

Import text or CSV file 3.0

Summary


This operator allows to **import data from a text file** where values are separated by comma (comma separated values, CSV) or another symbol.

It can only be applied to an **empty data node**.

The text file has to be available in the [Data Management](#) on the TIS Server. Therefore, a file from a local storage has to be uploaded to the TIS Server. See [Upload or download a data file to the TIS Server](#) for how to do this.

Import via Parameters	As of version 5.8 import files can be defined via Parameters. Pfad (manuell): <input type="text" value="#XI.TISPar('parFolder')#\#XI.TISPar('parFile')#"/>
Error Node	As of version 5.8 a specific error node can be defined. This way, error nodes can be displayed in TIS Board. The error node contains data rows that could not be properly interpreted. Create an empty data node and choose the node as error node in the operation settings. Error output in node:* <input type="text" value="A01a error output"/>

Example: Import text file of the type "Date/Time/Time"

Situation	The text file Import_1.txt is to be imported into a data node. <pre>Datum;Von;Bis 01.01.2007;06:00;14:30 02.01.2007;06:00;13:00 03.01.2007;14:00;23:00 04.01.2007;14:00;22:00 05.01.2007;22:00;06:00 06.01.2007;22:00;06:00 09.01.2007;06:00;14:00 10.01.2007;06:00;15:00</pre>
Step 1	Go to Homepage and choose the Data Management tab; upload file (Upload or download a data file to the TIS Server) 
Step 2	Create an empty data node. To this node, add the operation "Import Text or CSV file 3.0". Click on the folder symbol next to "Name" and select the import file. Settings Name: <input type="text" value="Import_1.txt"/> <input type="button" value="x"/> <input type="button" value="Folder icon"/> Path (manual): <input type="text"/> Alternatively, files can be defined via parameters under "Path (manual):" Path (manual): <input type="text" value="#XI.TISPar('parFolder')#\#XI.TISPar('parFile')#"/> <input type="button" value="x"/> Then choose the following settings:

Data (Number of rows total: 9)

First lines: Datum;Von;Bis
 01.01.2007;06:00;14:30
 02.01.2007;06:00;13:00
 03.01.2007;14:00;23:00

Last lines: 05.01.2007;22:00;06:00
 06.01.2007;22:00;06:00
 09.01.2007;06:00;14:00
 10.01.2007;06:00;15:00

First row is a header row.
 Remove white space characters.

Column separator: ;
 Text delimiter:
 Decimal symbol: .

Type of result table: Duration (conversion necessary)

Behavior in the case of invalid cell values: Apply default values, e.g. 0.0 with floating point values, if NULL should transferred

Mapping [Execute](#)

Then click "Execute" to let TIS suggest the columns based on your suggestions. You will need to correct the suggested column "Bis" to Semantics: "Time (end)".

Mapping [Execute](#)

Column	Column name	Data type	Data Format	Semantics	Replacement of illegal values
1	Datum	Date	Date (MDY)	Date	
2	Von	Time	Time (hhmm)	Time (start)	
3	Bis	Time	Time (hhmm)	Time (end)	

- You get into the editing mode by clicking the icon
- You need to confirm changes by clicking the icon
- Columns that are not supposed to be imported can be deleted with the icon
- You can change the order of columns (how they will be displayed in the result table) with the icons and

As of version 5.8 a specific **error node** can optionally be defined. That gives the possibility that error nodes can be displayed in TIS Board.

Create an empty data node and choose the node as data node in the import operation.

