world>	*PlainGlobal*
february	februarys	<month>	<world>	*PlainGlobal*
february <integer>	februarys	<day of year>	<world>	*NumberedGlobal*
february <integer> of <integer>	februarys	<date>	<integer>	*Numbered*

Key Phrase	Plural	Creates a	From a	*Form*
february of <integer>	februarys	<month and year>	<integer>	*Plain*
final part <time interval> of <time range>	final parts	<time range>	<time range>	*Indexed*
finite of <floating point>	finites	<boolean>	<floating point>	*Plain*
first <day of week> of <month and year>	firsts	<date>	<month and year>	*Indexed*
first <integer> of <string>	firsts	<substring>	<string>	*Numbered*
first <string> of <string>	firsts	<substring>	<string>	*Named*
first became relevant of <bes fixlet result>	first became relevants	<time>	<bes fixlet result>	*Plain*
first child of <xml dom node>	first children	<xml dom node>	<xml dom node>	*Plain*
first friday of <month and year>	first fridays	<date>	<month and year>	*Plain*
first match <regular expression> of <string>	first matches	<regular expression match>	<string>	*Indexed*
first monday of <month and year>	first mondays	<date>	<month and year>	*Plain*
first saturday of <month and year>	first saturdays	<date>	<month and year>	*Plain*
first sunday of <month and year>	first sundays	<date>	<month and year>	*Plain*
first thursday of <month and year>	first thursdays	<date>	<month and year>	*Plain*
first tuesday of <month and year>	first tuesdays	<date>	<month and year>	*Plain*
first wednesday of <month and year>	first wednesdays	<date>	<month and year>	*Plain*
fixlet <integer> of <bes site>	fixlets	<bes fixlet>	<bes site>	*Numbered*
fixlet flag of <bes fixlet>	fixlet flags	<boolean>	<bes fixlet>	*Plain*
fixlet of <bes fixlet result>	fixlets	<bes fixlet>	<bes fixlet result>	*Plain*
fixlet of <bes site>	fixlets	<bes fixlet>	<bes site>	*Plain*
floating point <string>	floating points	<floating point>	<world>	*NamedGlobal*
following text of <string position>	following texts	<substring>	<string position>	*Plain*

Key Phrase	Plural	Creates a	From a	*Form*
following text of <substring>	following texts	<substring>	<substring>	*Plain*
friday	fridays	<day of week>	<world>	*PlainGlobal*
geometric mean of <statistical bin>	geometric means	<floating point>	<statistical bin>	*Plain*
ghz	ghzs	<hertz>	<world>	*PlainGlobal*
globally visible flag of <bes fixlet>	globally visible flags	<boolean>	<bes fixlet>	*Plain*
greatest hz	greatest hzs	<hertz>	<world>	*PlainGlobal*
greatest integer	greatest integers	<integer>	<world>	*PlainGlobal*
greatest time interval	greatest time intervals	<time interval>	<world>	*PlainGlobal*
group flag of <bes fixlet>	group flags	<boolean>	<bes fixlet>	*Plain*
group member flag of <bes action>	group member flags	<boolean>	<bes action>	*Plain*
hexadecimal integer <string>	hexadecimal integers	<integer>	<world>	*NamedGlobal*
hexadecimal string <string>	hexadecimal strings	<string>	<world>	*NamedGlobal*
hidden bes action	hidden bes actions	<bes action>	<world>	*PlainGlobal*
hidden flag of <bes action>	hidden flags	<boolean>	<bes action>	*Plain*
hour	hours	<time interval>	<world>	*PlainGlobal*
hour_of_day of <time of day with time zone>	hours_of_day	<integer>	<time of day with time zone>	*Plain*
hour_of_day of <time of day>	hours_of_day	<integer>	<time of day>	*Plain*
hz	hzs	<hertz>	<world>	*PlainGlobal*
id of <bes action>	ids	<integer>	<bes action>	*Plain*
id of <bes activation>	ids	<integer>	<bes activation>	*Plain*
id of <bes computer>	ids	<integer>	<bes computer>	*Plain*
id of <bes fixlet>	ids	<integer>	<bes fixlet>	*Plain*
id of <bes property>	ids	<integer>	<bes property>	*Plain*
id of <bes site>	ids	<integer>	<bes site>	*Plain*
in console context	in console contexts	<boolean>	<world>	*PlainGlobal*
in web reports context	in web reports contexts	<boolean>	<world>	*PlainGlobal*
index type of <property>	index types	<type>	<property>	*Plain*

Key Phrase	Plural	Creates a	From a	*Form*
inexact of <floating point>	inexacts	<boolean>	<floating point>	*Plain*
infinite of <floating point>	infinites	<boolean>	<floating point>	*Plain*
initial part <time interval> of <time range>	initial parts	<time range>	<time range>	*Indexed*
integer <integer>	integers	<integer>	<world>	*NumberedGlobal*
integer <string>	integers	<integer>	<world>	*NamedGlobal*
integer ceiling of <floating point>	integer ceilings	<integer>	<floating point>	*Plain*
integer floor of <floating point>	integer floors	<integer>	<floating point>	*Plain*
invalid of <floating point>	invalids	<boolean>	<floating point>	*Plain*
issuer of <bes action>	issuers	<bes user>	<bes action>	*Plain*
issuer of <bes activation>	issuers	<bes user>	<bes activation>	*Plain*
issuer of <bes fixlet>	issuers	<bes user>	<bes fixlet>	*Plain*
january	januarys	<month>	<world>	*PlainGlobal*
january <integer>	januarys	<day of year>	<world>	*NumberedGlobal*
january <integer> of <integer>	januarys	<date>	<integer>	*Numbered*
january of <integer>	januarys	<month and year>	<integer>	*Plain*
javascript array <string> of <statistical bin>	javascript arrays	<html>	<statistical bin>	*Named*
july	julys	<month>	<world>	*PlainGlobal*
july <integer>	julys	<day of year>	<world>	*NumberedGlobal*
july <integer> of <integer>	julys	<date>	<integer>	*Numbered*
july of <integer>	julys	<month and year>	<integer>	*Plain*
june	junes	<month>	<world>	*PlainGlobal*
june <integer>	junes	<day of year>	<world>	*NumberedGlobal*
june <integer> of <integer>	junes	<date>	<integer>	*Numbered*
june of <integer>	junes	<month and year>	<integer>	*Plain*
khz	khzs	<hertz>	<world>	*PlainGlobal*

