Bedrock TM1 Opensource Project

Bedrock TM1 Turbo Integrator

Welcome to Bedrock TM1 Turbo Integrator. Bedrock TM1 TI is a collection of Turbo Integrator (TI) processes that are designed to make building models easier and faster than ever before.

Each TI is a fully contained, auditable, multi-function code block with parameter switches permitting the user to perform numerous tasks. Well over 10,000 lines of code are contained within these processes meaning you don't have to write them - just use them at the right time for the right job.

Modular Turbo Integrator Coding

The Bedrock TM1 TI supports the modular coding approach to building TI processes. Common functions are encapsulated in parameterised TI processes. Any custom TI process can call particular Bedrock TM1 TI processes to perform required functions.

A common example is clearing an area of the cube before loading data from an external source. Before the data is loaded into the cube, a portion of the cube must be cleared of values. Traditionally, all code that is required to clear that portion of the cube is written in a custom TI process. By using Bedrock TM1 TI, the process Bedrock.Cube.Data.Clear (formerly ZeroOut) can be called from within any custom TI process. Using the required parameters to restrict the specific area of cube, the process will build the required view, clear the data, and when complete, continue on to the custom code.

Changes in the requirements are easy to manage using Bedrock TM1 TI. In the above example a TM1 developer can quickly change the parameters to clear more or less data in the cube. The traditional approach would require the TM1 developer to review all the code in the custom process, add the required code and then re-test the results. By using Bedrock TM1 TI, the entire process is made simple and easy to manage.

Best Practice

All Bedrock TM1 TI processes that have been developed will execute in the most efficient manner according to TM1 Black Belt techniques such as server locking. The modular approach to coding can produce time saving results that cannot be achieved using traditional TI coding. For example, the process Bedrock.Dim.Sub.Create will build subsets in the 'metadata' tab instead of the 'prolog' tab. The advantage being that the components of the subset are held in memory until the very end, at which point, the subset is written to disk. This is more efficient than the traditional manner (in the prolog using a 'While...End' loop) in which the subset file is saved to disk on each change, causing resource inefficiencies.

Bedrock TM1 TI may require changes in the future to reflect changes in best practice. This could be due to a new release of TM1 or an increased understanding of existing implementations. By using Bedrock TM1 TI, the impact of changes is minimal as it is easier to change a single Bedrock TM1 TI, than it is to review, change and test many instances of custom code to achieve the same outcome.

More than just code

Bedrock TM1 TI contains more than just processes to support modular coding. It includes a number of utilities that will help with performing everyday tasks. For example, in situations which require different security for the same dimension, the process Bedrock.Dim.Clone will clone the dimension to enable changes to be made to the security definition, and the process Bedrock.Cube.Dimension.Replace will replace the dimension in the cube.

What the future holds

Bedrock TM1 TI is for anyone serious about getting the best out of TM1 in a simple and ordered environment.

At BedrockTM1.org we are committed to ongoing development and invite everyone to use and test the TI functions. We also ask that those that benefit make suggestions and contribute to improving Bedrock TM1 TI as the entire TM1 community will benefit from our work together.

Quick Downloads

- Bedrock Turbo Integrator
  - White Paper - The Modular Approach

- Best Practice
  - White Paper - Best Practice Cube Design
  - White Paper - Best Practice Rules
  - White Paper - Best Practice Turbo Integrator

- Project Management
  - White Paper - Managing TM1 Projects

Release 2.0 Change Log

With this version, we aimed to make Bedrock more “TM1 version” and “system-type” agnostic. Object locking is dependent on both your version of TM1 and how you use it, i.e. your propensity for creating and destroying objects, how concurrent they are and whether they are system or user-driven. This brings into play trade-offs of performance and system maintenance which the TM1 developer can flexibly invoke via Bedrock's multi-switch parameters.

Thus we drive towards giving as much flexibility as possible to the developer; in this release this new functionality chiefly is manifested in a new Bedrock “core” process called Bedrock.Cube.View.Create that is used by the clearing, copying and exporting “calling” processes.

Instead of using Bedrock named views and subsets the TM1 developer can nominate the name of the view to be used by the Bedrock process. If no view or subset name is provided then a Bedrock name will be used with a date stamp and random number. This is to ensure that there is no concurrency issue with two users using the same object at the same time. There is also an option for the TM1 developer to decide if the Bedrock view and/or subset are to be cleaned up at the end of the Bedrock process.

This improvement has been made to all Bedrock processes in Bedrock 2.0.

Numerous fixes have been made to existing Bedrock processes.

Bedrock, temporary objects and server locking

Two new processes have been created for clearing and exporting data, these are called **Bedrock.Cube.Data.Clear** and **Bedrock.Cube.Data.Export**, these supersede **Bedrock.Cube.Data.ZeroOut** and **Bedrock.Cube.Data.ExportToFile**. Each of these processes in addition to **Bedrock.Cube.Data.Copy** now have a new parameter called **pDestroyTempObj**, this parameter determines whether the views and subsets are deleted after use:

- 0 = Retain View and Subsets
  1 = Delete View and Subsets
  2 = Delete View only

In each of these 3 processes you can pass in the name of the view so you can reuse it appropriately if you want to take advantage of Parallel Interaction (9.5.2+). For example you need to use a view name that won't be used by another process at the same time, i.e. *}GL.Hourly.Load*

New Processes

Bedrock.Cube.View.Create

This process is now one of the foundation processes for a number of other Bedrock processes. It takes the concept of a filter first introduced in **Bedrock.Cube.Data.ZeroOut** and makes it easier to read and reusable for other processes. The process takes a string filter and then does the heavy lifting for you creating a view that can be used for multiple purposes. Below are some examples of filters from the Bedrock documentation:

Year: 2010 - Year 2010 only

Year: 2010 & Version: Actual - Year 2010 and Version Actual

Year: 2010 + 2011 - Year 2010 and Year 2011

Year: 2010 + 2011 & Month: Jan + Feb - Years 2010 and 2011 for the Months of January and February

Year: 2010 & Month: All Months - If the pSkipConsols parameter is set to 1, any consolidated elements passed to the filter will be converted to their N level children. In this case it will be Year 2010 and January, February, March, April, May, etc.

Hot Tip: When building a Filter String, use the debug functionality for a char by char feedback to flat file.

Bedrock.Cube.Data.Clear
Replaces Bedrock.Cube.Data.ZeroOut. Uses the new filter concept by calling Bedrock.Cube.View.Create

Bedrock.Cube.Data.Export
Replaces **Bedrock.Cube.Data.Export.** Now uses the filter concept by calling Bedrock.Cube.View.Create

Bedrock.Cube.ViewAndSubsets.Delete
Is used in conjunction with **Bedrock.Cube.View.Create** to delete the views and subsets using a common name. Use this process in your Epilog to clean up a view that was cleared in the Prolog tab.

Bedrock.Dim.CloneFromSubset
Creates a new dimension based on a subset from another dimension.

Bedrock.Dim.CloneFromSubset.Flat
Creates a new dimension with a flat hierarchy based on a subset in another dimension.

Bedrock.Server.DataDir.Backup
Makes a copy of all objects from the data directory to the specified backup directory.

Bedrock.Server.DataDir.ListContents
Outputs to text file the contents of the data directory - very helpful for documentation.

Release 3.0 Change Log

The following changes have been made to the Bedrock TI from Release 2.0

Bedrock Process	Changes made for Release 3.0
Bedrock.Chore.DayOfWeek.Run	New Process. Test the current day against the Parameters. If the chore should not run on that day the chore is exited using ChoreQuit; command.
Bedrock.Cube.Clone	Prolog: Reduce the amount of random views from 100,000 to 1,000.
Bedrock.Cube.Data.Clear	Prolog: Reduce the amount of random views from 100,000 to 1,000. Removed the "}" and the date stamp from the default view used if no view is nominated.
Bedrock.Cube.Data.Copy	Prolog: Reduce the amount of random views from 100,000 to 1,000. Removed the "}" and the date stamp from the default view used if no view is nominated. Prolog: Change Debug out where a target view has been nominated. Prolog and Epilog: Additional code to test if an existing view is been used as a source. If so, then the source view will not be destroyed regardless of the 'pDestroyTempObj' value. Data: Fixed error when copying two dimensional cubes. Epilog: The condition to destroy temporary object was based on the pDebug parameter. Changed code so that the test is based on pDestroyTempObj parameter. Added coded for the debug file to include a line to explain how temporary objects were destroyed by the process. Change the order of event for the debug file so that the finalisation code is at the end of the file. Prolog and Data: Added flag to detect if the source cube is a Attribute cube and we are copying along the attribute dimension. In which case we will skip Alias Attributes as they can not copy to maintain data integrity. The Alias attribute will still be cleared if the Zero Source or Zero Target parameter are True. Prolog: If the dimension that is being transposed is the last dimension of the cube. The process will validate that the source and target element type is the same. If not the process will quit.
Bedrock.Cube.Data.Export	Prolog: Reduce the amount of random views from 100,000 to 1,000. Removed the "}" and the date stamp from the default view used if no view is nominated.
~~Bedrock.Cube.Data.ExportToFile~~	Bedrock remove from Release.
Bedrock.Cube.Data.ImportFromFile	Prolog: Reduce the amount of random views from 100,000 to 1,000.
~~Bedrock.Cube.Data.ZeroOut~~	Bedrock remove from Release.
Bedrock.Cube.Delete	Prolog: Reduce the amount of random views from 100,000 to 1,000.
Bedrock.Cube.Dimension.Replace	Prolog: Reduce the amount of random views from 100,000 to 1,000.
Bedrock.Cube.View.Create	Prolog: Reduce the amount of random views from 100,000 to 1,000.
Bedrock.Cube.View.Delete	Prolog: Reduce the amount of random views from 100,000 to 1,000.
Bedrock.Cube.View.Publish	Prolog: Reduce the amount of random views from 100,000 to 1,000.
Bedrock.Cube.ViewAndSubsets.Create	Prolog: Reduce the amount of random views from 100,000 to 1,000.
Bedrock.Cube.ViewAndSubsets.Delete	Prolog: Reduce the amount of random views from 100,000 to 1,000.
Bedrock.Dim.AllConsols.Delete	Prolog: Reduce the amount of random views from 100,000 to 1,000.
Bedrock.Dim.AllElements.Delete	Prolog: Reduce the amount of random views from 100,000 to 1,000.
Bedrock.Dim.Attr.Delete	Prolog: Reduce the amount of random views from 100,000 to 1,000.
Bedrock.Dim.Attr.ImportFromFile	Prolog: Reduce the amount of random views from 100,000 to 1,000.
Bedrock.Dim.Attr.Insert	Prolog: Reduce the amount of random views from 100,000 to 1,000.
Bedrock.Dim.Attr.SwapAlias	Prolog: Reduce the amount of random views from 100,000 to 1,000.
Bedrock.Dim.Clone	Parameter: New Parameter - pUnwind. Either Delete All Elements or unwind the target dimension before cloning the dimension. Default is to Delete All Elements to be consistent with Bedrock 2. Prolog: Reduce the amount of random views from 100,000 to 1,000. Prolog: Added an index to the temporary subset. Removed the '}' from the temporary subset name. Prolog: Added code to support the new parameter: pUnwind Epilog: Added code to clone dimension properties and hierarchy. Epilog: Added code to destroy temporary subset.

