

# Intro to TM1

# What is TM1?

- Memory-Resident OLAP database
- Fast & Flexible
  - Sparsity Algorithm for efficiency
  - Up to 256 dimensions/Unlimited RAM (64 bit)
  - Cube Rule Language
  - Can store text!
  - MDX for subsets
- Turbo Integrator ETL tool
  - Imports/Exports
  - Scripting language for processes/chores
  - Copy data between cubes / complex spreading
  - Parameterized with Action Buttons
- Choice of clients: standalone, web-based, ad-hoc, Excel add-in

# Authentication/Security

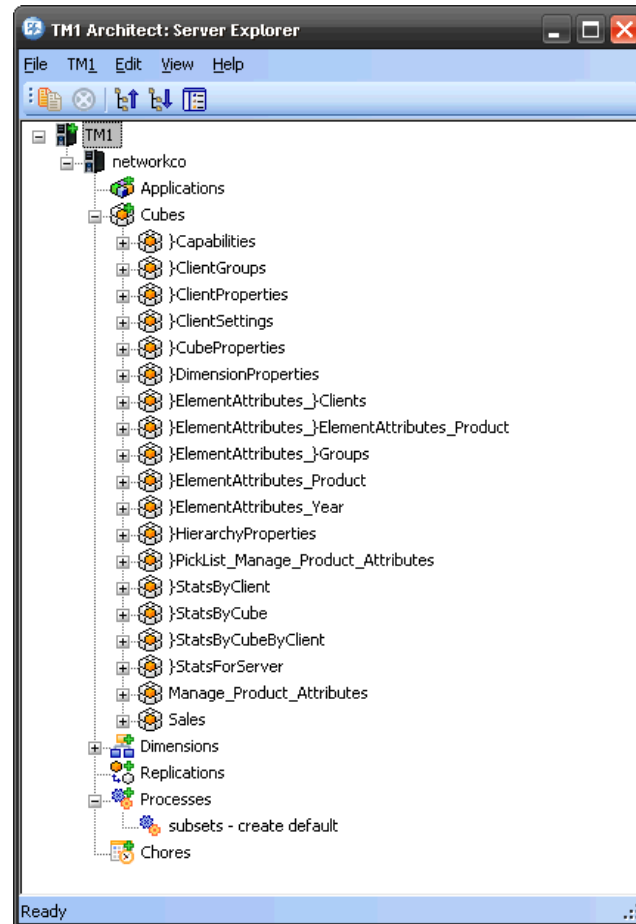
- Authentication:
  - TM1
  - Windows Integrated (Single Sign On)
  - LDAP
  - Cognos CAM
- Security:
  - Cube/Dimension/Cell/Application level
  - Can leverage Cube Rules in Security cubes

# TM1 Clients

- Architect (standalone)
- Perspectives (Excel add-in)
- TM1Web (Excel rendered to ASP)
- Contributor (web-based workflow)
- Executive Viewer (ad-hoc/charting)

# Architect

- Admin/Dev tool
- Access to all components
- Manage security, create and run TI processes, etc
- Can be installed on multiple desktops



# Perspectives

- Excel Add-in
- All functionality of Architect, plus slicing to Excel

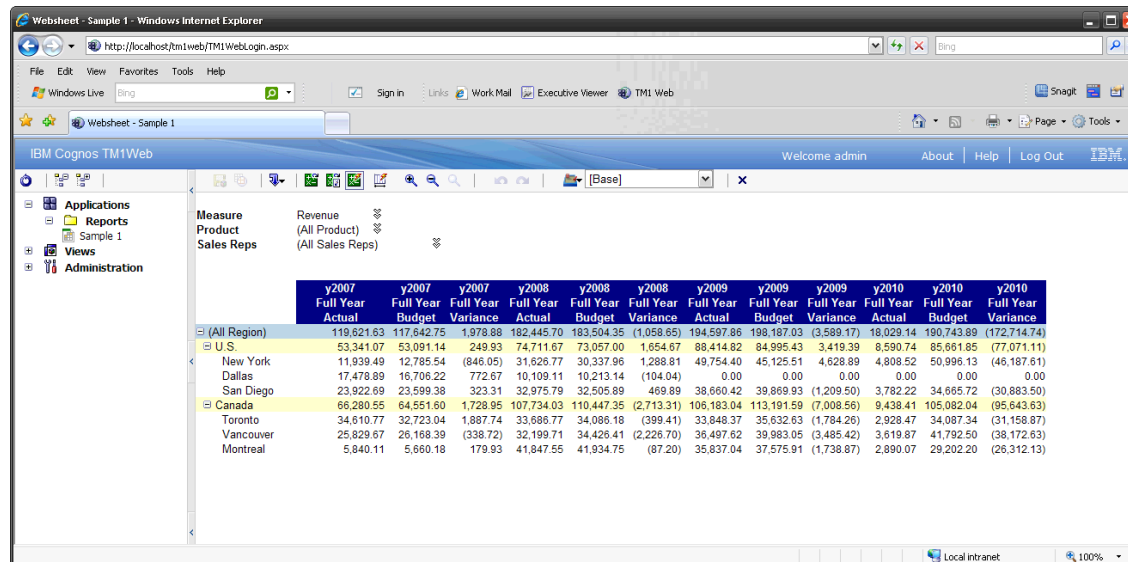
The screenshot shows a Microsoft Excel spreadsheet with a data table and a Cube Viewer window. The data table is as follows:

