

Origination Manager

Client Setup & Management

4.9.2

FIS Administrator Guide

FICO® **Decisions**

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CHAPTER 1 Introduction

The *Fidelity Information Systems (FIS) Origination Manager Client Setup and Management Administrator's Guide* details how to use the new and/or updated features of the FICO™ Origination Manager (OM) system administrator tools, including how to:

- Set up new clients in the Decision Manager (DM).
- Establish a new DM system, as well as administer client configurations within that new DM.
- Set up a new DAM client.
- Copy a client in the Application Processing Module (APM), as well as administer that client's configurations (in APM).

Each time a new issuer signs up to use your loan origination system, this user guide is instrumental to ensure all the processes are completed in the DM, DAM, and APM. You can establish your clients' configurations, including business and decisioning rules, bureau details, users, group permissions, etc.

Additionally, you can find important references related to ongoing administration of client configurations in the APM (e.g., configuring letters, external customer users), as well as the DM (e.g., stipulations, liabilities). This includes which configurations are subject to client-specific specifications, which are common for all FIS clients, as well as additional information that assists in determining who should have access (and for what purpose(s)) to prevent unintentional impact from configuration changes.

Lastly, a troubleshooting section is available for issues concerning the system administration values if they are not automatically populated in the Copy Client feature of the APM.

For information about OM system administrator tools, refer to the *FICO Origination Manager Application Processing Module Administrator's Guide*.

Origination Manager System Admin Overview

This guide was written for system and security administrators who manage the Application Processing and Decision Manager Modules, including defining , decision strategy parameters, adding and maintaining user groups, adding, copying, and maintaining clients, and maintaining configuration parameters. The guide should also be used by the client system administrators in a multi-tenancy setup.



Note The images throughout this user guide are strictly for example purposes.

Related Documentation

FICO Origination Manager application users might find the following documentation useful:

- *FICO Origination Manager Application Processing Module User's Guide*
- *FICO Origination Manager Installation Guide*
- *FICO Origination Manager Integration Guide*
- *FICO Origination Manager Application Processing Module Administrator's Guide*

- *FICO Origination Manager Application Processing Module Developer's Guide*
- *FICO Origination Manager Supported Platforms Guide*
- *FICO Origination Manager Application Processing Module Release Notes*

This chapter details how the system administrator creates a new Decision Module (DM) client, imports the default client's repository into the new client configuration, and then creates a DM user for that client. Once this is done, the business analyst can log in with the created user and perform rule changes.

A default client DM Repository is being provided to FIS to serve as the 'existing DM client', from which to create a new client's DM configuration. Using the default client DM Repository eliminates risks related to "copying" an actual client's specific information (e.g., proprietary rules, fees) when creating a new client's DM repository.

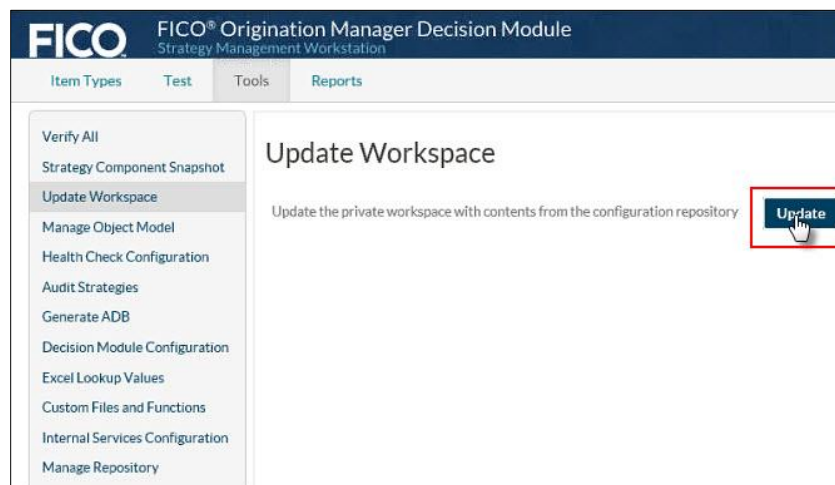
The default client repository is configured with an object model schema, which includes:

- Basic decision flow
- Default product selection tree
- Set of limit assignment tables for default products
- Common policy and segmentation rules and rulesets
- Common data methods and (data method) sequences required for processing
- Additional data methods and (data method) sequences with several default (client-configurable) parameters.

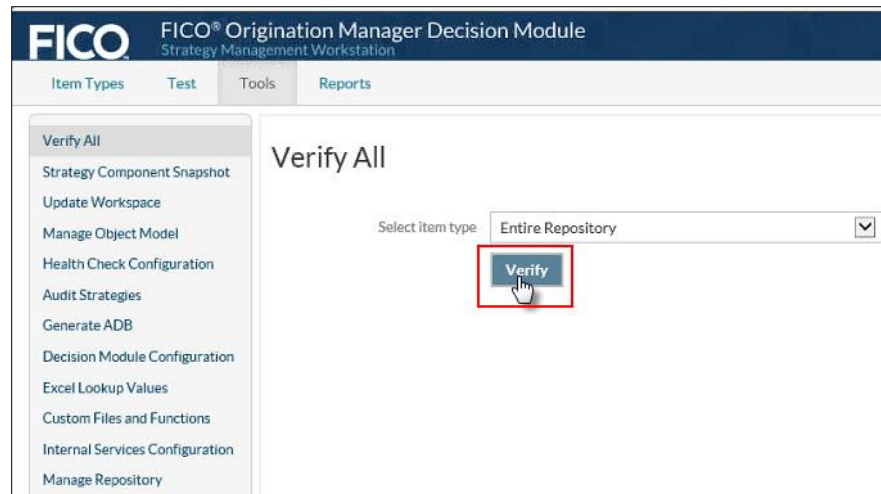
The default client repository design is documented in an Excel workbook, *FIS ConsumerCreditCard OMDM Design Workbook_DefaultClient_v1.0.xlsx*.