Error output in node:*

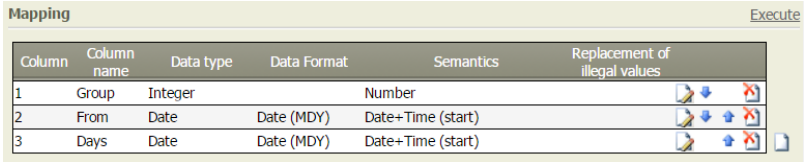
Result	<table border="1"> <thead> <tr> <th>No.</th> <th>A Datum </th> <th>B Von </th> <th>C Bis </th> </tr> </thead> <tbody> <tr><td>1</td><td>01/01/2007</td><td>06:00:00</td><td>14:30:00</td></tr> <tr><td>2</td><td>01/02/2007</td><td>06:00:00</td><td>13:00:00</td></tr> <tr><td>3</td><td>01/03/2007</td><td>14:00:00</td><td>23:00:00</td></tr> <tr><td>4</td><td>01/04/2007</td><td>14:00:00</td><td>22:00:00</td></tr> <tr><td>5</td><td>01/05/2007</td><td>22:00:00</td><td>06:00:00</td></tr> <tr><td>6</td><td>01/06/2007</td><td>22:00:00</td><td>06:00:00</td></tr> <tr><td>7</td><td>01/09/2007</td><td>06:00:00</td><td>14:00:00</td></tr> <tr><td>8</td><td>01/10/2007</td><td>06:00:00</td><td>15:00:00</td></tr> </tbody> </table> <p>« Back Forward » Go to page <input type="text" value="1"/> Total 1 Number of rows: 8 Columns: 3</p>	No.	A Datum	B Von	C Bis	1	01/01/2007	06:00:00	14:30:00	2	01/02/2007	06:00:00	13:00:00	3	01/03/2007	14:00:00	23:00:00	4	01/04/2007	14:00:00	22:00:00	5	01/05/2007	22:00:00	06:00:00	6	01/06/2007	22:00:00	06:00:00	7	01/09/2007	06:00:00	14:00:00	8	01/10/2007	06:00:00	15:00:00
	No.	A Datum	B Von	C Bis																																	
1	01/01/2007	06:00:00	14:30:00																																		
2	01/02/2007	06:00:00	13:00:00																																		
3	01/03/2007	14:00:00	23:00:00																																		
4	01/04/2007	14:00:00	22:00:00																																		
5	01/05/2007	22:00:00	06:00:00																																		
6	01/06/2007	22:00:00	06:00:00																																		
7	01/09/2007	06:00:00	14:00:00																																		
8	01/10/2007	06:00:00	15:00:00																																		
Further steps	The resulting table should be converted to date+time/date+time to allow operations such as Scaling 7.0																																				
TIS Project	Confluence Op Import Text or CSV file.gzip																																				

Want to learn more?

Imports data from a text file.

Parameter

Parameter	Value	Opt.	Description	Example
@LOADCSV FILE	System. String	-	-	-
Name	System. String	-	Name of the file, including path. Entered by browsing the folders in data management .	Confluence/confluence-upload-CSV.txt
Path (manual)	System. String	-	Name of the file, including path. Entered manually and can be a parameter .	Path (manual): <input type="text" value="#XI.TISPar('parFolder')#\XI.TISPar('parFile')#"/>
First lines / Last lines	-	-	Information box showing the first and last lines of the import file defined above.	<div style="border: 1px solid #ccc; padding: 5px;"> <p>First lines: <input type="text" value="Datum;Von;Bis"/></p> <p>01.01.2007;06:00;14:30</p> <p>02.01.2007;06:00;13:00</p> <p>03.01.2007;14:00;23:00</p> <p>Last lines: <input type="text" value="Datum;Von;Bis"/></p> <p>01.01.2007;06:00;14:30</p> <p>02.01.2007;06:00;13:00</p> <p>03.01.2007;14:00;23:00</p> <p><input checked="" type="checkbox"/> First row is a header row.</p> </div>
First row is a header row	System. Boolean	-	When checked, the data of the first row in the file is used as headers.	<div style="border: 1px solid #ccc; padding: 5px;"> <p>First lines: <input type="text" value="Datum;Von;Bis"/></p> <p>01.01.2007;06:00;14:30</p> <p>02.01.2007;06:00;13:00</p> <p>03.01.2007;14:00;23:00</p> <p>Last lines: <input type="text" value="Datum;Von;Bis"/></p> <p>01.01.2007;06:00;14:30</p> <p>02.01.2007;06:00;13:00</p> <p>03.01.2007;14:00;23:00</p> <p><input checked="" type="checkbox"/> First row is a header row.</p> </div>