Key Phrase	Plural	Creates a	From a	*Form*
kurtosis of <statistical bin>	kurtoses	<floating point>	<statistical bin>	*Plain*
last <integer> of <string>	lasts	<substring>	<string>	*Numbered*
last <string> of <string>	lasts	<substring>	<string>	*Named*
last became nonrelevant of <bes fixlet result>	last became nonrelevants	<time>	<bes fixlet result>	*Plain*
last became relevant of <bes fixlet result>	last became relevants	<time>	<bes fixlet result>	*Plain*
last child of <xml dom node>	last children	<xml dom node>	<xml dom node>	*Plain*
last login time of <bes user>	last login times	<time>	<bes user>	*Plain*
last report time of <bes computer>	last report times	<time>	<bes computer>	*Plain*
leap of <year>	leaps	<boolean>	<year>	*Plain*
least hz	least hzs	<hertz>	<world>	*PlainGlobal*
least integer	least integers	<integer>	<world>	*PlainGlobal*
least significant one bit of <bit set>	least significant one bits	<integer>	<bit set>	*Plain*
least time interval	least time intervals	<time interval>	<world>	*PlainGlobal*
left operand type of <binary operator>	left operand types	<type>	<binary operator>	*Plain*
left shift <integer> of <bit set>	left shifts	<bit set>	<bit set>	*Numbered*
length of <month and year>	lengths	<time interval>	<month and year>	*Plain*
length of <rope>	lengths	<integer>	<rope>	*Plain*
length of <statistical bin>	lengths	<time interval>	<statistical bin>	*Plain*
length of <string>	lengths	<integer>	<string>	*Plain*
length of <time range>	lengths	<time interval>	<time range>	*Plain*
length of <year>	lengths	<time interval>	<year>	*Plain*
less significance <integer> of <floating point>	less significances	<floating point>	<floating point>	*Numbered*
line number of <bes action result>	line numbers	<integer>	<bes action result>	*Plain*
linear fit of <statistical bin>	linear fits	<linear projection>	<statistical bin>	*Plain*

Key Phrase	Plural	Creates a	From a	*Form*
link <html> of <bes action>	links	<html>	<bes action>	*Indexed*
link <html> of <bes computer>	links	<html>	<bes computer>	*Indexed*
link <html> of <bes fixlet>	links	<html>	<bes fixlet>	*Indexed*
link <html> of <bes user>	links	<html>	<bes user>	*Indexed*
link <html> of <bes wizard>	links	<html>	<bes wizard>	*Indexed*
link <string> of <bes action>	links	<html>	<bes action>	*Named*
link <string> of <bes computer>	links	<html>	<bes computer>	*Named*
link <string> of <bes fixlet>	links	<html>	<bes fixlet>	*Named*
link <string> of <bes user>	links	<html>	<bes user>	*Named*
link <string> of <bes wizard>	links	<html>	<bes wizard>	*Named*
link href of <bes action>	link hrefs	<string>	<bes action>	*Plain*
link href of <bes computer>	link hrefs	<string>	<bes computer>	*Plain*
link href of <bes fixlet>	link hrefs	<string>	<bes fixlet>	*Plain*
link href of <bes user>	link hrefs	<string>	<bes user>	*Plain*
link href of <bes wizard>	link hrefs	<string>	<bes wizard>	*Plain*
link of <bes action>	links	<html>	<bes action>	*Plain*
link of <bes computer>	links	<html>	<bes computer>	*Plain*
link of <bes fixlet>	links	<html>	<bes fixlet>	*Plain*
link of <bes user>	links	<html>	<bes user>	*Plain*
link of <bes wizard>	links	<html>	<bes wizard>	*Plain*
local time <string>	local times	<time>	<world>	*NamedGlobal*
local time zone	local time zones	<time zone>	<world>	*PlainGlobal*
locally visible flag of <bes fixlet>	locally visible flags	<boolean>	<bes fixlet>	*Plain*
logarithm kurtosis of <statistical bin>	logarithm kurtoses	<floating point>	<statistical bin>	*Plain*
logarithm skewness of <statistical bin>	logarithm skewnesses	<floating point>	<statistical bin>	*Plain*
logarithm standard deviation of <statistical bin>	logarithm standard deviations	<floating point>	<statistical bin>	*Plain*
logarithm variance of <statistical bin>	logarithm variances	<floating point>	<statistical bin>	*Plain*

