**RBC Test Cases**

**Barchart Component**

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# Barchart Element Cget

## Test Case 1

**Test Case ID –** RBC.barchart.element.cget.1

**Test Item –** The *element cget* function of the *barchart* BLT component.

**Input Specification –** The name of a element configure option.

**Output Specification –** The value of the given element configure option name.

**Special Procedural Requirements –** A barchart widget can be created.

**Inter-case Dependencies –** RBC.barchart.element.create.1

### Test Procedure – Barchart Element Cget: Valid Option Name

**Purpose –** Ensure the *element cget* command works correctly when given a valid element configuration option name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.cget.1.1

### Test Procedure – Barchart Element Cget: Invalid Option Name

**Purpose –** Ensure the *crosshairs cget* command works correctly when given an invalid element configuration option name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.cget.1.2

# Barchart Element Activate

## Test Case 1

**Test Case ID –** RBC.barchart.element.activate.1

**Test Item –** The *element activate* function of the *barchart* BLT component.

**Input Specification –** An element name.

**Output Specification –** The element name is on the activate list.

**Special Procedural Requirements –** A barchart widget can be created.

**Inter-case Dependencies –** RBC.barchart.element.create.1

### Test Procedure – Barchart Element Activate: Valid Element Name

**Purpose –** Ensure the *element activate* command works correctly when given a valid element name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.activate.1.1

### Test Procedure – Barchart Element Activate: Invalid Element Name

**Purpose –** Ensure the *element activate* command works correctly when given an invalid element name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.activate.1.2

# Barchart Element Bind

## Test Case 1

**Test Case ID –** RBC.barchart.element.bind.1

**Test Item –** The *element bind* function of the *barchart* BLT component.

**Input Specification –** A tag name and a command.

**Output Specification –** The bindtags contain the name of the tag.

**Special Procedural Requirements –** A barchart widget can be created.

**Inter-case Dependencies –** RBC.barchart.element.create.1

### Test Procedure – Barchart Element Bind: Tag, Sequence, Command

**Purpose –** Ensure the *element bind* command works correctly when given a tag name, an event sequence, and a command.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.bind.1.1

# Barchart Element Configure

## Test Case 1

**Test Case ID –** RBC.barchart.element.configure.1

**Test Item –** The *element configure -activepen* function of the *barchart* BLT component.

**Input Specification –** The name of a pen or “” to not draw the element when it is active.

**Output Specification –** The activepen property of the element component is set to the input value, which will be used to draw the element when it is active.

**Special Procedural Requirements –** A barchart widget can be created.

**Inter-case Dependencies –** RBC.barchart.element.cget.1,RBC.barchart.element.create.1, RBC.barchart.pen.1

### Test Procedure – Barchart Element Configure: Activepen – Valid Pen Name

**Purpose –** Ensure the *element configure -activepen* command works correctly when given a valid pen name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.1.1

### Test Procedure – Barchart Element Configure: Activepen – Invalid Pen Name

**Purpose –** Ensure the *element configure -activepen* command works correctly when given an invalid pen name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.1.2

## Test Case 2

**Test Case ID –** RBC.barchart.element.configure.2

**Test Item –** The *element configure -background* function of the *barchart* BLT component.

**Input Specification –** A string representation of a color name.

**Output Specification –** The color of the element component is set to the input value.

**Special Procedural Requirements –** A barchart widget can be created.

**Inter-case Dependencies –** RBC.barchart.element.cget.1, RBC.barchart.element.create.1

### Test Procedure – Barchart Element Configure: Background – Valid Color Name

**Purpose –** Ensure the *element configure -background* command works correctly when given a valid color name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.2.1

### Test Procedure – Barchart Element Configure: Background – Invalid Color Name

**Purpose –** Ensure the *element configure -background* command works correctly when given an invalid color name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.2.2

## Test Case 3

**Test Case ID –** RBC.barchart.element.configure.3

**Test Item –** The *element configure -barwidth* function of the *barchart* BLT component.

**Input Specification –** A positive numerical value.

**Output Specification –** The barwidth of the element component is set according to the input value.

**Special Procedural Requirements –** A barchart widget can be created.

**Inter-case Dependencies –** RBC.barchart.element.create.3

### Test Procedure – Barchart Element Configure: Barwidth – Valid Integer Input

**Purpose –** Ensure the *element configure -barwidth* command works correctly when given an integer pixel value.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.3.1

### Test Procedure – Barchart Element Configure: Barwidth – Valid Decimal Input

**Purpose –** Ensure the *element configure -barwidth* command works correctly when given a decimal pixel value.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.3.2

### Test Procedure – Barchart Element Configure: Barwidth – Character Input

**Purpose –** Ensure the *element configure -barwidth* command works correctly when given a character as input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.3.3