Steps 1 through 4 of the setting up a new DM client using an existing DM client process consist of accessing the default client, as well as updating and verifying your workspace, so you have all the current rules from that default client's repository.

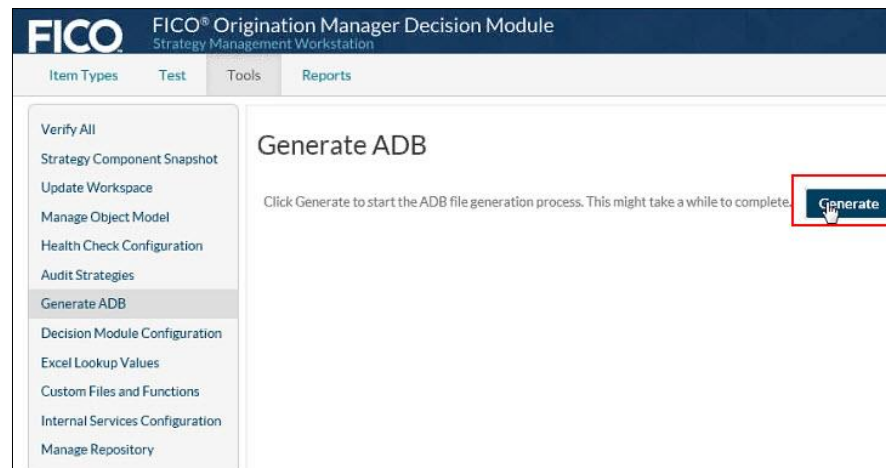
1. Log in to the existing client from which you want to copy the repository data.
2. From within the OM Decision Module, click the Tools tab from the menu bar near the top of your window and click Update Workspace from the menu on the left of your window. This will update the current user's workspace with contents from the configuration repository (e.g., changes made by other users).



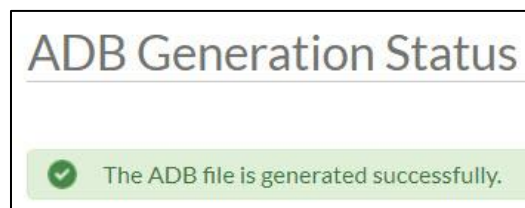
- Click Verify All from the menu on the left side of your window and click Verify to validate the entire repository.



- Click Generate ADB from the menu on the left side of your window and click

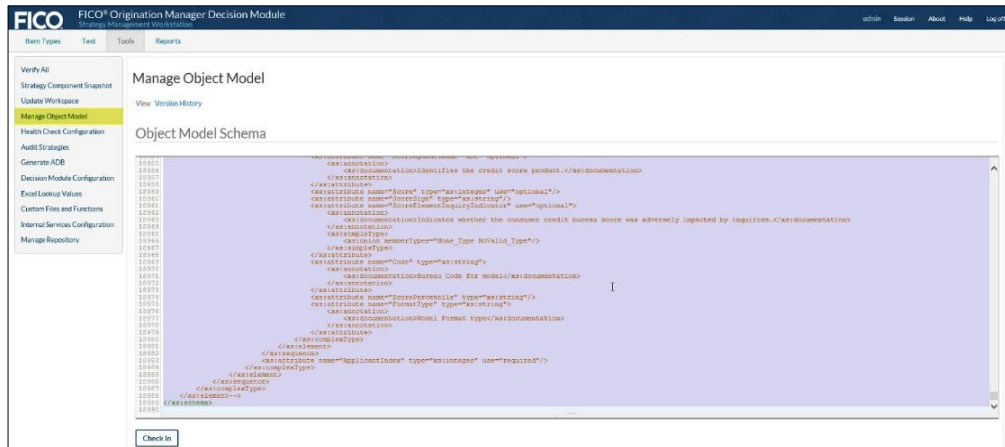


- ✓ Generate to start the ADB file generation process. This recompiles the repository.
Note You should receive confirmation that the ADB file was successfully generated.

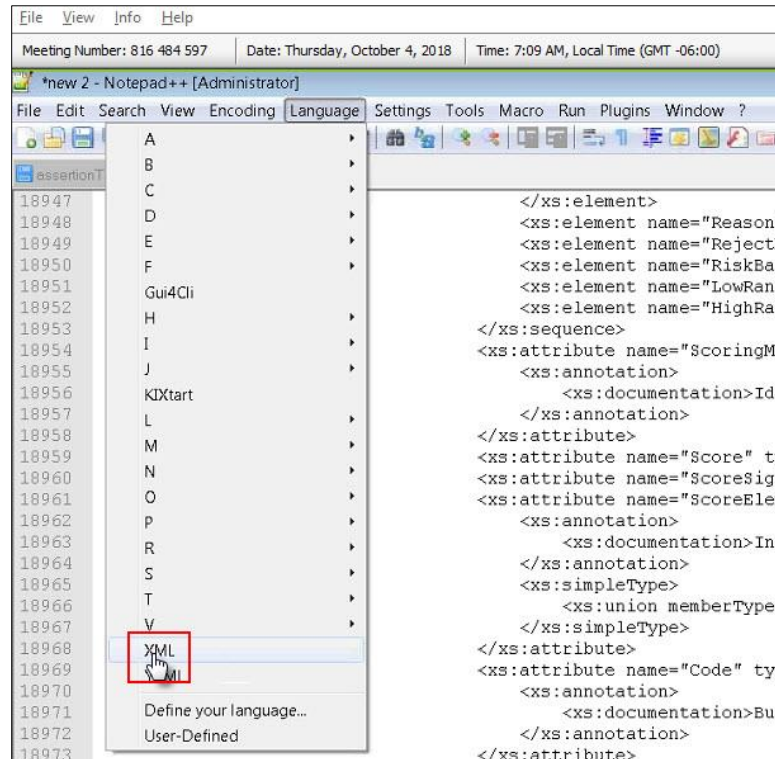


Steps 5 through 11 consist of copying a DM Object Model Schema (definition), the default client's repository (via exporting and saving the default client's repository), and the Excel Lookup files.

