How to Create Folders in Tableau via XML Editing

Overview

This guide explains how to organize calculated fields into folders by directly editing a Tableau workbook's XML. This is useful for:

- Organizing large numbers of calculated fields for handoff
- Bulk-creating folder structures that would be tedious in the UI
- Standardizing folder organization across workbooks

> **Warning**: XML editing is unsupported by Tableau. Always work on a backup copy.

Prerequisites

1. **Backup your workbook** - Copy your `.twb` file before editing
2. **Close Tableau Desktop** - The file must not be open while editing
3. **Text editor** - Use VS Code, Notepad++, or any XML-friendly editor

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File Types

Extension	Description	How to Edit
`.twb`	Unpackaged workbook (XML)	Edit directly
`.twbx`	Packaged workbook (ZIP)	Rename to `.zip`, extract, edit the `.twb` inside

XML Structure for Folders

Key Concepts

1. **Folders must be inside** `<folders-common>` - Individual `<folder>` elements cannot stand alone
2. **Location matters** - `<folders-common>` must appear in a specific position in the XML schema
3. **Field names must match exactly** - Use the internal `name` attribute from `<column>` tags

Schema Position

The `<folders-common>` element must appear in this order within `<datasource>`:

```
...
<drill-paths>...</drill-paths>                          (if present)
<unlinked-server-hierarchies>...</unlinked-server-hierarchies>  (if present)
<folders-common>                                        <-- YOUR FOLDERS GO HERE
  <folder>...</folder>
</folders-common>
<folders-parameters>...</folders-parameters>           (if present)
```

```
<actions>...</actions>                              (if present)
<extract>...</extract>                              (if present)
<layout ... />                                      <-- MUST BE AFTER
folders-common
<style>...</style>
...
```

Basic Syntax

```
<folders-common>
  <folder name='Folder Name'>
    <folder-item name='[InternalFieldName]' type='field' />
    <folder-item name='[AnotherFieldName]' type='field' />
  </folder>
</folders-common>
```

Step-by-Step Instructions

Step 1: Find Your Calculated Field Names

Each calculated field has an internal name (not the display name). To find it:

1. Open the `.twb` file in a text editor
2. Search for your field's display name (the `caption` attribute)
3. Note the `name` attribute value

Example:

```
<column caption='Attendance Rate'
        datatype='real'
        name='[Calculation_1234567890123456]'
        role='measure'
        type='quantitative'>
  <calculation class='tableau' formula='SUM([Present])/SUM([Total])' />
</column>
```

The internal name is: `[Calculation_1234567890123456]`

Step 2: Find the Insertion Point

Search for `<layout` in your file. Your `<folders-common>` block goes **immediately before** the `<layout` tag.

Look for this pattern:

```
    </group>
    <layout common-percentage='...' ... />
```

You will insert between `</group>` and `<layout>`:

```
</group>
<folders-common>
  <!-- folders go here -->
</folders-common>
<layout common-percentage='...' ... />
```

Step 3: Create the Folder Structure

Add your `<folders-common>` block with folders:

```
<folders-common>
  <folder name='Sales Metrics'>
    <folder-item name='[Calculation_1111111111111111]' type='field' />
    <folder-item name='[Calculation_2222222222222222]' type='field' />
  </folder>
  <folder name='Date Filters'>
    <folder-item name='[Calculation_3333333333333333]' type='field' />
    <folder-item name='[Calculation_4444444444444444]' type='field' />
  </folder>
</folders-common>
```

Step 4: Verify `show-structure` is Enabled

Find the `<layout>` tag and ensure it has `show-structure='true'`:

```
<layout ... show-structure='true' ... />
```

If this attribute is missing or set to `false`, add/change it to `true`.

Step 5: Save and Test

1. Save the file
2. Open in Tableau Desktop
3. In the Data pane, right-click and select **Group by Folder**

Complete Example

Before (No Folders)

```
    </group>
    <layout common-percentage='0.5' dim-ordering='alphabetic'
            measure-ordering='alphabetic' show-structure='true' />
    <style>
```

After (With Folders)

```
    </group>
    <folders-common>
      <folder name='Core Metrics'>
        <folder-item name='[Calculation_1234567890123456]' type='field' />
        <folder-item name='[Calculation_2345678901234567]' type='field' />
        <folder-item name='[Calculation_3456789012345678]' type='field' />
      </folder>
      <folder name='Risk Flags'>
        <folder-item name='[Calculation_4567890123456789]' type='field' />
        <folder-item name='[Calculation_5678901234567890]' type='field' />
      </folder>
      <folder name='UI Elements'>
        <folder-item name='[Calculation_6789012345678901]' type='field' />
        <folder-item name='[Calculation_7890123456789012]' type='field' />
      </folder>
    </folders-common>
    <layout common-percentage='0.5' dim-ordering='alphabetic'
            measure-ordering='alphabetic' show-structure='true' />
    <style>
```

Special Characters

> **CRITICAL: XML Character Escaping**
>
> Special characters **MUST** be escaped in ALL XML attribute values, including:
>
> - **Folder names**
> - **Formula comments** (text after `//` in formulas)
> - Any other attribute text
>
> Failure to escape will cause Tableau to fail to open the workbook.