## Test Case 4

**Test Case ID –** RBC.barchart.element.configure.4

**Test Item –** The *element configure -bd* function of the *barchart* BLT component.

**Input Specification –** A positive numerical value.

**Output Specification –** The bd of the element component is set according to the input value.

**Special Procedural Requirements –** A barchart widget can be created.

**Inter-case Dependencies –** RBC.barchart.element.create.1

### Test Procedure – Barchart Element Configure: Bd – Valid Integer Input

**Purpose –** Ensure the *element configure -bd* command works correctly when given an integer pixel value.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.4.1

### Test Procedure – Barchart Element Configure: Bd – Valid Decimal Input

**Purpose –** Ensure the *element configure -bd* command works correctly when given a decimal pixel value.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.4.2

### Test Procedure – Barchart Element Configure: Bd – Invalid Numerical Input

**Purpose –** Ensure the *element configure -bd* command works correctly when given an invalid numerical pixel value.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.4.3

### Test Procedure – Barchart Element Configure: Bd – Character Input

**Purpose –** Ensure the *element configure -bd* command works correctly when given a character as input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.4.4

## Test Case 5

**Test Case ID –** RBC.barchart.element.configure.5

**Test Item –** The *element configure -bg* function of the *barchart* BLT component.

**Input Specification –** A string representation of a color name.

**Output Specification –** The color of the element component is set to the input value.

**Special Procedural Requirements –** A barchart widget can be created.

**Inter-case Dependencies –** RBC.barchart.element.cget.1, RBC.barchart.element.create.1

### Test Procedure – Barchart Element Configure: Bg – Valid Color Name

**Purpose –** Ensure the *element configure -bg* command works correctly when given a valid color name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.5.1

### Test Procedure – Barchart Element Configure: Bg – Invalid Color Name

**Purpose –** Ensure the *element configure -bg* command works correctly when given an invalid color name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.5.2

## Test Case 6

**Test Case ID –** RBC.barchart.element.configure.6

**Test Item –** The *element configure -bindtags* function of the *barchart* BLT component.

**Input Specification –** A list of binding tag names.

**Output Specification –** The bindtag list has the given list of tag names.

**Special Procedural Requirements –** A barchart widget can be created.

**Inter-case Dependencies –** RBC.barchart.element.cget.1, RBC.barchart.element.create.1, RBC.barchart.element.bind.1

### Test Procedure – Barchart Element Configure: Bindtags – Single Tag

**Purpose –** Ensure the *element configure -bindtags* command works correctly when given a single tag name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.6.1

### Test Procedure – Barchart Element Configure: Bindtags – Tag List

**Purpose –** Ensure the *element configure -bindtags* command works correctly when given a list of tag names.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.6.2

## Test Case 7

**Test Case ID –** RBC.barchart.element.configure.7

**Test Item –** The *element configure -* borderwidth function of the *barchart* BLT component.

**Input Specification –** A positive numerical value.

**Output Specification –** The borderwidth of the element component is set according to the input value.

**Special Procedural Requirements –** A barchart widget can be created.

**Inter-case Dependencies –** RBC.barchart.element.create.1

### Test Procedure – Barchart Element Configure: Borderwidth – Valid Integer Input

**Purpose –** Ensure the *element configure -borderwidth* command works correctly when given an integer pixel value.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.7.1

### Test Procedure – Barchart Element Configure: Borderwidth – Valid Decimal Input

**Purpose –** Ensure the *element configure -borderwidth* command works correctly when given a decimal pixel value.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.7.2

### Test Procedure – Barchart Element Configure: Borderwidth – Invalid Numerical Input

**Purpose –** Ensure the *element configure -borderwidth* command works correctly when given an invalid numerical pixel value.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.7.3

### Test Procedure – Barchart Element Configure: Borderwidth – Character Input

**Purpose –** Ensure the *element configure - borderwidth* command works correctly when given a character as input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.7.4

## Test Case 8

**Test Case ID –** RBC.barchart.element.configure.8

**Test Item –** The *element configure -errorbarcolor* function of the *barchart* BLT component.

**Input Specification –** A string representation of a color name.

**Output Specification –** The color of the element component is set to the input value.

**Special Procedural Requirements –** A barchart widget can be created.

**Inter-case Dependencies –** RBC.barchart.element.cget.1,RBC.barchart.element.create.1

### Test Procedure – Barchart Element Configure: Errorbarcolor Valid Color Name

**Purpose –** Ensure the *element configure -errorbarcolor* command works correctly when given a valid color name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.8.1

### Test Procedure – Barchart Element Configure: Errorbarcolor – Invalid Color Name

**Purpose –** Ensure the *element configure -errorbarcolor* command works correctly when given an invalid color name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.8.2

