

Study Guide

Salesforce Certified Tableau
Desktop Foundations



Yatharth Chauhan

Follow for more content

Salesforce Certified Tableau Desktop Foundations - Yatharth Chauhan

Introduction: What is Salesforce Certified Tableau Desktop Foundations?

The Salesforce Certified Tableau Desktop Foundations certification proves you understand the basics of data visualization and analysis using Tableau Desktop. This is an ENTRY-LEVEL certification designed for anyone NEW to Tableau who wants to prove their fundamental skills. This is perfect for analysts, business users, students, and anyone starting with data visualization.

Think of this certification as proving you know:

- How to connect to data and prepare it
- How to create visualizations and charts
- How to use basic Tableau concepts
- How to build dashboards
- How to share your insights
- How to organize and filter data

Who should take this exam?

- Data analysts (entry level)
- Business analysts
- Business intelligence professionals
- Anyone learning Tableau
- Students interested in data visualization
- Anyone with 3 months of Tableau experience

EXAM BASICS: What You Need to Know

Total Questions: 40 multiple-choice and multiple-select questions

Time Given: 70 minutes total (includes 5 minutes to read instructions)

Passing Score: 48% (which means about 19 questions correct out of 40)

Cost: 75 USD (approximately 6,000 INR)

Retake Cost: FREE! If you fail, you can try again for free

Prerequisites: None - anyone can take this exam

Exam Code: TDS-C01

Language: Available in English and other languages

Where to Take: Online or at Pearson VUE testing center

Certification Valid For: No expiration date (unique among Tableau certifications!)

This is the EASIEST passing score in Tableau certifications! Only 48% needed.

THE 4 EXAM TOPICS: What You Must Study

Your exam covers 4 main areas. Let me explain each one simply:

1. Connecting to and Preparing Data - 25% of Exam (About 10 questions)

This is about GETTING your data into Tableau and making it ready to use.

What You Need to Know:

1. Data Sources and Connections

Before you can visualize data, you must CONNECT to it.

Types of Data You Can Connect To:

1. Excel Files

- CSV files
- Excel spreadsheets
- Common and easy to use
- Best for small to medium data

2. Databases

- SQL Server

- MySQL
- PostgreSQL
- Oracle
- Connect to large datasets

3. Cloud Services

- Google Sheets
- Salesforce
- Amazon Redshift
- Microsoft Azure
- Connect to live business data

4. Other Sources

- Web data
- JSON files
- PDF files
- Any data source

Connection Types:

1. Live Connection

- Connects directly to data source
- Always uses latest data
- Query sent to database each time
- Slower performance
- Best for: Real-time data, frequently updated data

2. Extract

- Downloads copy of data into Tableau
- Snapshot of data at point in time
- Faster performance

- Can be scheduled to refresh
- Best for: Large datasets, offline work, faster speed

3. Data Model

The data model is HOW your data is organized.

Key Components:

1. Tables

- A collection of data rows and columns
- Like a spreadsheet
- Example: Customer table, Sales table

2. Fields

- Individual columns in a table
- Each field contains one type of data
- Example: Customer Name field, Sales Amount field

3. Data Types

- Text (strings of characters)
- Numbers (integers or decimals)
- Dates (calendar dates)
- Boolean (true or false)
- Geographic (country, state, city)

4. Relationships Between Tables

- How tables connect to each other
- Based on common fields
- Example: Customer table connects to Orders table by Customer ID

5. Joins: Combining Data

Joins are how you combine data from multiple tables.

Types of Joins:

1. Inner Join

- Only includes matching records
- If record in Table A matches Table B, include it
- If no match, exclude it
- Smallest result set

2. Left Join

- Includes all from left table
- Plus matching records from right table
- If no match in right table, still include left table record
- Keeps all left table data

3. Right Join

- Opposite of left join
- Includes all from right table
- Plus matching records from left table

4. Full Outer Join

- Includes all from both tables
- Whether they match or not
- Largest result set

Join Example:

Table A: Customers

- Customer ID 1: John Smith
- Customer ID 2: Jane Doe
- Customer ID 3: Bob Johnson

Table B: Orders

- Order 1: Customer ID 1
- Order 2: Customer ID 1
- Order 3: Customer ID 4 (no match!)