Remove white space characters	System. Boolean	-	When checked, white space characters around the column separator will be removed.	-
Column separator	System. String	-	Character that separates columns in the input file.	-
Text delimiter	System. String	-	Symbol enclosing text in the input file.	-
Decimal symbol	System. String	-	Symbol separating the integral part from the fractional part in decimal numbers (this is "," in German, but "." in English).	-
Type of result table	System. String	-	Type of result table, see Types of Tables .	-
Behavior in the case of invalid cell values – Apply default values, e.g. 0.0 with floating point values, if NULL should transferred	System. Boolean	-	When checked, then default values are written instead of NULL, e.g. "0.0" in Double columns, "0" in Integer columns.	-
Mapping	-	-	<p>Suggested mapping from the input file to the table.</p> <p>Created after clicking "Execute" on the upper right.</p> <p>Can be modified manually by using the symbols to the left.</p>	
Error output in node	System. String	opt.	An empty data node to save rows that could not be imported.	-
@MODE	System. Int32	-	-	-
@IMPORTFILE	System. String	-	-	-

Example 2: Import file of type date+time/date+time

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Read in the text file [Import_2a.txt](#)

```
Von;Bis
01.01.07 06:00;01.01.07 14:30
02.01.07 06:00;01.01.07 13:00
03.01.07 14:00;01.01.07 23:00
04.01.07 14:00;01.01.07 22:00
05.01.07 22:00;01.01.07 06:00
06.01.07 22:00;01.01.07 06:00
09.01.07 06:00;01.01.07 14:00
10.01.07 06:00;01.01.07 15:00
```

First, save the file on your PC and then import it into TIS (see [TIS:Datenmanagement \(link to old wiki\)](#)).

Create an empty node in the TIS project and add operation "Import text or csv-file".

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Click on the folder symbol next to "Name" and select the import file.

Alternatively, files can be defined via parameters under "Path (manual):"

Path (manual):

Then, chose the following settings:

Settings

Name:

Path (manual):

Data (Number of rows total: 9)

First lines:
01.01.07 06:00;01.01.07 14:30
02.01.07 06:00;01.01.07 13:00
03.01.07 14:00;01.01.07 23:00

Last lines:
06.01.07 22:00;01.01.07 06:00
09.01.07 06:00;01.01.07 14:00
10.01.07 06:00;01.01.07 15:00

First row is a header row.
 Remove white space characters.

Column separator:

Text delimiter:

Decimal symbol:

Type of result table:

Behavior in the case of invalid cell values: Apply default values, e.g. 0.0 with floating point values, if NULL should transferred

Mapping Execute

Column	Column name	Data type	Data Format	Semantics	Replacement of illegal values
1	Von	Date	Date (MDY)	Date+Time (start)	
2	Bis	Date	Date (MDY)	Date+Time (start)	

Click "Execute" to let TIS suggest the columns based on your suggestions. You will need to correct the suggested column "Bis" to Semantics: "Date+Time (end)".

Please note: Click on the button "Edit" to change settings. Click on the button "Apply" to confirm changes.

As of version 5.8 a specific **error node** can optionally be defined. That gives the possibility that error nodes can be displayed in [TIS] Board.

Define an empty data node and choose the node as data node in the import operation.