## Test Case 9

**Test Case ID –** RBC.barchart.element.configure.9

**Test Item –** The *element configure -errorbarwidth* function of the *barchart* BLT component.

**Input Specification –** A positive numerical value.

**Output Specification –** The errorbarwidth of the element component is set according to the input value.

**Special Procedural Requirements –** A barchart widget can be created.

**Inter-case Dependencies –** RBC.barchart.element.create.1

### Test Procedure – Barchart Element Configure: Errorbarwidth – Valid Integer Input

**Purpose –** Ensure the *element configure -errorbarwidth* command works correctly when given an integer pixel value.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.9.1

### Test Procedure – Barchart Element Configure: Errorbarwidth – Valid Decimal Input

**Purpose –** Ensure the *element configure -errorbarwidth* command works correctly when given a decimal pixel value.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.9.2

### Test Procedure – Barchart Element Configure: Errorbarwidth – Invalid Numerical Input

**Purpose –** Ensure the *element configure -errorbarwidth* command works correctly when given an invalid numerical pixel value.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.9.3

### Test Procedure – Barchart Element Configure: Errorbarwidth – Character Input

**Purpose –** Ensure the *element configure -errorbarwidth* command works correctly when given a character as input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.9.4

## Test Case 10

**Test Case ID –** RBC.barchart.element.configure.10

**Test Item –** The *element configure -errorbarcap* function of the *barchart* BLT component.

**Input Specification –** A positive numerical value.

**Output Specification –** The errorbarcap of the element component is set according to the input value.

**Special Procedural Requirements –** A barchart widget can be created.

**Inter-case Dependencies –** RBC.barchart.element.create.1

### Test Procedure – Barchart Element Configure: Errorbarcap – Valid Integer Input

**Purpose –** Ensure the *element configure -errorbarcap* command works correctly when given an integer pixel value.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.10.1

### Test Procedure – Barchart Element Configure: Errorbarcap – Valid Decimal Input

**Purpose –** Ensure the *element configure -errorbarcap* command works correctly when given a decimal pixel value.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.10.2

### Test Procedure – Barchart Element Configure: Errorbarcap – Invalid Numerical Input

**Purpose –** Ensure the *element configure -errorbarcap* command works correctly when given an invalid numerical pixel value.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.10.3

### Test Procedure – Barchart Element Configure: Errorbarcap – Character Input

**Purpose –** Ensure the *element configure -errorbarcap* command works correctly when given a character as input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.10.4

## Test Case 11

**Test Case ID –** RBC.barchart.element.configure.11

**Test Item –** The *element configure -fg* function of the *barchart* BLT component.

**Input Specification –** A string representation of a color name.

**Output Specification –** The color of the element component is set to the input value.

**Special Procedural Requirements –** A barchart widget can be created.

**Inter-case Dependencies –** RBC.barchart.element.cget.1, RBC.barchart.element.create.1

### Test Procedure – Barchart Element Configure: Fg – Valid Color Name

**Purpose –** Ensure the *element configure -fg* command works correctly when given a valid color name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.11.1

### Test Procedure – Barchart Element Configure: Fg – Invalid Color Name

**Purpose –** Ensure the *element configure -fg* command works correctly when given an invalid color name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.11.2

## Test Case 12

**Test Case ID –** RBC.barchart.element.configure.12

**Test Item –** The *element configure -data* function of the *barchart* BLT component.

**Input Specification –** A list of numeric expressions representing the X-Y coordinate pairs of each data point.

**Output Specification –** The data property of the element is set to the list of input.

**Special Procedural Requirements –** A barchart widget can be created.

**Inter-case Dependencies –** RBC.barchart.element.cget.1,RBC.barchart.element.create.1

### Test Procedure – Barchart Element Configure: Data – Valid Coordinate List

**Purpose –** Ensure the *element configure -data* command works correctly when given a valid coordinate list as input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.12.1

### Test Procedure – Barchart Element Configure: Data – Invalid Coordinate List

**Purpose –** Ensure the *element configure -data* command works correctly when given an invalid coordinate list as input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.12.2

### Test Procedure – Barchart Element Configure: Data – Not Proper Form

**Purpose –** Ensure the *element configure -data* command works correctly when given input that is not in the proper form (x1 y1 x2 y1).

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.12.3

### Test Procedure – Barchart Element Configure: Data – Odd List

**Purpose –** Ensure the *element configure -data* command works correctly when given input that does not have an even number of values.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.12.4

## Test Case 13

**Test Case ID –** RBC.barchart.element.configure.13

**Test Item –** The *element configure -foreground* function of the *barchart* BLT component.

**Input Specification –** A string representation of a color name.

**Output Specification –** The color of the element component is set to the input value.

**Special Procedural Requirements –** A barchart widget can be created.

**Inter-case Dependencies –** RBC.barchart.element.cget.1, RBC.barchart.element.create.1

### Test Procedure – Barchart Element Configure: Foreground – Valid Color Name

**Purpose –** Ensure the *element configure -foreground* command works correctly when given a valid color name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.13.1

### Test Procedure – Barchart Element Configure: Foreground – Invalid Color Name

**Purpose –** Ensure the *element configure -foreground* command works correctly when given an invalid color name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.13.2

## Test Case 14

**Test Case ID –** RBC.barchart.element.configure.14

**Test Item –** The *element configure -label* function of the *barchart* BLT component.

**Input Specification –** Text label for the element or “” for no legend entry.

**Output Specification –** The label of the element is set to the input value and is displayed in the legend or no entry is displayed in the legend and the value of the label is empty.

