Version 2019 Features

Updated: October 31, 2019

Upgrade Notes	
Area	**Feature**
Ad Hoc Reporting	**Features restored to Ad Hoc Report Design** The following features from earlier versions of the Ad Hoc Report design tool have been restored in version 2019: Page layout, page setup, chart highlighting, parameter sheet layout.
Administration	**Create and delete schema functions removed** The 'Create schema' and 'Delete schema' functions for the audit and dataspace database have been removed from Enterprise Manager. The schemas are now created automatically. They can be managed from the administrative console by using the DSL 'database' command.
Administration	**Ant tasks replaced by DSL framework** A variety of Ant tasks have been replaced by a DSL framework for automated tasks, and a new administrative console has been provided for command line access. See "Automating administrative tasks" in the "Advanced Server Administration" section of the documentation for full details.
Administration	**Custom logo and favicon removed** The custom logo and custom favicon features have been removed from Enterprise Manager. Please consult your Account Manager about changing the User Portal logo or favicon for your application.
Administration	**ReportFiles deployment is removed** Support for automated report deployment using the 'ReportFiles' folder has been removed. Files saved in this location are no longer automatically deployed to the server. To deploy reports, use the 'Deploy' feature in Style Studio or the 'Import Asset' feature in Enterprise Manager.
Administration	**Security provider chaining supported** Multiple security providers can now be chained together, both for authentication and authorization. If you had previously defined a primary and backup LDAP server for authentication, the backup server definition will be preserved as the secondary server in the authentication chain.
Administration	**Audit reports moved to User Portal** The predefined audit reports (e.g., 'Logon History', 'Inactive Users', etc.) that were previously located under the **Audit** tab in Enterprise Manager are now located in the 'Built-in Admin Reports' folder in the User Portal Repository listing. Permission to view this folder should generally only be granted to administrative users. New 'Schedule History' and 'Execution Breakdown' reports have also been added.
Administration	**Dashboard configuration settings moved** A variety of dashboard configuration settings were moved from the 'Presentation' folder in the 2018 Enterprise Manager to the 'Content' > 'Dashboard' folder in the 2019 Enterprise Manager.

Administration	**Broadcast feature renamed and relocated**
	The 'Broadcast' button has been removed from Enterprise Manager. The function of broadcasting a message to all users is now served by the 'Send Notification' button at the top of Enterprise Manager.
API	**Method removed from XFactory class**
	The `refresh()` method has been removed from the XFactory class.
API	**Methods removed from QueryRegistry class**
	The following methods have been removed from the QueryRegistry class: `clear(), init(boolean), refresh(boolean), refresh(boolean, boolean), removeAllQueries(), teardown(), heartbeat(), load(InputStream), load(InputStream, boolean), save(), save(OutputStream), isLoaded(String)`.
API	**Methods removed from DataSourceRegistry class**
	The following methods have been removed from the DataSourceRegistry class: `clear(), clearCache(), init(boolean), refresh(boolean), refresh(boolean, boolean), removeAllDataSources(), teardown(), heartbeat(), load(InputStream), load(InputStream, boolean), save(), save(OutputStream), save(OutputStream, boolean), isLoaded(Filter[]), getExtendedLogicalModelNames(String, String), getExtendedPartitionNames(String, String)`. These methods were no longer functional, so you can remove any calls to these functions from your code.
Dashboard Design	**Double-click text insertion is disabled**
	Double-clicking in an empty region of the Viewsheet canvas no longer inserts a new text component. To insert text into a dashboard, drag the Text component from the **Toolbox** panel.
Dashboards	**Tables are exported to Excel in separate tabs**
	Exporting a dashboard to Excel format now adds each dashboard table to an individual Excel sheet. (This export behavior for tables is now the same as the export behavior for charts.)
Dashboards	**Dashboard export settings are stored for each user**
	The most recent export setting choices made by a user (e.g., 'Expand Tables and Charts') are now used as the default settings of those options for that user.
Integration	**Direct URL access for reports uses new syntax**
	The URL syntax for direct report access has been changed, and no longer uses the "op" codes. See "Load Assets via URL" in "Advanced Server Integration" for more information.
User Portal	**Report Explorer renamed to 'Search'**
	The 'Report Explorer' button in the report toolbar has been renamed 'Search'. The 'Sort' function of the Report Explorer is still available under the **Browse** tab. The 'Column Selection' and 'Filter' functions have been removed.