Key Phrase	Plural	Creates a	From a	*Form*
management rights flag of <bes action>	management rights flags	<boolean>	<bes action>	*Plain*
march	marchs	<month>	<world>	*PlainGlobal*
march <integer>	marchs	<day of year>	<world>	*NumberedGlobal*
march <integer> of <integer>	marchs	<date>	<integer>	*Numbered*
march of <integer>	marchs	<month and year>	<integer>	*Plain*
master flag of <bes user>	master flags	<boolean>	<bes user>	*Plain*
master site flag of <bes fixlet>	master site flags	<boolean>	<bes fixlet>	*Plain*
match <regular expression> of <string>	matches	<regular expression match>	<string>	*Indexed*
maximum of <integer>	maxima	<integer>	<integer>	*Plain*
maximum of <time interval>	maxima	<time interval>	<time interval>	*Plain*
maximum of <time>	maxima	<time>	<time>	*Plain*
maximum single computer total of <statistical bin>	maximum single computer totals	<floating point>	<statistical bin>	*Plain*
maximum value of <statistical bin>	maximum values	<floating point>	<statistical bin>	*Plain*
may	mays	<month>	<world>	*PlainGlobal*
may <integer>	mays	<day of year>	<world>	*NumberedGlobal*
may <integer> of <integer>	mays	<date>	<integer>	*Numbered*
may of <integer>	mays	<month and year>	<integer>	*Plain*
mean computer count of <statistical bin>	mean computer counts	<floating point>	<statistical bin>	*Plain*
mean failing computer count of <statistical bin>	mean failing computer counts	<floating point>	<statistical bin>	*Plain*
mean logarithm of <statistical bin>	mean logarithms	<floating point>	<statistical bin>	*Plain*
mean nonzero value count of <statistical bin>	mean nonzero value counts	<floating point>	<statistical bin>	*Plain*
mean of <floating point>	means	<floating point>	<floating point>	*Plain*
mean of <integer>	means	<floating point>	<integer>	*Plain*

Key Phrase	Plural	Creates a	From a	*Form*
mean of \<statistical bin\>	means	\<floating point\>	\<statistical bin\>	*Plain*
mean sample interval of \<statistical bin\>	mean sample intervals	\<time interval\>	\<statistical bin\>	*Plain*
mean sample rate of \<statistical bin\>	mean sample rates	\<rate\>	\<statistical bin\>	*Plain*
mean successful computer count of \<statistical bin\>	mean successful computer counts	\<floating point\>	\<statistical bin\>	*Plain*
mean total of \<statistical bin\>	mean totals	\<floating point\>	\<statistical bin\>	*Plain*
mean value count of \<statistical bin\>	mean value counts	\<floating point\>	\<statistical bin\>	*Plain*
mean zero value count of \<statistical bin\>	mean zero value counts	\<floating point\>	\<statistical bin\>	*Plain*
menu path of \<bes wizard\>	menu paths	\<string\>	\<bes wizard\>	*Plain*
message action button flag of \<bes action\>	message action button flags	\<boolean\>	\<bes action\>	*Plain*
message allow cancel flag of \<bes action\>	message allow cancel flags	\<boolean\>	\<bes action\>	*Plain*
message of \<bes fixlet\>	messages	\<html\>	\<bes fixlet\>	*Plain*
message postpone delay of \<bes action\>	message postpone delays	\<time interval\>	\<bes action\>	*Plain*
message text of \<bes action\>	message texts	\<string\>	\<bes action\>	*Plain*
message timeout delay of \<bes action\>	message timeout delays	\<time interval\>	\<bes action\>	*Plain*
message title of \<bes action\>	message titles	\<string\>	\<bes action\>	*Plain*
mhz	mhzs	\<hertz\>	\<world\>	*PlainGlobal*
microsecond	microseconds	\<time interval\>	\<world\>	*PlainGlobal*
middle action of \<bes action\>	middle actions	\<bes action\>	\<bes action\>	*Plain*
midnight	midnights	\<time of day\>	\<world\>	*PlainGlobal*
millisecond	milliseconds	\<time interval\>	\<world\>	*PlainGlobal*
minimum of \<integer\>	minima	\<integer\>	\<integer\>	*Plain*
minimum of \<time interval\>	minima	\<time interval\>	\<time interval\>	*Plain*
minimum of \<time\>	minima	\<time\>	\<time\>	*Plain*
minimum single computer total of	minimum single computer	\<floating	\<statistical	*Plain*

Key Phrase	Plural	Creates a	From a	*Form*
<statistical bin>	totals	point>	bin>	
minimum value of <statistical bin>	minimum values	<floating point>	<statistical bin>	*Plain*
minute	minutes	<time interval>	<world>	*PlainGlobal*
minute_of_hour of <time of day with time zone>	minutes_of_hour	<integer>	<time of day with time zone>	*Plain*
minute_of_hour of <time of day>	minutes_of_hour	<integer>	<time of day>	*Plain*
module <string>	modules	<module>	<world>	*NamedGlobal*
monday	mondays	<day of week>	<world>	*PlainGlobal*
month	months	<number of months>	<world>	*PlainGlobal*
month <integer>	months	<month>	<world>	*NumberedGlobal*
month <string>	months	<month>	<world>	*NamedGlobal*
month of <date>	months	<month>	<date>	*Plain*
month of <day of year>	months	<month>	<day of year>	*Plain*
month of <month and year>	months	<month>	<month and year>	*Plain*
month_and_year of <date>	months_and_years	<month and year>	<date>	*Plain*
more significance <integer> of <floating point>	more significances	<floating point>	<floating point>	*Numbered*
most significant one bit of <bit set>	most significant one bits	<integer>	<bit set>	*Plain*
multiple flag of <bes action>	multiple flags	<boolean>	<bes action>	*Plain*
multiplicity of <integer with multiplicity>	multiplicities	<integer>	<integer with multiplicity>	*Plain*
multiplicity of <string with multiplicity>	multiplicities	<integer>	<string with multiplicity>	*Plain*
multivalued of <property>	multivalueds	<boolean>	<property>	*Plain*
name of <bes action>	names	<string>	<bes action>	*Plain*
name of <bes activation>	names	<string>	<bes activation>	*Plain*
name of <bes computer>	names	<string>	<bes computer>	*Plain*
name of <bes custom site>	names	<string>	<bes custom site>	*Plain*