**Special Procedural Requirements –** A barchart widget can be created.

**Inter-case Dependencies –** RBC.barchart.element.cget.1, RBC.barchart.element.create.1

### Test Procedure – Barchart Element Configure: Label – Valid Text

**Purpose –** Ensure the *element configure -label* command works correctly when given valid text.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.14.1

### Test Procedure – Barchart Element Configure: Label – Empty String

**Purpose –** Ensure the *element configure -label* command works correctly when given the empty string as input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.14.2

### Test Procedure – Barchart Element Configure: Label – Default Value

**Purpose –** Ensure the *element configure -label* command does not change the default value when not given any input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.14.3

## Test Case 15

**Test Case ID –** RBC.barchart.element.configure.15

**Test Item –** The *element configure -labelrelief* function of the *barchart* BLT component.

**Input Specification –** Labelrelief for the element must be flat, groove, raised, ridge, solid, or sunken

**Output Specification –** The labelrelief of the element is set to the input value and is displayed in the legend with the correct relief.

**Special Procedural Requirements –** A barchart widget can be created.

**Inter-case Dependencies –** RBC.barchart.element.cget.1, RBC.barchart.element.create.1

### Test Procedure – Barchart Element Configure: Labelrelief – Flat

**Purpose –** Ensure the element configure -labelrelief command works correctly when given 'flat' as input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.15.1

### Test Procedure – Barchart Element Configure: Labelrelief – Groove

**Purpose –** Ensure the element configure -labelrelief command works correctly when given 'groove' as input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.15.2

### Test Procedure – Barchart Element Configure: Labelrelief – Raised

**Purpose –** Ensure the element configure -labelrelief command works correctly when given 'raised' as input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.15.3

### Test Procedure – Barchart Element Configure: Labelrelief – Ridge

**Purpose –** Ensure the element configure -labelrelief command works correctly when given 'ridge' as input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.15.4

### Test Procedure – Barchart Element Configure: Labelrelief – Solid

**Purpose –** Ensure the element configure -labelrelief command works correctly when given 'solid' as input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.15.5

### Test Procedure – Barchart Element Configure: Labelrelief – Sunken

**Purpose –** Ensure the element configure -labelrelief command works correctly when given 'sunken' as input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.15.6

### Test Procedure – Barchart Element Configure: Labelrelief – Invalid Numerical Input

**Purpose –** Ensure the element configure -labelrelief command works correctly when given invalid numerical input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.15.7

### Test Procedure – Barchart Element Configure: Labelrelief – Invalid Character Input

**Purpose –** Ensure the element configure -labelrelief command works correctly when given invalid character input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.15.8

## Test Case 16

**Test Case ID –** RBC.barchart.element.configure.16

**Test Item –** The *element configure -hide* function of the *barchart* BLT component.

**Input Specification –** Any of the following: 1, 0, true, false, yes, no

**Output Specification –** The hide property of the element component is set according to the input value (either 1 or 0).

**Special Procedural Requirements –** A barchart widget can be created.

**Inter-case Dependencies –** RBC.barchart.element.create.1

### Test Procedure – Barchart Element Configure: Hide – 1

**Purpose –** Ensure the *element configure -hide* command works correctly when given 1.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.16.1

### Test Procedure – Barchart Element Configure: Hide – 0

**Purpose –** Ensure the *element configure -hide* command works correctly when given 0.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.16.2

### Test Procedure – Barchart Element Configure: Hide – True

**Purpose –** Ensure the *element configure -hide* command works correctly when given true.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.16.3

### Test Procedure – Barchart Element Configure: Hide – False

**Purpose –** Ensure the *element configure -hide* command works correctly when given false.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.16.4

### Test Procedure – Barchart Element Configure: Hide – Yes

**Purpose –** Ensure the *element configure -hide* command works correctly when given yes.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.16.5

### Test Procedure – Barchart Element Configure: Hide – No

**Purpose –** Ensure the *element configure -hide* command works correctly when given no.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.16.6

### Test Procedure – Barchart Element Configure: Hide – Invalid Input

**Purpose –** Ensure the *element configure -hide* command works correctly when given an invalid input value.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.16.7

## Test Case 17

**Test Case ID –** RBC.barchart.element.configure.17

**Test Item –** The *element configure -mapx* function of the *barchart* BLT component.

**Input Specification –** The name of a barchart axis instance.

**Output Specification –** The element’s x-coordinates are mapped onto the given axis.

**Special Procedural Requirements –** A barchart widget can be created, an axis component can be created.

**Inter-case Dependencies –** RBC.barchart.element.create.1, RBC.barchart.axis.[create]

### Test Procedure – Barchart Element Configure: Mapx – Valid Axis Name

**Purpose –** Ensure the *element configure -mapx* command works correctly when given valid axis name as input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.17.1