- Copy the DM data model (backup) files by clicking Manage Object Model from the menu on the left side of your window, selecting all (Ctrl+A) the file content displayed under Object Model Schema, and then copying it (Ctrl+C).



- Open your Notepad++ application (or any XML editor), create a new Notepad++ file, and paste (Ctrl+V) the DM data model files from the Object Model Schema into the new Notepad file.
- Save the contents of Object Model Schema to an appropriate folder location as an XML file.



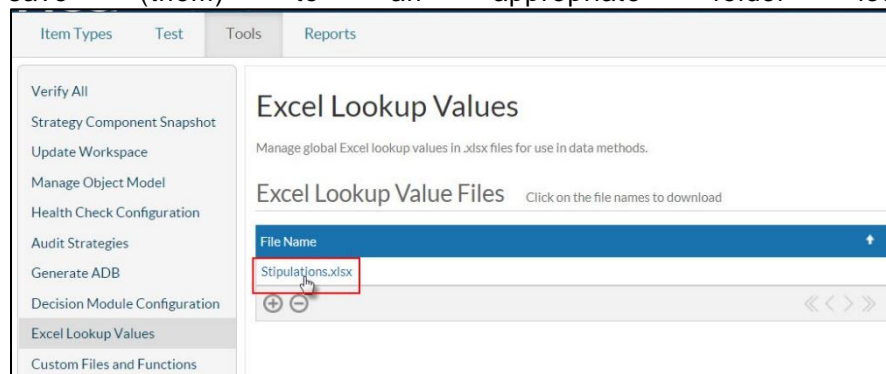
8. Click Manage Repository from the menu on the left side of your window and click Export to export the data model files from the default DM client.



9. When asked if you want to save the export.xml file, click the down arrow next to Save and click "Save as" to save the file to an appropriate folder location.



10. Click Excel Lookup Values from the menu on the left side of your window and click the listed Excel file(s) named, *Stipulations.xlsx*, to download and save (them) to an appropriate folder location.



Steps 11 through 17 discuss creating a new client using Shell scripts on the DM server.

11. Log in to the DM server. You might need to use SSH/telnet client like PuTTY.

12. Check if ANT_HOME and JAVA_HOME variables are set. If not, set them.



Note ANT_HOME can be found at “Advisor73/bin/ant” inside the directory where Blaze is installed.

```
[root@om-mcloud632 EOS]# cat build.properties
<!-- Customer settings -->
eos_home    =/apps/DM49
blaze_home   =/apps/Blaze/Advisor73
websphere_home =
server_port  =8080
schema_name  =COS.SMWDisplayValues.xsd
system_id    =FI_BASELINE_TENANT_2_ID
```

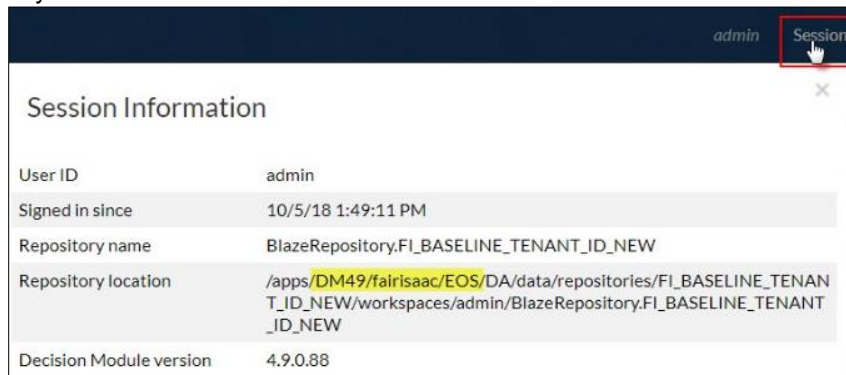
13. Using echo command, verify that ANT_HOME and JAVA_HOME variables are set and execute the command:

Export PATH=\$PATH:\$ANT_HOME/bin:\$JAVA_HOME/bin.

14. Navigate to the EOS folder/directory where the DM is installed.



Note Log in to the default client repository and click on Session in the upper right of your DM window to determine where the EOS folder resides.



15. Open the build.properties file in file editor and enter the name of the new client in the tenant property (system_id) of the build.properties file.

16. Create the Strategy Management Workstation (SMW) WAR (deployment) file by executing the command: *ant generateNextGenRma*.

```
Buildfile: /apps/DM49/fairisaac/EOS/build.xml
-record_log:
  [echo] Build logged to build_2018-10-03_08-37-54.log
-copyinnovatorRT:
  [copy] Copying 1 file to /apps/Blaze/Advisor73/lib
-createTenantLockFile:
  [echo] Creating lock file for creating new tenant : FI_BASELINE_TENANT_2_ID.
.....
<more generation tasks>
.....
generateNextGenRma:
BUILD SUCCESSFUL
Total time: 1 minute 3 seconds
```

17. Confirm that the WAR (deployment) file for the new client is created by executing the Linux command: *ls /<DM folder name>/DM49/fairisaac/EOS/DA/data*.



Note The command result should display what you named the new tenant file in step 21 with a .war suffix. *EXAMPLE: “SMW.FI_BASELINE_TENANT_2_ID.war”*.

Steps 18 through 23 include how to deploy the WAR (Web Application Resource) file for the new client created in the previous steps (11 through 17). The SMW application for the new client is set up using the WAR file, which helps you create/edit rules for your new client.

