Release Notes for SAS® Fraud Management 4.4_M0, Hot Fix 3

Description	Component	Summary	Test Scenario
Create a restore utility job for the ENT_ID SAS table that is used by the Common Point of Purchase (CPP) batch job.	ETL	If the ENT_ID table becomes corrupted, there needs to be a way to restore it from backup. The table is created by the CPP batch job 6020.	After you apply this hot fix, you can restore the ENT_ID table from a backup with the new 6022 batch job. The backup file is created by an earlier run of the 6020 job.
Excessive **NOTE** entries in the SAS logs can fill up the SAS **Work** directory.	ODE	System-generated NOTE entries in the SAS logs for the SAS® OnDemand Decision Engine can be excessive and can fill up SAS **Work** directory. An example of one of these notes is as follows: `NOTE: Invalid second argument to function SUBSTR at line 1649 column 25.`	After you apply this hot fix, the NONOTES option will be set immediately before the transaction processing loop starts to eliminate the excessive notes in the log. If you want to see all the notes, you can set the MPRINT option in the SAS_OPTIONS property in the ose.properties file.
If an error is reported when you click the **Run Estimation** button, you cannot correct your input values and run the same estimation again.	RULES	If you receive an error message on the Define New Estimation page, the toolbar buttons change so that the **Run Estimation** button is no longer available. You cannot fix your input values and run the estimation again. Instead, you must click the New **Estimation** button to create a new estimation.	After you apply this hot fix, if you receive an error message on the Define New Estimation page, the **Run Estimation** button remains available. You can update your input values and run the estimation.
Decimal formats in reports need to be locale specific.	REPORTS	The currency format in the following reports cause an error when the browser language is set to **Polish**: • Fraud Detection • Confirmed Fraud Alerts • System Performance Summary	After you apply this hot fix, decimal formats in reports are locale specific. No error occurs when the language is set to **Polish**.

Description	Component	Summary	Test Scenario
Reports that use the FCM_DAILY_SNAPSHOT or FCM_WUR_DAILY_SNAPSHOT tables incorrectly convert dates to Greenwich Mean Time (GMT).	REPORTS	The web application converts the dates that you enter on the Report Definition page to GMT before sending those dates to the report. Even though the dates are already converted to GMT, the report code converts them again, which causes incorrect results. The following reports that use the FCM_DAILY_SNAPSHOT or FCM_WUR_DAILY_SNAPSHOT tables are impacted. • New Alerts Scheduled • Fraud Summary • Work Unit Fraud Summary • False Positives	After you apply this hot fix, the dates that you enter for the report are not converted to GMT, so the resulting reports are correct.
On Oracle systems, the index on Multi-Entity History (MEH) signature tables is missing.	DATABASE	The Oracle MEH signature tables do not have an index on the LST_UPDT_TS timestamp column. The MEH purge job deletes data based on timestamp. Without an index, the purge job might not perform well.	After you apply this hot fix, an index is added to the FHM_V_DATA and FMH_Z_DATA tables in the MEH database to support purging.
The Fraud Summary report has discrepancies in the counts.	REPORTS	The counts in the **Fraud Summary By Strategy and Queue** section of the Fraud Summary report might not match the counts in the **Fraud Summary by Strategy** section of the report.	After you apply this hot fix, counts in the Fraud Summary report are consistent among the sections of the report.
			(Table continued on next page)

<table>
<tr><th>Description</th><th>Component</th><th>Summary</th><th>Test Scenario</th></tr>
<tr><td>The ability to import and export new client variables in Rules Studio is needed.</td><td>RULES</td><td>You currently cannot import or export user and client variables from the variable display pages in Rules Studio. That functionality needs to be added.

The rule export function also needs to save the offset of the variable. Then, you can import the variable into the same position in the segment.</td><td>After you apply this hot fix, user and client variables can be imported and exported in Rules Studio. The rule export function saves the offset of the variable in the segment.</td></tr>
<tr><td>Lookup lists do not sort correctly when you click column headings.</td><td>RULES</td><td>When you click the column headings on the Contents tab in the Lookup List Details pane, the list entries are not sorted.</td><td>After you apply this hot fix, when you click the lookup list's column headings, the entries are sorted correctly.</td></tr>
<tr><td>Batch jobs terminate with an exit status that is blank (that is, it has no code).</td><td>ETL</td><td>Batch jobs that complete successfully do not exit with a return code equal to 0.</td><td>After you apply this hot fix, batch jobs exit with a return code equal to 0 if no error occurs. Other conditions result in a nonzero return code, as shown in the chart below:

Severity — Return Code — Description
SUCCESS — 0 — Normal
WARNING — 1 — SAS warning
ERROR — 2 — SAS error
INFORMATIONAL — 3 — User issued ABORT
FATAL — 4 — User issued ABORT RETURN
FATAL — 5 — User issued ABORT ABEND
INFORMATIONAL — 6 — SAS internal error</td></tr>
</table>