|              | y2007      | y2007      | y2007     | y2008      | y2008      | y2008      | y2009      |
|--------------|------------|------------|-----------|------------|------------|------------|------------|
|              | Full Year  | Full Year  | Full Year | Full Year  | Full Year  | Full Year  | Full Year  |
|              | Actual     | Budget     | Variance  | Actual     | Budget     | Variance   | Actual     |
| (All Region) | 119,821.83 | 117,642.75 | 1,978.88  | 182,445.70 | 183,504.35 | (1,058.65) | 194,597.86 |
| - U.S.       | 53,341.07  | 53,091.14  | 249.93    | 74,711.67  | 73,057.00  | 1,654.67   | 88,414.82  |
| New York     | 11,939.49  | 12,785.54  | (846.05)  | 31,626.77  | 30,337.96  | 1,288.81   | 49,754.40  |
| Dallas       | 17,478.89  | 16,706.22  | 772.67    | 10,109.11  | 10,213.14  | (104.04)   | 0.00       |
| San Diego    | 23,922.69  | 23,598.38  | 323.31    | 32,975.79  | 32,505.89  | 469.89     | 38,660.42  |
| - Canada     | 66,280.55  | 64,551.60  | 1,728.95  | 107,734.03 | 110,447.35 | (2,713.31) | 106,183.04 |
| Toronto      | 34,610.77  | 32,723.04  | 1,987.74  | 33,686.77  | 34,086.18  | (399.41)   | 33,848.37  |
| Vancouver    | 25,829.67  | 26,168.39  | (338.72)  | 32,199.71  | 34,426.41  | (2,226.70) | 36,497.62  |
| Montreal     | 5,840.11   | 5,660.18   | 179.93    | 41,847.55  | 41,934.75  | (87.20)    | 35,837.04  |

The Cube Viewer window displays a detailed view of the data for 'Sales Variance by Region' with columns for Year/Leaves, Month, Scenario, and various metrics for y2007, y2008, and y2009.

# TM1Web

- Excel converted to ASP pages
- Can leverage Excel functionality
- Pre-built reports or Cube Views
- Export to Excel & PDF