Error output in node:*

R e s u l t	A Von ▾		B Bis ▾	
	1	01/01/2007 06:00:00		01/01/2007 14:30:00
	2	01/02/2007 06:00:00		01/01/2007 13:00:00
	3	01/03/2007 14:00:00		01/01/2007 23:00:00
	4	01/04/2007 14:00:00		01/01/2007 22:00:00
	5	01/05/2007 22:00:00		01/01/2007 06:00:00
	6	01/06/2007 22:00:00		01/01/2007 06:00:00
	7	01/09/2007 06:00:00		01/01/2007 14:00:00
	8	01/10/2007 06:00:00		01/01/2007 15:00:00
« Back Forward » Go to page		1	Total 1	Number of rows: 8 Columns: 2
T I S P r o j e c t	Confluence Op Import Text or CSV file.gzip			

Example 3: Import file of type date+time/date+time with overlap to the next day

Situation	<p>Read in the text file</p> <pre>Datum;Von;Bis 01.01.2007;06:00;14:30 02.01.2007;06:00;13:00 03.01.2007;14:00;23:00 04.01.2007;14:00;22:00 05.01.2007;22:00;06:00 06.01.2007;22:00;06:00 09.01.2007;06:00;14:00 10.01.2007;06:00;15:00 11.01.2007;06:00;25:00 12.01.2007;06:00;05:00+ 13.01.2007;06:00;06:00+ 14.01.2007;22:00;06*00</pre> <p>Please note: Times overlapping to the next day are indicated by different formats here: 25:00, 5:00+, and 6*00. This example will demonstrate how to read in each of these formats.</p>
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Operation setting

One solution for this is to apply the **Formula operator (row-by-row) (4.0) = Formeloperator** to create new columns which calculate the correct date and time:

No.	Status	Operation	Kurzbezeichner	Beschreibung
1		Import Text- bzw. CSV-Datei 3.0		Einstellungen CSV Daten: Import_cs/Import_1.txt Spaltenreihenr.: Dezimalsymbol: Typ der Ergebnistabelle: Nicht definiert Sonstiges: Überflüssige Leerzeichen löschen, Erste Zeile enthält Spaltenüberschriften Importiert: 12 Zeilen, 5 Spalten am: 11.12.2015 13:54:55 Fehlerrspalte in Knoten:
2		Formeloperator (zeilenweise) (4.0)		Einstellungen Name der Ergebnisspalte: Nextday Typ der Ergebnisspalte: Ja/Nein-Wert Benutzerparameter:
3		Umwandlung "String" -> Datum 2.0		Anwendung auf Spalten: Eingangsspalten = C (Bis) Einstellungen Datumformat (Eingangsdaten): HH:mm Datumformat (Ergebnisdaten): HH:mm:ss Prefix Spalte Erfolg: S_ Prefix Spalte Wert: V_ Max. Fehleranzahl: 1000
4		Formeloperator (zeilenweise) (4.0)		Einstellungen Name der Ergebnisspalte: Bis2 Typ der Ergebnisspalte: Text Benutzerparameter:
5		Umwandlung "String" -> Datum 2.0		Anwendung auf Spalten: Eingangsspalten = G (Bis2) Einstellungen Datumformat (Eingangsdaten): HH:mm Datumformat (Ergebnisdaten): HH:mm:ss Prefix Spalte Erfolg: S_ Prefix Spalte Wert: V_ Max. Fehleranzahl: 1000
6		Formeloperator (zeilenweise) (4.0)		Einstellungen Name der Ergebnisspalte: h Typ der Ergebnisspalte: ganze Zahl Benutzerparameter:
7		Formeloperator (zeilenweise) (4.0)		Einstellungen Name der Ergebnisspalte: m Typ der Ergebnisspalte: ganze Zahl Benutzerparameter:
8		Formeloperator (zeilenweise) (4.0)		Einstellungen Name der Ergebnisspalte: Bis3 Typ der Ergebnisspalte: Datum Benutzerparameter:
9		Formeloperator (zeilenweise) (4.0)		Einstellungen Name der Ergebnisspalte: Von2 Typ der Ergebnisspalte: Datum Benutzerparameter:

Formulas are:

