Release Notes for SAS® Fraud Management 4.4_M1, Hot Fix 4
Version 5, Release 10

Description	Component	Summary and Business Impact	Test Scenario
On Oracle systems, time fields include the epoch date of `January 1, 1970` when they are displayed in the transaction grid on the **Explore** tab.	EXPLORE	**Summary:** On the **Explore** tab, the epoch date of `January 1, 1970` is included in the RQO_TRAN_TIME field. This field should display only the time. Also, the time is converted, incorrectly, to Coordinated Universal Time (UTC). **Business Impact:** Rule writers see an incorrect transaction time when they use the **Explore** tab.	After you apply this hot fix, the time fields in the transaction grid on the **Explore** tab are correct.

An error is displayed when you update a role with more than 1000 users.	ADMIN	**Summary:** When you try to update a role with more than 1000 users, the following error is displayed:
		
		`An unexpected error has occurred in the application. Click Resume to continue working. If the problem persists, please contact an administrator.`
		
		The web application log also contains this Oracle error:
		
		`ORA-01795: maximum number of expressions in a list is 1000.`
		
		Business Impact: You cannot update a role that has more than 1000 users assigned to it.
			After you apply this hot fix, you can update a role with more than 1000 users.

Description	Component	Summary and Business Impact	Test Scenario
You cannot configure the SAS OnDemand Decision Engine to run only rules or only models.	ODE	**Summary:** Currently, the SAS OnDemand Decision Engine always runs both rules and models for all transactions that it receives. However, with the ability to write custom Python models, customers have a business need to run existing models in parallel with Python models. Once the scores are returned from both models, the rules can be run. The SAS OnDemand Decision Engine should be enhanced to support this need. **Business Impact:** SAS OnDemand Decision Engine runs both rules and models for all transactions. You cannot run only rules or only models.	After you apply this hot fix, you can configure SAS OnDemand Decision Engine to run only rules or only models. To use this feature, you must set the SMH_SDD_IND field in the transaction before you send it into SAS Fraud Management. The valid values for the SMH_SDD_IND field are as follows: • `1`: Indicates to run both models and rules. This is the default value. • `2`: Indicates to run rules. • `3`: Indicates to run models. Any other value is treated as `1`.
An error occurs when you click the icon in the **All Rules** column in the Analyst grid for alert type D.	ANYLSTSWORK	**Summary:** If you have an alert type D and you click the icon in the **All Rules** column in the analyst grid, the Rules Fired for Transaction dialog box displays this error message: `    Unable to retrieve rules.` **Business Impact:** The analyst cannot view all the rules that fire on a transaction for alert type D.	After you apply this hot fix, you can view all the rules that fire for any alert type that is supported by the transaction type.
With the SAS OnDemand Decision Engine, you cannot save signatures for Python models to the Multi-Entity History (MEH) database.	ODE	**Summary:** Signatures for customer-written Python models are not stored in the MEH database. **Business Impact:** Custom Python models without signature support are of limited use.	After you apply this hot fix, model signatures for Python models are stored in the MEH.

Description	Component	Summary and Business Impact	Test Scenario
When you use the guided approach to work with a rule, the **Transaction Scope** drop-down list is limited to 100 multi-organizations.	RULES	**Summary:** On the **Rules** tab, when you create a new rule or edit an existing rule by using the guided approach, the **Transaction Scope** drop-down list contains a maximum of 100 multi-organizations. You do not see all multi-organizations to which you have access. **Business Impact:** Rule writers are not able to select from all multi-organizations for which they are authorized to write rules.	After you apply this hot fix, the **Transaction Scope** drop-down list contains all multi-organizations that are assigned to you.
The SAS Fraud Management web application does not support the Italian language.	UI	**Summary:** The SAS Fraud Management web application does not display Italian text if you set your browser language to Italian. **Business Impact:** The web application is not displayed in the Italian language for end users.	After you apply this hot fix, you can configure the web application to display text in the Italian language.

The Transactional Analysis Server (TAS) creates excessive threads when it cannot communicate with Elasticsearch.	TAS	**Summary:** Under some conditions when the TAS cannot communicate with Elasticsearch, an exception occurs, and the thread pool is not closed.
		
		This exception error is displayed in the log:
		
		`java.io.IOException: cluster state is RED and not YELLOW, from here on, everything will fail!`
		
		The accumulating threads result in the following error in the log:
		
		`java.lang.OutOfMemoryError: unable to create new native thread`
		
		Business Impact: The excessive creation of threads leads to high resource use and overall performance degradation of the operating system on the server that the TAS runs on.
			After you apply this hot fix, the TAS does not create excessive threads when it cannot communicate with Elasticsearch.

Description	Component	Summary and Business Impact	Test Scenario
Python models do not support client-input variable segments.	ODE	**Summary:** Client-input (I##) variable segments enable you to send additional data into SAS Fraud Management. Currently, the I## variables can be used only by fraud models that are written by SAS. You cannot reference I## variables within Python models that you develop. **Business Impact:** Models written in Python cannot reference I## variables. With Python models, you are limited to sending additional data in the User Authorization Request segments (RUA and DUA segments).	After you apply this hot fix, you can reference I## variables within your custom Python models.
Numeric variables in the Multi-Entity History (MEH) database that are less than 8 bytes in length are not converted from S370 floating-point notation to IEEE when signatures are migrated off the mainframe.	OSE	**Summary:** When numeric signature variables are migrated off the mainframe, they must be converted from S370 floating point to IEEE. Currently, only 8-byte numeric variable converted. As a result, the values of these variables will be interpreted incorrectly. **Business Impact:** Numeric signature variables with lengths of 4, 3, or 2 bytes are not converted to IEEE. As a result, the values of these variables will be interpreted incorrectly.	After you apply this hot fix, all numeric variables are converted to IEEE when signatures are migrated off the mainframe
The multi-organizations that are assigned to a user are not always checked on the **Users** tab.	ADMIN	**Summary:** On the **Users** Tab, the assigned multi-organizations are not consistently checked when you expand the **Multi-Orgs** section for a user. The assignments are saved to the System of Record (SOR) database, but they are not visible in the web application. **Business Impact:** An update to a user's multi-organizational assignment is not reflected in the web application. It appears that the changes are not saved.	After you apply this hot fix, the multi-organizations for a user are displayed correctly on the **Users** tab.

Description	Component	Summary and Business Impact	Test Scenario
Slow performance occurs when you create, open, and save rules.	RULES	**Summary:** On the **Rules** tab, the performance is slow for the following activities: • creating a new rule • opening an existing rule • saving a rule **Business Impact:** Rules writers experience excessive delays when they create, open, and save rules.	After you apply this hot fix, the tasks of creating, opening, and saving rules run faster.