User Portal	**Email return address is disabled by default**
	The 'From' email option for emailing reports and dashboards is now disabled by default, and the user's defined email is used as the return address. To allow users to specify a different 'From' email, set `mail.from.address=true` in *sree.properties* .

Major Features	
Area	**Feature**
Administration	**Enterprise Manager has revised interface** The Enterprise Manager interface has been modernized for greater ease of use.
Administration	**Permission control for Enterprise Manager tabs** User permissions can now be assigned to individual Enterprise Manager functions.
Scheduler	**Time ranges available for scheduled tasks** The Scheduler now supports the selection of time ranges for scheduled tasks. The following default time ranges are provided: morning (6am - noon), afternoon (noon - 6pm), and overnight (6pm - 6am). Custom ranges can also be defined. Tasks are guaranteed to be started within the selected time range, but the actual task start times will be automatically distributed within the range to maximize Scheduler throughput. By using these range options, you can prevent a large number of tasks from being assigned exactly the same start time, which often results in delays.
User Portal	**Data Source page added to User Portal** The User Portal features a new **Data Source** page. This page allows a user to add new data sources and configure existing data sources. Certain database drivers and connectors must be installed by an administrator.
Minor Features	
Area	**Feature**
Administration	**Support provided for multiple Enterprise Managers in cluster** The clustered server option now supports multiple Enterprise Managers to provide administrator access in the event of a server failure.
Administration	**Multitenant CSS supported** CSS files can now be composed in Enterprise Manager by mapping users, groups, and roles to different CSS files. This enables different tenants in a multitenant environment to be assigned individual dashboard style. Styles are cascaded as follows: User Mapped > Role Mapped > Group Mapped > Global Viewsheet. For example, the "admin" user is assigned CSS styles from format.css, then organization1.css, then administrators.css, then admin.css.
Administration	**New permissions added** A variety of new permissions have been added for scheduled task actions and Portal operations.
Administration	**Support added for CSS @font-face rule** CSS files can now use the **@font-face** rule to embed fonts on the server and automatically download the fonts to the client machine.
Administration	**Support added for uploading custom fonts** Enterprise Manager now provides an option to upload new fonts to the server. This feature is available on the **Look and Feel** page.

Administration	**Email notification for scheduled cycle failure** A 'Notification of Cycle Failure' option is now provided for scheduled cycles (in addition to the existing notifications for cycle start and cycle end). This option will send an email notification if a cycle fails.
Administration	**Recovery of deleted assets in Enterprise Manager** A 'Recycle Bin' in Enterprise Manager now allows an administrator to recover assets deleted by users (both archived reports as well as live reports).
Administration	**Access control provided for Dashboard 'Home' button** The dashboard 'Home' button can now be hidden by permission settings in Enterprise Manager.
Administration	**Scheduler supports Asset Backup** A 'Backup' action has been added for scheduled tasks. This task facilitates automatic backup of selected assets, and provides the same functionality as the manual 'Export Asset' feature.
Administration	**Option to download localization bundle file** A 'Get User Bundle' action has been added to the 'General' > 'Localization' page in Enterprise Manager. This downloads a file called *user_bundle.properties* that contains a list of all repository properties that can be localized, including TextIDs in reports and Viewsheets, data source names, and so on. By adding localized text for all the entries in the file, you can ensure that your localization is complete.
Administration	**Audit database password encryption strengthened** Passwords for external services such as databases and LDAP servers are now securely encrypted using a password-derived key. To change the password, run the **:security change-master-password** command from the administration console. (See "Automating Administrative Tasks" in the documentation.) Use the system Environment Variable **INETSOFT_MASTER_PASSWORD** to provide the password (default: **success123**) to the InetSoft application. If you set **INETSOFT_MASTER_PASSWORD** before you run the application the first time, the **INETSOFT_MASTER_PASSWORD** password is used instead of the default.
Administration	**Asset import honors permission settings** The 'Import Asset' feature in Enterprise Manager now observes path permissions. An administrative user can only import assets into a location for which they have write permission.
Administration	**Warning for cross-version imports** A warning is now issued when an administrator imports assets from newer version into older version.
Administration	**Improved resolution for monitoring** Audit reports and monitoring displays now provide higher resolution analysis of process timing characteristics, including JavaScript processing, UI display processing, etc.