18. Open the directory, `<JBOSS_HOME>/standalone/deployments`.

19. Execute the Linux command: `ls`. This shows all previously uploaded WAR files.

```
[root@om-mcloud632 EOS]# cd /usr/share/jbossas/standalone/deployments
[root@om-mcloud632 deployments]# ls -ls
total 748628
37540 -rw-rw-r--x. 1 jboss jboss 38440656 Dec 6 2017 ps.war
4 -rw-r--r--. 1 jboss jboss 457 Oct 3 08:07 ps.war.failed
12 -rw-rw-r--x. 1 jboss jboss 9041 Jun 6 2017 README.txt
177764 -rw-rw-r--x. 1 jboss jboss 182026575 Dec 6 2017 SMW.BASE_TENANT_ID.war
4 -rw-r--r--. 1 jboss jboss 505 Oct 3 08:07 SMW.BASE_TENANT_ID.war.failed
177764 -rw-rw-r--x. 1 jboss jboss 182026614 May 1 13:57 SMW.FI_BASELINE_TENANT_ID_NEW.war
4 -rw-r--r--. 1 jboss jboss 33 May 1 13:57 SMW.FI_BASELINE_TENANT_ID_NEW.war.deployed
177764 -rw-rw-r--x. 1 jboss jboss 182026601 Feb 27 2018 SMW.FI_BASELINE_TENANT_ID.war
4 -rw-r--r--. 1 jboss jboss 526 Oct 3 08:07 SMW.FI_BASELINE_TENANT_ID.war.failed
177764 -rw-rw-r--x. 1 jboss jboss 182026530 Dec 6 2017 SMW.sysid.war
4 -rw-r--r--. 1 jboss jboss 478 Oct 3 08:07 SMW.sysid.war.failed
[root@om-mcloud632 deployments]# pwd
/usr/share/jbossas/standalone/deployments
```

20. Stop Jboss service and copy the newly generated tenant .war file to the deployments directory.

```
Stopping jbossas: [ OK ]
[root@om-mcloud632 deployments]# ps -ef | grep jbossas | grep -v grep
root 2952 2849 0 07:51 ? 00:00:32 /usr/java/jdk1.7.0_79/jre/bin/java -D[Standalone] -server -XX:+UseCompressedOops -
verbose:gc -Xloggc:/usr/share/jbossas_DAM/standalone/log/gc.log -XX:+PrintGCDetails -XX:+PrintGCDateStamps -
XX:+UseGCLogFileRotation -XX:NumberOfGCLogFiles=5 -XX:GCLogFileSize=3M -XX:-TraceClassUnloading -Xms1303m -Xmx1303m -
XX:MaxPermSize=256m -Djava.net.preferIPv4Stack=true -Djboss.modules.system.pkgs=org.jboss.byteman -Djava.awt.headless=true
-Djboss.modules.policy-permissions=true -Dhttps.protocols=TLSv1.2,TLSv1.1 -Djavax.net.debug=ssl,handshake -
Dorg.jboss.boot.log.file=/usr/share/jbossas_DAM/standalone/log/server.log -
Dlogging.configuration=file:/usr/share/jbossas_DAM/standalone/configuration/logging.properties -jar
/usr/share/jbossas_DAM/jboss-modules.jar -mp /usr/share/jbossas_DAM/modules -jaxpmodule javax.xml.jaxp-provider
org.jboss.as.standalone -Djboss.home.dir=/usr/share/jbossas_DAM -Djboss.server.base.dir=/usr/share/jbossas_DAM/standalone -b
0.0.0.0
[root@om-mcloud632 deployments]# cp /apps/DM49/fairisaac/EOS/DA/data/SMW.FI_BASELINE_TENANT_2_ID.war .
[root@om-mcloud632 deployments]# ls -ls
total 926392
37540 -rw-rw-r--x. 1 jboss 38440656 Dec 6 2017 ps.war
4 -rw-r--r--. 1 jboss 457 Oct 3 08:07 ps.war.failed
177764 -rw-rw-r--x. 1 jboss 182026608 Oct 3 08:51 SMW.FI_BASELINE_TENANT_2_ID.war
177764 -rw-rw-r--x. 1 jboss 182026614 May 1 13:57 SMW.FI_BASELINE_TENANT_ID_NEW.war
4 -rw-r--r--. 1 jboss 33 May 1 13:57 SMW.FI_BASELINE_TENANT_ID_NEW.war.deployed
177764 -rw-rw-r--x. 1 jboss 182026601 Feb 27 2018 SMW.FI_BASELINE_TENANT_ID.war
4 -rw-r--r--. 1 jboss 526 Oct 3 08:07 SMW.FI_BASELINE_TENANT_ID.war.failed
177764 -rw-rw-r--x. 1 jboss 182026530 Dec 6 2017 SMW.sysid.war
4 -rw-r--r--. 1 jboss 478 Oct 3 08:07 SMW.sysid.war.failed
[root@om-mcloud632 deployments]# service jbossas start
Starting jbossas:
```

21. Start Jboss service.

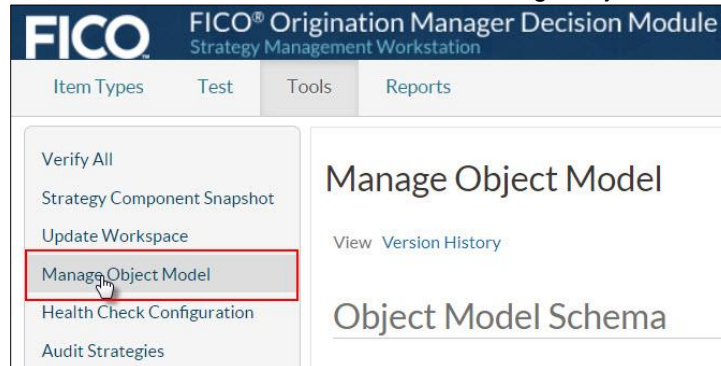
```
177764 -rw-r--r--. 1 root 182026608 Oct 3 08:51 SMW.FI_BASELINE_TENANT_2_ID.war
177764 -rw-rw-r--x. 1 jboss 182026614 May 1 13:57 SMW.FI_BASELINE_TENANT_ID_NEW.war
4 -rw-r--r--. 1 jboss 33 May 1 13:57 SMW.FI_BASELINE_TENANT_ID_NEW.war.deployed
177764 -rw-rw-r--x. 1 jboss 182026601 Feb 27 2018 SMW.FI_BASELINE_TENANT_ID.war
4 -rw-r--r--. 1 jboss 526 Oct 3 08:07 SMW.FI_BASELINE_TENANT_ID.war.failed
177764 -rw-rw-r--x. 1 jboss 182026530 Dec 6 2017 SMW.sysid.war
4 -rw-r--r--. 1 jboss 478 Oct 3 08:07 SMW.sysid.war.failed
[root@om-mcloud632 deployments]# service jbossas start
Starting jbossas:
```

22. Change file/folder permissions for `SMW.FI_BASELINE_TENANT_2_ID` within `<DM folder name>/DM49/fairisaac/EOS/DA/data/repositories/` for the new tenant by executing the command: `chmod -Rf 0777 MW.FI_BASELINE_TENANT_2_ID`.