Key Phrase	Plural	Creates a	From a	*Form*
name of \<bes fixlet>	names	\<string>	\<bes fixlet>	*Plain*
name of \<bes property>	names	\<string>	\<bes property>	*Plain*
name of \<bes site>	names	\<string>	\<bes site>	*Plain*
name of \<bes user>	names	\<string>	\<bes user>	*Plain*
name of \<bes wizard>	names	\<string>	\<bes wizard>	*Plain*
name of \<binary operator>	names	\<string>	\<binary operator>	*Plain*
name of \<cast>	names	\<string>	\<cast>	*Plain*
name of \<type>	names	\<string>	\<type>	*Plain*
name of \<unary operator>	names	\<string>	\<unary operator>	*Plain*
nan of \<floating point>	nans	\<boolean>	\<floating point>	*Plain*
navbar name of \<bes wizard>	navbar names	\<string>	\<bes wizard>	*Plain*
next sibling of \<xml dom node>	next siblings	\<xml dom node>	\<xml dom node>	*Plain*
node name of \<xml dom node>	node names	\<string>	\<xml dom node>	*Plain*
node type of \<xml dom node>	node types	\<integer>	\<xml dom node>	*Plain*
node value of \<xml dom node>	node values	\<string>	\<xml dom node>	*Plain*
noon	noons	\<time of day>	\<world>	*PlainGlobal*
normal of \<floating point>	normals	\<boolean>	\<floating point>	*Plain*
november	novembers	\<month>	\<world>	*PlainGlobal*
november \<integer>	novembers	\<day of year>	\<world>	*NumberedGlobal*
november \<integer> of \<integer>	novembers	\<date>	\<integer>	*Numbered*
november of \<integer>	novembers	\<month and year>	\<integer>	*Plain*
now	nows	\<time>	\<world>	*PlainGlobal*
numeric value of \<string>	numeric values	\<integer>	\<string>	*Plain*
october	octobers	\<month>	\<world>	*PlainGlobal*
october \<integer>	octobers	\<day of year>	\<world>	*NumberedGlobal*
october \<integer> of \<integer>	octobers	\<date>	\<integer>	*Numbered*

Key Phrase	Plural	Creates a	From a	*Form*
october of <integer>	octobers	<month and year>	<integer>	*Plain*
one bit of <bit set>	one bits	<integer>	<bit set>	*Plain*
open action count of <bes fixlet>	open action counts	<integer>	<bes fixlet>	*Plain*
operand type of <cast>	operand types	<type>	<cast>	*Plain*
operand type of <unary operator>	operand types	<type>	<unary operator>	*Plain*
operator site flag of <bes action>	operator site flags	<boolean>	<bes action>	*Plain*
operator site flag of <bes fixlet>	operator site flags	<boolean>	<bes fixlet>	*Plain*
overflow of <floating point>	overflows	<boolean>	<floating point>	*Plain*
owner document of <xml dom node>	owner documents	<xml dom document>	<xml dom node>	*Plain*
owner flag <bes user> of <bes custom site>	owner flags	<boolean>	<bes custom site>	*Indexed*
owner of <bes custom site>	owners	<bes user>	<bes custom site>	*Plain*
parent node of <xml dom node>	parent nodes	<xml dom node>	<xml dom node>	*Plain*
parent of <type>	parents	<type>	<type>	*Plain*
parenthesized part <integer> of <regular expression match>	parenthesized parts	<substring>	<regular expression match>	*Numbered*
parenthesized part of <regular expression match>	parenthesized parts	<substring>	<regular expression match>	*Plain*
plural flag of <bes property result>	plural flags	<boolean>	<bes property result>	*Plain*
plural name of <property>	plural names	<string>	<property>	*Plain*
position <integer> of <string>	positions	<string position>	<string>	*Numbered*
position of <string>	positions	<string position>	<string>	*Plain*
postaction allow cancel flag of <bes action>	postaction allow cancel flags	<boolean>	<bes action>	*Plain*
postaction force delay of <bes action>	postaction force delays	<time interval>	<bes action>	*Plain*
postaction message text of <bes action>	postaction message texts	<string>	<bes action>	*Plain*