Inner Join Result: Only Customer 1 and 2 appear (4 has no customer)

1. Relationships and Data Blending

Modern Tableau Relationships (Recommended):

Relationships let you combine tables while keeping their independence.

Advantages:

- Preserves table structure
- No data duplication
- Flexible joining
- Handles different levels of detail

Data Blending:

Blending combines two separate data sources.

When to Use Blending:

- Two different databases
- Data at different levels of detail
- Quick combination without restructuring

1. Unions: Stacking Data

Unions combine data vertically (stacking rows).

When to Use:

- Same structure, different time periods
- Multiple similar tables
- Combining quarterly data into annual data

Example:

Q1 Sales Table + Q2 Sales Table + Q3 Sales Table + Q4 Sales Table = Annual Sales Table

1. Metadata and Data Properties

Metadata is DATA ABOUT your data.

What You Can Define:

1. Field Names

- Change how field displays

- Example: Change "S_ID" to "Sales ID"

2. Data Types

- Tell Tableau what kind of data
- Date, text, number, etc.

3. Field Roles

- Dimension or measure (see section 3)
- Determines how it's used

4. Default Aggregation

- How to combine multiple values
- Sum, Average, Count, etc.

5. Geographic Roles

- Tell Tableau this is a city, state, country
- Enables map visualizations

2. Exploring and Analyzing Data - 40% of Exam (About 16 questions)

This is the BIGGEST section! This is about CREATING visualizations and ANALYZING data.

What You Need to Know:

1. Tableau Concepts: The Foundation
2. Dimensions
 - Categorical data
 - What things ARE
 - Examples: Product names, Regions, Customer names, Dates
 - Used to slice and dice data
 - Typically text or dates

3. Measures

- Numerical data
- What you MEASURE
- Examples: Sales amount, Profit, Quantity, Count
- Can be aggregated (added, averaged, etc.)
- Typically numbers

4. Aggregation

- Combining multiple values into one
- Sum: Add all values
- Average: Typical value
- Count: How many values
- Min/Max: Smallest/largest value

Example with Dimensions and Measures:

Data: Sales by Region and Month

Dimensions: Region (North, South, East, West), Month (Jan, Feb, Mar...)

Measures: Sales amount

Aggregation: Sum of Sales

Result: Total sales for each region each month

1. Discrete vs. Continuous

This is CRITICAL for understanding Tableau!

Discrete Fields:

- Individual, separate values
- Create headers or labels
- Shown in BLUE in Tableau
- Example: Discrete Product names as separate columns

When to Use Discrete:

- Categorical data
- When you want separate groups
- Country names, product categories

Continuous Fields:

- Range of values on a scale
- Create an axis (scale)
- Shown in GREEN in Tableau
- Example: Continuous sales amounts as scale from 0 to 1000

When to Use Continuous:

- Numeric data
- When you want trends
- Sales over time, temperature ranges

Important: You can use dimensions as continuous and measures as discrete!

1. Basic Visualizations: Fundamental Charts

2. Bar Chart (Column Chart)

- Vertical bars
- Compare values across categories
- Good for: Comparing sales by region
- Best for: Small number of categories (max 10-15)

3. Horizontal Bar Chart

- Bars go left to right
- Good for: Long category names
- Example: Compare sales by customer name

4. Line Chart

- Points connected by lines
- Show trends over time

- Good for: Sales over months or years
- Best for: Continuous data

5. Scatter Plot

- Points on graph
- Show relationship between two measures
- Good for: Profit vs. Sales (are they related?)
- Answer: Do high sales mean high profit?

6. Pie Chart

- Circle divided into slices
- Show parts of a whole
- Good for: Percent of total
- Example: Market share by product

7. Table

- Rows and columns
- Display raw numbers
- Good for: Exact values
- Best for: Small datasets

8. Organizing Data: Fields, Shelves, and Layout

Tableau Uses Shelves to Organize Data:

1. Columns Shelf

- What goes across the top
- Usually dimensions (categories)
- Creates columns in your visualization

2. Rows Shelf

- What goes down the side
- Usually dimensions

- Creates rows in your visualization

3. Marks Shelf

- What represents the data point
- Color, size, shape, label
- Changes how data looks

4. Filters Shelf

- What data to INCLUDE
- Removes unwanted data before visualization
- Example: Only show 2024 sales

Example: Creating a Chart

Goal: Show sales by region and product

1. Drag Region to Columns shelf

- Creates column headers: North, South, East, West

2. Drag Product to Rows shelf

- Creates row headers: Widget, Gadget, Tool

3. Drag Sales (measure) to Marks shelf

- Each cell shows sales number

4. Change mark from text to color

- See pattern more easily

Result: Two-way comparison table of sales

1. Filters: Controlling What Data Shows

Filters limit which data appears.