Bedrock.Dim. CloneFromSubset.Flat	Prolog: Reduce the amount of random views from 100,000 to 1,000. Prolog, Epilog: If no subset is nominate in the parameters then the All Subset will be used. If such cases the temporary subset will be deleted. Metadata: Modify so that only 'C' elements are changed to 'N' element when copy to the target subset.
Bedrock.Dim. CloneFromSubset	Parameter: New Parameter - pUnwind. Either Delete All Elements or unwind the target dimension before cloning the dimension. Default is to Delete All Elements to be consistent with Bedrock 2. Prolog: Reduce the amount of random views from 100,000 to 1,000. Prolog: Added code to support the new parameter: pUnwind Epilog: Added code to copy the Dimension Properties and Dimension Hierarchy from the source dimension to the target dimension.
Bedrock.Dim.Create	Prolog: Reduce the amount of random views from 100,000 to 1,000.
Bedrock.Dim.Destroy	Prolog: Reduce the amount of random views from 100,000 to 1,000.
Bedrock.Dim.Element.Create	Prolog: Reduce the amount of random views from 100,000 to 1,000.
Bedrock.Dim.Element.Delete	Prolog: Reduce the amount of random views from 100,000 to 1,000.
Bedrock.Dim.Element.Move	Prolog: Reduce the amount of random views from 100,000 to 1,000.
Bedrock.Dim.EmptyConsols. Delete	Change process to cascade up the levels of the dimension to remove nested empty consolidations.
~~Bedrock.Dim.ExportToFile~~	Removed in release 3.0 replace with Bedrock.Dim.Export.
Bedrock.Dim.Hierarchy. Unwind.Consolidation	Prolog: Code to set dimension's attribute cube logging to "No" before flagging the elements that are a member of the consolidation. Epilog: Reset the dimension's attribute cube logging to the pre-process state.
~~Bedrock.Dim. ImportFromFile~~	Removed in Release 3.0. Replaced with Bedrock.Dim.Import.
Bedrock.Dim.Sub.Create	Added optional attribute to allow the operator set the Alias of the Subset. Modify debug to be at the time the element is insert into the subset. When the element is a consolidation, call Bedrock.Dim.Sub.Create instead of Bedrock.Dim.Sub.Create. Consolid Removed commented out code. Allow subset to be created for attributes that have null values or zero values for numeric attributes.
Bedrock.Dim.Sub.Create. ByElement	Added optional attribute to allow the operator set the Alias of the Subset. Modify debug to be at the time the element is insert into the subset. When the element is a consolidation, call Bedrock.Dim.Sub.Create instead of Bedrock.Dim.Sub.Create. Consolidation.All
Bedrock.Dim.Sub.Create. ByLevel	Added optional attribute to allow the operator set the Alias of the Subset.
Bedrock.Dim.Sub.Create. Consolidation.All	Added optional attribute to allow the operator set the Alias of the Subset.
Bedrock.Dim.Sub.Create. Consolidation.Leaf	Added optional attribute to allow the operator set the Alias of the Subset.
Bedrock.Dim.Sub.Create.Leaf	Added optional attribute to allow the operator set the Alias of the Subset.
Bedrock.Dim.Sub.Create. TopLevelHierarchy	Added optional attribute to allow the operator set the Alias of the Subset.
Bedrock.Dim.Consol.Create. Leaf	New Process that builds a consolidation of the 'N' elememts in a dimension.
Bedrock.Dim.Element. Component.Delete	New process that breaks the component relationship between Parent and Element
Bedrock.Dim.Hierarchy. Create.FromAttribute	Create a new hierarchy from the attribute value of the dimension.
Bedrock.Dim.Element. Component.Add	New process that adds a component to between an element and a parent.
Bedrock.Server.File.Combine	Combine two or more files into one file
Bedrock.Dim.Export	Export the dimension elements, element parents and attributes for a nominated dimension. This process enhances the existing Bedrock process "Bedrock.Dim.ExporttoFile" as it deal with elements that have more than five parents and dimensions that have more than one Alias. The process will also export the nominated dimension sort order.
Bedrock.Dim.Import	This Bedrock process recreates a dimension from the file that is produced by Bedrock.Dim.Export.
Bedrock.Dim.Sub.Clone	Clone a subset within a dimension. Called by Bedrock.Dim.Sub.ByMDX.
Bedrock.Server.LogFile. Delete	New Process
Bedrock.Server.Wait	New Process

Getting Started

Follow these simple steps.

1. Download the Bedrock TM1 TI zip file on the homepage at BedrockTM1.org
2. Unzip or copy the files to your TM1 data directory.
3. Restart your TM1 server.
4. Refer to this help to use the processes on your TM1 server.

System requirements

All Bedrock TM1 TIs have been extensively tested on multiple TM1 versions and environments. Nevertheless it is good and common practice to test independently before being implemented in any production environment TM1 model.

Getting help

Please email info@bedrocktm1.org for help or feedback.

Error trapping example

Bedrock processes have their own auditing yet you may want to trap errors externally. Below is an example of using a BedrockTM1 TI process and trapping its return state;

```
NumericGlobalVariable('nRet');

# Data ZeroOut

  sProc = 'Bedrock.Cube.Data.ZeroOut';

  nRet = ExecuteProcess ( sProc , 'pCube' , sCube ,'pFilter' , 'Version+Actual&Year+2009+2008' , 'pDebug' , pDebug );

  #Region "Block Audit"

  IF( nRet = ProcessExitNormal() );

    sRet = 'Process Completed Successfully';

  ELSEIF( nRet = ProcessExitByChoreQuit() );

    sRet = 'Exit by Chore Quit';

  ELSEIF( nRet = ProcessExitMinorError() );

    sRet = 'Exit with Minor Error';

  ELSEIF( nRet = ProcessExitByQuit() );

    sRet = 'Exit by Quit';

  ELSEIF( nRet = ProcessExitWithMessage() );

    sRet = 'Exit with Message';

  ELSEIF( nRet = ProcessExitSeriousError() );

    sRet = 'Exit with Serious Error';

  ELSEIF( nRet = ProcessExitOnInit() );

    sRet = 'Exit on Initiation';

  ELSEIF( nRet = ProcessExitByBreak() );

    sRet = 'Exit by Break';
```

```
  Endif;

  CellPutS( sRet ,'}Docu_Processes' , sProc , 'Process State' );

#End Region
```

Debugging

All of the Bedrock TM1 TI processes include debugging capabilities. This gives the developer more information than traditionally found in the TM1 logs in the event of an error (or other unexpected behaviour) when executing TI processes. This information will assist in identifying the problem source and thus help with troubleshooting errors.

To enable the debugging capability when executing a process, a value must be specified for the pDebug parameter. There are three possible values for this parameter (0,1& 2):-

0 - Run the process normally with no debugging. This is the default value.

1 - Run the process normally and write information out to the debug files.

2 - Run the process and write information out to the debug files but don't perform any updates.

When debugging is enabled (option 1 or 2), the relevant debug output will be sent to debug files in the logging directory of the TM1 server.

The debug file name defaults to '[processname].[timestamp].[tab].debug', for example 'Bedrock.Cube.Clone.30-03-2011 12:00:00.Prolog.Debug'.

There is a separate file for each tab in the process: Prolog, Metadata, Data, and Epilog.

The content of the debug files will vary from process to process. There are some standard outputs for all processes:-

- Process start time
- Process finish time
- Parameter values

Other debugging information may include the variable values, parameter errors and customised debug messaging.

Cubes

The Bedrock.Cube processes are used for tasks such as copying and clearing cubes, importing and exporting cube data, replacing dimensions and working with views.

Bedrock.Cube.Clone

This Bedrock TM1 TI will clone an existing cube. The dimensional structure of the cube is copied to the clone cube. Data and/or rule calculated data point in the existing cube can be copied to the cloned cube. If a existing view is nominated only the data in the view will be copied to the cloned cube. If no view is nominated the entire cube is copied.

Limited to a cube with a maximum of 27 dimensions.

Parameters

Parameter	Data Type	Default	Explanation
pSourceCube	String		The original cube name that is to be cloned.
pTargetCube	String		The name of the clone cube. If this parameter is blank the default clone cube name is the source cube name suffixed with '_Clone'.
pIncludeRules	Boolean	1	Clone the rules from the original cube to the clone cube. The clone process does not change the rules from the original cube. The clone rules should be reviewed to ensure cube references are correct after cloning.
pIncludeData	Boolean	0	Clone the data from the source cube.
pSourceView	String		The name of an existing view in the source cube. This view will be used to restrict the amount of data copied from the original cube. If this parameter is *null* then all the data in the cube will be copied.
pRuleValues	Boolean	1	Use 1 to exclude rule calculated data. Use 0 to include rule calculated data. This value is set to 1 if the original cube rules are cloned as per the pIncludeRules parameter.
pDebug	Numeric	0	The Debug mode.

Example

```
ExecuteProcess('Bedrock.Cube.Clone',
    'pSourceCube','General Ledger',
    'pTargetCube','General Ledger Cube Clone',
    'pIncludeRules',1,
    'pIncludeData',1,
    'pSourceView','2011 Actual Data',
    'pRuleValues',1,
    'pDebug',0
```

```
);
```

Bedrock.Cube.Data.Clear

This Bedrock TM1 TI will build a temporary view for a single cube that is to be zeroed out. The temporary view can be restricted by nominating one or more dimensions and elements. Using the filter parameter, nominate the dimension followed by the elements to be included in the temporary subset separated by the Element Delimiter (pElementDelim). If more than one dimension is required, then separate each dimension and element set using the Dimension Delimiter (pDimensionDelim).

The filter can be based on multiple dimensions and multiple views, here are some standard examples using the standard delimiters:

Year: 2010 - Year 2010 only

Year: 2010 & Version: Actual - Year 2010 and version Actual

Year: 2010 + 2011 - Year 2010 and Year 2011

Year: 2010 + 2011 & Month: Jan + Feb - Years 2010 and 2011 for the Months of January and February

Year: 2010 & Month: All Months - If the pSkipConsols parameter is set to 1, any consolidated elements passed to the filter will be converted to their N level children. In this case it will be Year 2010 and January, February, March, April, May, etc.

Filter Tips

Principal or Alias's can be used for elements

Spaces in the filter statement are ignored.