Key Phrase	Plural	Creates a	From a	*Form*
postaction message title of <bes action>	postaction message titles	<string>	<bes action>	*Plain*
postaction postpone delay of <bes action>	postaction postpone delays	<time interval>	<bes action>	*Plain*
pre60 flag of <bes wizard>	pre60 flags	<boolean>	<bes wizard>	*Plain*
preceding text of <string position>	preceding texts	<substring>	<string position>	*Plain*
preceding text of <substring>	preceding texts	<substring>	<substring>	*Plain*
previous sibling of <xml dom node>	previous siblings	<xml dom node>	<xml dom node>	*Plain*
product of <integer>	products	<integer>	<integer>	*Plain*
property <integer> of <bes fixlet>	properties	<bes property>	<bes fixlet>	*Numbered*
property <string>	properties	<property>	<world>	*NamedGlobal*
property <string> of <type>	properties	<property>	<type>	*Named*
property of <bes fixlet>	properties	<bes property>	<bes fixlet>	*Plain*
property of <bes property result>	properties	<bes property>	<bes property result>	*Plain*
property of <type>	properties	<property>	<type>	*Plain*
property result of <bes computer>	property results	<bes property result>	<bes computer>	*Plain*
property returning <type>	properties returning	<property>	<world>	*IndexedGlobal*
property returning <type> of <type>	properties returning	<property>	<type>	*Indexed*
range <time range> of <statistic range>	ranges	<statistic range>	<statistic range>	*Indexed*
range after <time> of <time range>	ranges after	<time range>	<time range>	*Indexed*
range before <time> of <time range>	ranges before	<time range>	<time range>	*Indexed*
rate <time interval> of <exponential projection>	rates	<floating point>	<exponential projection>	*Indexed*
rate of <linear projection>	rates	<rate>	<linear projection>	*Plain*
reader of <bes custom site>	readers	<bes user>	<bes custom site>	*Plain*
reapplication limit of <bes action>	reapplication limits	<integer>	<bes action>	*Plain*
regex <string>	regexes	<regular expression>	<world>	*NamedGlobal*

Key Phrase	Plural	Creates a	From a	*Form*
regular expression <string>	regular expressions	<regular expression>	<world>	*NamedGlobal*
relative significance place <integer> of <floating point>	relative significance places	<floating point>	<floating point>	*Numbered*
relative significance place of <floating point>	relative significance places	<floating point>	<floating point>	*Plain*
relevance of <bes fixlet>	relevances	<string>	<bes fixlet>	*Plain*
relevant <(bes computer, bes fixlet)>	relevants	<boolean>	<world>	*IndexedGlobal*
relevant <(bes fixlet, bes computer)>	relevants	<boolean>	<world>	*IndexedGlobal*
relevant <bes computer> of <bes fixlet>	relevants	<boolean>	<bes fixlet>	*Indexed*
relevant <bes fixlet> of <bes computer>	relevants	<boolean>	<bes computer>	*Indexed*
relevant fixlet of <bes computer>	relevant fixlets	<bes fixlet>	<bes computer>	*Plain*
relevant flag of <bes fixlet result>	relevant flags	<boolean>	<bes fixlet result>	*Plain*
require user absence of <bes action>	require user absences	<boolean>	<bes action>	*Plain*
require user presence of <bes action>	require user presences	<boolean>	<bes action>	*Plain*
requires authoring flag of <bes wizard>	requires authoring flags	<boolean>	<bes wizard>	*Plain*
reserved flag of <bes property>	reserved flags	<boolean>	<bes property>	*Plain*
restart flag of <bes action>	restart flags	<boolean>	<bes action>	*Plain*
result <(bes action, bes computer)>	results	<bes action result>	<world>	*IndexedGlobal*
result <(bes computer, bes action)>	results	<bes action result>	<world>	*IndexedGlobal*
result <(bes computer, bes property)>	results	<bes property result>	<world>	*IndexedGlobal*
result <(bes property, bes computer)>	results	<bes property result>	<world>	*IndexedGlobal*
result from <bes action> of <bes computer>	results from	<bes action result>	<bes computer>	*Indexed*
result from <bes computer> of <bes action>	results from	<bes action result>	<bes action>	*Indexed*
result from <bes computer> of <bes property>	results from	<bes property result>	<bes property>	*Indexed*
result from <bes property> of <bes computer>	results from	<bes property result>	<bes computer>	*Indexed*

Key Phrase	Plural	Creates a	From a	*Form*
result of \<bes action>	results	\<bes action result>	\<bes action>	*Plain*
result of \<bes fixlet>	results	\<bes fixlet result>	\<bes fixlet>	*Plain*
result of \<bes property>	results	\<bes property result>	\<bes property>	*Plain*
result type of \<binary operator>	result types	\<type>	\<binary operator>	*Plain*
result type of \<property>	result types	\<type>	\<property>	*Plain*
result type of \<unary operator>	result types	\<type>	\<unary operator>	*Plain*
retry count of \<bes action result>	retry counts	\<integer>	\<bes action result>	*Plain*
retry delay of \<bes action>	retry delays	\<time interval>	\<bes action>	*Plain*
retry limit of \<bes action>	retry limits	\<integer>	\<bes action>	*Plain*
right operand type of \<binary operator>	right operand types	\<type>	\<binary operator>	*Plain*
right shift \<integer> of \<bit set>	right shifts	\<bit set>	\<bit set>	*Numbered*
rope \<string>	ropes	\<rope>	\<world>	*NamedGlobal*
running message text of \<bes action>	running message texts	\<string>	\<bes action>	*Plain*
running message title of \<bes action>	running message titles	\<string>	\<bes action>	*Plain*
sans id list of \<bes fixlet>	sans id lists	\<string>	\<bes fixlet>	*Plain*
saturday	saturdays	\<day of week>	\<world>	*PlainGlobal*
script of \<bes fixlet action>	scripts	\<string>	\<bes fixlet action>	*Plain*
script type of \<bes fixlet action>	script types	\<string>	\<bes fixlet action>	*Plain*
second	seconds	\<time interval>	\<world>	*PlainGlobal*
second_of_minute of \<time of day with time zone>	seconds_of_minute	\<integer>	\<time of day with time zone>	*Plain*
second_of_minute of \<time of day>	seconds_of_minute	\<integer>	\<time of day>	*Plain*
select \<string> of \<xml dom node>	selects	\<xml dom node>	\<xml dom node>	*Named*
selected groups string of \<bes action>	selected groups strings	\<string>	\<bes action>	*Plain*