1. NextDay [Ja/Nein]: #Bis#.Substring(#Bis#.Length-1 > 0 ? #Bis#.Length - 1 : 0) == "+" || #Bis#.Contains(" * ")
2. Bis2 [Text]: #Bis#.Replace("+", "").Replace(" * ", ":")
3. h [ganze Zahl]: System.Convert.ToInt32(#Bis2#.Split(':')[0])
4. m [ganze Zahl]: System.Convert.ToInt32(#Bis2#.Split(':')[1])
5. Bis3 [DateTime]: #Datum#.AddDays(#Nextday# ? 1 : 0).AddHours(#h#).AddMinutes(#m#)
6. Von2 [DateTime]: #Datum#.Add(#Von#.TimeOfDay)

Result

Datenknoten: s_01_import_date/time

Einstellungen zum Knoten ausblenden

Name: s_01_import_date/time

Beschreibung:

Basiert auf: -

Aktualisierung: Automatisch Manuell Eingefroren

Eigenschaften: TISBoard

Datentabelle ausblenden

No.	Datum	B_Von	C_Bis	D_Nextday	E_S_Bis	F_V_Bis	G_Bis2	H_S_Bis2	I_V_Bis2	J_h	K_m	L_Bis3	M_Von2
1	01.01.2007	06:00:00	14:30	False	True	14:30:00	14:30	True	14:30:00	14	30	01.01.2007 14:30:00	01.01.2007 06:00:00
2	02.01.2007	06:00:00	13:00	False	True	13:00:00	13:00	True	13:00:00	13	0	02.01.2007 13:00:00	02.01.2007 06:00:00
3	03.01.2007	14:00:00	23:00	False	True	23:00:00	23:00	True	23:00:00	23	0	03.01.2007 23:00:00	03.01.2007 14:00:00
4	04.01.2007	14:00:00	22:00	False	True	22:00:00	22:00	True	22:00:00	22	0	04.01.2007 22:00:00	04.01.2007 14:00:00
5	05.01.2007	22:00:00	06:00	False	True	06:00:00	06:00	True	06:00:00	6	0	05.01.2007 06:00:00	05.01.2007 22:00:00
6	06.01.2007	22:00:00	06:00	False	True	06:00:00	06:00	True	06:00:00	6	0	06.01.2007 06:00:00	06.01.2007 22:00:00
7	09.01.2007	06:00:00	14:00	False	True	14:00:00	14:00	True	14:00:00	14	0	09.01.2007 14:00:00	09.01.2007 06:00:00
8	10.01.2007	06:00:00	15:00	False	True	15:00:00	15:00	True	15:00:00	15	0	10.01.2007 15:00:00	10.01.2007 06:00:00
9	11.01.2007	06:00:00	25:00	False	False	-:25:00	False	False	-	25	0	11.01.2007 01:00:00	11.01.2007 06:00:00
10	12.01.2007	06:00:00	05:00+	True	False	-:05:00	True	True	05:00:00	5	0	12.01.2007 05:00:00	12.01.2007 06:00:00
11	13.01.2007	06:00:00	06:00+	True	False	-:06:00	True	True	06:00:00	6	0	13.01.2007 06:00:00	13.01.2007 06:00:00
12	13.01.2007	22:00:00	06:00	False	False	-:06:00	True	True	06:00:00	6	0	14.01.2007 06:00:00	13.01.2007 22:00:00

s Zurück Vor Gehe zu Seite 1 imp. 1 Anzahl Zeilen: 12 | Spalten: 13

TIS Project

[DateTimeImport.gzip](#)

Problem	Frequent Cause	Solutions
Everything is suggested as Identifier although I wanted to read in Text.		<ul style="list-style-type: none"> • This can be changed manually, but it is usually not necessary. • All operations which work with Text, also work with Identifier. (Identifier = special case of text) • If columns remain after conversion, and this is not wanted, simply delete those columns.
How can I make changes to the "Mapping" table?		<ul style="list-style-type: none"> • You get into the editing mode by clicking the button • You need to confirm changes by clicking the button • Columns that are not supposed to be imported can be deleted with the button • You can change the order of columns (how they will be displayed in the result table) with the buttons