You can use multiple characters for the delimiters, this is important for dimensions were special characters are used. If your dimension has special characters it is suggested that you use multiple character sets as delimiters, i.e.:

Year:: 2010 ++ 2011 && Version:: Actual

OR

Year:= 2010 ++ 2011 && Version:= Actual

It is rare for multiple special characters to be side by side.

Parameters

Parameter	Data Type	Default	Explanation
pCube	String		The cube name where the view is to be created.
pView	String		The name to use for the temporary view subsets created by the process. If omitted or blank, a view name consisting of a time stamp and random number is used.

pFilter	String		Restrict the portion of the cube to be cleared by entering dimension and element sets. Version : Actual & Year : 2011 & Month + Sep + 2nd QTR To clear the entire cube use the filter "Clear Cube".
pDimensionDelim	String	&	The delimiter between dimensions.
pElementStartDelim	String	:	The delimiter at the end of the dimension name and the start of the list of elements.
pElementDelim	String	+	The delimiter between elements.
pDeleteTempObj	Boolean	1	Use 0 to retain temporary views and subsets created by the process. Use 1 to delete temporary views and subsets created by the process. Use 2 to delete only the temporary views created by the process.
pDebug	Numeric	0	The Debug mode.

Example

```
ExecuteProcess('Bedrock.Cube.Data.Clear',
    'pCube','General Ledger',
    'pView','',
    'pFilter','Year: 2011 + 2012 & Version: Budget',
    'pDimensionDelim','&',
    'pElementStartDelim',':',
    'pElementDelim','+',
    'pDeleteTempObj',1,
    'pDebug',0
    );
```

Bedrock.Cube.Data.Copy

This Bedrock TM1 TI will copy data within a cube from one element in a dimension to another element in the same dimension.

Limited to a cube with a maximum of 27 dimensions.

Parameters

Parameter	Data Type	Default	Explanation
pCube	String		The name of the cube where the data exists.
pViewSource	String		The name to use for the temporary source view and subsets created by the process. If the view does not exist on the server, Bedrock.Cube. Data.Copy will create and destroy the view. If parameter is blank a Bedrock view name consisting of a time stamp and random number is used. If the source view exist on the server, Bedrock. Cube.Data.Copy will use this view as the data source.
pViewTarget	String		The name to use for the temporary target view and subsets created by the process. If this parameter is left blank, a Bedrock view will be created consisting of a time stamp and random number. If the target view exists and pZeroTarget parameter is 1, then the view will be destroyed and recreated to clear out the data.
pDimension	String		The dimension where the source and target elements exist.
pSourceElement	String		The element in the dimension from which the data is copied.
pTargetElement	String		The element in the dimension where the data is to be copied to.
pSkipRules	Boolean	1	Use 0 to include rule calculated data in the copied data. Use 1 to exclude rule calculated data from the copied data..
pZeroTarget	Boolean	1	Use 1 to zero out data in the target element before copying the data.

pZeroSource	Boolean	0	Use 1 to zero out the source element data after it is copied to the target element.
pDeleteTempObj	Numeric	1	Use 0 to retain temporary views and subsets created by the process. Use 1 to delete temporary views and subsets created by the process. Use 2 to delete only the temporary views created by the process.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Cube.Data.Copy',
    'pCube','General Ledger',
    'pViewSource','',
    'pViewTarget','',
    'pDimension','Version',
    'pSourceElement','Budget',
    'pTargetElement','Budget_v2',
    'pSkipRules',0,
    'pZeroTarget',1,
    'pZeroSource',1,
    'pDeleteTempObj',1
    'pDebug',0
    );
```

Bedrock.Cube.Data.Export

This Bedrock TM1 TI exports data based on a string based filter from the nominated cube to an ASCII file.

Note: If you wish to export a current view use **Bedrock.Cube.Data.ViewExportToFile**

The filter can be based on multiple dimensions and multiple views, here are some standard examples using the standard delimiters:

Year: 2010 - Year 2010 only

Year: 2010 & Version: Actual - Year 2010 and version Actual

Year: 2010 + 2011 - Year 2010 and Year 2011

Year: 2010 + 2011 & Month: Jan + Feb - Years 2010 and 2011 for the Months of January and February

Year: 2010 & Month: All Months - If the pSkipConsols parameter is set to 1, any consolidated elements passed to the filter will be converted to their N level children. In this case it will be Year 2010 and January, February, March, April, May, etc.

Filter Tips

Principal or Alias's can be used for elements

Spaces are ignored

Consolidated elements are converted to the N level children when pSkipConsols is set to 1 (the default).

You can use multiple characters for the delimiters, this is important for dimensions were special characters are used. If your dimension has special characters it is suggested that you use multiple character delimiters, i.e.:

Year:: 2010 ++ 2011 && Version:: Actual

OR

Year:= 2010 ++ 2011 && Version:= Actual

It is rare for multiple special characters to be side by side.

If there is no filter parameter provided, the entire cube will be exported.

Limited to a cube with a maximum of 27 dimensions.

Parameters

Parameter	Data Type	Default	Explanation
pCube	String		The name of the cube where the data exists.
pView	String		The name to use for the temporary view and

			subsets created by the process. If omitted or blank, a view name consisting of a time stamp and random number is used.
pFilter	String		The filter to be used to create the view to export, see the examples above.
pDimensionDelim	String		The delimiter between dimensions.
pElementStartDelim	String		The delimiter at the end of the dimension name and the start of the list of elements.
pElementDelim	String		The delimiter between elements.
pSkipRules	Boolean	1	Use 0 to include rule calculated data in the copied data. Use 1 to exclude rule calculated data from the copied data.
pSkipCons	Boolean	1	Use 0 to include consolidated data in the copied data. Use 1 to exclude consolidated data from the copied data.
pZeroSource	Boolean	0	Use 1 to zero out the source element data after it is copied to the target element.
pDeleteTempObj	Boolean	1	Use 0 to retain temporary views and subsets created by the process. Use 1 to delete temporary views and subsets created by the process. Use 2 to delete only the temporary views created by the process.
pFilePath	String		The directory where the file is to be saved. If no file path is provided, the ASCII file will be saved to the TM1 logging directory.
pFileName	String		The file name of the ASCII file. If no file name is provided, a combination of the cube, dimension and element suffixed by 'export.csv' will be used.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Cube.Data.ExportToFile',
    'pCube','General Ledger',
    'pView','',
    'pFilter','Year : 2011 + 2012 & Version : Actual' ,
    'pDimensionDelim','&',
    'pElementStartDelim',':',
    'pElementDelim','+',
    'pSkipRules',1,
```

```
'pSkipCons',1,
'pZeroSource',0,
'pDeleteTempObj',1,
'pFilePath','C:\FinancialData',
'pFileName','Actuals.txt',
'pDebug',0
);
```

Bedrock.Cube.Data.ExportToFile

This process as been removed from Bedrock 3.0 and replaced with Bedrock.Cube.Data.Export.

Bedrock.Cube.Data.ImportFromFile

This Bedrock TM1 TI imports data from a file to a cube.

Limited to a cube with a maximum of 27 dimensions.

Parameters

Parameter	Data Type	Default	Explanation
pSourceDir	String		The directory where the file is saved.
pSourceFile	String		The name of the file to be loaded into the cube.
pCube	String		The name of the cube where the data is to be loaded.
pDimension	String		(Optional) The name of the dimension within which to copy data from source element (exported element) to target element.
pSourceElement	String		(Only required if pDimension is used.) Exported element to copy data from.
pTargetElement	String		(Only required if pDimension is used.) Element to copy data of exported element to.
pTitleRows	Numeric	1	The number of title rows in the file that will be skipped by this Bedrock TM1 TI.
pDelimiter	String	,	The character separator of the data.
pQuote	String	“	The quote character used in the source data.
pAccumulate	Numeric	0	Use 0 to not accumulate amounts when importing. Use 1 to accumulate amounts when importing.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Cube.Data.ImportFromFile',
    'pSourceDir','C:\FinancialData',
    'pSourceFile','Actuals.txt',
    'pCube','General Ledger',
    'pDimension','Version',
    'pSourceElement','Budget',
    'pTargetElement','Budget_v2,
    'pTitleRows',1,
    'pDelimiter',',',
    'pQuote', '"',
    'pAccumulate',0,
    'pDebug',0
    );
```

Bedrock.Cube.Data.ViewExportToFile

This Bedrock TM1 TI will export the data from a view within the cube. Options to include or exclude consolidated elements, rule calculated data, and null data points can be specified.

Note: If you wish to export all data for a single element in a dimension use **Bedrock.Cube.Data.ExportToFile**

Parameters

Parameter	Data Type	Default	Explanation
pCube	String		The name of the cube where the view exists.
pExportPath	String		The directory where the file is to be saved. If no file path is provided, the ASCII file will be saved to the TM1 logging directory.
pExportFile	String		The file name of the ASCII file. If no file name is provided, a combination of the cube and view suffixed by the word “export.csv” will be used.
pView	String		The name of the view to be exported to the file. If no view is provided then the whole cube will be exported to the file.
pSkipRuleValues	Boolean	1	To include (0) or exclude (1) rule calculated data from the export file.
pSkipCalcValues	Boolean	1	To include (0) or exclude (1) consolidated data from the export file.
pSkipNullValues	Boolean	1	To include (0) or exclude (1) data points that have no data in the export file.
pTitleRecord	Boolean	1	To include (1) or exclude (0) a title row in the export file.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Cube.Data.ViewExportToFile',
    'pCube','General Ledger',
    'pExportPath','C:\FinancialData',
    'pExportFile','2011 Actual Data.txt',
    'pView','2011 Actual Data',
    'pSkipRuleValues',1,
    'pSkipCalcValues',1,
    'pSkipNullValues',1,
    'pTitleRecord',1,
    'pDebug',0
    );
```

Bedrock.Cube.Data.ZeroOut

This Bedrock TI has been removed from Release 3.0. The same functionality can be achieved using Bedrock.Cube.Data.Clear.

Bedrock.Cube.Delete

This Bedrock TM1 TI will delete one or more cubes.

Parameters

Parameter	Data Type	Default	Explanation
pCubes	String		The cube name(s) to be deleted separated by the delimiter. For example: General Ledger & Sales
pDelimiter	String	&	Used to distinguish more than one cube in the pCube parameter. Change the delimiter to another character if it is used in any cube name in the pCube parameter.
pDebug	Numeric	0	The Debug mode.

Example

```
ExecuteProcess('Bedrock.Cube.Delete',
    'pCubes','Finance & Marketing',
    'pDelimiter','&',
    'pDebug',0
    );
```

Bedrock.Cube.Dimension.Replace

This Bedrock TM1 TI replaces an existing dimension with another dimension that exists in the model.

Note: After running this process, all the data in the cube will be lost. The cube rules may need to be modified and re-saved for the cube.