Character	Must Use	Example
&	&	`Config & Security` displays as "Config & Security"
'	'	`Owner's goal` displays as "Owner's goal"
"	"	
<	<	

Character	Must Use	Example
>	>	

Common Errors:

- `"expected entity name for reference"` → Unescaped `&` character
- `"whitespace expected"` → Unescaped `'` (apostrophe) inside single-quoted attribute

Folder Name Example:

```
<!-- WRONG -->
<folder name='Config & Security'>

<!-- CORRECT -->
<folder name='Config &amp; Security'>
```

Formula Comment Example (same rules apply):

```
<!-- WRONG - apostrophe breaks the attribute -->
formula='// Individual owner's margin goal&#13;&#10;...'

<!-- CORRECT -->
formula='// Individual owner&apos;s margin goal&#13;&#10;...'
```

Example with escaped ampersand:

```
<folder name='Trends &amp; Rolling'>
```

This displays as: `Trends & Rolling`

Using Emojis in Folder Names

Emojis work in folder names and help with visual organization:

```
<folders-common>
  <folder name='📊 Core Metrics'>
    ...
  </folder>
  <folder name='▶ Risk Flags'>
    ...
  </folder>
  <folder name='📅 Dates &amp; Filters'>
    ...
  </folder>
```

```
    <folder name=' 🔒 Security'>
      ...
    </folder>
  </folders-common>
```

Common Errors and Solutions

Error: "element 'folder' is not allowed"

Cause: `<folder>` elements are not wrapped in `<folders-common>`

Solution: Wrap all folders:

```
<folders-common>
  <folder name='...'>...</folder>
</folders-common>
```

Error: "attribute 'role' is not declared for element 'folder'"

Cause: Using `role='measures'` or `role='dimensions'` attribute

Solution: Remove the `role` attribute. Inside `<folders-common>`, folders only need the `name` attribute:

```
<!-- WRONG -->
<folder name='Sales' role='measures'>

<!-- CORRECT -->
<folder name='Sales'>
```

Error: "no declaration found for element 'folder'"

Cause: `<folders-common>` is in the wrong location in the XML

Solution: Move `<folders-common>` to appear **BEFORE** `<layout>` and **AFTER** `</group>` or other allowed elements

Error: "element 'folders-common' is not allowed"

Cause: `<folders-common>` is placed after elements that must come after it (like `<layout>` or `<object-graph>`)

Solution: Check the schema order and move `<folders-common>` to the correct position

Error: "expected entity name for reference"

Cause: Unescaped `&` character in folder name or other attribute

Solution: Replace all `&` with `&` in folder names and other attribute values

Folders Don't Appear in Tableau

Cause: Data pane is not set to folder view

Solution: In Tableau, right-click in the Data pane → **Group by Folder**

Tips for Large Workbooks

Finding All Calculated Fields

Use this regex pattern to find all calculated fields:

```
<column caption='[^']*' [^>]*name='\[Calculation_[^\]]+\]'
```

Batch Extraction with Python

```python
from tableaudocumentapi import Workbook

wb = Workbook('your_workbook.twb')
for ds in wb.datasources:
    for field in ds.fields:
        if field.calculation:
            print(f"Name: {field.name}, Caption: {field.caption}")
```

Organizing by Category

Group calcs by their function:

- Attendance-related calcs → Attendance folder
- Grade-related calcs → Grades folder
- Flag/indicator calcs → Risk Flags folder

Folder Organization Best Practices

Folder Type	Purpose	Example Fields
Core Metrics	Main KPIs and measures	Attendance %, GPA, Completion Rate
Risk Flags	Warning indicators	At-Risk Flag, Low Attendance Flag
Trends	Week-over-week, rolling calcs	WoW Change, 4-Week Average
Dates & Filters	Date logic, filter helpers	Current Week, Is Active
UI & Tooltips	Display formatting	Button Labels, Tooltip Text

Folder Type	Purpose	Example Fields
Security	RLS, user-based logic	User Email, Row Access

Limitations

1. **One folder per field** - A field can only belong to one folder
2. **No nested folders** - Tableau doesn't support subfolders
3. **Relational sources only** - OLAP/cube sources don't support folders
4. **Server publishing** - Folders may not persist when publishing data sources separately

Quick Reference

```xml
<!-- Minimum required structure -->
<folders-common>
  <folder name='Folder Name'>
    <folder-item name='[Calculation_XXXXX]' type='field' />
  </folder>
</folders-common>

<!-- Must appear BEFORE <layout> tag -->
<!-- Must appear AFTER </group>, </drill-paths>, etc. -->
<!-- Do NOT use role attribute -->
<!-- Field names must match exactly (case-sensitive, with brackets) -->
```

Checklist Before Saving

- ☐ All `<folder>` elements are inside `<folders-common>`
- ☐ `<folders-common>` is positioned before `<layout>`
- ☐ No `role` attribute on `<folder>` elements
- ☐ All field names match exactly (including brackets)
- ☐ **No unescaped `&` in folder names** (use `&`)
- ☐ **No unescaped `'` in formula comments** (use `'`)
- ☐ `show-structure='true'` is set in `<layout>`
- ☐ File is saved and Tableau Desktop is closed

XML Escaping Quick Reference

Before saving, search for these patterns and fix them:

Search For	Replace With	Where It Occurs
`&` (ampersand + space)	`&`	Folder names, comments
`'s` (apostrophe-s)	`'s`	Comments: "owner's goal"

Search For	Replace With	Where It Occurs
' between words	'	Comments: 'All', 'Current'

Common words that need escaping:

- AE & CM → AE & CM
- Dates & Time → Dates & Time
- owner's → owner's
- 'All' → 'All'

Regex to find unescaped ampersands:

```
& (?!amp;|apos;|quot;|lt;|gt;)
```

Document created: December 2024 Updated: December 2025 - Added prominent XML escaping warning based on real-world errors Based on Tableau Desktop XML schema