Description	Component	Summary	Test Scenario
The Interactive Voice and Response System (IVR) web service UpdateAlert call fails with an error.	DATABASE	On Oracle systems, if the RESULT_ID value of the requested alert is null, the INSERT_IVR_ALERT_ACTION database stored procedure fails with a NO DATA FOUND message. The IVR response message contains this error: `Unexpected exception occurred while updating an alert.`	After you apply this hot fix, the IVR UpdateAlert call completes successfully when the RESULT_ID value for the requested alert is null.
The analytic extract jobs do not check for sufficient disk space before the jobs extract the data.	LOADERS	To prevent corruption of the existing transaction table extract, the analytic extract jobs should calculate the space that is needed to run the job and confirm that there is enough disk space available before continuing.	After you apply this hot fix, the analytic extract jobs check for sufficient disk space before they extract the data.
The **Help** button in the rule editor does not work.	RULES	When you click the **Help** button in the rule editor, the Help page is not displayed. Instead, the message A `webpage cannot be found` is displayed.	After you apply this hot fix, the rule editor help is displayed when you click the **Help** button.
The first time the analytical extract job runs, the amount of data might be large, and the job might use too much memory and disk space.	LOADERS	The analytic extract 5007 job should be enhanced to allow an incremental build of the extract. You should be able to specify the number of days to be extracted. The 5008 job already has an option to specify the EXTRACTDAYS command-line option. The 5007 job should also have this option.	After you apply this hot fix, the EXTRACTDAYS command-line option is supported by the analytic extract 5007 job. Valid values for the EXTRACTDAYS option are **1** through **30**. *(continued on next page)*

Description	Component	Summary	Test Scenario
			In this hot fix, the 5007 job now creates an empty extract file if no data is found. It also updates the FMX_LST_PULL_KEY table. In addition, the range of valid values for the EXTRACTDAYS option of the 5008 job changed from **1** through **10** to **1** through **30**.
The date-of-birth (DOB) field from local demographics is sent as a timestamp in the IVR web service.	IVR	On Oracle systems, a date is mapped to a timestamp in the database driver. In the IVR response, the timestamp field is not converted back to a date. **Example:** `<item name="DOB">1960-01-01 02:06:15.0</item>`	After you apply this hot fix, the DOB field is converted back to a date in the IVR response.
The list of build numbers is truncated in a rule estimation.	RULES	If the list of build numbers for an estimation is long, it is truncated when the value is stored. In addition, the value is set whether the estimation takes the slow path or the fast path. The value is not used by the slow path, and it should not be populated in that situation.	After you apply this hot fix, the list of build numbers is broken up into multiple lines to avoid truncation. Also, estimations that use the slow path do not set the build number list.
Rule estimation is unable to read a user variable segment that is greater than 2000 bytes.	RULES	On Oracle systems, rule estimations using the fast path fail when the user variable segment is greater than 2000 bytes. *(Continued on next page)*	After you apply this hot fix, estimations using the fast path complete without error when user variable segments are greater than 2000 bytes.

Description	Component	Summary	Test Scenario
		When the failure occurs, you receive the following error message: `ERROR: Error fetching from cursor. ORACLE error is ORA-22835: Buffer too small for CLOB to CHAR or BLOB to RAW conversion (actual: 2872, maximum: 2000).`	
The **Available Credit** column in the Agent Time Analysis report is always $0.00.	ANYSLTSWORK	The **Available Credit** value is not set correctly in the Agent Time Analysis report because the **OPEN_TO_BUY_AMT** column in the FCM_ALERT_ACTION database table is always null. This column should be populated by real-time demographics. The value for the field is correct in the entity-demographics section on the alert page.	After you apply this hot fix, the **Available Credit** column in the Agent Time Analysis report is set correctly.
On Oracle systems, the error limit is ignored by recovery jobs when they are run in bulk mode.	ETL	The ETL_REC_ERRLIMIT property specifies how many errors can occur before the recovery jobs terminate. On Oracle systems, the property value is not used when the recovery jobs are run in bulk mode.	After you apply this hot fix, Oracle bulk loads use the ETL_REC_ERRLIMIT property value to determine how many non-fatal database errors to ignore. A value of **0** means that an unlimited number of non-fatal database errors are ignored. The default value is **50**.

Description	Component	Summary	Test Scenario
The rule estimation displays incorrect data for the eFalse Positive Ratio metric.	RULES	Rule estimations might show incorrect values for the eFalse Positive Ratio metric when dampen options are not selected. This behavior occurs only when the estimation is using the slow path, which calculates user variables instead of relying on the data in the VXX database tables.	After you apply this hot fix, rule estimations calculate correct values for the eFalse Positive Ratio metric.
If you check out more than three alerts for a contact, an application error occurs.	ANYLSTSWORK	With the new payments interface, the alert page displays all the available alerts for a contact. You can check out three alerts. When you click the fourth alert, an application errors occurs The maximum number of alerts is currently limited by the analyst.maxNumberOfAlerts property, which defaults to three alerts.	After you apply this hot fix, a new property, analyst.maxNumberOfCheckouts, is available to set the maximum number of contacts that have checked-out alerts. A value of **0** means unlimited checkouts.