Limited to a cube with a maximum of 27 dimensions.

Parameters

Parameter	Data Type	Default	Explanation
pCube	String		The name of the target cube to be changed.
pSourceDim	String		The name of the existing dimension that is to be replaced. This dimension must be in the specified cube.
pTargetDim	String		The name of the replacement dimension. This dimension must exist in the model.
pDebug	Numeric	0	The Debug mode.

Example

```
ExecuteProcess('Bedrock.Cube.Dimension.Replace',
    'pCube','General Ledger',
    'pSourceDim','Business Unit',
    'pTargetDim','Cost Centre',
    'pDebug',0
    );
```

Bedrock.Cube.View.Create

This Bedrock TM1 TI is used to create a view based on a string based filter instead the usual ViewCreate, SubsetCreate & SubsetElementInsert statements. It dramatically simplifies the process of creating views, allowing you to create a simple string and the complexity is done for you. This method is much more readable and reduces the number of lines of code.

The filter can be based on multiple dimensions and multiple views, here are some standard examples using the standard delimiters:

Year: 2010 - Year 2010 only

Year: 2010 & Version: Actual - Year 2010 and version Actual

Year: 2010 + 2011 - Year 2010 and Year 2011

Year: 2010 + 2011 & Month: Jan + Feb - Years 2010 and 2011 for the Months of January and February

Year: 2010 & Month: All Months - If the pSkipConsols parameter is set to 1, any consolidated elements passed to the filter will be converted to their N level children. In this case it will be Year 2010 and January, February, March, April, May, etc.

Filter Tips

Principal or Alias's can be used for elements

Spaces are ignored

Consolidated elements are converted to the N level children when pSkipConsols is set to 1 (the default).

You can use multiple characters for the delimiters, this is important for dimensions were special characters are used. If your dimension has special characters it is suggested that you use multiple character delimiters, i.e.:

Year:: 2010 ++ 2011 && Version:: Actual

OR

Year:= 2010 ++ 2011 && Version:= Actual

It is rare for multiple special characters to be side by side.

Parameters

Parameter	Data Type	Default	Explanation
pCube	String		The name of the cube that the view will be created on.
pView	String		The name of the view that will be created, the name will also be used for any subsets that are created.

pFilter	String		The filter to be used to create the view, see the examples above.
pSuppressZero	Numeric	1	Skip zero values.
pSuppressConsol	Numeric	1	Skip consolidated values.
pSuppressRules	Numeric	1	Skip rule derived values.
pDimensionDelim	String	&	The delimiter between dimensions.
pElementStartDelim	String	:	The delimiter at the end of the dimension name and the start of the list of elements.
pElementDelim	String	+	The delimiter between each element.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Cube.View.Create',
  'pCube' , 'General Ledger',
  'pView' , 'Archive',
  'pFilter' , 'Year: 2008 + 2009 & Month: Jan + Feb + Mar',
  'pSuppressZero' , 1,
  'pSuppressConsol' , 1,
  'pSuppressRules' , 1,
  'pDimensionDelim' , '&',
  'pElementStartDelim' , ':',
  'pElementDelim' , '+',
  'pDebug' , 0
  );
```

Bedrock.Cube.View.Delete

This Bedrock TM1 TI will delete views in the nominated cubes. This process is typically used to clean up temporary views as part of an overnight process.

Parameters

Parameter	Data Type	Default	Explanation
pCubes	String		One or more cube names. If this parameter is blank than all cubes will be processed.
pViews	String		The name of one or more views to be deleted from the nominated cubes. Can use wildcard characters.
pDelimiter	String	&	Used to separate multiple cubes or separate multiple views in the above parameters.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Cube.View.Delete',
    'pCubes','General Ledger & Marketing',
    'pViews','Actuals 2011 & Mkt Plan',
    'pDelimiter','&',
    'pDebug',0
    );
```

Bedrock.Cube.View.Publish

This Bedrock TM1 TI will publish a private view as a public view.

Parameters

Parameter	Data Type	Default	Explanation
pClient	String		The client name that owns the private view.
pCube	String		The name of the cube where the private view exists.
pView	String		The name of the private view that is to be made public.
pSubPublish	Boolean	1	Make private subsets that are associated with the private view public.
pOverwrite	Boolean	0	Allow the private view to overwrite the public view.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Cube.View.Publish',
    'pClient','Test',
    'pCube','General Ledger',
    'pView','CFO Accounts',
    'pSubPublish',0,
    'pOverwrite',1,
    'pDebug',0
    );
```

Bedrock.Cube.ViewAndSubsets.Create

This Bedrock TM1 TI builds a view for a single cube, then assigns empty subsets to that view for one or more dimensions.

Should be used in conjunction with other Bedrock TM1 TI that will define the elements within the subset.

Parameters

Parameter	Data Type	Default	Explanation
pCube	String		The cube name where the view is to be created.
pSuppressZero	Boolean	1	Set whether data points with no data should be suppressed in the view.
pSuppressConsol	Boolean	1	Set whether the consolidations should be suppressed in the view.
pSuppressRules	Boolean	1	Set whether rule calculated data points should be included in the view.
pDimensions	String		The dimensions of the cube where empty subsets are to be assigned to the view. If the subset exists for the dimension then all the elements assigned to the subset will be cleared.
pDelimiter	String	&	Used to separate multiple dimensions in the pDimensions parameter.
pView	String		The name of the view to be created for the cube. If the pView parameter is *null* then the pSubset parameter value is used. If the pSubset parameter is also *null* then the default view name is "}" and the cube name.
pSubset	String		The name of the subset to be created for each dimension nominated in the pDimensions parameter. If the pSubset parameter is *null* then the pView parameter value is used. If pView parameter is also *null* then the default view name is "}" and the cube name.
pDebug	Numeric	0	The Debug mode.

Example

```
ExecuteProcess('Bedrock.Cube.ViewAndSubset.Create',
    'pCube','General Ledger',
    'pSuppressZero',1,
    'pSuppressConsol',1,
    'pSuppressRules',0,
    'pDimension','Version & Year',
    'pDelimiter','&',
```

```
'pView', 'zTI_Temp View',
'pSubset','zTI_Temp Subset',
'pDebug',0
);
```

Bedrock.Cube.ViewAndSubsets.Delete

This Bedrock TM1 TI deletes a view and any specified subsets that are attached to the dimensions of the cube. It is used in clean up after Bedrock.Cube.View.Create is used. The process first deletes the view on the cube if it exists and then loops through each dimension on the cube and deletes subsets on those dimensions with the name provided.

Parameters

Parameter	Data Type	Default	Explanation
pCube	String		The name of the cube that the view will be deleted from.
pView	String		The name of the view that will deleted by executing the process.
pSubset	String		The name of the subset(s) that will be deleted by executing the process. If the parameter is blank, any subset(s) named the same as the view will be deleted.
pMode	Numeric	1	Use 0 to retain view and subset(s). Use 1 to delete view and subset(s). Use 2 to delete only the view.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Cube.ViewAndSubsets.Delete',
    'pCube','General Ledger',
    'pView','Archive',
    'pSubset','ArchiveSub',
    'pMode',1,
    'pDebug',0
    );
```

Dimensions

The Bedrock.Dim processes are used for tasks such as importing and exporting dimensions, copying dimensions and working with elements, attributes and hierarchies.

Bedrock.Dim.AllConsols.Delete

This Bedrock TM1 TI will delete all consolidation elements within a dimension.

Parameters

Parameter	Data Type	Default	Explanation
pDimension	String		The name of the dimension on which the process is to run.
pDebug	Numeric	0	The Debug mode.

Example

```
ExecuteProcess('Bedrock.Dim.AllConsols.Delete',
    'pDimension','Account',
    'pDebug',0
    );
```

Bedrock.Dim.AllElements.Delete

This Bedrock TM1 TI will delete all the elements within a dimension.

Parameters

Parameter	Date Type	Default	Explanation
pDimension	String		The name of the dimension on which the process is to run.
pDebug	Numeric	0	The Debug mode.

Example

```
ExecuteProcess('Bedrock.Dim.AllElements.Delete',
    'pDimension','Account',
    'pDebug',0
    );
```

Bedrock.Dim.Attr.Delete

This Bedrock TM1 TI will delete an attribute from a dimension.

Parameters

Parameter	Data Type	Default	Explanation
pDimension	String		The name of the dimension on which the process is to run.
pAttribute	String		The name of the existing attribute to be deleted.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Dim.Attr.Delete',
    'pDimension','Account',
    'pAttribute','Account Type',
    'pDebug',0
    );
```

Bedrock.Dim.Attr.ImportFromFile

This Bedrock TM1 TI will create attributes to a dimension from a file.

Parameters

Parameter	Data Type	Default	Explanation
pDimension	String		The name of the dimension on which the process is to run.
pSourceDir	String		The file directory where the data file exists.
pSourceFile	String		The file name that contains the attributes to be loaded.
pTitleRows	Numeric	2	The number of title rows in the file to be skipped
pDelimiter	String	,	The delimiter used in the file.
pQuote	String	“	Quotation character.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Dim.Attr.ImportFromFile',
    'pDimension','Account',
    'pSourceDir','C:\FileData',
    'pSourceFile','attributes_account_dim.csv',
    'pTitleRows',0,
    'pDelimiter',',',
    'pQuote','"',
    'pDebug',0
    );
```

Bedrock.Dim.Attr.Insert

This Bedrock TM1 TI will insert a new attribute into the dimension. A common use of this process is to avoid opening the Attributes Editor in TM1 if you have a large dimension.

Parameters

Parameter	Data Type	Default	Explanation
pDimension	String		The name of the dimension on which the process is to run.
pPrevAttr	String		The existing attribute the new attribute is to be inserted after. Can be left blank.
pAttribute	String		The name of the attribute to be inserted.
pAttributeType	String		The attribute type: S (String), N (Numeric) or A (Alias).
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Dim.Attr.Insert',
    'pDimension','Account',
    'pPrevAttr','',
    'pAttribute','Account Type',
    'pAttributeType','S',
    'pDebug',0
    );
```

Bedrock.Dim.Attr.SwapAlias

The Bedrock TM1 TI will swap the principal name of the dimension with an alias.

Parameters

Parameter	Data Type	Default	Explanation
pDimension	String		The name of the dimension on which the process is to run.
pAlias	String		The existing alias that is to become the principal name.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Dim.Attr.SwapAlias',
    'pDimension','Account',
    'pAlias','Alias',
    'pDebug',0
    );
```

Bedrock.Dim.Clone

This Bedrock TM1 TI will make a copy of an existing dimension.