Types of Filters:

1. Dimension Filter

- Filter by category
- Example: Only show North and South regions

- Removes rows from data

2. Measure Filter

- Filter by number value
- Example: Only show sales above 1000
- Removes rows from data

3. Date Filter

- Filter by date range
- Example: Only show last 12 months
- Removes old data

4. Context Filter

- Filter applied before other filters
- Makes other filters faster
- Advanced technique

Filter Shelf:

- Drag field to Filters shelf
- Choose what to include/exclude
- Visualizations instantly update

1. Sorting: Ordering Data

Sorting arranges data in specific order.

1. Alphabetical Sort

- A to Z or Z to A
- For text data
- Example: Countries alphabetically

2. Numerical Sort

- Low to high or high to low
- For number data

- Example: Sales highest to lowest

3. Date Sort

- Oldest to newest or newest to oldest
- For date data

4. Custom Sort

- Create your own order
- Drag items to reorder
- Example: Put Best region first

Sorting vs. Filtering:

Sorting: Changes ORDER of data (still shows all)

Filtering: Changes WHICH data shows (hides some)

1. Grouping and Sets

Grouping: Combining Related Values

Group Example:

- Individual states: California, Nevada, Arizona → Group them as "Southwest"
- Individual products: Product A, Product B → Group them as "Premium Line"

Why Group?

- Simplify data
- Focus on bigger picture
- Reduce clutter

Sets: Custom Collections of Values

Set Example:

- Create "Top 5 Customers" set
- Select specific customers manually
- Use set in visualizations

1. Table Calculations: Advanced Analysis

Table calculations do math on your data.

Examples:

1. Rank

- Rank customers by sales (1st, 2nd, 3rd...)
- Answer: Who is top customer?

2. Running Total

- Sales accumulating over time
- Jan: 10k, Feb: 20k, Mar: 35k (accumulation)
- Answer: Are we reaching our annual target?

3. Percent of Total

- What percent of total is this value?
- Region North: 25% of total sales
- Answer: North region is 1/4 of all sales

4. Year-over-Year Growth

- How much did sales grow compared to last year?
- 2024 sales up 15% from 2023
- Answer: Are we growing?

5. Trend Lines and Reference Lines

Trend Lines:

- Line showing general trend
- Help see pattern in data
- Example: Sales trend line going up = growth

Reference Lines:

- Fixed line for comparison
- Example: Average line
- Shows where each point is vs. average

3. Understanding Tableau Concepts - 15% of Exam (About 6 questions)

This is about CORE CONCEPTS and how Tableau works.

What You Need to Know:

1. Measures and Aggregation

Measures are numbers that get aggregated (combined).

Default Aggregations:

1. Sum

- Total of all values
- Example: Total sales
- Best for: Money, quantities

2. Average

- Middle value
- Example: Average sale per transaction
- Best for: Typical value

3. Count

- How many items
- Example: Number of customers
- Best for: Counting records

4. Distinct Count

- How many unique items
- Example: How many different products sold?
- Best for: Unique values

When to Change Aggregation:

- Right-click measure in visualization
- Select aggregation type

- Chart updates immediately

 1. Granularity and Levels of Detail

Granularity is how DETAILED your data is.

Example:

Sales Data at Different Granularities:

- By day: \$1,000 on Monday, \$800 on Tuesday
- By week: \$5,600 total for week
- By month: \$22,000 total for month
- By year: \$250,000 total for year

Same data, different detail level!

Granularity Problems:

If blending data at different granularities:

- One table: Transaction level (each sale)
- Other table: Quota level (by quarter)
- Must handle carefully!