### Test Procedure – Barchart Element Configure: Mapx – Non-Existent Axis Name

**Purpose –** Ensure the *element configure -mapx* command works correctly when given a non-existent axis name as input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.17.2

### Test Procedure – Barchart Element Configure: Mapx – No Input

**Purpose –** Ensure the *element configure -mapx* command works correctly when not input is given.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.17.3

## Test Case 18

**Test Case ID –** RBC.barchart.element.configure.11

**Test Item –** The *element configure -mapy* function of the *barchart* BLT component.

**Input Specification –** The name of a barchart axis instance.

**Output Specification –** The element’s y-coordinates are mapped onto the given axis.

**Special Procedural Requirements –** A barchart widget can be created, an axis component can be created.

**Inter-case Dependencies –** RBC.barchart.element.create.1, RBC.barchart.axis.[create]

### Test Procedure – Barchart Element Configure: Mapy – Valid Axis Name

**Purpose –** Ensure the *element configure -mapy* command works correctly when given valid axis name as input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.18.1

### Test Procedure – Barchart Element Configure: Mapy – Non-Existent Axis Name

**Purpose –** Ensure the *element configure -mapy* command works correctly when given a non-existent axis name as input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.18.2

### Test Procedure – Barchart Element Configure: Mapy – No Input

**Purpose –** Ensure the *element configure -mapy* command works correctly when not input is given.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.18.3

## Test Case 19

**Test Case ID –** RBC.barchart.element.configure.19

**Test Item –** The *element configure -pen* function of the *barchart* BLT component.

**Input Specification –** The name of a pen.

**Output Specification –** The pen property of the element component is set to the input value, which will be used to draw the element when it is active.

**Special Procedural Requirements –** A barchart widget can be created.

**Inter-case Dependencies –** RBC.barchart.element.cget.1,RBC.barchart.element.create.1, RBC.barchart.pen.1

### Test Procedure – Barchart Element Configure: Pen – Valid Pen Name

**Purpose –** Ensure the *element configure -pen* command works correctly when given a valid pen name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.19.1

### Test Procedure – Barchart Element Configure: Pen – Invalid Pen Name

**Purpose –** Ensure the *element configure -pen* command works correctly when given an invalid pen name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.19.2

## Test Case 20

**Test Case ID –** RBC.barchart.element.configure.20

**Test Item –** The *element configure -relief* function of the *barchart* BLT component.

**Input Specification –** Relief for the element must be flat, groove, raised, ridge, solid, or sunken

**Output Specification –** The relief of the element is set to the input value and is displayed in the legend with the correct relief.

**Special Procedural Requirements –** A barchart widget can be created.

**Inter-case Dependencies –** RBC.barchart.element.cget.1, RBC.barchart.element.create.1

### Test Procedure – Barchart Element Configure: Relief – Flat

**Purpose –** Ensure the element configure -relief command works correctly when given 'flat' as input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.20.1

### Test Procedure – Barchart Element Configure: Relief – Groove

**Purpose –** Ensure the element configure -relief command works correctly when given 'groove' as input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.20.2

### Test Procedure – Barchart Element Configure: Relief – Raised

**Purpose –** Ensure the element configure -relief command works correctly when given 'raised' as input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.20.3

### Test Procedure – Barchart Element Configure: Relief – Ridge

**Purpose –** Ensure the element configure -relief command works correctly when given 'ridge' as input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.20.4

### Test Procedure – Barchart Element Configure: Relief – Solid

**Purpose –** Ensure the element configure -relief command works correctly when given 'solid' as input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.20.5

### Test Procedure – Barchart Element Configure: Relief – Sunken

**Purpose –** Ensure the element configure -relief command works correctly when given 'sunken' as input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.20.6

### Test Procedure – Barchart Element Configure: Relief – Invalid Numerical Input

**Purpose –** Ensure the element configure -relief command works correctly when given invalid numerical input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.20.7

### Test Procedure – Barchart Element Configure: Relief – Invalid Character Input

**Purpose –** Ensure the element configure -relief command works correctly when given invalid character input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.20.8

## Test Case 21

**Test Case ID –** RBC.barchart.element.configure.21

**Test Item –** The *element configure -showerrorbars* function of the *barchart* BLT component.

**Input Specification –** Showerrorbars for the element must be none, x, y, or both

**Output Specification –** The showerrorbars of the element is set to the input value

**Special Procedural Requirements –** A barchart widget can be created.

**Inter-case Dependencies –** RBC.barchart.element.cget.1, RBC.barchart.element.create.1

### Test Procedure – Barchart Element Configure: Showerrorbars – None

**Purpose –** Ensure the element configure -showerrorbars command works correctly when given 'none' as input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.21.1