Parameters

Parameter	Data Type	Default	Explanation
pSourceDim	String		The dimension that is to be cloned.
pTargetDim	String		The name of the dimension to be created. The dimension will be rebuilt if it already exists. If this parameter is null then the source dimension name will be appended with '_Clone'.
pAttr	Boolean	0	Set to 1 to copy the source dimension's attributes to the new dimension.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Dim.Clone',
    'pSourceDim','Account',
    'pTargetDim','Account Clone',
    'pAttr',1,
    'pDebug',0
    );
```

Bedrock.Dim.CloneFromSubset

This Bedrock TM1 TI will make a copy of an existing dimension subset, creating it as a dimension.

Parameters

Parameter	Data Type	Default	Explanation
pSourceDim	String		The dimension that is to be cloned.
pSubset	String		The subset that contains the elements to be cloned.
pTargetDim	String		The name of the dimension to be created. The dimension will be rebuilt if it already exists. If this parameter is null then the source dimension name will be appended with '_Clone'.
pAttr	Boolean	0	Set to 1 to copy the source dimension's attributes to the new dimension.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Dim.CloneFromSubset',
    'pSourceDim','Account',
    'pSubset','All Planning Level'
    'pTargetDim','Account Planning',
    'pAttr',1,
    'pDebug',0
    );
```

Bedrock.Dim.CloneFromSubset.Flat

This Bedrock TM1 TI will make a copy of an existing dimension subset, creating it as a dimension. All 'C' type elements of the source subset will be created as N type elements in the target dimension.

Parameters

Parameter	Data Type	Default	Explanation
pSourceDim	String		The dimension that is to be cloned.
pSubset	String		The subset that contains the elements to be cloned. When this parameter is blank then all elements in the dimension to be cloned will be copied.
pTargetDim	String		The name of the dimension to be created. The dimension will be rebuilt if it already exists. If this parameter is null then the target dimension name will be the source dimension name with '_Clone' appended to the end.
pAttr	Boolean	0	Set to 1 to copy the source dimension's attributes to the new dimension.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Dim.CloneFromSubset.Flat',
    'pSourceDim','Account',
    'pSubset','All Planning Level'
    'pTargetDim','Account Planning',
    'pAttr',1,
    'pDebug',0
    );
```

Bedrock.Dim.Consol.Create.Leaf

This Bedrock TM1 TI will create a consolidation of all the leaf elements with the weight of 1.

Parameters

Parameter	Data Type	Default	Explanation
pDimension	String		The name of the dimension to be created.
pConsol	String		The name of the consolidation point to be created.
pMemberConsol	String		Optional. The leaf element must be a member of this consolidation before it can be added new consolidation. If this parameter is null then all leaf elements will be considered.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess( 'Bedrock.Dim.Consol.Create.Leaf',
    'pDimension','Line of Business',
    'pConsol', 'Check Line of Business',
    'pMemberConsol, '',
    'pDebug',0
    );
```

Bedrock.Dim.Create

This Bedrock TM1 TI will create an empty dimension.

Parameters

Parameter	Data Type	Default	Explanation
pDimension	String		The name of the dimension to be created.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Dim.Create',
    'pDimension','Line of Business',
    'pDebug',0
    );
```

Bedrock.Dim.Destroy

This Bedrock TM1 TI will destroy an existing dimension as long as it is not part of any cube structure.

Parameters

Parameter	Data Type	Default	Explanation
pDimension	String		The name of the dimension to be destroyed.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Dim.Destroy',
    'pDimension','Line of Business',
    'pDebug',0
    );
```

Bedrock.Dim.Element.Component.Add

This Bedrock TM1 TI will add an element to a consolidated element.

Parameters

Parameter	Data Type	Default	Explanation
pDimension	String		The name of the dimension in which the element is to be inserted.
pParent	String		The principle name of the consolidated element.
pElement	String		The principal name of the element to be inserted.
pWeight	String	1	The weight of the element in the consolidation
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Dim.Element.Component.Add',
    'pDimension','Line of Business',
    'pParent', 'Southern Region
    'pElement','LOB_1',
    'pWeight', 1,
    'pDebug',0
    );
```

Bedrock.Dim.Element.Component.Delete

This Bedrock TM1 TI will delete an element from a consolidated element.

Parameters

Parameter	Data Type	Default	Explanation
pDimension	String		The name of the dimension in which the element is to be inserted.
pParent	String		The principle name of the consolidated element.
pElement	String		The principal name of the element to be inserted.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Dim.Element.Component.Delete',
    'pDimension','Line of Business',
    'pParent', 'Southern Region
    'pElement','LOB_1',
    'pDebug',0
    );
```

Bedrock.Dim.Element.Create

This Bedrock TM1 TI will insert a new element into a dimension.

Parameters

Parameter	Data Type	Default	Explanation
pDimension	String		The name of the dimension in which the element is to be inserted.
pElement	String		The principal name of the element to be inserted.
pElementType	String		The element type to be inserted: N = Numeric; S = String; C = Consolidated.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Dim.Element.Create',
    'pDimension','Line of Business',
    'pElement','LOB_1',
    'pElementType','N',
    'pDebug',0
    );
```

Bedrock.Dim.Element.Delete

This Bedrock TM1 TI will delete an existing element from a dimension.

Parameters

Parameter	Data Type	Default	Explanation
pDimension	String		The name of the dimension in which the element exists.
pElement	String		The principal name or alias name of the element to be deleted.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Dim.Element.Delete',
    'pDimension','Line of Business',
    'pElement','LOB_1',
    'pDebug',0
    );
```

Bedrock.Dim.Element.Move

This Bedrock TM1 TI will either remove an element from a consolidation or assign an element to a consolidation, depending on the chosen action.

Parameters

Parameter	Data Type	Default	Explanation
pDimension	String		The name of the dimension where the element exists.
pElement	String		The principal name or alias name of the existing element to be moved.
pTargetConsol	String		The name of the consolidation that the element is to be either added to or removed from.
pAction	String	Add Delete	Add – Add the element to the consolidation. Delete – Remove the element from the consolidation.
pElWeight	Numeric	1	The weight to be assigned the element within the consolidation.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Dim.Element.Move',
    'pDimension','Cost Centre',
    'pElement','Accounting',
    'pTargetConsol','Finance Group',
    'pAction','Add',
    'pElWeight',1,
    'pDebug',0
    );
```

Bedrock.Dim.EmptyConsols.Delete

This Bedrock TM1 TI deletes any consolidated elements within the dimension that do not have any components. That is, it deletes C level parents that have no children.

Parameters

Parameter	Data Type	Default	Explanation
pDimension	String		The name of the dimension.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Dim.EmptyConsols.Delete',
    'pDimension','Account',
    'pDebug',0
    );
```

Bedrock.Dim.Export

This Bedrock TM1 TI exports information about the the elements of a dimension to a file. This information can be read by Bedrock.Dim.Import to rebuild the dimension.