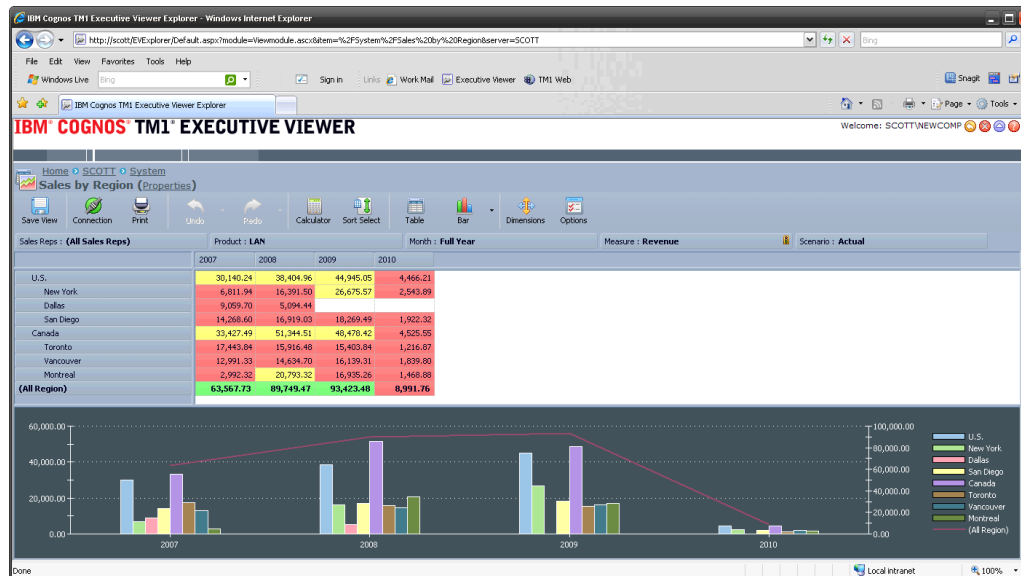


The screenshot displays the IBM Cognos TM1Web interface within a Windows Internet Explorer browser. The browser address bar shows the URL: http://localhost:tm1web/TM1WebLogin.aspx. The page title is "WebSheet - Sample 1". The interface includes a navigation menu on the left with sections for Applications, Reports, Views, and Administration. The main content area shows a report titled "Revenue (All Product)" and "Sales Reps (All Sales Reps)". The report is presented as a table with columns for years 2007 through 2010, each subdivided into Full Year Actual, Full Year Budget, and Full Year Variance. The rows represent different regions and cities, including (All Region), U.S., New York, Dallas, San Diego, Canada, Toronto, Vancouver, and Montreal. The table data is as follows:

|              | y2007            |                  |                    | y2008            |                  |                    | y2009            |                  |                    | y2010            |                  |                    |
|--------------|------------------|------------------|--------------------|------------------|------------------|--------------------|------------------|------------------|--------------------|------------------|------------------|--------------------|
|              | Full Year Actual | Full Year Budget | Full Year Variance | Full Year Actual | Full Year Budget | Full Year Variance | Full Year Actual | Full Year Budget | Full Year Variance | Full Year Actual | Full Year Budget | Full Year Variance |
| (All Region) | 119,621.63       | 117,642.75       | 1,978.88           | 182,445.70       | 183,504.35       | (1,058.65)         | 194,597.86       | 198,187.03       | (3,589.17)         | 18,029.14        | 190,743.89       | (172,714.74)       |
| U.S.         | 53,341.07        | 53,091.14        | 249.93             | 74,711.67        | 73,057.00        | 1,654.67           | 88,414.82        | 84,995.43        | 3,419.39           | 8,590.74         | 85,661.85        | (77,071.11)        |
| New York     | 11,939.49        | 12,785.54        | (846.05)           | 31,625.77        | 30,337.96        | 1,287.81           | 49,754.40        | 45,125.51        | 4,628.89           | 4,808.52         | 50,996.13        | (46,187.61)        |
| Dallas       | 17,478.89        | 16,706.22        | 772.67             | 10,109.11        | 10,213.14        | (104.04)           | 0.00             | 0.00             | 0.00               | 0.00             | 0.00             | 0.00               |
| San Diego    | 23,922.69        | 23,599.38        | 323.31             | 32,975.79        | 32,505.89        | 469.89             | 38,660.42        | 39,869.93        | (1,209.50)         | 3,782.22         | 34,865.72        | (30,883.50)        |
| Canada       | 66,280.55        | 64,551.60        | 1,728.95           | 107,734.03       | 110,447.35       | (2,713.31)         | 106,183.04       | 113,191.59       | (7,008.55)         | 9,438.41         | 105,082.04       | (95,643.63)        |
| Toronto      | 34,610.77        | 32,723.04        | 1,887.74           | 33,696.77        | 34,086.18        | (399.41)           | 33,848.37        | 35,632.63        | (1,784.26)         | 2,928.47         | 34,087.34        | (31,158.87)        |
| Vancouver    | 25,829.67        | 26,168.39        | (338.72)           | 32,199.71        | 34,426.41        | (2,226.70)         | 36,497.62        | 39,983.05        | (3,485.42)         | 3,619.87         | 41,792.50        | (38,172.63)        |
| Montreal     | 5,840.11         | 5,660.18         | 179.93             | 41,847.55        | 41,934.75        | (87.20)            | 35,837.04        | 37,575.91        | (1,738.87)         | 2,890.07         | 29,202.20        | (26,312.13)        |