Key Phrase	Plural	Creates a	From a	Form
september	septembers	\<month\>	\<world\>	*PlainGlobal*
september \<integer\>	septembers	\<day of year\>	\<world\>	*NumberedGlobal*
september \<integer\> of \<integer\>	septembers	\<date\>	\<integer\>	*Numbered*
september of \<integer\>	septembers	\<month and year\>	\<integer\>	*Plain*
settings flag of \<bes action\>	settings flags	\<boolean\>	\<bes action\>	*Plain*
show message flag of \<bes action\>	show message flags	\<boolean\>	\<bes action\>	*Plain*
show running message flag of \<bes action\>	show running message flags	\<boolean\>	\<bes action\>	*Plain*
shutdown flag of \<bes action\>	shutdown flags	\<boolean\>	\<bes action\>	*Plain*
significance place \<integer\> of \<floating point\>	significance places	\<floating point\>	\<floating point\>	*Numbered*
significance place of \<floating point\>	significance places	\<floating point\>	\<floating point\>	*Plain*
significance threshold of \<floating point\>	significance thresholds	\<floating point\>	\<floating point\>	*Plain*
significant digits \<integer\> of \<hertz\>	significant digitss	\<hertz\>	\<hertz\>	*Numbered*
significant digits \<integer\> of \<integer\>	significant digitss	\<integer\>	\<integer\>	*Numbered*
single flag of \<bes action\>	single flags	\<boolean\>	\<bes action\>	*Plain*
singular name of \<property\>	singular names	\<string\>	\<property\>	*Plain*
site of \<bes fixlet\>	sites	\<bes site\>	\<bes fixlet\>	*Plain*
size of \<type\>	sizes	\<integer\>	\<type\>	*Plain*
skewness of \<statistical bin\>	skewnesses	\<floating point\>	\<statistical bin\>	*Plain*
source analysis of \<bes property\>	source analyses	\<bes fixlet\>	\<bes property\>	*Plain*
source evaluation period of \<bes property\>	source evaluation periods	\<time interval\>	\<bes property\>	*Plain*
source fixlet of \<bes action\>	source fixlets	\<bes fixlet\>	\<bes action\>	*Plain*
source id of \<bes fixlet\>	source ids	\<string\>	\<bes fixlet\>	*Plain*
source id of \<bes property\>	source ids	\<integer\>	\<bes property\>	*Plain*
source name of \<bes property\>	source names	\<string\>	\<bes property\>	*Plain*
source of \<bes fixlet\>	sources	\<string\>	\<bes fixlet\>	*Plain*
source release date of \<bes fixlet\>	source release dates	\<date\>	\<bes fixlet\>	*Plain*

Key Phrase	Plural	Creates a	From a	Form
source relevance of <bes action>	source relevances	<string>	<bes action>	Plain
source severity of <bes fixlet>	source severities	<string>	<bes fixlet>	Plain
source severity of <fixlet count pair>	source severitys	<string>	<fixlet count pair>	Plain
standard deviation of <floating point>	standard deviations	<floating point>	<floating point>	Plain
standard deviation of <integer>	standard deviations	<floating point>	<integer>	Plain
standard deviation of <statistical bin>	standard deviations	<floating point>	<statistical bin>	Plain
start date of <bes action>	start dates	<date>	<bes action>	Plain
start flag of <bes action>	start flags	<boolean>	<bes action>	Plain
start of <statistic range>	starts	<time>	<statistic range>	Plain
start of <statistical bin>	starts	<time>	<statistical bin>	Plain
start of <substring>	starts	<string position>	<substring>	Plain
start of <time range>	starts	<time>	<time range>	Plain
start time_of_day of <bes action>	start times_of_day	<time of day>	<bes action>	Plain
state of <bes action>	states	<string>	<bes action>	Plain
statistic range of <bes property>	statistic ranges	<statistic range>	<bes property>	Plain
status of <bes action result>	statuses	<bes action status>	<bes action result>	Plain
string <string>	strings	<string>	<world>	NamedGlobal
subscription flag of <bes action>	subscription flags	<boolean>	<bes action>	Plain
substring <string> of <string>	substrings	<substring>	<string>	Named
substring after <string> of <string>	substrings after	<substring>	<string>	Named
substring before <string> of <string>	substrings before	<substring>	<string>	Named
substring between <string> of <string>	substrings between	<substring>	<string>	Named
substring separated by <string> of <string>	substrings separated by	<substring>	<string>	Named
success on custom relevance of <bes action>	success on custom relevances	<boolean>	<bes action>	Plain
success on original relevance of <bes action>	success on original relevances	<boolean>	<bes action>	Plain

