## Command Reference: ReadTableFromDataStore()

Read a table from a datastore

Version 11.08.00, 2016-02-03

The ReadTableFromDataStore () command executes a database query for a datastore that is associated with a database, and places the result in a TSTool table, which can subsequently be processed with other TSTool commands. This command cannot be used with web service datastores because the underlying software relies on a database to perform the query. If database datastore support is not specifically provided by TSTool, a generic database datastore can be used (see the **Generic Database DataStore** appendix). For example, use a generic database datastore to read data from a Microsoft Access database. This command is useful when the database can provide results with a simple query and tight integration with TSTool is not required or has not been implemented. The query can be specified in the following ways:

- Specify a single table/view to query:
  - o the list of tables is filtered to remove internal database tables; however, this capability varies by database product and in some cases internal tables will be listed
  - o the query is constructed from the provided database table/view name and column names
  - o the output can be sorted by specifying column names
  - o "where" clauses currently are not supported but may be added in the future
  - o the top N rows of the result can be returned to allow "peeking" at tables (may not be available for all database software)
- Specify a SQL select statement:
  - o SQL must be valid for the database (syntax may vary based on database software)
  - Use \${Property} notation to insert processor property values set with SetPropety().
  - SQL syntax is not checked for validity and therefore error messages from the database may be more difficult to interpret.
  - Comments can be specified using /\* \*/ notation or - (double dash) for end of line comments. TSTool removes comments if using Microsoft Access because Access does not support comments in SQL.
- Specify an SOL select statement in a file:
  - o Similar to the above option; however, the SQL statement is read from a file
  - Useful if the SQL statement is also used by other tools
- Specify a procedure to run:
  - o Available procedures are listed and can be selected
  - o Currently, only procedures that do not require parameters can be run

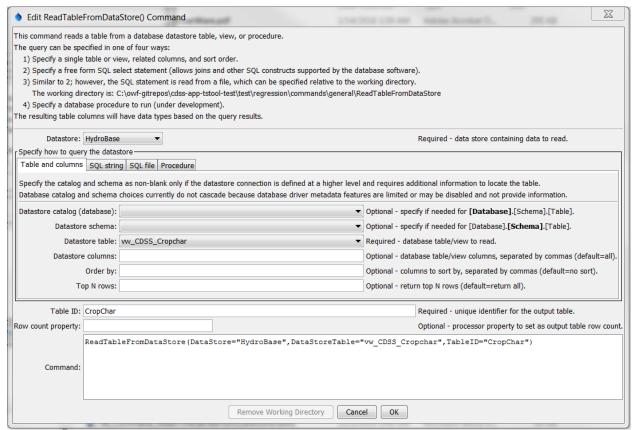
## General constraints on the query are as follows:

- the table, views, and procedures being queried must be readable (some databases restrict direct access to data and require using stored procedures)
- the resulting table in TSTool will have columns with names that match the database query results
- data types for columns will closely match the database results:
  - o data will be treated as strings if unable to match the database column type
  - o the precision of floating point numbers for displays is defaulted to 6 digits
  - o null values in the database will transfer to null values in the TSTool table and will display as blank table cells

 date/time columns in the database will be represented as such in the TSTool table; however, it may not be possible to limit the precision of the date/time (i.e., hours, minutes, and seconds may be shown with default zero values in output)

Future enhancements will add additional features to intelligently map database results to TSTool tables.

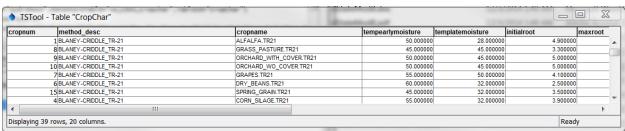
The following dialog is used to edit the command and illustrates the syntax for the command, in this case reading a small table from the State of Colorado's HydroBase.



ReadTableFromDataStore\_Table

ReadTableFromDataStore() Command Editor When Querying a Single Table

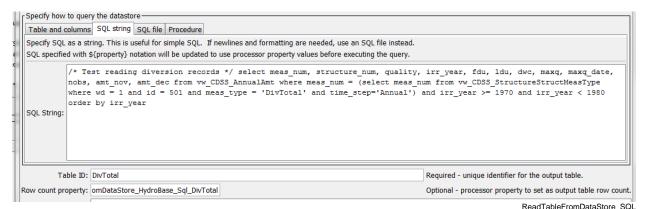
The corresponding output table is as shown below:



ReadTableFromDataStore\_Results

Example ReadTableFromDataStore() Command Output Table

The following example illustrates using an SQL query string, in this case to read diversion records for a specific structure in the State of Colorado's HydroBase database:



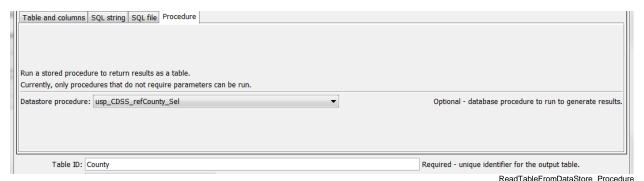
ReadTableFromDataStore() Command Editor When Specifying a SQL Query String

The following example illustrates using an SQL file:



ReadTableFromDataStore() Command Editor When Specifying a SQL File

The following example illustrates using a procedure:



ReadTableFromDataStore() Command Editor When Specifying a Procedure

The command syntax is as follows:

ReadTableFromDataStore(Parameter=Value,...)

## **Command Parameters**

Parameter	Description	Default
DataStore	The name of a database datastore to read.	None – must be specified.
DataStoreTable	The name of the database table or view to	None.
	read when querying a single table or view.	
	If specified, do not specify Sql or	
	SqlFile.	
DataStoreColumns	When reading a single table/view, the	All columns from
	names of the columns to read, separated by	DataStoreTable are
	commas.	read.
OrderBy	When reading a single table/view, a list of	Default database sort order
_	column names separated by commas to	will be used.
	control the order of output.	
Тор	Indicate that Top rows should be returned.	Return all rows.
	This functionality may not be implemented	
	for all databases (SQL is not fully	
	standardized for this feature). This	
	parameter is useful to determine the	
	columns for a table prior to using the Sql	
	or SqlFile parameters.	
Sql	The SQL string that will be used to query	None.
	the database, optionally using	
	\${Property} notation to insert	
	processor property values. If specified, do	
	not specify DataStoreTable or	
	SqlFile.	
SqlFile	The name of the file containing an SQL	None.
	string to execute, optionally using	
	\${Property} notation in the SQL file	
	contents to insert processor property	
	values. If specified, do not specify	
	DataStoreTable or Sql.	
DataStoreProcedure	The name of the database procedure to run.	None.
	Currently, only procedures that do not	
	require parameters can be run.	
TableID	Identifier to assign to the output table in	None – must be specified.
	TSTool, which allows the table data to be	
	used with other commands. A new table	
	will be created. Can be specified with	
	\${Property}.	
RowCountProperty	The name of the processor property that	Property is not set.
	will be set to the row count, optionally	
	using \${Property} notation to specify	
	the name.	