Administration	**Materialized view analysis includes nested Viewsheets**
	Materialized view analysis for a composite Viewsheet now includes analysis of all nested Viewsheets. These Viewsheets no longer need to be individually analyzed and materialized.
Administration	**Option added to disable automatic email field population**
	An 'Auto-complete email' option has been added the 'Email' page in Enterprise Manager. When enabled, this allows automatic population of the user email address (stored from previously entered email) for scheduled mail tasks. When disabled, the email address is not automatically populated.
API	**createReplet method returns repletId**
	For the SoapRepository (execution of reports via a SOAP client), the **createReplet** method now returns the **repletId**. Call the **executeRepletById** method to execute the replet and store it in a server-side cache.
Charts	**Improved display for Google Maps**
	A new function, `setupGoogleMapsPlot()`, is provided to help generate a Chart that uses a Google map as the background. The function allows you to easily control the map image size and the zoom level.
Charts	**Scripted chart types added: Tree map, Marimekko, Icicle, Circle-packing, Sunburst**
	The following functions have been added to facilitate additional chart types: `createTreemap, createCirclePackingGraph, createIcicleGraph, createMekkoGraph, createSunburstGraph`.
Charts	**Color synchronization across charts**
	It is now possible to explicitly map colors to values, and to use these colors across all charts in the Viewsheet. Chart color assignments are now also persistent as long as the Viewsheet is open, and colors are maintained under chart operations such as sorting and filtering.
Charts	**Support for stacking measures added**
	The 'Plot Property' panel for Charts now features a 'Stack Value' option to control whether multiple measures should be stacked for stacked charts.
Charts	**Clear target lines in script**
	A **clearTargets()** function was added to enable target lines to be cleared from within script.
Charts	**Target line labels can be formatted in script**
	Target lines created with the **addTargetLine** function can now include formatting on the labels, specified by the optional parameter in the function.
Dashboard Design	**Visibility control added for table columns**
	The Table Editor now supplies a 'Show/Hide' option for each table column. The table can be sorted using both hidden and visible columns.
Dashboard Design	**Support for filtering multiple data blocks**
	Filter components such as Selection Lists can now filter multiple data blocks simultaneously. On the **Data** tab of the component 'Properties' dialog box, drag the desired data blocks from the 'Compatible Tables' panel to the 'Additional Tables' panel.