Solution: Use relationships or blending carefully

1. Parameters: Let Users Change Values

Parameters are variables users can change.

Example Parameter:

Parameter: "Profit Target"

- Owner sets it to 100,000
- Visualizations compare actual profit to this target
- Owner can change to 150,000
- Visualizations update automatically

Uses:

- What-if scenarios
- User controls thresholds
- Dynamic dashboards

1. Bins and Histograms

Bins: Grouping Continuous Values

Example:

Sales data (continuous): 5, 12, 8, 15, 22, 18, 30, 25

Create bins of 10:

- Bin 0-10: 5, 8 (2 sales)
- Bin 10-20: 12, 15, 18 (3 sales)
- Bin 20-30: 22, 25 (2 sales)
- Bin 30-40: 30 (1 sale)

Histogram:

Bar chart showing bins:

- X-axis: Bin ranges
 - Y-axis: Count of values in each bin
 - Shows distribution of values
-

4. Sharing Insights - 20% of Exam (About 8 questions)

This is about PRESENTING data and BUILDING dashboards.

What You Need to Know:

1. Formatting Visualizations

Making visualizations look good and clear.

Formatting Options:

1. Fonts

- Size (bigger = easier to read)
- Color (important numbers in bright colors)
- Type (bold for emphasis)

2. Colors

- Background color
- Text color
- Mark color
- Legend color

3. Shapes and Marks

- Circle, square, diamond shapes
- Different shapes highlight different data

4. Legends

- Show what colors mean
- Show what shapes mean
- Help people understand visualization

5. Titles and Labels

- Chart title (what is this?)
- Axis labels (what do these mean?)
- Data labels (exact values)

6. Dashboards: Multi-Visualization Layouts

A dashboard combines multiple visualizations on one screen.

Dashboard Purpose:

- Show multiple perspectives at once
- Answer several questions together
- Interactive exploration
- Communicate insights

Creating a Dashboard:

1. Build individual visualizations (worksheets)

- One chart per worksheet
- Example: Chart 1 is sales by region, Chart 2 is profit by product

2. Create a new dashboard

- Drag worksheets onto dashboard
- Arrange them on canvas

3. Add filters

- Click region filter on dashboard
- All charts update together

4. Add text and titles

- Explain what user is seeing

5. Format layout

- Align charts nicely
- Make it look professional

6. Dashboard Interactivity

Making dashboards respond to user actions.

Dashboard Actions:

1. Filter Action

- Click value in one chart
- Other charts filter to that value
- Example: Click “North” region, all charts show only North

2. Highlight Action

- Click value in one chart
- Other charts highlight that value
- Example: Click customer name, all their transactions highlighted

3. URL Action

- Click in visualization
- Opens website or link
- Example: Click product, opens product page

4. Device Layouts

Different devices need different layouts.

Device Types:

1. Desktop

- Large screen
- Side-by-side charts
- Everything visible

2. Tablet

- Medium screen
- Vertical stacking
- Some charts hidden

3. Phone

- Small screen
- One chart per screen
- Swipe between charts

Creating Device Layouts:

- In dashboard, choose device type
- Rearrange elements for that screen
- Test on actual devices

1. Stories: Guided Narratives

Stories guide user through analysis.

Story Example:

Slide 1: "This region had highest sales"

- Show chart of regions

Slide 2: "Because we launched new product in North"

- Show launch date and North sales spike

Slide 3: "North team had highest bonus this year"

- Show bonus chart

Creating Stories:

1. Create worksheets and dashboards
2. Create new story

3. Drag visualizations into story
4. Add text to explain each slide
5. Users click through slides
6. Workbooks and Worksheets

Understanding Tableau file structure.

Worksheet:

- Single visualization
- One chart or dashboard
- Contains one or more views

Workbook:

- File containing multiple sheets
- Tabs at bottom of screen
- Each sheet can be visualization or dashboard
- Save as .twbx or .twb file

Example Workbook Structure:

- Tab 1: Dashboard (combines charts)
- Tab 2: Sales by Region (worksheet)
- Tab 3: Profit by Product (worksheet)
- Tab 4: Story (guided analysis)

1. Publishing and Sharing

Getting your work to others.