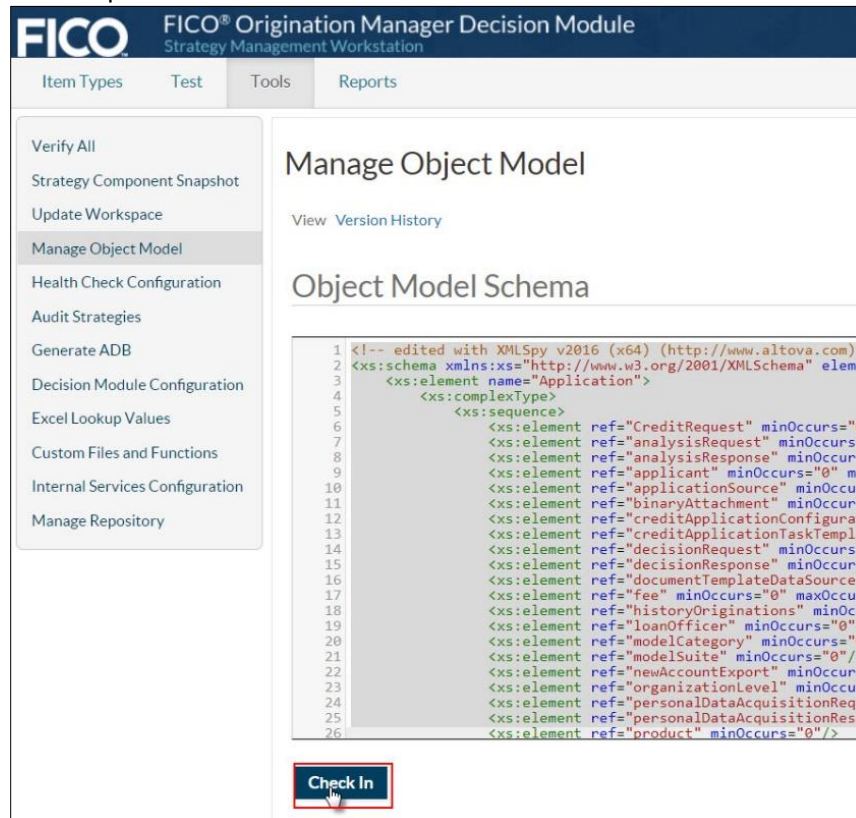
23. Change file/folder permissions for `SMW.FI_BASELINE_TENANT_2_ID` within `<DM folder name>/DM49/fairisaac/EOS/Common/data/schema` for the new tenant by executing the (same) command: `chmod -Rf 0777 SMW.FI_BASELINE_TENANT_2_ID`. The URL for the new tenant is `http://<Server_Address>/SMW.FI_BASELINE_TENANT_2_ID`.

The remaining steps in the process talk about importing what was copied and exported (via steps 6 through 10) into the new client's repository using the SMW application's tools.

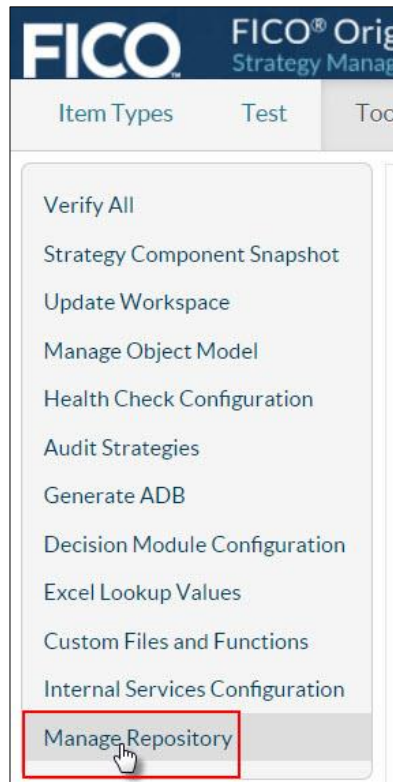
24. Log in to the DM with the User ID credential of “admin” and password credential of “admin”.
25. Click the Tools tab in the DM and click Manage Object Model.



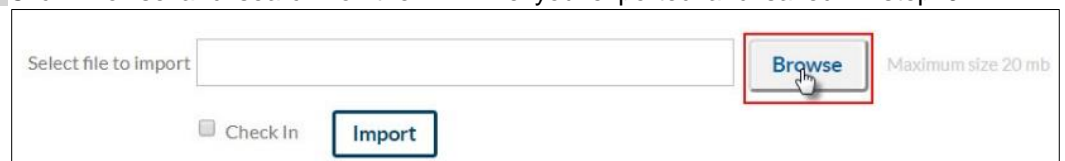
26. Paste the copied contents of the DM data model taken from the existing client from Step 8 and click Check In.