Parameters

Parameter	Data Type	Default	Explanation
pDimension	String		The name of the dimension.
pExportPath	String		The file path were the output file is to be created.
pExportFile	String		The name of the file to be created. If no file name is provide then the default file name is the name of the dimension with '.csv' appended to the file name.
pTitleRecord	Numeric	1	The file is to contain a header.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Dim.Export',
    'pDimension','Cost Centre',
    'pExportPath','D:\Landing_Zone\Export',
    'pExportFile','Cost Centre Backup.csv',
    'pTitleRecord',1,
    'pDebug',0
    );
```

Output file

The output file will follow the following format.

Header

If the pTitleRecord parameter is 1 then the header will contain the following information.

Parameter	Data Type
Line 1	Control data about the export file.
Line 2	The name of the source dimension.
Line 3	The dimension sort order of the source dimension.
Line 4	Reserved for future requirements.
Line 5	Reserved for future requirements.
Line 6:	Column headings.

Output file columns

Line_Type	The type of information been provided.

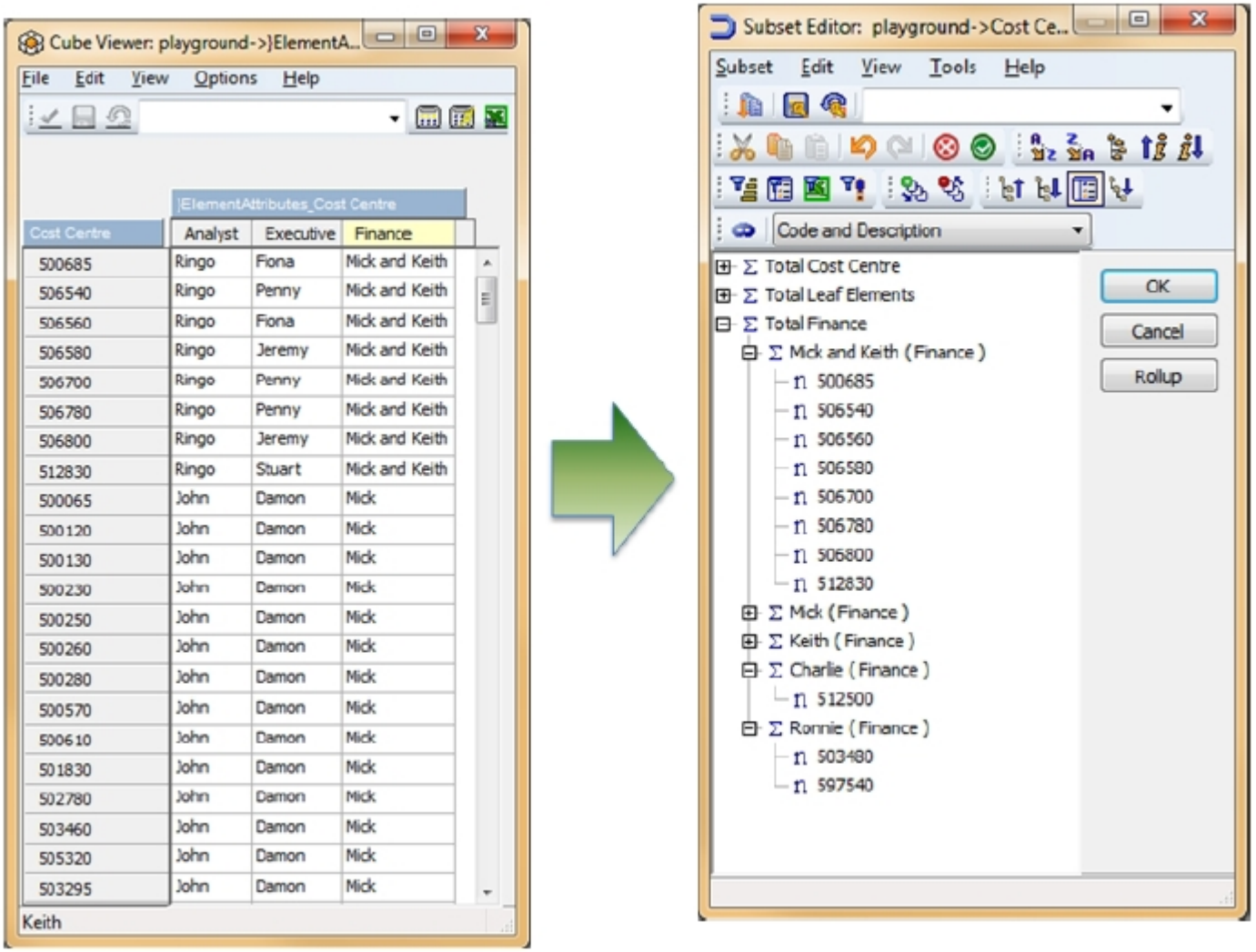
	E is element information. A is attribute information. P is an element's parent information V is an element attribute information.
Element	The element in the dimension
Value_1	The value that appear depends on the Line_Type.
Value_2	The value that appear depends on the Line_Type.
Value_3	The value that appear depends on the Line_Type.

Bedrock.Dim.ExportToFile

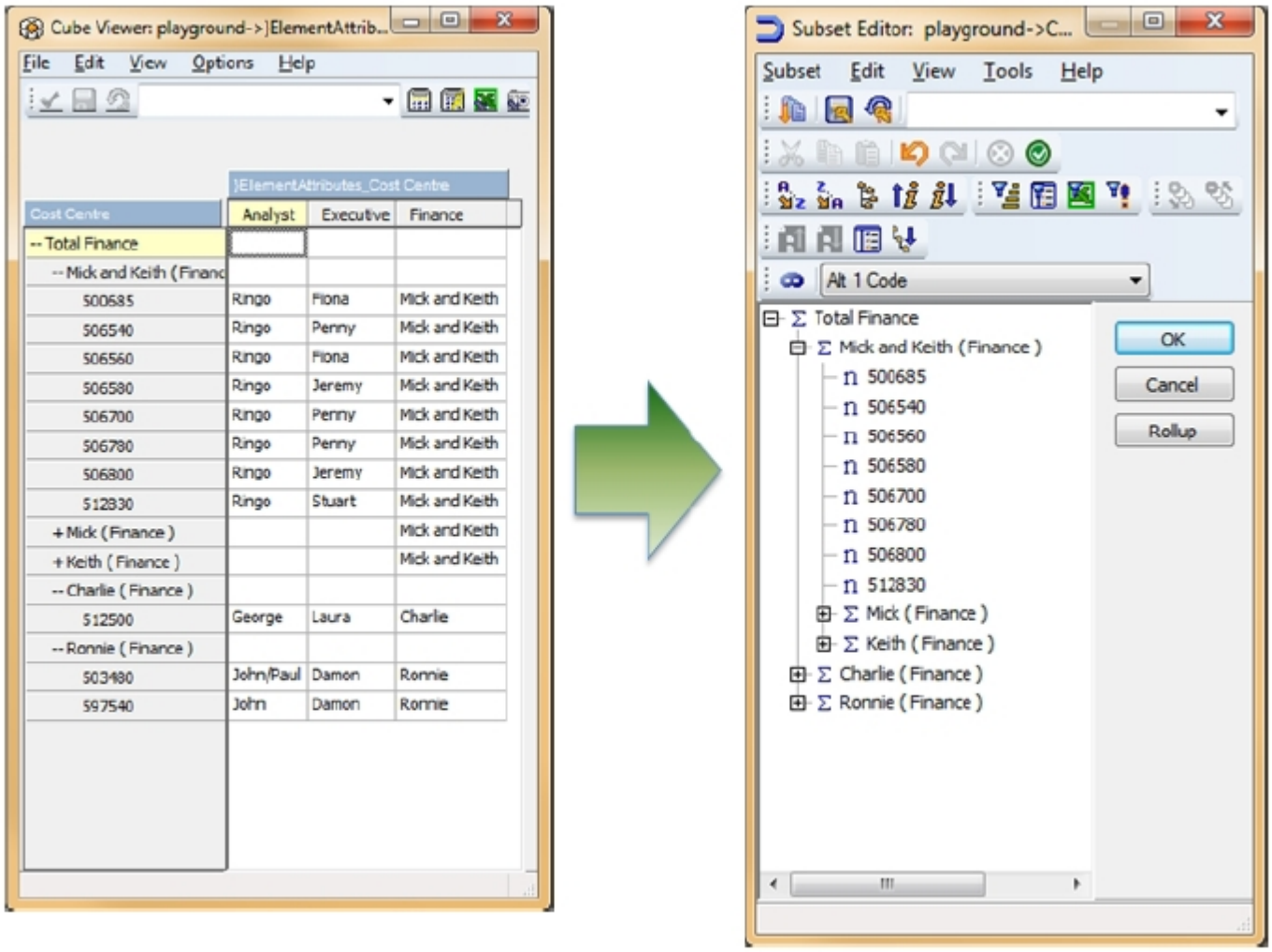
This Bedrock TM1 TI has been replaced by Bedrock.Dim.Export.

Bedrock.Dim.Hierarchy.Create.FromAttribute

This Bedrock TM1 TI will create a hierarchy within the dimension based on the values of an text attribute.



Depth in the hierarchy can be added by assigning the consolidated elements into the same hierarchy.



Parameters

Parameter	Data Type	Default	Explanation
pDimension	String		The dimension where the hierarchy is to be built.
pAttribute	String		The attribute that contains the values
pTopNode	String		The name of the element at the top of the Hierarchy.
pPrefix	String		Optional: Characters to be insert before the attribute value. This will not change the element name.
pSuffix	String		Optional: Characters to be insert after the attribute value. This will not change the element name.
pUnwind	Numeric	1	The hierarchy will be unwound before been rebuilt from the attribute values.
pEmptyConsol	Number	0	Optional: This will delete all empty consolidations in the dimension.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Dim.Hierarchy.Create.FromAttribute',
    'pDimension','Cost Centre',
    'pAttribute','Finance',
    'pTopNode', 'Total Finance Managers',
    'pPrefix', '',
    'pSuffix', ' (Finance)',
    'pUnwind', 1,
    'pEmptyConsol', 0,
    'pDebug',0
    );
```

Bedrock.Dim.Hierarchy.Unwind.All

This Bedrock TM1 TI will remove all parent / child relationships in a dimension.

Parameters

Parameter	Data Type	Default	Explanation
pDimension	String		The name of the dimension to be unwound.
pDebug	Numeric		The debug mode.

Example

```
ExecuteProcess('Bedrock.Dim.Hierarchy.Unwind.All',
    'pDimension','Cost Centre',
    'pDebug',0
    );
```

Bedrock.Dim.Hierarchy.Unwind.Consolidation

This Bedrock TM1 TI will remove all parent / child relationships below a consolidation in a dimension.

Parameters

Parameter	Data Type	Default	Explanation
pDimension	String		The name of the dimension to be unwound.
pConsol	String		The consolidated element that the elements are to be unwound from.
pRecursive	Boolean	0	0 = Delete only the relationships between the pConsol element and its children. 1 = Delete all the relationsips from all the elements under the nominated pConsol consolidation.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Dim.Hierarchy.Unwind.Consolidation',
    'pDimension','Cost Centre',
    'pConsol','Finance',
    'pRecursive',1,
    'pDebug',0
    );
```

Bedrock.Dim.Import

This Bedrock TM1 TI use the file created by Bedrock.Dim.Export to recreate the dimension.

Parameters

Parameter	Data Type	Default	Explanation
pSourceDir	String		The file path were the source file is stored.
pSourceFile	String		The name of the source file.
pDimension	String		The name of the dimension to be created.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Dim.Import',
    'pSourceDir','D:\Landing_Zone\Import',
    'pSourceFile','Cost Centre Backup.csv',
    'pDimension', 'Cost Centre',
    'pDebug',0
    );
```

Bedrock.Dim.ImportFromFile

This Bedrock TM1 TI as been replace by Bedrock.Dim.Import.

Subsets

The Bedrock.Sub processes are used for tasks such as creating and editing a dimension's subsets based on attributes and levels in the hierarchy.

Bedrock.Dim.Sub.Clone

This Bedrock TM1 TI will create a copy of a subset in the same dimension.

Parameters

Parameter	Data Type	Default	Explanation
pDimension	String		The name of the dimension where the subset exists and the clone is to be created.
pSourceSub	String		The name of the source subset which is a member of the dimension.
pTargetSub	String		Then name of the subset to be created by the process.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Dim.Sub.Clone',
      'pDimension', 'Cost Centre',
      'pSourceSub', 'Northern Region',
      'pTargetSub', 'North West Region',
      'pDebug',0
    );
```

Bedrock.Dim.Sub.Create

This Bedrock TM1 TI will add elements to a subset based on a number of criteria as follows:-

Ancestor of a consolidated element

The attribute value

The level of the element in the dimension. An upper and lower limit can be specified.

Parameters

Parameter	Data Type	Default	Explanation
pDimension	String		The name of the dimension where the subset is to be created.
pSubset	String		The name of the subset that the elements will be added to.
pConsol	String		The consolidated element the element must be a member of to be added to the subset. If this parameter is left blank then all elements will be evaluated.
pAttribute	String		The attribute to be evaluated. If this parameter is left blank then this criteria is not evaluated.
pAttributeValue	String		The value of the attribute the element must equal.
pLevelFrom	String	0	The lowest level in the dimension the element can have.
pLevelTo	String	20	The highest level in the dimension the element can have.
pExclusions	String		Elements to be excluded from the subset.
pDelimiter	String	&	The delimiter to separate multiple elements to be excluded.
pAddToSubset	Boolean	0	0 = Add the elements to an empty subset. 1 = Add the elements to an existing subset.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Dim.Sub.Create',
    'pDimension','Product',
    'pSubset','Audio Items',
    'pConsol','All Products',
    'pAttribute','Audio/Video',
```

```
'pAttributeValue','Audio',
'pLevelFrom',0,
'pLevelTo',1,
'pExclusions',
'ViDMP3 & VidAudio',
'pDelimiter','&',
'pAddToSubset',0,
'pDebug',0
);
```

Bedrock.Dim.Sub.Create.All

This Bedrock TM1 TI will create a subset with all the elements in a dimension.