### Test Procedure – Barchart Element Configure: Showerrorbars – X

**Purpose –** Ensure the element configure -showerrorbars command works correctly when given 'x' as input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.21.2

### Test Procedure – Barchart Element Configure: Showerrorbars – Y

**Purpose –** Ensure the element configure -showerrorbars command works correctly when given 'y' as input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.21.3

### Test Procedure – Barchart Element Configure: Showerrorbars – Both

**Purpose –** Ensure the element configure -showerrorbars command works correctly when given 'both' as input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.21.4

### Test Procedure – Barchart Element Configure: Showerrorbars – Invalid Numerical Input

**Purpose –** Ensure the element configure -showerrorbars command works correctly when given invalid numerical input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.21.5

### Test Procedure – Barchart Element Configure: Showerrorbars – Invalid Character Input

**Purpose –** Ensure the element configure -showerrorbars command works correctly when given invalid character input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.21.6

## Test Case 22

**Test Case ID –** RBC.barchart.element.configure.22

**Test Item –** The *element configure -showvalues* function of the *barchart* BLT component.

**Input Specification –** Showvalues for the element must be none, x, y, or both

**Output Specification –** The showvalues of the element is set to the input value

**Special Procedural Requirements –** A barchart widget can be created.

**Inter-case Dependencies –** RBC.barchart.element.cget.1, RBC.barchart.element.create.1

### Test Procedure – Barchart Element Configure: Showvalues – None

**Purpose –** Ensure the element configure -showvalues command works correctly when given 'none' as input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.22.1

### Test Procedure – Barchart Element Configure: Showvalues – X

**Purpose –** Ensure the element configure -showvalues command works correctly when given 'x' as input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.22.2

### Test Procedure – Barchart Element Configure: Showvalues – Y

**Purpose –** Ensure the element configure -showerrorbars command works correctly when given 'y' as input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.22.3

### Test Procedure – Barchart Element Configure: Showerrorbars – Both

**Purpose –** Ensure the element configure -showerrorbars command works correctly when given 'both' as input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.22.4

### Test Procedure – Barchart Element Configure: Showerrorbars – Invalid Numerical Input

**Purpose –** Ensure the element configure -showerrorbars command works correctly when given invalid numerical input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.22.5

### Test Procedure – Barchart Element Configure: Showerrorbars – Invalid Character Input

**Purpose –** Ensure the element configure -showerrorbars command works correctly when given invalid character input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.22.6

## Test Case 23

**Test Case ID –** RBC.barchart.element.configure.23

**Test Item –** The *element configure -state* function of the *barchart* BLT component.

**Input Specification –** State for the element must be normal, active, or disabled

**Output Specification –** The state of the element is set to the input value

**Special Procedural Requirements –** A barchart widget can be created.

**Inter-case Dependencies –** RBC.barchart.element.cget.1, RBC.barchart.element.create.1

### Test Procedure – Barchart Element Configure: State – Normal

**Purpose –** Ensure the element configure -state command works correctly when given 'normal' as input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.23.1

### Test Procedure – Barchart Element Configure: State – Active

**Purpose –** Ensure the element configure -state command works correctly when given 'active' as input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.23.2

### Test Procedure – Barchart Element Configure: State – Disabled

**Purpose –** Ensure the element configure -state command works correctly when given 'disabled' as input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.23.3

### Test Procedure – Barchart Element Configure: State – Invalid Numerical Input

**Purpose –** Ensure the element configure -state command works correctly when given invalid numerical input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.23.4

### Test Procedure – Barchart Element Configure: State – Invalid Character Input

**Purpose –** Ensure the element configure -state command works correctly when given invalid charcter input.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.23.5

## Test Case 24

**Test Case ID –** RBC.barchart.element.configure.24

**Test Item –** The *element configure -stipple* function of the *barchart* BLT component.

**Input Specification –** Stipple data

**Output Specification –** The stipple property of the element component is set to the input value.

**Special Procedural Requirements –** A barchart widget can be created.

**Inter-case Dependencies –** RBC.barchart.element.create.1

### Test Procedure – Barchart Element Configure: Stipple – Existing Bitmap name

**Purpose –** Ensure the element configure -stipple command works correctly when given an existing bitmap name

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.24.1

### Test Procedure – Barchart Element Configure: State – Invalid Bitmap Name

**Purpose –** Ensure the element configure -state command works correctly when given an invalid bitmap name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.24.2

## Test Case 25

**Test Case ID –** RBC.barchart.element.configure.25

**Test Item –** The *element configure -styles* function of the *barchart* BLT component.

**Input Specification –** A list containing a pen name and optionally a minimum and maximum element weight range.

**Output Specification –** The styles property of the element component is set to the input value.

**Special Procedural Requirements –** A barchart widget can be created.

**Inter-case Dependencies –** RBC.barchart.element.create.1

### Test Procedure – Barchart Element: Stylelist – Valid Pen Name

**Purpose –** Ensure the *element configure -styles* command works correctly when given a valid pen name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.25.1