Export Options:

1. PDF
 - Static image
 - Send to people
 - Can't change
2. Image (PNG/JPG)

- Screenshot quality
- Small file size
- Perfect for email

3. PowerPoint

- Embed in presentation
- Professional look

4. Publish to Tableau Server or Cloud

- Interactive dashboard
 - People can explore
 - Updates automatically
-

IMPORTANT TABLEAU CONCEPTS FOR THE EXAM

Order of Operations (Critical!)

Tableau applies filters in specific order:

1. Extract Filters

- Filters on extracted data
- Happens first (fastest)

2. Data Source Filters

- Filters at connection level
- Applied to all views

3. Context Filters

- Special filters
- Applied before other filters
- Makes other filters faster

4. Dimension Filters

- Filter by categories
- Applied after context

5. Measure Filters

- Filter by numbers
- Applied last (slowest)

6. Table Calculation Filters

- Filters on calculated values
- Applied after visualization complete

Why It Matters:

- Performance (earlier = faster)
- Accuracy (order changes results)
- Logical flow

Cardinality and Granularity

Cardinality: Number of unique values

Example:

- Low cardinality: Region (4 values: N, S, E, W)
- High cardinality: Customer (100,000 values)

Granularity: Level of detail

Example:

- Fine granularity: Transaction level (each item sold)
- Coarse granularity: Daily summary

When combining data:

- Must account for different granularity
- Use relationships or blending carefully

Color Encoding

Using color effectively.

Color Rules:

1. Use color to encode dimension

- Different color per category
 - Makes patterns visible
2. Use color to encode measure
 - Light to dark shows scale
 - Light = low, dark = high
 3. Avoid too many colors
 - Maximum 10 different colors
 - Hard to distinguish more
 4. Use colorblind-friendly palettes
 - Not everyone sees colors same way
 - Avoid red-green combinations
-

EXAM QUESTION TYPES AND EXAMPLES

Type 1: Concept Questions

Example:

"What is the difference between a dimension and a measure?"

- A. Dimensions are numbers; measures are text
- B. Dimensions are qualitative data; measures are quantitative data
- C. Dimensions are aggregated; measures are not
- D. There is no difference

Answer: B (Dimensions are categories; measures are numbers)

Type 2: Scenario Questions

Example:

"You need to show sales trends by month for each region. Which shelf arrangement would be best?"

- A. Month on Columns, Sales on Rows
- B. Month on Columns, Region on Rows, Sales on Marks

- C. Region on Columns, Sales on Rows
- D. Sales on Columns, Month on Rows

Answer: B (Shows regions as rows, months across, sales as values)

Type 3: Best Practice Questions

Example:

"You have 200 product categories and want to compare their sales. What should you do?"

- A. Create bar chart with all 200 products
- B. Filter to top 15 products and create bar chart
- C. Create pie chart with all products
- D. Create table with all products

Answer: B (Too many categories on chart is unreadable)

Type 4: Tool Usage Questions

Example:

"To allow users to change a threshold value that affects multiple charts, what should you use?"

- A. A calculated field
- B. A parameter
- C. A filter
- D. A set

Answer: B (Parameters let users change values dynamically)

STUDY STRATEGY: 4-Week Plan

Week 1: Learn the Basics

- Read this guide 2-3 times
- Watch YouTube videos on Tableau basics
- Download Tableau Public (free)
- Complete first few Trailhead modules

Week 2: Deep Dive Topics

- Complete official Trailhead preparation path
- Focus on Exploring and Analyzing Data (40% of exam)
- Practice creating basic charts
- Learn about dimensions and measures deeply

Week 3: Practice and Hands-On

- Take practice exams
- Identify weak topics from practice tests
- Do hands-on exercises in Tableau Public
- Create sample visualizations from real datasets

Week 4: Final Review

- Review this guide one more time
 - Take final practice exam
 - Score 60% or higher consistently
 - Review weak areas
 - Get good sleep before exam!
-