Parameters

Parameter	Data Type	Default	Explanation
pDimension	String		The name of the dimension where the subset is to be created.
pSubset	String		The name of the subset that the elements will be added to.
pAddToSubset	Boolean	0	0 = Add the elements to an empty subset. 1 = Add the elements to an existing subset.
pExclusion	String		Elements to be excluded from the subset.
pDelimiter	String	&	The delimiter to separate different elements to be excluded.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Dim.Sub.Create.All',
      'pDimension','product',
      'pSubset','All Items Except Audio and Video',
      'pAddToSubset',0,
      'pExclusions','ViDMP3 & VidAudio',
      'pDelimiter','&',
      'pDebug',0
    );
```

Bedrock.Dim.Sub.Create.Attribute.All

This Bedrock TM1 TI will create a subset based on a value of an attribute. The process evaluates all elements in the dimension including consolidated elements. If the value of the nominated attribute for the element equals the parameter value then the element is added to the subset.

Parameters

Parameter	Data Type	Default	Explanation
pDimension	String		The name of the dimension where the subset is to be created.
pSubset	String		The name of the subset that the elements will be added to.
pAttribute	String		The attribute to base the subset on.
pAttributeValue	String		The attribute value of the element must equal to be included into the subset.
pAddToSubset	Boolean	0	0 = Add the elements to an empty subset. 1 = Add the elements to an existing subset.
pExclusion	String		Elements to be excluded from the subset.
pDelimiter	String	&	The delimiter to separate different elements to be excluded.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Dim.Sub.Create.Attribute.All',
      'pDimension','Business Unit',
      'pSubset','All Operational Units',
      'pAttribute','Type of Unit',
      'pAttributeValue','OP',
      'pAddToSubset',0,
      'pExclusions','',
      'pDelimiter','&',
      'pDebug',0
    );
```

Bedrock.Dim.Sub.Create.Attribute.Leaf

This Bedrock TM1 TI will create a subset of leaf elements based on a value of an attribute. This will evaluate only leaf elements in the dimension. If the value of the nominated attribute for the element equals the parameter value then the element is added to the subset.

Parameters

Parameter	Data Type	Default	Explanation
pDimension	String		The name of the dimension where the subset is to be created.
pSubset	String		The name of the subset that the elements will be added to.
pAttribute	String		The attribute to base the subset on.
pAttributeValue	String		The attribute value the element must have to be included in the subset
pAddToSubset	Boolean	0	0 = Add the elements to an empty subset. 1 = Add the elements to an existing subset.
pExclusion	String		Elements to be excluded from the subset.
pDelimiter	String	&	The delimiter to separate different elements to be excluded.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Dim.Sub.Create.Attribute.Leaf',
      'pDimension','Business Unit',
      'pSubset','Operational Units',
      'pAttribute','Type of Unit',
      'pAttributeValue','OP',
      'pAddToSubset',0,
      'pExclusions','',
      'pDelimiter','&',
      'pDebug',0
      );
```

Bedrock.Dim.Sub.Create.ByElement

This Bedrock TM1 TI will add specific elements to a specified subset.

Parameters

Parameter	Data Type	Default	Explanation
pDimension	String		The name of the dimension where the subset is to be created.
pSubset	String		The name of the subset that the elements will be added to.
pElements	String		The elements to be added to the subset.
pDelimiter	String	&	The delimiter to separate multiple elements.
pAddToSubset	Boolean	0	0 = Add the elements to an empty subset. 1 = Add the elements to an existing subset.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Dim.Sub.Create.ByElement',
      'pDimension','Business Unit',
      'pSubset','Regional Units',
      'pElements','Western & Northern & Eastern',
      'pAddToSubset',0,
      'pDelimiter','&',
      'pDebug',0
      );
```

Bedrock.Dim.Sub.Create.ByLevel

This Bedrock TM1 TI will create a subset for each level of a dimension. The subset will contain the elements for that level. The name of the subset will be 'All Level' and the level of the dimension, for example: 'All Level 01'.

Parameters

Parameter	Data Type	Default	Explanation
pDimension	String		The name of the dimension where the subset is to be created.
pSort	Boolean	0	0 = The subset will be sorted in the same order as the dimension. 1 = Sort the subset alphabetically.
pConvertStatic	Boolean	1	0 = The subset is created by an MDX expression. 1 = The MDX expression will be converted to a static subset.
pDebug	Numeric	1	The debug mode.

Example

```
ExecuteProcess('Bedrock.Dim.Sub.Create.ByLevel',
      'pDimension','Business Unit',
      'pSort',0,
      'pConvertStatic',1,
      'pDebug',0
      );
```

Bedrock.Dim.Sub.Create.ByMDX

This Bedrock TM1 TI will create a subset using an MDX expression. This subset can then be converted to a static subset.

Parameters

Parameter	Data Type	Default	Explanation
pDimension	String		The name of the dimension where the subset is to be created.
pSubset	String		The name of the subset that the elements will be added to.
pMDXExpr	String		The MDX expression to create the subset
pConvertToStatic	Boolean	1	0 = The subset is created by an MDX expression. 1 = The MDX expression will be converted to a static subset.
pDebug	Numeric	1	The debug mode.

Example

```
ExecuteProcess('Bedrock.Dim.Sub.Create.ByMDX',
      'pDimension',
      'product',
      'pSubset','LA Products',
      'pMDXExpr','{TM1FILTERBYPATTERN( {TM1SUBSETALL( [Product] )}, "*LA-*")}',
      'pConvertToStatic',1,
      'pDebug',0
      );
```

Bedrock.Dim.Sub.Create.Consolidation.All

This Bedrock TM1 TI will create a subset of elements that are descendants of the consolidated element.

Parameters

Parameter	Data Type	Default	Explanation
pDimension	String		The name of the dimension where the subset is to be created.
pSubset	String		The name of the subset that the elements will be added to.
pConsol	String		The consolidated element that members of the subset must be a descendent of.
pAddToSubset	Boolean	0	0 = Add the elements to an empty subset. 1 = Add the elements to an existing subset.
pExclusion	String		Elements to be excluded from the subset.
pDelimiter	String	&	The delimiter to separate multiple elements to be excluded.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Dim.Sub.Create.Consolidation.All',
      'pDimension','Business Unit',
      'pSubset','By Regions',
      'pConsol','Regional',
      'pAddtoSubset',0,
      'pExclusions','Other',
      'pDelimiter','&',
      'pDebug',0
    );
```

Bedrock.Dim.Sub.Create.Consolidation.Leaf

This Bedrock TM1 TI will create a subset of leaf (level 0) elements that are descendants of the consolidated element.

Parameters

Parameter	Data Type	Default	Explanation
pDimension	String		The name of the dimension where the subset is to be created.
pSubset	String		The name of the subset that the elements will be added to.
pConsol	String		The consolidated element that members of the subset must be descendants of.
pAddToSubset	Boolean	0	0 = Add the elements to an empty subset. 1 = Add the elements to an existing subset.
pExclusion	String		Elements to be excluded from the subset.
pDelimiter	String	&	The delimiter to separate multiple elements to be excluded.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Dim.Sub.Create.Consolidation.Leaf',
      'pDimension','Business Unit',
      'pSubset','By Regions Leaf',
      'pConsol','Regional',
      'pAddtoSubset',0,
      'pExclusions','Other',
      'pDelimiter','&',
      'pDebug',0
    );
```

Bedrock.Dim.Sub.Create.Leaf

This Bedrock TM1 TI will create a subset with elements that are the leaf level of a dimension.

Parameters

Parameter	Data Type	Default	Explanation
pDimension	String		The name of the dimension where the subset is to be created.
pSubset	String		The name of the subset that the elements will be added to.
pAddToSubset	Boolean	0	0 = Add the elements to an empty subset. 1 = Add the elements to an existing subset.
pExclusion	String		Elements to be excluded from the subset.
pDelimiter	String	&	The delimiter to separate different elements to be excluded.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Dim.Sub.Create.Leaf',
      'pDimension','Business Unit',
      'pSubset','Leaf Elements',
      'pAddtoSubset',0,
      'pExclusions','',
      'pDelimiter','&',
      'pDebug',0
    );
```

Bedrock.Dim.Sub.Create.Orphans

This Bedrock TM1 TI will create two subsets; 'Orphan C Elements (no children)' and 'Orphan N elements (no parents)'. The 'Orphan C Elements (no children)' subset contains all the consolidation elements that have no component elements. The 'Orphan N elements (no parents)' subset contains all the leaf elements that are not members of any consolidation.

Parameters

Parameter	Data Type	Default	Explanation
pDimension	String		The name of the dimension where the subset is to be created.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Dim.Sub.Create.Orphans',
    'pDimension','Cost Centre',
    'pDebug',0
    );
```

Bedrock.Dim.Sub.Create.TopLevelHierarchy

This Bedrock TM1 TI will create a subset of the top level consolidations in a dimension. That is, a subset of all the "top node" ancestors which are consolidated C level elements that have no parents.

Parameters

Parameter	Data Type	Default	Explanation
pDimension	String		The name of the dimension where the subset is to be created.
pSubset	String		The name of the subset that the elements will be added to.
pConvertToStatic	Boolean	1	0 = The subset is created by an MDX expression. 1 = The MDX expression will be converted to a static subset.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Dim.Sub.Create.TopLevelHierarchy',
    'pDimension','Cost Centre',
    'pSubset','Top Level Centres',
    'pConvertToStatic',1,
    'pDebug',0
    );
```

Bedrock.Dim.Sub.Delete

This Bedrock TM1 TI will delete one or more subsets from one or more dimensions.

Parameters

Parameter	Data Type	Default	Explanation
pDimensions	String		The name of the dimension where the subset is to be deleted. Multiple dimensions can be specified by separating the dimension names with the delimiter character.
pSubsets	String	}Bedrock*	The name of the subset to be deleted. Multiple subsets can be deleted by separating the subset names with the delimiter character. Wildcard characters can be used, e.g. 'All Level *'.
pDelimiter	String	&	The delimiter to separate different dimensions or subsets.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Dim.Sub.Delete',
    'pDimensions','Business Unit',
    'pSubsets','By Regions & Regional Units',
    'pDelimiter','&',
    'pDebug',0
    );
```

Bedrock.Dim.Sub.Exclude

This Bedrock TM1 TI will remove specific elements from a subset.

Parameters

Parameter	Data Type	Default	Explanation
pDimension	String		The name of the dimension where the subset exists.
pSubset	String		The name of the subset that the elements are to be excluded from.
pElements	String		The element to be excluded. Multiple elements can be specified by separating the elements using the delimiter character. If a consolidated element is specified then the consolidated element and all its descendants will be excluded from the element.
pDelimiter	String	&	The delimiter to separate multiple elements to be removed.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Dim.Sub.Exclude',
    'pDimension','Business Unit',
    'pSubset','Regional',
    'pElements','Other & Unspecific',
    'pDelimiter','&',
    'pDebug',0
    );
```

Bedrock.Dim.Sub.ExportToFile

This Bedrock TM1 TI will export the members of a subset to a file. The file columns are:-

Column	Header	Description
1	Index	The dimension index of the element.
2	Element	The principal name of the element.
3	Alias: [Alias Name]	The first alias of the dimension.
4	Level	The level the element is in the dimension.
5	Parent 1	The first consolidation for the element.
6	Weight 1	The weight of the element to the first consolidation.
7	Parent 2	The second consolidation for the element.
8	Weight 2	The weight of the element to the second consolidation.
9	Parent 3	The third consolidation for the element.
10	Weight 3	The weight of the element to the third consolidation.
11	Parent 4	The fourth consolidation for the element.
12	Weight 4	The weight of the element to the fourth consolidation.
13	Parent 5	The fifth consolidation for the element.
14	Weight 5	The weight of the element to the fifth consolidation.

Up to five consolidations can be specified in the output file.

Parameters

Parameter	Data Type	Default	Explanation
pDimension	String		The name of the dimension where the subset exists.
pSubset	String		The name of the subset that the elements are to be excluded from.
pExportPath	String		The file directory where the export file will be saved.
pExportFile	String		The name of the export file. If no export file name is provided then the default export file is '[dimension name].[subset name].export.csv'.
pTitleRecord	Boolean	1	1 – The first row of the file will include metadata about the dimension. The second row of the file will be the

			column headings. 0 – Do not include a header row in the output file.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Dim.Sub.ExportToFile',
    'pDimension','Business Unit',
    'pSubset','Regional',
    'pExportPath','C:\Financial Data',
    'pExportFile','Regional Subset.txt',
    'pTitleRecord',1,
    'pDebug',0
    );
```

Security

Bedrock.Security processes are for tasks that affect Security on the TM1 Server. Remember to Refresh Security when metadata has been changed.