### Test Procedure – Barchart Element: Stylelist – Non-Existent Pen

**Purpose –** Ensure the *element configure -styles* command works correctly when given an invalid pen name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.25.2

### Test Procedure – Barchart Element Configure: Stylelist – Pen and Weights

**Purpose –** Ensure the *element configure -styles* command works correctly when given a valid pen name and a minimum and maximum element weight range.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.25.3

## Test Case 32

**Test Case ID –** RBC.barchart.element.configure.32

**Test Item –** The *element configure -weights* function of the *barchart* BLT component.

**Input Specification –** A vector name or a list of numeric expressions representing the weights for each data point.

**Output Specification –** The weights property of the element component is set to the input value.

**Special Procedural Requirements –** A barchart widget can be created.

**Inter-case Dependencies –** RBC.barchart.element.create.1

### Test Procedure – Barchart Element Configure: Weights – Valid Vector Name

**Purpose –** Ensure the *element configure -weights* command works correctly when given a valid vector name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.32.1

### Test Procedure – Barchart Element Configure: Weights – Invalid Vector Name

**Purpose –** Ensure the *element configure -weights* command works correctly when given an invalid vector name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.32.2

### Test Procedure – Barchart Element Configure: Weights – Valid List

**Purpose –** Ensure the *element configure -weights* command works correctly when given a valid list of numerical values.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.32.3

### Test Procedure – Barchart Element Configure: Weights – Invalid Input

**Purpose –** Ensure the *element configure -weights* command works correctly when given an invalid list.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.32.4

## Test Case 35

**Test Case ID –** RBC.barchart.element.configure.35

**Test Item –** The *element configure -xdata* function of the *barchart* BLT component.

**Input Specification –** A vector name or a list of numeric expressions.

**Output Specification –** The xdata property of the element component is set to the input value.

**Special Procedural Requirements –** A barchart widget can be created.

**Inter-case Dependencies –** RBC.barchart.element.create.1

### Test Procedure – Barchart Element Configure: Xdata – Valid Vector Name

**Purpose –** Ensure the *element configure -xdata* command works correctly when given a valid vector name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.35.1

### Test Procedure – Barchart Element Configure: Xdata – Invalid Vector Name

**Purpose –** Ensure the *element configure -xdata* command works correctly when given an invalid vector name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.35.2

### Test Procedure – Barchart Element Configure: Xdata – Valid List

**Purpose –** Ensure the *element configure -xdata* command works correctly when given a valid list of numerical values.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.5.3

### Test Procedure – Barchart Element Configure: Xdata – Invalid Input

**Purpose –** Ensure the *element configure -xdata* command works correctly when given an invalid list.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.35.4

## Test Case 36

**Test Case ID –** RBC.barchart.element.configure.36

**Test Item –** The *element configure -ydata* function of the *barchart* BLT component.

**Input Specification –** A vector name or a list of numeric expressions.

**Output Specification –** The ydata property of the element component is set to the input value.

**Special Procedural Requirements –** A barchart widget can be created.

**Inter-case Dependencies –** RBC.barchart.element.create.1

### Test Procedure – Barchart Element Configure: Ydata – Valid Vector Name

**Purpose –** Ensure the *element configure -ydata* command works correctly when given a valid vector name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.36.1

### Test Procedure – Barchart Element Configure: Ydata – Invalid Vector Name

**Purpose –** Ensure the *element configure -ydata* command works correctly when given an invalid vector name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.36.2

### Test Procedure – Barchart Element Configure: Ydata – Valid List

**Purpose –** Ensure the *element configure -ydata* command works correctly when given a valid list of numerical values.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.36.3

### Test Procedure – Barchart Element Configure: Ydata – Invalid Input

**Purpose –** Ensure the *element configure -ydata* command works correctly when given an invalid list.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.configure.36.4

# Barchart Element Create

## Test Case 1

**Test Case ID –** RBC.barchart.element.create.1

**Test Item –** The *element create* function of the *barchart* BLT component.

**Input Specification –** An element name.

**Output Specification –** A barchart element will be created

**Special Procedural Requirements –** A barchart widget can be created

**Inter-case dependencies –** RBC.barchart.element.create.1

### Test Procedure – Barchart Element Create: Unique Element Name

**Purpose –** Ensure the element create command works correctly when given a unique element name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.create.1.1

### Test Procedure – Barchart Element Create: Existing Element Name

**Purpose –** Ensure the element create command works correctly when given an existing element name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.type.1.2