COMMON MISTAKES TO AVOID

Mistake 1: Confusing dimensions and measures

- Fix: Dimensions = categories; measures = numbers

Mistake 2: Using wrong chart type

- Fix: Bar = compare categories; Line = show trends

Mistake 3: Not understanding discrete vs. continuous

- Fix: Discrete = separate groups; Continuous = scale/axis

Mistake 4: Putting wrong field on wrong shelf

- Fix: Dimensions usually on rows/columns; measures on marks

Mistake 5: Not filtering before visualizing

- Fix: Filter data first, then visualize cleaner result

VOCABULARY CHEAT SHEET

Data Source: Connection to your data

Live Connection: Real-time connection to data

Extract: Download of data into Tableau

Dimension: Categorical/qualitative data (text, dates)

Measure: Numerical/quantitative data (numbers)

Aggregation: Combining multiple values (sum, average, count)

Discrete: Separate individual values (categories)

Continuous: Range of values on a scale

Join: Combining tables horizontally

Union: Combining tables vertically

Relationship: Modern way to combine tables

Blend: Combining separate data sources

Worksheet: Single visualization

Dashboard: Multiple visualizations on one screen

Story: Guided narrative through visualizations

Filter: Limit which data shows

Sort: Order data in specific sequence

Shelf: Place to drag fields (rows, columns, marks)

Mark: Visual representation of data point

Calculated Field: New field created from formula

Parameter: Variable that user can change

Bin: Group continuous values into ranges

TEST DAY TIPS

Do This:

- Read questions carefully and completely
- Think about what visualization is best for the data
- Remember order of operations for filters
- Understand discrete vs. continuous
- Click through all answer choices before deciding
- If unsure, eliminate obviously wrong answers first
- Manage your time: 70 minutes for 40 questions equals 1.75 minutes per question
- Review flagged questions if time permits

Don't Do This:

- Rush through questions
 - Assume you know the answer without reading fully
 - Choose first answer without reading others
 - Leave questions blank (always guess if unsure)
 - Spend 5 minutes on one very hard question
 - Panic if you don't recognize a question
-

FREE STUDY RESOURCES

1. Tableau Public (100% Free)

- Download free version of Tableau
- Practice building visualizations
- Download sample data from gallery

2. Trailhead (Free learning)

- Official Salesforce/Tableau training
- Hands-on practice
- Certification prep modules

3. YouTube Channels (Free)

- Tableau official channel
- "Tableau Public" tutorials

- “Tableau With a Story” channel

4. Tableau Documentation (Free)

- help.tableau.com
- Official guides and explanations
- Video tutorials

5. Sample Datasets (Free)

- Tableau Public gallery
 - Kaggle.com
 - Download and practice
-

WHY THIS CERTIFICATION MATTERS

Career Benefits:

- Entry into data visualization field
- Proof of Tableau skills
- Foundation for advanced certifications
- Helps land data analyst jobs
- Valuable for consultants
- No expiration date (unique!)

Career Paths After Certification:

- Data Analyst roles
 - Business Intelligence Analyst
 - Tableau Specialist roles
 - Management consulting
 - Self-employed consultant
-

SUMMARY: Your Quick Reference

Topic: Connecting to and Preparing Data

Percent of Exam: 25%

Key: Connections, data models, joins, relationships, blending

Topic: Exploring and Analyzing Data

Percent of Exam: 40% - THE BIGGEST SECTION

Key: Visualizations, filters, sorting, grouping, calculations

Topic: Understanding Tableau Concepts

Percent of Exam: 15%

Key: Dimensions, measures, aggregation, parameters, bins

Topic: Sharing Insights

Percent of Exam: 20%

Key: Formatting, dashboards, stories, publishing, sharing

Remember:

- 40 questions, 70 minutes
 - 48% to pass (only 19 correct needed!)
 - FREE retake if you fail
 - No expiration date on certification
 - Focus on Exploring and Analyzing Data (40%)
-

FINAL ENCOURAGEMENT

This is an ENTRY-LEVEL certification for data visualization. You can do this!

Remember:

- Only 48% needed to pass (lowest among Tableau certs)
- FREE retake if needed
- No prerequisites
- No expiration (once certified, always certified!)
- Based on fundamental Tableau skills

Study Plan:

- Read this guide completely 2-3 times
- Download Tableau Public and practice
- Complete Trailhead modules
- Take practice exams
- Get hands-on experience building visualizations
- Take the exam when you're consistently scoring 60% or higher

Good luck! You've got this!

Now go study and pass that exam!