Bedrock.Security.Client.Create

This Bedrock TM1 TI can be used to add one or more clients to the model.

Parameters

Parameter	Data Type	Default	Explanation
pClients	String		The name of the client to be added. Multiple clients can be added by separating the clients' names using the delimiter character.
pPassword	String		The TM1 password for the new client.
pMaxPorts	Numeric	5	The maximum number of ports the client is limited to use in the client properties.
pDelimiter	String	&	The delimiter character.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Security.Client.Create',
    'pClients','JSmith & BClark',
    'pPassword','abc123',
    'pMaxPorts',5,
    'pDelimiter','&',
    'pDebug',0
    );
```

Bedrock.Security.Client.Delete

This Bedrock TM1 TI can be used to delete one or more clients from the model.

Parameters

Parameter	Data Type	Default	Explanation
pClients	String		The name of the client to be deleted. Multiple clients can be deleted by separating the clients' names using the delimiter character.
pDelimiter	String	&	The delimiter character.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Security.Client.Delete',
    'pClients','JSmith & BClark',
    'pDelimiter','&',
    'pDebug',0
    );
```

Bedrock.Security.Client.Group.Assign

This Bedrock TM1 TI will assign one or more existing clients to one or more groups or remove one or more existing clients from one or more groups.

Parameters

Parameter	Data Type	Default	Explanation
pClients	String		The name of the client to be added or removed. Multiple clients can be specified by separating the clients' names using the delimiter character.
pGroups	String		The name of the group the clients are to be assigned to or removed from. Multiple groups can be specified by separating the group names using the delimiter character.
pDelimiter	String	&	The delimiter character.
pAddOrRemove	String	Add	Add = Assign the clients to the groups. Remove = Remove the clients from the groups
pSecurityRefresh	String	Yes	Execute a security refresh of the model.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Security.Client.Group.Assign',
    'pClients','JSmith',
    'pGroups','Finance',
    'pDelimiter','',
    'pAddOrRemove','Add',
    'pSecurityRefresh','Yes',
    'pDebug',0
    );
```

Bedrock.Security.Client.Password.Reset

This Bedrock TM1 TI can be used to reset one or more clients' passwords.

Parameters

Parameter	Data Type	Default	Explanation
pClients	String		The name of the client whose password will be reset. Multiple clients' passwords can be reset by separating the clients' names using the delimiter character.
pPassword	String		The new password for the client.
pDelimiter	String	&	The delimiter character.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Security.Client.Password.Reset',
    'pClients','JSmith',
    'pPassword','xyz789',
    'pDelimiter','',
    'pDebug',0
    );
```

Bedrock.Security.Client.Group.Assign

This Bedrock TM1 TI will create one or more clients and assign those clients to one or more groups.

Parameters

Parameter	Data Type	Default	Explanation
pClients	String		The name of the client to be added. Multiple clients can be added by separating the clients' names using the delimiter character.
pGroups	String		The name of the group to which the clients are to be assigned. Multiple groups can be assigned by separating the group names using the delimiter character.
pDelimiter	String	&	The delimiter character used in the pClients and pGroups parameters.
pAddOrRemove	String	Add	The action that is to be performed. Add will add the nominated client(s) will be added to the nominated group(s). Remove will removed the nominated clients(s) from the nominated group(s).
pSecurityRefresh	String	Yes	Forces a security refresh of the TM1 model.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess( 'Bedrock.Security.Client.Group.Assign',
    'pClients', 'JSmith',
    'pGroups', 'Finance & Operations',
    'pDelimiter', '&'
    'pAddOrRemove', 'Add',
    'pSecurityRefresh', 'Yes',
    'pDebug', 0
    );
```

Bedrock.Security.Group.Create

This Bedrock TM1 TI will create one or more groups.

Parameters

Parameter	Data Type	Default	Explanation
pGroups	String		The name of the group to be added. Multiple groups can be added by separating the group names using the delimiter character.
pDelimiter	String	&	The delimiter character.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Security.Group.Create',
    'pGroups','IT & Marketing',
    'pDelimiter','&',
    'pDebug',0
    );
```

Bedrock.Security.Group.Delete

This Bedrock TM1 TI can be used to delete one or more groups.

Parameters

Parameter	Data Type	Default	Explanation
pGroups	String		The name of the group to be deleted. Multiple groups can be deleted by separating the group names using the delimiter character.
pDelimiter	String	&	The delimiter character.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Security.Group.Delete',
    'pGroups','IT & Marketing',
    'pDelimiter','&',
    'pDebug',0
    );
```

Bedrock.Security.Object.Assign

This Bedrock TM1 TI can be used to assign one or more groups to an object (application, cube, dimension, process or chore).

Parameters

Parameter	Data Type	Default	Explanation
pGroups	String		The name of the group to be assigned. Multiple groups can be assigned by separating the group names using the delimiter character.
pObjectType	String		The Application, Cube, Dimension, Process or Chore security that is to be changed.
pObjects	String		The Object to which the security is to be applied. Multiple objects can be assigned by separating the object names using the delimiter character.
pSecurityLevel	String		The level of security to be assigned to the groups: Read, Write, Admin or None. Not all security levels are applicable to all objects.
pSecurityRefresh	String	No	Perform a 'Security Refresh' of the model after the objects' security has changed.
pDelimiter	String	&	The delimiter character.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Security.Object.Assign',
    'pGroups','Finance',
    'pObjectType','Cube',
    'pObjects','General Ledger',
    'pSecurityLevel','Write',
    'pSecurityRefresh','No',
    'pDelimiter','',
    'pDebug',0
    );
```

Bedrock.Security.Refresh

This Bedrock TM1 TI will perform a security refresh on the model.

Parameters

Parameter	Data Type	Default	Explanation
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Security.Refresh',
    'pDebug',0
    );
```

Server Administration

Bedrock.Server processes are for tasks that affect the whole TM1 server.

Bedrock.Server.DataDir.Backup

This Bedrock TM1 TI will perform a backup of the TM1 data directory.

Parameters

Parameter	Data Type	Default	Explanation
pDataDir	String		The TM1 data directory that is to be copied.
pBackupDir	String		The directory where the copy will be stored.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Server.DataDir.Backup',
    'pDataDir','C:\Program Files\Cognos\TM1\Custom\TM1Data\PlanSamp'
    'pBackupDir','C:\Program Files\Cognos\TM1\Custom\TM1Data\PlanSampBackups'
    'pDebug',0
    );
```

Bedrock.Server.DataDir.ListContents

This Bedrock TM1 TI will create listings of the contents of the TM1 data directory as text file output in the data directory itself.

Parameters

Parameter	Data Type	Default	Explanation
pDataDir	String		The TM1 data directory to list contents of.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Server.DataDir.ListContents',
    'pDataDir','C:\Program Files\Cognos\TM1\Custom\TM1Data\PlanSamp'
    'pDebug',0
    );
```

Bedrock.Server.LogFile.Delete

This Bedrock TM1 TI will delete TM1 log files according to the parameters.

Parameters

Parameter	Data Type	Default	Explanation
pLogDir	String		The TM1 logging directory for the server. When this parameter is blank it will be derived from the server.
pLogDays	Numeric	7	This will delete all files that follow the "tm1s*.log" or "tm1auditstore*.log" format and are older than the nominated days.
pErrorDays	Numeric	21	This will delete all files that follow the "tm1ProcessError*.log" format and are older than the nominated days.
pBedrockDays	Numeric	7	This will delete all files that follow the "Bedrock*.*" format and are older than the nominated days.
pCSVDays	Numeric	7	This will delete all files that follow the "*.csv", "*.cma" or "*.txt" format and are older than the nominated days.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Server.DataDir.ListContents',
    'pLogDir','E:\Database\Logs\'
    'pLogDays', 7,
    'pErrorDays', 21,
    'BedrockDays', 7,
    'pCSVDays', 7,
    'pDebug',0
    );
```

Bedrock.Server.SaveDataAll

This Bedrock TM1 TI will perform a 'Save Data All' on the model.

Parameters

Parameter	Data Type	Default	Explanation
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Server.SaveDataAll',
    'pDebug',0
    );
```

Bedrock.Security.Refresh

This Bedrock TM1 TI will put a process in a wait state for a nominated seconds.

Parameters

Parameter	Data Type	Default	Explanation
pWaitSec	String		The number of seconds that the server should wait before continuing.
pDebug	Numeric	0	The debug mode.

Example

```
ExecuteProcess('Bedrock.Security.Refresh',
    'pDebug',0
    );
```

Bedrock.Chore.DayOfWeek.Run

This Bedrock TM1 TI is to be used at the start of a chore. The Bedrock TM1 TI will compare the current week day and confirm that the chore can be run on that week day.

Parameters

Parameter	Data Type	Default	Explanation
pSunday	String	1	Boolean. '1' indicates that the chore can be run on Sunday.
pMonday	String	1	Boolean. '1' indicates that the chore can be run on Monday.
pTuesday	String	1	.Boolean. '1' indicates that the chore can be run on Tuesday.
pWednesday	String	1	Boolean. '1' indicates that the chore can be run on Wednesday.
pThursday	String	1	Boolean. '1' indicates that the chore can be run on Thursday.
pFriday	String	1	Boolean. '1' indicates that the chore can be run on Friday.
pSaturday	String	1	Boolean. '1' indicates that the chore can be run on Saturday.
pDebug	String	0	The Debug mode.

Example

```
ExecuteProcess( 'Bedrock.Cube.Clone',
    'pSunday', 1,
    'pMonday', 1,
    'pTuesday', 1,
    'pWednesday', 1,
    'pThursday', 1,
    'pFriday', 1,
    'pSaturday', 1
    'pDebug', 0
    );
```