# Barchart Element Deactivate

## Test Case 1

**Test Case ID –** RBC.barchart.element.deactivate.1

**Test Item –** The *element deactivate* function of the *barchart* BLT component.

**Input Specification –** An element name.

**Output Specification –** The element name is not on the activate list.

**Special Procedural Requirements –** A barchart widget can be created.

**Inter-case Dependencies –** RBC.barchart.element.create.1, RBC.barchart.element.activate.1

### Test Procedure – Barchart Element Deactivate: Valid Element Name

**Purpose –** Ensure the *element deactivate* command works correctly when given a valid element name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.deactivate.1.1

### Test Procedure – Barchart Element Deactivate: Invalid Element Name

**Purpose –** Ensure the *element deactivate* command works correctly when given an invalid element name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.deactivate.1.2

# Barchart Element Delete

## Test Case 1

**Test Case ID –** RBC.barchart.element.delete.1

**Test Item –** The *element delete* function of the *barchart* BLT component.

**Input Specification –** One or more element name.

**Output Specification –** The element name is deleted.

**Special Procedural Requirements –** A barchart widget can be created.

**Inter-case Dependencies –** RBC.barchart.element.create.1

### Test Procedure – Barchart Element Delete: Single Element Name

**Purpose –** Ensure the *element delete* command works correctly when given a single element name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.delete.1.1

### Test Procedure – Barchart Element Delete: Multiple Element Names

**Purpose –** Ensure the *element delete* command works correctly when given multiple element names.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.delete.1.2

### Test Procedure – Barchart Element Delete: Invalid Element Name

**Purpose –** Ensure the *element delete* command works correctly when given an invalid element name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.delete.1.3

# Barchart Element Exists

## Test Case 1

**Test Case ID –** RBC.barchart.element.exists.1

**Test Item –** The *element exists* function of the *barchart* BLT component.

**Input Specification –** An element name.

**Output Specification –** 1 if the element is found, 0 otherwise.

**Special Procedural Requirements –** A barchart widget can be created.

**Inter-case Dependencies –** RBC.barchart.element.create.1, RBC.barchart.element.activate.1

### Test Procedure – Barchart Element Exists: Existing Element Name

**Purpose –** Ensure the *element delete* command works correctly when given an existing element name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.exists.1.1

### Test Procedure – Barchart Element Exists: Non-Existent Element Name

**Purpose –** Ensure the *element delete* command works correctly when given a non-existent element name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.exists.1.2

# Barchart Element Names

## Test Case 1

**Test Case ID –** RBC.barchart.element.names.1

**Test Item –** The *element names* function of the *barchart* BLT component.

**Input Specification –** A pattern.

**Output Specification –** The names of element objects that match the pattern.

**Special Procedural Requirements –** A barchart widget can be created

**Inter-case dependencies –** RBC.barchart.element.create.1

### Test Procedure – Barchart Element Names: No Pattern

**Purpose –** Ensure the *element names* command works correctly when no pattern is given.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.names.1.1

### Test Procedure – Barchart Element Names: Exact Pattern

**Purpose –** Ensure the *element names* command works correctly when an exact pattern is given.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.names.1.2

### Test Procedure – Barchart Element Names: Wildcard Pattern

**Purpose –** Ensure the *element names* command works correctly when a wildcard pattern is given.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.names.1.3

### Test Procedure – Barchart Element Names: Incorrect Pattern

**Purpose –** Ensure the *element names* command works correctly when an incorrect pattern is given.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.names.1.4

# Barchart Element Show

## Test Case 1

**Test Case ID –** RBC.barchart.element.show.1

**Test Item –** The *element show* function of the *barchart* BLT component.

**Input Specification –** One or more element names.

**Output Specification –** The given element names are part of the show list.

**Special Procedural Requirements –** A barchart widget can be created

**Inter-case dependencies –** RBC.barchart.element.create.1

### Test Procedure – Barchart Element Show: Single Element Name

**Purpose –** Ensure the *element show* command works correctly when given a single element name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.show.1.1

### Test Procedure – Barchart Element Show: Multiple Element Names

**Purpose –** Ensure the *element show* command works correctly when given multiple element names.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.show.1.2

### Test Procedure – Barchart Element Show: Non-Existent Element Name

**Purpose –** Ensure the *element show* command works correctly when given a non-existent element name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.show.1.3

# Barchart Element Type

## Test Case 1

**Test Case ID –** RBC.barchart.element.type.1

**Test Item –** The *element type* function of the *barchart* BLT component.

**Input Specification –** An element name.

**Output Specification –** One of the following: BarElement, LineElement.

**Special Procedural Requirements –** A barchart widget can be created

**Inter-case dependencies –** RBC.barchart.element.create.1

### Test Procedure – Barchart Element Type: Valid Line Element Name

**Purpose –** Ensure the *element type* command works correctly when given the name of a valid line element.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.type.1.1

### Test Procedure – Barchart Element Type: Invalid Element Name

**Purpose –** Ensure the *element type* command works correctly when given an invalid element name.

**Special Requirements –** None

**TclTest –** RBC.barchart.element.type.1.2