Dashboard Design	**Support for binding charts to other dashboard components**
	Dashboard charts can now pull data from other dashboard components such as tables and crosstabs. These assets are now listed in the **Data Source** panel of the Chart Editor.
Dashboard Design	**Improved support for gauge colors**
	Gauge fill color and range colors can now be set by variable or scripted expression in addition to static value. The color of the value arc on donut-style gauges can also be set.
Dashboard Design	**Support for embedding external content in a Viewsheet**
	An "Embed as URL" option is added to the Text component properties. When enabled, the Text element will be rendered as an IFrame with the text content of the Text component specifying the source URL.
Dashboard Design	**Chart properties can be selectively disabled**
	The following additional chart properties can now be selectively disabled by using the **setActionVisible()** function: **AxisResize**, **LegendResize**, **LegendMove**.
Dashboard Design	**Wrap Text option for Selection Tree**
	The **Format** panel for Selection Tree now provides a 'Wrap Text' option. When enabled this will cause text to wrap to fit within the Selection Tree boundaries, and will adjust the row height automatically to ensure the text is visible.
Dashboard Design	**Stack property provides explicit error information**
	A '**stack**' property is now available for use in **try-catch** statements to provide explicit information about script errors. The usage for writing the error to the log file is as follows: " **catch(ex) {log(ex.stack);}** "
Dashboard Design	**CSS class and ID can be applied on Viewsheet level**
	CSS class and ID styles can now be assigned to a Viewsheet as a whole. This facilitates the assignment of Viewsheet background color based on class or ID. For example, **Viewsheet.className {background-color: red;}** .
Dashboard Design	**Parameters in parameter prompt can be reordered**
	The 'Customize Parameters' dialog box (accessed through the 'Viewsheet Options' dialog box) now allows the order of parameters in the Viewsheet parameter prompt to be changed.
Dashboard Design	**Option added for dashboard margins**
	Uniform margins can now be added to a dashboard by setting the 'Balance Padding' option in the Layout tab of the 'Viewsheet Options' dialog box.
Dashboard Design	**Highlighting available for chart labels**
	Highlighting (conditional formatting) can now be added to categorical chart axis labels.
Dashboard Design	**Greater control for component stacking**
	New options 'Send Backward' and 'Bring Forward' have been added to the existing 'Send to Back' and 'Bring to Front' options in the Viewsheet right-click menu to facilitate the stacking of Viewsheet components.
Dashboard Design	**Condition 'one of' option allows multiple selection**
	The 'Browse' menu for the condition 'one of' operator now permits the selection of multiple entries by using Ctrl-click.

Dashboard Design	**Additional characters permitted in calculated fields**
	The following special characters are now permitted in the name of a calculated field: Period ("."), comma (","), question mark ("?"), parentheses ("()"), exclamation point ("!"), at sign ("@"), ampersand ("&"), single quote ("'"). Slash ("/") is not permitted.
Dashboard Design	**Gradient fills available for shapes**
	Shapes added to a Viewsheet can now be filled with gradient colors in addition to uniform colors.
Dashboards	**Select All option for Selection List**
	Selection Lists now provide a 'Select All' option in the right-click context menu. This option selects all items currently shown with a filled box (i.e., meaning "item is present in the result set"), and allows the user to easily expand the filter to include all those items.
Dashboards	**Show Enlarged option added for tables**
	The 'Show Enlarged' feature previously available only for Charts is now extended to Tables and Crosstabs.
Dashboards	**New 'Enable History Bar' option added**
	The Portal 'Preferences' dialog box now supplies an 'Enable History Bar' option to toggle the visibility of the Portal history bar. (The history bar displays recently viewed reports and dashboards.) A new *sree.properties* property, **portal.history.bar** , can be used to set the default behavior for the history bar if the user does not explicitly change the setting.
Dashboards	**Hyperlinks open in new tab**
	Dashboard hyperlinks now open the linked resource in a new browser tab rather than replacing the existing dashboard in the current tab.
Dashboards	**Support for HTML and PNG export added**
	Dashboards can now be exported to HTML and PNG format in addition to PDF, PPT, Excel, and Snapshot. An "HTML" and "Embedded PNG" option are also available for email actions. The embedded PNG contains a link to the full dashboard.
Dashboards	**Export options can be controlled for individual dashboards**
	The export options (e.g., Excel, PowerPoint) available for an individual dashboard can now be set by using the **thisViewsheet.setActionVisible()** function in Viewsheet onInit script.
Dashboards	**Table styles available for Show Details and Show Data tables**
	The tables displayed by the chart 'Show Details' and 'Show Data' buttons can now be assigned tables styles. A 'Table Style' button is provided above the displayed table.
Dashboards	**SVG support added**
	Charts can now be exported to SVG format in addition to PNG format. The Viewsheet Image component now supports SVG images as well.
Dashboards	**Show Data displays projection values**
	When a projection line has been added to a chart, the 'Show Data' chart option now displays a column containing the projected value in addition to the actual chart data.

