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PRODUCT RELEASE NOTES :: DECEMBER 15, 2018

Nanoseconds, complex queries, custom workspaces, and more.

We're kicking off 2019 with some exciting new features and performance improvements in AMI. First, we're speeding things up by supporting nanosecond and microsecond granularity. Most charting tools only offer one-second granularity, so this feature is incredibly important to brokers who now measure latency in nanoseconds. For our enterprise clients, users can now save custom workspaces that load on login to enhance user experience and workflow efficiency. Additionally, relationships are now even more configurable with cascading abilities for audit trails and multivariable support. See below for all of the new features and enhancements we've added this month.

Highlights

- **NEAREST in JOIN query clauses**
  The Nearest function is now available for cross-database analysis. Join the two database tables by Nearest on the timestamp columns and AMI will figure out the nearest events.
- **Nanosecond and Microsecond support**
  AMI's real-time speed is now granular to the nanosecond and microsecond. Users can utilize nanosecond and microsecond timestamps for real-time analysis and charting.
- **Complex query workflows**
  AMI now allows for the use of multiple variables in dynamic relationships. This is very useful for complex data audit trails across systems.
- **Cascading relationships and queries**
  New expressions manage the timing and order of relationship queries between multiple panels, which allows users to configure cascading relationships.
- **User properties**
  Users can now save custom workspaces with the option ami.web.user.preferences.plugin.class. This will make the user's properties load on login. This feature comes with security additions (see Encrypting properties in the security improvements section).

New Features

- **Function autocomplete**
  AMI now supports autocomplete for nested functions. Ex. typing session.log(session.now().<spacebar> will generate an autocompleted function.
- **timezoneOffset(...)**
  A new function setting the time zone offset.
- **rand(number)**
  A new function generating a random number.
- **percentileCont(...) and percentileDisc(...)**
  New continuous and discrete functions for finding data within a certain percentile.
- **diffSequence(...)**
  A new function for comparing two series of data.
- **Datamodel::process() and datamodel::getParameters()**
  Two new functions that allow walking audit trails to be a programmatic process rather than a manual one.
- **FormButtonField click()**
  A new click method for form fields.
- **Session.execute()**
  A new method to register an event and schedule when it will execute.
- **getPanel()**
  A new menu item class that allows users to design their own right-click menus.

- **ALTER TABLE ... ADD = expression**
  A new expression to add columns to a table and populate them with data
- **CREATE TABLE mytable = <some_java_expression>**
  This java function can now generate a table
- **GROUP BY ... ORDER BY**
  Users can now order underlying groups. Example: group by symbol, order by time.
- **runOnStartup**
  This new expression ensures replaying persistent data fires the appropriate triggers again.
- **Scroll lock option**
  AMI tables now support the option to lock the scroll bar to the bottom of the table when new rows are appended.
- **Filter subrange slider**
  New subrange slider for filters with minimum and maximum options.
- **Datapoint limits**
  Users can now configure the maximum number of data points to display in a chart. If the limit is reached, the chart does not display data.
- **Arrange column search field**
  Added a new search field to arrange columns.
- **Multiline=on option for console**
  Command console now supports running multiple lines at once with the multiline=on option.

Enhancements and Improvements

- **Smarter temporary index generation**
  Indexing is more efficient when querying large sets of data.
- **Faster join search**
  Faster lookup times on left/right joins.
- **More trigger capabilities**
  Event triggers can now return false for onUpdating, onDeleting, and onInserting. When this happens, the update, delete, or insert that triggered the event can be prevented from taking place.
- **Smarter line drawing**
  Graphs lines are sharper and no longer rely on antialiasing. Overlapping lines and areas are now properly layered.
- **Faster ellipses**
  AMI supports faster ellipse drawing using the new canvas ellipse functionality.
- **Better divider styling**
  Global divider style changes are now faster to take effect. Additionally, double-clicking on dividers will now minimize or maximize them.
- **Better hierarchy in column arrange panel**
  Aggregate columns are now bolded in the column arrange menu for better distinction.
- **Improved column naming**
  Column renaming is faster and now supports non-standard variable names.
- **Smarter data source wizard**
  AMI now recognizes price, date, and other common data types in the data source wizard and automatically formats that data accordingly. Ex. price data is autoformatted with two decimal points.
- **Copying relationships**
  Copying and pasting multiple panels now copies their relationships too (rather than having to recreate them).