<p>"Execute" is suggesting only 1 column with all column titles in "Mapping"</p>	<p>Common error: Wrong column separator has been chosen (e.g., semicolon instead of tabulator)</p>	<p>Check column separator, change it and click "execute"</p>
<p>The operation does not read in the decimal points (or not in every column)</p>	<ul style="list-style-type: none"> • Decimal symbol has not been selected correctly. • After clicking "Execute" the suggested columns have been applied without further checking. However, TIS interprets the values in the import table by reading the values in the first row. If the first row contains numbers without decimal numbers, TIS suggests Integer as data type. 	<ul style="list-style-type: none"> • Check if the decimal symbol has been chosen correctly. • Check the data type for each column. For decimal numbers you need to select "Double" as data type.

24:00 is not imported correctly

24:00 is not allowed format, because in most software systems it means that it is already the next day.

1. Trick: Replacement of illegal values in combination with formula operator:

- State in the import operation that illegal values should be replaced by 23:59:59:

Mapping

Column	Column name	Data type	Data Format	Semantics	Replacement of illegal values
1	Datum	Date	Date (MDY)	Date	
2	Von	Time	Time (hhmm)	Time (start)	
3	Bis	Time	Time (hhmm)	Time (end)	23:59:59

- Then import, with replacement of illegal values.
- Convert the table to a date+time/date+time format with the Operation [Convert "From-Date/From-Time/To-Time"](#)
- Then, apply the [Formula operator \(row-by-row\) \(4.0\) = Formeloperator](#) and change the corrected date (after don't forget to choose Date as the data type) with the following formula:

Formeloperator (zeilenweise)

```
#Datum#.AddSeconds(#Datum#.Second == 59 && #Datum#.Minute ==59 && #Datum#.Hour==23 ? 1 : 0)
```

Parameter

Name	Typ	Wert	Beschreibung
Datum	Tabellenspalte		
Pers.Nr.	Tabellenspalte		
Kommen/Gehen	Tabellenspalte		

[Vorlage laden](#) [Als Vorlage speichern](#) [Übernehmen](#) [Abbrechen](#)

If the column that needs to be changed is named "Datum", then you can copy this formula:

```
#Datum#.AddSeconds(#Datum#.Second == 59 && #Datum#.Minute ==59 && #Datum#.Hour==23  
1 : 0)
```

A time overlapping to the next day is included (e.g., 25:00)

25:00 is not allowed format, because in most software systems it means that it is already the next day.

Possible solutions please see Example 3 above

Another trick: Use data type "Text" for time

Settings

Name:

Path (manual):

Data (Number of rows total: 4)

First lines:

Datum Von Bis
1.1.2008 7:00 24:00:00
2.1.2008 7:30 25:00:00
3.2.2008 7:45 03:00:00

Last lines:

Datum Von Bis
1.1.2008 7:00 24:00:00
2.1.2008 7:30 25:00:00
3.2.2008 7:45 03:00:00

First row is a header row.
 Remove white space characters.

Column separator:

Text delimiter:

Decimal symbol:

Type of result table:

Behavior in the case of invalid cell values: Apply default values, e.g. 0.0 with floating point values, if NULL should transferred

Mapping Execute

Column	Column name	Data type	Data Format	Semantics	Replacement of illegal values
1	Datum	Date	Date (DMY)	Date	
2	Von	Time	Time (hhmm)	Time (start)	
3	BisTxt	Text		Identifier (name)	

Resulting in:

No.	A Datum	B Von	C BisTxt
1	01/01/2008	07:00:00	24:00:00
2	02/01/2008	07:30:00	25:00:00
3	03/02/2008	07:45:00	03:00:00

« Back Forward » Go to page Total 1 Number of rows: 3 | Columns: 3