27. Click Manage Repository from the Tools tab.



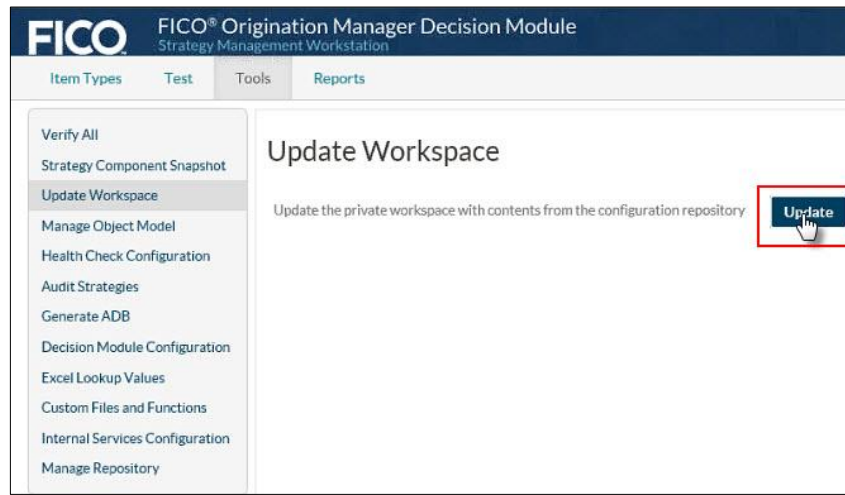
28. Click Browse and search for the .xml file you exported and saved in step 9.



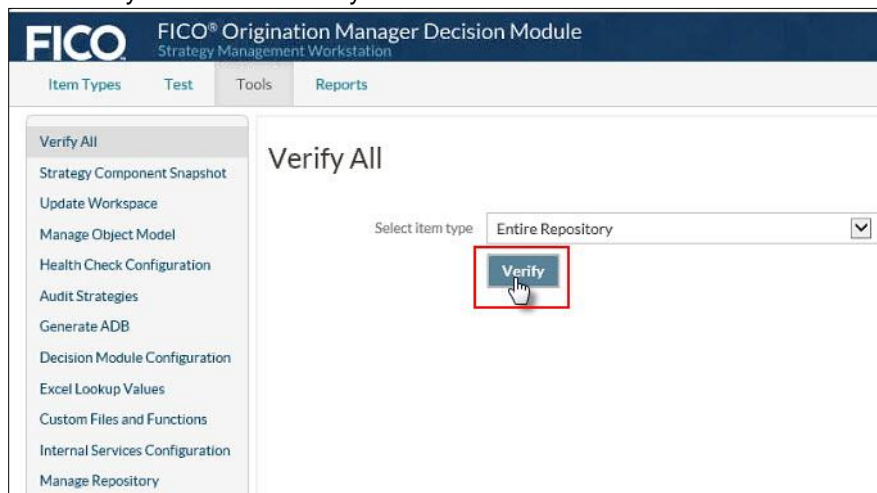
29. Click the Check In check box and click Import.



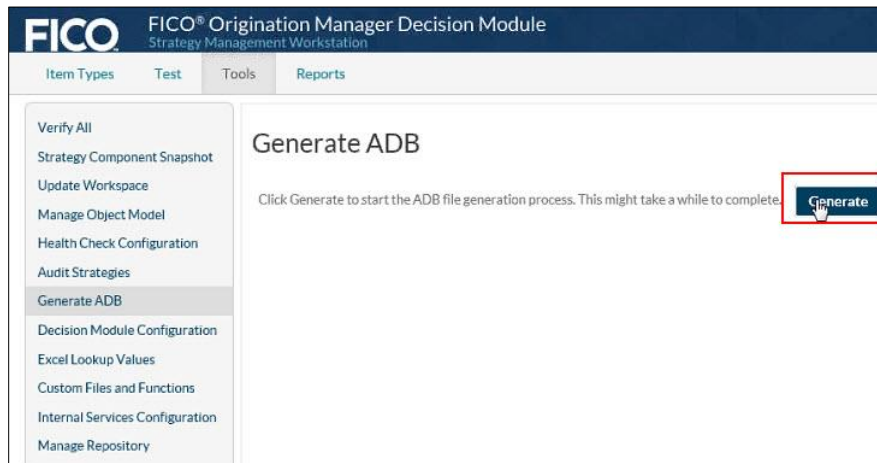
30. Click Update Workspace from the menu on the left side of your window and click Update.



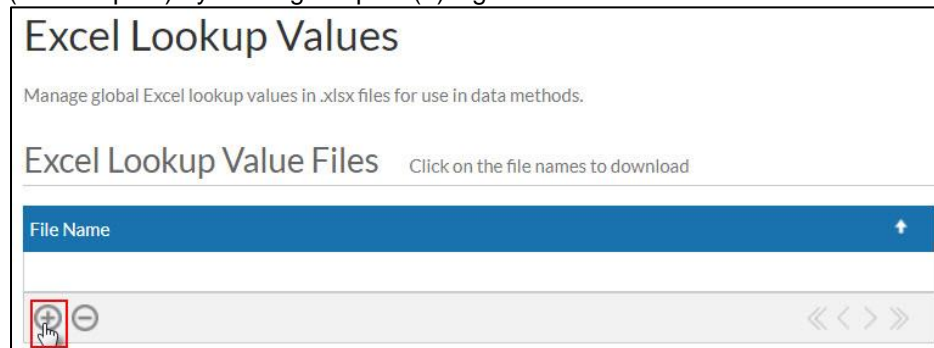
31. Click Verify All and click Verify.



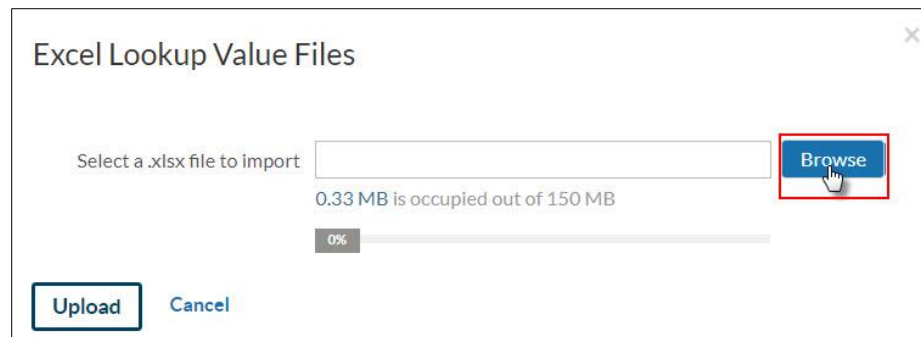
32. Click Generate ADB and click Generate.