Data Sources	**Support for new data sources: R, Jira, QuickBooks Online, Access**
	Support for R, Jira, and Quickbooks Online, and Microsoft Access has been added.
Data Sources	**Option for GET/POST for REST data source**
	The REST data source now provides an option to select the GET or POST method for requests.
Data Sources	**Support for REST web services with row limits**
	The REST data source now supports paging for web services that limit the number of rows returned in a result set.
Data Sources	**Aliased tables supported for VPM hidden columns**
	A VPM can now apply hidden columns to aliased tables in the selected physical view (as well as physical tables).
Data Sources	**Warning for modifying required attributes**
	A warning is now issued when you attempt to rename or delete logical model attributes that are required by other assets such as Viewsheets and reports.
Data Worksheet	**Time series option for grouped date fields**
	An 'As Time Series' option is now available for grouping date-type fields in Data Worksheets. This option is also added to Crosstabs and Freehand/Formula Tables in dashboards and reports. The 'As Time Series' option forces the display of date groups even when the group has no data. In this case the cell is filled either with a null value or with a zero (if the 'Fill Blank Cell With Zero' option is enabled in the Table Properties dialog box).
Exports	**Improved resolution for exported charts**
	Resolution on exported charts has been increased from 72 dpi to 200 dpi.
Exports	**Hyperlinks are active in Excel exports**
	Hyperlinks are now functional in exports to Excel format.
Infrastructure	**Server repository uses WebSockets**
	The 'Server' repository option in Style Studio now uses WebSocket technology to improves performance on high-latency networks.
Integration	**Direct URL access to Enterprise Manager now supported**
	Enterprise Manager tabs can now be loaded by direct URL. Set permissions for the different Enterprise Manager pages on the following page: **http://host: port/sree/em/settings/security/actions** .
Integration	**Support direct display of dashboard chart**
	An individual dashboard chart can now be displayed by direct URL. The form of the URL is as follows: **http://host:8080/sree/export/vs- chart/global/ViewsheetPath? chartId=ChartName&width=number&height=number&svg=true** . The **width**, **height**, and **svg** parameters are optional.
Report Design	**TOC element supports right-to-left text**
	The report TOC element now supports right-to-left text with page numbers on the left. Select the 'Right To Left' option in the TOC 'Properties' dialog box to apply this setting.

Report Design	**TIFF format supported for images**
	Images now support TIFF format.
Report Design	**Field comparison supported in conditions**
	Conditions and highlights on tables now support comparison between fields in the table in addition to comparison against a static value or variable.
Scheduler	**Option to include link in email task**
	An 'Include Link' option has been added to the 'Deliver to Emails' action for scheduled tasks. This option embeds a link in the email to allow the recipient to open the report or dashboard in the User Portal (provided they have appropriate permissions).
Scheduler	**Improved reporting for Scheduler errors**
	Errors that occur when a scheduled task is run in the Portal using the 'Run Now' option are now reported more fully.
Scheduler	**Property to force user choice of task start time**
	A new property, `schedule.condition.taskDefaultTime`, determines whether the user needs to explicitly supply a 'Start Time' when creating a scheduled task. Set to `false` to suppress the default value and force the user to enter an explicit value. Set to `true` to allow the 'Start Time' to be populated with a default value.
User Portal	**Support for 'Favorite' dashboards and reports**
	Users can now mark a dashboard or report in the Repository as a "favorite" by selecting the 'Add To Favorites' option in the Repository right-click menu. To list all favorites, press the 'Favorites' button above the repository tree.
User Portal	**Start of week controlled by locale setting**
	The locale setting for a user now controls start day of the week for all date components (e.g., Calendars). If specified, the `week.start` property in *sree. properties* will override locale-based start day (e.g., `week.start=tuesday`).
User Portal	**Client time supported for scheduled tasks**
	A 'Show Server Time Zone' option has been added to the Condition tab for scheduled tasks. Disable this option to use client time rather than server time for task initiation.