Key Phrase	Plural	Creates a	From a	*Form*
success on run to completion of <bes action>	success on run to completions	<boolean>	<bes action>	*Plain*
success rate of <statistical bin>	success rates	<floating point>	<statistical bin>	*Plain*
sum of <integer>	sums	<integer>	<integer>	*Plain*
sunday	sundays	<day of week>	<world>	*PlainGlobal*
symbol of <binary operator>	symbols	<string>	<binary operator>	*Plain*
symbol of <unary operator>	symbols	<string>	<unary operator>	*Plain*
targeted by id flag of <bes action>	targeted by id flags	<boolean>	<bes action>	*Plain*
targeted by list flag of <bes action>	targeted by list flags	<boolean>	<bes action>	*Plain*
targeted by property flag of <bes action>	targeted by property flags	<boolean>	<bes action>	*Plain*
targeted computer of <bes action>	targeted computers	<bes computer>	<bes action>	*Plain*
targeted list of <bes action>	targeted lists	<string>	<bes action>	*Plain*
targeted name of <bes action>	targeted names	<string>	<bes action>	*Plain*
targeting method of <bes action>	targeting methods	<string>	<bes action>	*Plain*
targeting relevance of <bes action>	targeting relevances	<string>	<bes action>	*Plain*
task flag of <bes fixlet>	task flags	<boolean>	<bes fixlet>	*Plain*
temporal distribution of <bes action>	temporal distributions	<time interval>	<bes action>	*Plain*
thursday	thursdays	<day of week>	<world>	*PlainGlobal*
time <string>	times	<time>	<world>	*NamedGlobal*
time <time zone> of <time>	times	<time of day with time zone>	<time>	*Indexed*
time interval <string>	time intervals	<time interval>	<world>	*NamedGlobal*
time issued of <bes action>	times issued	<time>	<bes action>	*Plain*
time of <historical computer count>	times	<time>	<historical computer count>	*Plain*
time of <historical fixlet count>	times	<time>	<historical fixlet count>	*Plain*

Key Phrase	Plural	Creates a	From a	*Form*
time of <time of day with time zone>	times	<time of day>	<time of day with time zone>	*Plain*
time range end of <bes action>	time range ends	<time of day>	<bes action>	*Plain*
time range start of <bes action>	time range starts	<time of day>	<bes action>	*Plain*
time zone <string>	time zones	<time zone>	<world>	*NamedGlobal*
time_of_day <string>	times_of_day	<time of day>	<world>	*NamedGlobal*
top level bes action	top level bes actions	<bes action>	<world>	*PlainGlobal*
total <time interval> of <statistic range>	totals	<statistical bin>	<statistic range>	*Indexed*
total lower bound of <statistical bin>	total lower bounds	<floating point>	<statistical bin>	*Plain*
total of <statistic range>	totals	<statistical bin>	<statistic range>	*Plain*
total upper bound of <statistical bin>	total upper bounds	<floating point>	<statistical bin>	*Plain*
true	trues	<boolean>	<world>	*PlainGlobal*
tuesday	tuesdays	<day of week>	<world>	*PlainGlobal*
tuple string item <integer> of <string>	tuple string items	<string>	<string>	*Numbered*
tuple string item of <string>	tuple string items	<string>	<string>	*Plain*
two digit hour of <time of day>	two digit hours	<string>	<time of day>	*Plain*
two digit minute of <time of day>	two digit minutes	<string>	<time of day>	*Plain*
two digit second of <time of day>	two digit seconds	<string>	<time of day>	*Plain*
type of <bes fixlet>	types	<string>	<bes fixlet>	*Plain*
unary operator <string>	unary operators	<unary operator>	<world>	*NamedGlobal*
unary operator returning <type>	unary operators returning	<unary operator>	<world>	*IndexedGlobal*
underflow of <floating point>	underflows	<boolean>	<floating point>	*Plain*
unique value of <integer>	unique values	<integer with multiplicity>	<integer>	*Plain*
unique value of <integer>	unique values	<integer>	<integer>	*Plain*
unique value of <string>	unique values	<string with multiplicity>	<string>	*Plain*
unique value of <string>	unique values	<string>	<string>	*Plain*

Key Phrase	Plural	Creates a	From a	Form
universal time <string>	universal times	<time>	<world>	NamedGlobal
universal time zone	universal time zones	<time zone>	<world>	PlainGlobal
unlocked computer count of <bes fixlet>	unlocked computer counts	<integer>	<bes fixlet>	Plain
untargeted flag of <bes action>	untargeted flags	<boolean>	<bes action>	Plain
urgent flag of <bes action>	urgent flags	<boolean>	<bes action>	Plain
url of <bes wizard>	urls	<string>	<bes wizard>	Plain
usual name of <property>	usual names	<string>	<property>	Plain
value count of <bes property result>	value counts	<integer>	<bes property result>	Plain
value of <bes property result>	values	<string>	<bes property result>	Plain
variance of <statistical bin>	variances	<floating point>	<statistical bin>	Plain
version string <string> of <module>	version strings	<string>	<module>	Named
wednesday	wednesdays	<day of week>	<world>	PlainGlobal
week	weeks	<time interval>	<world>	PlainGlobal
windows display time <string>	windows display times	<time>	<world>	NamedGlobal
wizard data of <bes fixlet>	wizard datas	<html>	<bes fixlet>	Plain
wizard link of <bes fixlet>	wizard links	<string>	<bes fixlet>	Plain
wizard name of <bes fixlet>	wizard names	<string>	<bes fixlet>	Plain
writer of <bes custom site>	writers	<bes user>	<bes custom site>	Plain
xml document of <string>	xml documents	<xml dom document>	<string>	Plain
xpath <(string, string)> of <xml dom node>	xpaths	<xml dom node>	<xml dom node>	Indexed
xpath <string> of <xml dom node>	xpaths	<xml dom node>	<xml dom node>	Named
year	years	<number of months>	<world>	PlainGlobal
year <integer>	years	<year>	<world>	NumberedGlobal
year <string>	years	<year>	<world>	NamedGlobal
year of <date>	years	<year>	<date>	Plain

Key Phrase	Plural	Creates a	From a	*Form*
year of <month and year>	years	<year>	<month and year>	*Plain*
zone of <time of day with time zone>	zones	<time zone>	<time of day with time zone>	*Plain*
zoned time_of_day <string>	zoned times_of_day	<time of day with time zone>	<world>	*NamedGlobal*

Casting Operators

The casting operators allow you to convert one type to another.This is a list of the casting operators sorted by key phrase.