33. Click Excel Lookup Values from the menu on the left side of your window.
34. Upload the Stipulations.xlsx Excel file from the existing client to the new client (from step 10) by clicking the plus (+) sign.



35. Click Browse and search for the saved Excel file.



36. Once you have found and selected the file, click Upload.
37. Repeat steps 34 through 36 for each saved Excel file.

Now that the new client repository setup is complete, refer to *FIS Consumer Credit Card OMDM Design Workbook_DefaultClient_V1.0* for information related to the design of the default repository, as it will be the starting point for configuration changes and/or additions for the new client.

The next chapter in this guide, *Administer Client Configurations in DM*, provides helpful reference information when capturing and implementing your new client's decisioning rules (and other DM configuration parameters) to begin processing applications under their desired credit strategy.

Rule Reasons & Stipulations

In step 10 of Chapter 2 in this guide, a *Stipulations.xlsx* file was copied from the default client to the new client repository in DM. This file contains two spreadsheets: Rulesets, which represent Rule Reasons, and Stipulations, which represent specific conditions. Rule Reasons and Stipulations are similar in many ways beyond simply being captured via a single Excel workbook (for ease of copying and/or updating). However, they are addressed separately in this guide since they serve different purposes and are specifically different in how each is configured in the DM, mapped to the APM, and ultimately displayed to users in the FAST application user interface.

Rule Reasons

A Rule Reason, also called a decision reason, is added to a rule in the DM. It is most common for a client to have multiple decision rules, many or all of which might fire true for a particular applicant or application. These multiple rule outcomes are important, not only as factors in the decision flow which ultimately renders a recommended decision returned from the DM, but each rule result is also key information for manual credit reviews, underwriting, application routing, as well as auditing and reporting.

As per the application design, Rule Reasons are configured in the DM and a Reason code is sent in the DM response to the APM. The APM retrieves and translates the Reason code into readable text using APM domain values, resulting in a set of user-friendly Decline, Review, or Fraud Reasons displayed in order by Rule Rank to see which rules fired.

As an administrator, if you want to add a new rule and display a reason related to that rule in the APM, you need to first define the reason code in the DM and then create a domain value entry in the APM/DM Reasons table to map the Reason code with UI text. Follow the instructions below to check the current rule reasons and domain value associated with them. For more information, see the Review Reasons section of chapter 2, Application Overview, within the *OM Application Processing Module Supplement User's Guide*.

Ruleset Properties

Name: rs_DeclineRules_InProcessApplicant

Description (optional): Decline rules for applicant

Return decision: Decline If any rule fires

Results: Decline

Rules

Rule	Status	Result	Reason	Severity	Rank
rule_DELINQUENT	Active		R_DELINQUENT	0	3
rule_CBR_NOHIT	Active		R_CBR_NOHIT	0	8
rule_APP_OCCUPATION	Active		R_OCCUPATION	0	5
rule_APP_SELF_EMPLOYED_SHORT_TIME	Active		R_SELF_EMPLOYED_SHORT_TIME	0	6
rule_APP_BANKRUPTCY_ON_CRA_REPORT	Active		R_BANKRUPTCY_ON_CRA_REPORT	0	2

DeclineRules_inProcessApplicant

Version 4 Checked-in date 07/12/2018 Checked-in comment Occupation rule for test

Decline rules for applicant
Return decision: Decline If any rule fires
Results: Decline

rule_DELINQUENT
Context: Application.creditApplication.personalApplicant.creditSummary
Status: Active
Effective date: from... to...
Ruleset result set to
Decision reason R_DELINQUENT
Severity level 0
Reason rank order 3

Return outcome when all conditions are true for every dor_inprocess_creditSummary
Field or Data Method Operator Field / Data method / Enumeration / Value
creditSummary.isDelinquent is equal to true

Rulesets > rs_stipulations_inProcessApplicant > rule_LOST_STOLEN_CARD2

[Read Only]

Rule Properties

Name rule_LOST_STOLEN_CARD2
Description (optional)
Context Application.creditApplication.personalApplicant.person
Status Active
Effective date from... to...

Rule Outcome (optional)

Ruleset result set to

Use reason	Yes
Decision reason	S_LOST_STOLEN_CARD
Severity level	0
Reason rank order	1

Rule Definition

Return outcome when if all conditions are true for every person

☒ Use minimal evaluation

In the data method, “*dm_CopyRuleReasons*,” other details are updated to rule reasons (e.g., ApplicantID).

The DM returns Rule Reason code to the APM in the DM response. That reason code is then looked up in the APM's Domain Values that have been configured for DM Reasons. The corresponding Domain Value's text is displayed in a Reasons section (in order by assigned rank in the DM) of the APM user interface. This allows you to configure and display the rule reasons as desired.

Domain Values	
Reason	Search
9 records	
Name	Action
Decline Reasons	
Verification Reason	
Adjustment Reason	
Referral Reasons	
Withdraw Application Reason	
Override Application Reason	
CreditReferralReasons	
Reconsider Reasons	
DM Reasons	

Refer to chapter 9, Page Customization and Configuration, within the *FICO Origination Manager Application Processing Module Administrator's Guide*, for steps on how to configure the rule reasons in the Domain Values within the System Admin tool of the APM. (See the Admin Configuration Workbook for default client configuration of DM Reasons.)