Expanded Support

- **Adapter for DBVisualizer**
  AMI now works with DBVisualizer, a tool for looking at the data inside the database.
- **Special characters support**
  When importing or exporting Excel files, SOH and other special characters are now supported. Additionally, table names now support special characters.

Security Improvements

- **Encrypting properties**
  Added AES Encryptor and associated command line tool for encrypting properties: f1.properties.secret.key.files.option and f1.global.password.substitute.global.property.

New Shortcuts

- **Table copy shortcuts**
  - Ctrl + CC (on a single cell) = copy cell
  - Ctrl + CC (on multiple columns) = copy selected columns
  - Ctrl + CR (on a single row) = copy row
  - Ctrl + CR (on multiple rows) = copy selected rows
  - Ctrl + CA = advanced copy options
- **Scrolling through table columns with arrow keys**
  When a cell or multiple rows in a column are selected, use the right and left arrow keys to scroll through the columns
- **Form field traversing with the tab key**
  Pressing the tab key focuses on fields top to bottom, left to right (previously, the tab key traversed form fields in the order in which they were created).

For more information, email info@3Forge.com.

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PRODUCT RELEASE NOTES :: FEBRUARY 18, 2019

Ten million data points, in-table editing, custom methods.

This feature release includes many new features for workspace control, enhanced searching capabilities, and one very important benchmark. AMI charts can now display tens of millions of data points – something only a few data tools have accomplished to date. The engineers at 3Forge are working tirelessly to make visualizations faster all the time for enterprise users with hundreds of systems, so this achievement is a very important milestone for the product.

Highlights

- **Tens of millions of data points**
  AMI charts can now display tens of millions of points. Very few analytics tools have achieved this benchmark, and the most popular platforms only support hundreds of thousands of points.
- **In-table editing**
  Users can now edit table values directly.
- **Custom methods**
  More powerful Amiscript supports modular, reusable custom methods to a dashboard.

New Features

- **Row count in datamodel wizard**
  Previewing AMIDB tables in the datamodel wizard now shows total row count.
- **Dynamic and programmatic tabs**
  Each tab in a tab panel can be bound to individual datamodels – allowing for dynamic tab titles, colors, etc. Additionally, tabs can be programmatically controlled using Amiscript.
- **Programmatic panels**
  Panels can be programmatically copied, pasted, and deleted using Amiscript.
- **Auto format axes**
  The data visualization wizard now auto formats chart axes based on the data.
- **Multiselect field**
  Forms now have a multiselect query field and associated Amiscript methods.
- **resetColumns()**
  A resetColumns() function has been added to the TablePanel class that lets users reset columns to the default arrangement.
- **Custom browser titles**
  Users can set custom browser titles.
- **Horizontal bar chart**
  A new type of chart is available in the 2D chart selection.
- **Multi data source option for datamodels**
  A new option to select multiple data sources to create a datamodel. Previously, only one data source could create a datamodel and others would have to be connected later. This new option streamlines the query process between data sources.
- **Text field autocomplete**
  Text fields in forms now have an autocomplete feature.

Enhancements and Improvements

- **Improved searching**
  Search indexing is now faster with enhanced pattern matching using AMIDB indexes. Users can also construct more complex search queries with added syntax for simplified text matching.
- **Optimized IN clauses**
  IN clauses are faster using indexes.
- **Faster joins**
  Joins on multiple columns are faster.
- **Optimized JDBC adapter**
  Accessing databases is faster with optimized JDBC adapter.
- **Better multimonitor support for custom workspaces**
  When an enterprise user signs in to AMI, the platform remembers the layout of windows and pop outs from their last session.
- **Better custom menu control**
  Users can edit and delete non-leaf menu items, allowing more manipulation over nested custom menus.

Expanded Support

- **Special characters**
  Command line terminal now supports SOH and other special characters with the setlocal unprintable_chars option.
- **Three digit hex colors**
  AMI now supports the three digit hex color code format.
- **Precision for very small and large numbers**
  Charts are better at precisely displaying very small and very large numbers and are no longer limited to 64-bit floating point precision.

Bug Fixes

- **Column aligning**
  Column headers now match the alignment of the data in their rows.
- **Table refresh**
  Tables now refresh when copied and pasted to ensure the data is displayed. Previously, pasted tables would appear to have no data at first.

Security Improvements

- **Permissions control**
  All server sockets now support binding to specific interfaces to control permissions and access.

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