Key Phrase	Creates a	From a
<action lock state> as string	<string>	<action lock state>
<bes action status> as string	<string>	<bes action status>
<binary operator> as string	<string>	<binary operator>
<bios> as string	<string>	<bios>
<bit set> as integer	<integer>	<bit set>
<bit set> as string	<string>	<bit set>
<boolean> as boolean	<boolean>	<boolean>
<boolean> as string	<string>	<boolean>
<cast> as string	<string>	<cast>
<date> as string	<string>	<date>
<day of month> as integer	<integer>	<day of month>
<day of month> as string	<string>	<day of month>
<day of month> as two digits	<string>	<day of month>
<day of week> as string	<string>	<day of week>
<day of week> as three letters	<string>	<day of week>
<day of year> as string	<string>	<day of year>
<environment variable> as string	<string>	<environment variable>

Key Phrase	Creates a	From a
<file content> as lowercase	<file content>	<file content>
<file content> as uppercase	<file content>	<file content>
<file> as string	<string>	<file>
<floating point> as integer	<integer>	<floating point>
<floating point> as scientific notation	<string>	<floating point>
<floating point> as standard notation	<string>	<floating point>
<floating point> as string	<string>	<floating point>
<hertz> as string	<string>	<hertz>
<html> as html	<html>	<html>
<html> as string	<string>	<html>
<integer> as bit set	<bit set>	<integer>
<integer> as bits	<bit set>	<integer>
<integer> as day_of_month	<day of month>	<integer>
<integer> as floating point	<floating point>	<integer>
<integer> as hexadecimal	<string>	<integer>
<integer> as integer	<integer>	<integer>
<integer> as month	<month>	<integer>
<integer> as string	<string>	<integer>
<integer> as year	<year>	<integer>
<ipv4 address> as string	<string>	<ipv4 address>
<language> as string	<string>	<language>
<local group member> as string	<string>	<local group member>
<metabase identifier> as integer	<integer>	<metabase identifier>
<metabase identifier> as string	<string>	<metabase identifier>
<metabase type> as integer	<integer>	<metabase type>
<metabase type> as string	<string>	<metabase type>
<metabase user type> as integer	<integer>	<metabase user type>
<metabase user type> as string	<string>	<metabase user type>
<metabase value> as integer	<integer>	<metabase value>

Key Phrase	Creates a	From a
<metabase value> as string	<string>	<metabase value>
<month and year> as string	<string>	<month and year>
<month> as integer	<integer>	<month>
<month> as string	<string>	<month>
<month> as three letters	<string>	<month>
<month> as two digits	<string>	<month>
<number of months> as string	<string>	<number of months>
<operating system> as string	<string>	<operating system>
<primary language> as string	<string>	<primary language>
<property> as string	<string>	<property>
<rate> as string	<string>	<rate>
<registry key value type> as string	<string>	<registry key value type>
<registry key value> as application	<application>	<registry key value>
<registry key value> as file	<file>	<registry key value>
<registry key value> as folder	<folder>	<registry key value>
<registry key value> as integer	<integer>	<registry key value>
<registry key value> as string	<string>	<registry key value>
<registry key value> as system file	<file>	<registry key value>
<registry key value> as time	<time>	<registry key value>
<rope> as string	<string>	<rope>
<security descriptor> as string	<string>	<security descriptor>
<security identifier> as string	<string>	<security identifier>
<service> as string	<string>	<service>
<setting> as string	<string>	<setting>
<string> as boolean	<boolean>	<string>
<string> as date	<date>	<string>
<string> as day_of_month	<day of month>	<string>
<string> as day_of_week	<day of week>	<string>
<string> as floating point	<floating point>	<string>

Key Phrase	Creates a	From a
<string> as hexadecimal	<string>	<string>
<string> as html	<html>	<string>
<string> as integer	<integer>	<string>
<string> as left trimmed string	<string>	<string>
<string> as local time	<time>	<string>
<string> as local zoned time_of_day	<time of day with time zone>	<string>
<string> as lowercase	<string>	<string>
<string> as month	<month>	<string>
<string> as right trimmed string	<string>	<string>
<string> as string	<string>	<string>
<string> as time	<time>	<string>
<string> as time interval	<time interval>	<string>
<string> as time zone	<time zone>	<string>
<string> as time_of_day	<time of day>	<string>
<string> as trimmed string	<string>	<string>
<string> as universal time	<time>	<string>
<string> as universal zoned time_of_day	<time of day with time zone>	<string>
<string> as uppercase	<string>	<string>
<string> as version	<version>	<string>
<string> as windows display time	<time>	<string>
<string> as year	<year>	<string>
<string> as zoned time_of_day	<time of day with time zone>	<string>
<time interval> as string	<string>	<time interval>
<time of day with time zone> as string	<string>	<time of day with time zone>
<time of day> as string	<string>	<time of day>
<time range> as string	<string>	<time range>
<time zone> as string	<string>	<time zone>

Key Phrase	Creates a	From a
<time> as local string	<string>	<time>
<time> as string	<string>	<time>
<time> as universal string	<string>	<time>
<type> as string	<string>	<type>
<unary operator> as string	<string>	<unary operator>
<version> as string	<string>	<version>
<version> as version	<version>	<version>
<wmi object> as string	<string>	<wmi object>
<wmi select> as string	<string>	<wmi select>
<xml dom node> as text	<string>	<xml dom node>
<xml dom node> as xml	<string>	<xml dom node>
<year> as integer	<integer>	<year>
<year> as string	<string>	<year>

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