**10.4**

**Report Services documents**

HTML5 widgets in documents now have a preference menu for the Heat Map and Network widgets, which allows you to further customize widgets within documents.  
When viewing Report Services documents in Presentation mode, you can:

Resize grid columns after drilling down on objects

Drill in and sort graphs

**MicroStrategy Developer**

**Aggregate and Subtotal from base:** You can now apply Aggregate from base and Subtotal from base to metrics in MicroStrategy Developer. The new options appear at the top of the Subtotals/Aggregation tab of the Metric Editor.

**Attribute thresholds -** You can add thresholds to attributes in visualizations, allowing you to apply conditional formatting across headers. When applying a threshold to a parent attribute, the conditional formatting is applied at level of the visualization.

**10.5**

**MicroStrategy Web**

* **Data Wrangling** - You can now select the first x number of rows or randomly sample rows, both options up to 10,000 rows, to get more representative data. You can also use Refresh after random row sampling to gauge the efficacy of your wrangling efforts. .
* **Project Switching**- Easily switch projects by using the MicroStrategy menu and hovering the mouse pointer over the Projects section.
* **Usability enhancements** –
  + Easy access to recent or current folders when saving a document or dashboard
  + Improved notifications to the user regarding unsaved changes to dashboards, before closing
  + Consistency between all the navigation bars within MicroStrategy Web.
* **Support for dashboard page toolbar from Web Customization Editor** - You can now customize the toolbar for the Dashboard page, similar to how the other pages can be customized using the web customization editor.

**Report Services documents**

**Select topmost element by default in a sorted grid** - By default, when defining an attribute in a grid as a slicing selector, the element with the lowest attribute ID is selected. However, due to the sorting defined on the grid, it is not always easy to locate the selected element, and thus not easy to know which element of this slicing selector is controlling the target grid or graph. To help you to easily identify the selected element, you can change the default selected element to the first element in the grid by the **Automatically select topmost element in sorted grid** option on the Configure Selector dialog box.

**View Filter in Presentation mode** - MicroStrategy 10.5 supports view filtering on grids and graphs in documents while in presentation mode. User will have more interactive options and can now include filters on-the-fly to slice and dice their data, even when they are in presentation mode.

**10.6**

**MicroStrategy Developer**

Pre- and post-SQL statements supported for secondary databases in a multi-source report: On a multi-source report in 10.6, you can execute multiple report pre- and post-SQL statements in an expected order for both primary and secondary databases. (A multi-source report uses data from more than one database.) The SQL statements are also executed when the report is used in a document or dashboard. To apply pre- and post-SQL statements, use the Pre/Post Statements VLDB setting.

**10.7**

**Report services documents**

Pre- and post-SQL statements supported for secondary databases in a multi-source report: On a multi-source report in 10.7, you can execute multiple report pre- and post-SQL statements in an expected order for both primary and secondary databases. (A multi-source report uses data from more than one database.) The SQL statements are also executed when the report is used in a document or dashboard. To apply pre- and post-SQL statements, use the Pre/Post Statements VLDB setting.

**Hierarchy Reporting (Early Adopter feature)**

**Web**

Filter on Hierarchical Element Groups: You can now filter on element groups. After an element group has been created, simply place the new group into the Filter panel.

**10.8**

**MicroStrategy Developer**

**Aggregate and Subtotal from base:**You can now apply Aggregate from base and Subtotal from base to metrics in MicroStrategy Developer. The new options appear at the top of the Subtotals/Aggregation tab of the Metric Editor.

**Improved PDF export options** Users now have more options to customize the PDF version of the dashboard, prior to exporting it. The new options, as listed on the image below, allow end users to customize the content on the PDF, and also customize page orientation (landscape vs portrait), paper size, and header or footer details.

**Report services documents**

**Hide Subtotal null/zero rows and columns:**Hide null/zero value functionality has been extended to include Subtotal rows and columns. For more information, see Determining how null and zero metric values are displayed or hidden in a grid report.

**Hierarchy Reporting (Early Adopter feature)**

**Performance enhancement:** When navigating a hierarchy, the display of elements is now noticeably faster.

**Data internationalization support for Microsoft Analysis Services:** The Locale Identifier connection string parameter, which is used by Microsoft Analysis Services for data internationalization, is now supported.

**Support formatting by cell for MDX metrics:** For MDX metric values, you can now select whether to format per column or cell. (In MicroStrategy Developer, navigate to **VLDB Properties** > **MDX** > **MDX Cell Formatting**. Then select **MDX metric values are formatted by column** (default) or **MDX metric values are formatted per cell**.)

**10.9**

**Report services documents**

Null and zero values are now hidden on an element-metric basis to provide further reduction in the return of unwanted data

**Dashboards are now dossiers**