# Executive Viewer

- Ad-hoc client
- Charting
- Traffic Lighting
- “Macros” aka DynaSelect

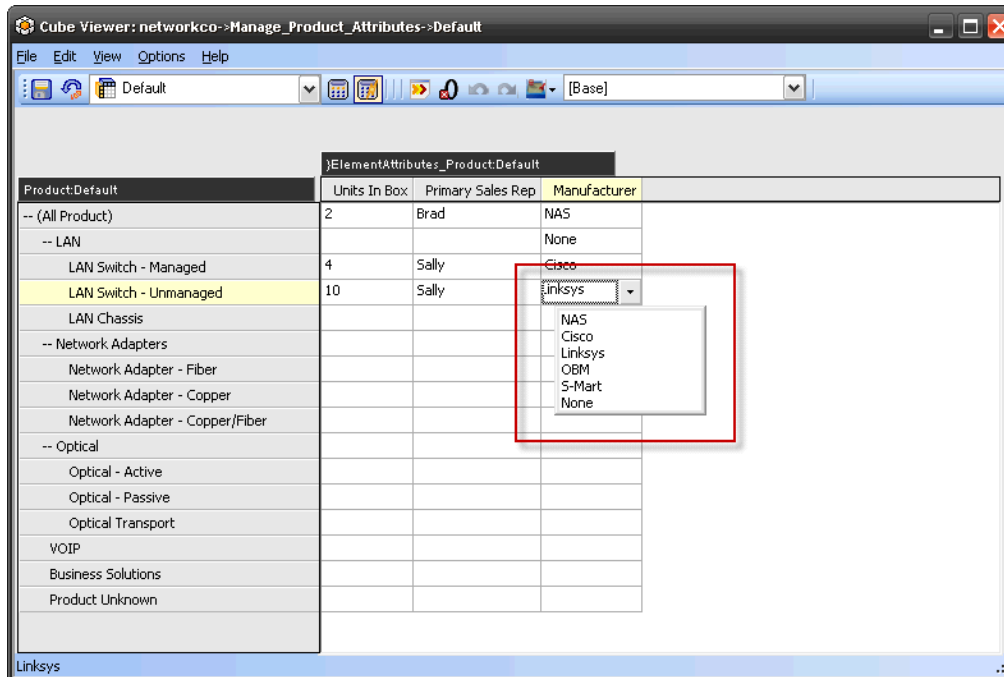


# What's New in 9.5

- Picklists
- Undo/Redo
- Sandboxing
- Contributor

# Picklists

- Define any cell in a cube as a drop down list
- Static, Dimension, or Subset
- Defined via Cube Rules



The screenshot shows the 'Cube Viewer' application window titled 'networkco->Manage\_Product\_Attributes->Default'. The main area displays a table with the following data:

| Product:Default                | Units In Box | Primary Sales Rep | Manufacturer |
|--------------------------------|--------------|-------------------|--------------|
| -- (All Product)               | 2            | Brad              | NAS          |
| -- LAN                         |              |                   | None         |
| LAN Switch - Managed           | 4            | Sally             | Cisco        |
| LAN Switch - Unmanaged         | 10           | Sally             | Linksys      |
| LAN Chassis                    |              |                   |              |
| -- Network Adapters            |              |                   |              |
| Network Adapter - Fiber        |              |                   |              |
| Network Adapter - Copper       |              |                   |              |
| Network Adapter - Copper/Fiber |              |                   |              |
| -- Optical                     |              |                   |              |
| Optical - Active               |              |                   |              |
| Optical - Passive              |              |                   |              |
| Optical Transport              |              |                   |              |
| VOIP                           |              |                   |              |
| Business Solutions             |              |                   |              |
| Product Unknown                |              |                   |              |

A red box highlights the 'Manufacturer' cell for 'LAN Switch - Unmanaged', which contains a dropdown menu with the following options: NAS, Cisco, Linksys, OBM, S-Mart, and None. The 'Linksys' option is currently selected.

# Undo/Redo

- TM1 stores data manipulation transactions
- Quantity of stored transactions adjustable in config file
- Undo/Redo will affect non-visible cells/Rule-driven cells/ consolidations

# Sandboxing

- “Versions” of cube views saved locally
- Users can create multiple sandboxes and perform “what-if” scenarios
- Sandbox changes can be committed back to “base”
- Sandboxes are personal and private until committed
- Exposed in multiple clients (TM1Web, Perspectives, Architect)

# Contributor

- Web-based Cognos front end
- Workflow functionality built off TM1 dimension hierarchies
- Handles many concurrent users well