The APM displays only the three highest ranked rule reasons, so consider this when ranking rule reasons. The current rule ranks are given based on the DM call (e.g., approve, decline, verify).

```

1  result := 0;
2
3  for every Application.DecisionResponse.Product.Decision.Reason in dor_Decision_Reason do
4      xReasonText := null;
5      xReasonCode := null;
6      xApplicantID := null;
7      xRank := 99;
8      xCategory := null;
9      xNewReasonText := null;
10     xRuleLevel := null;
11
12     //
13     //
14     //
15     if ( Decision.ImplementationType <> null and Decision.ImplementationType <> "" and
16         ( Decision.ImplementationType="Ruleset" or Decision.ImplementationType="Decision Tree" ) and
17         Reason.ReasonText <> null and left (Reason.ReasonText, 2) = "R_" ) then
18         xNewReasonText := Mid(Reason.ReasonText, 3, StrLen(Reason.ReasonText) - 2);
19         if ( xNewReasonText <> null ) then
20             Reason.ReasonText := xNewReasonText;
21
22         // Creating ReasonsCode
23         xReasonCode := xNewReasonText;
24
25         //
26         //Excel Loopup for ReasonText
27         xReasonText := ExcelCellValue("Stipulations","RuleSets", "reasonText", "Alpha", xReasonCode, "Alpha");
28         if (ExcelCellValueError("") = "true" ) then
29             xReasonText := "EXCEL LOOKUP ERROR - " + ExcelCellValueLastError("");
30         endif
    
```

When adding a new rule, add a new Rule Reason, code and details in the RuleSets tab of the stipulations.xlsx file. For steps on how to do this, refer to the Add Stipulations section within this chapter, adding the details in the RuleSets tab instead of the Stipulations tab.



Note Rule Reason codes usually start with “R_” and Stipulation codes usually start with “S_”

Stipulations

A Stipulation might also be added to a rule in the DM. Stipulations can act as alerts and/or conditions of approval which must be reviewed, met, cleared, and/or waived before processing can continue or an application is approved. Stipulations apply at either the applicant or application level and have one of the following pre-defined stipulation categories:

- Document
- Verification
- Stipulation
- Fraud
- Other

A stipulation has a type which is defined as one of the following:

- If Category is equal to (=) Document, then one of the configured APM Domain Values is for Document Type (e.g., Address Verification, Age Verification, Employment Verification).
- If Category is greater (>) or less than (<) Document, then one of the configured APM Domain Values is for Stipulation Type (e.g. Credit History, PostBureau Fraud).

For example, if a Stipulation is returned from the DM with a category of 'Fraud' and a type of 'Fraud PostBureau', it is displayed in the APM as an alert in the Resolve Fraud UI during PostBureau processing. Whereas, if a Stipulation is returned from the DM with a category of 'Document' and a type of 'Employment Verification', it is displayed in the Stipulations UI as a Document with a document type of 'Employment Verification', which must be obtained and cleared.

In the DM, applicant level stipulation rules are checked against each of the applicants. Application level rules are checked against application data. Application level stipulations are available in ruleset, "rs_stipulations_inProcessApplicant", and application level stipulations are available in ruleset, "rs_StipulationRulesBoth".

Rulesets > rs_stipulations_inProcessApplicant > rule_LOST_STOLEN_CARD2 [Read Only]

Rule Properties

Name: rule_LOST_STOLEN_CARD2
Description (optional):
Context: Application.creditApplication.personalApplicant.person
Status: Active
Effective date: from... to...

Rule Outcome (optional)

Ruleset result set to

Use reason: Yes

Decision reason	S_LOST_STOLEN_CARD
Severity level	0
Reason rank order	1

Rule Definition

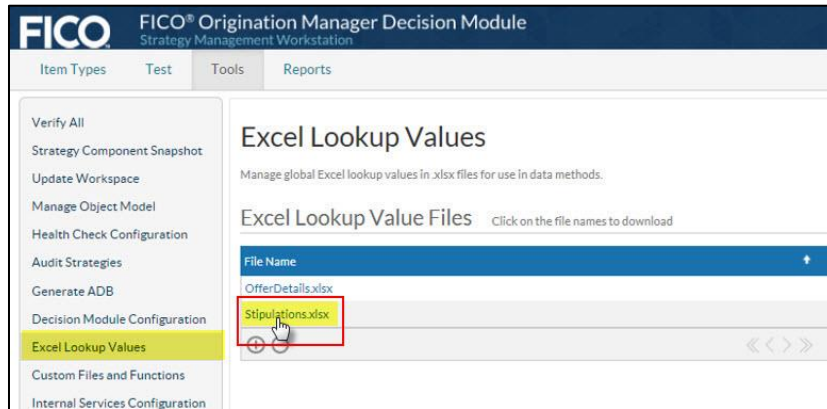
Return outcome when: If all conditions are true for every person

☒ Use minimal evaluation

Stipulation details can be seen in the “Decision reason” part of each rule, as well as the Stipulations Excel file located within the Excel Lookup Values feature of the Tools menu.

```
rule_SECURITY_REPORT2
ContextApplication.creditApplication.personalApplicant
StatusActive
Effective datefrom ... to ...
Ruleset result set to
Decision reason
S_SECURITY_REPORT
Severity level0
```

Click the Stipulations.xlsx (Excel) file to download it to your local hard drive or network location.



Select the Stipulations tab in the downloaded Excel file to view them.



Note Do not make any changes to rows one and two, so the DM can read the Excel file.

Row	Col	stipulationCode	stipText	stipCategory	stipType	stipLevel
4		FRAUD_ALERT	Credit report has fraud victim indicator	Stipulation	POST_BUREAU_FRAUD	Applicant
5		FRAUD_FILE_BLOCKED	Credit report has fraud file blocked indicator	Stipulation	POST_BUREAU_FRAUD	Applicant
6		LOST_STOLEN_CARD	Credit report has a lost or stolen indicator	Stipulation	POST_BUREAU_FRAUD	Applicant
7		SSN_VARIATION	Credit report has a SSN Variation Indicator	Stipulation	POST_BUREAU_FRAUD	Applicant
8		SECURITY_REPORT	Credit report has security indicators that require fraud review	Stipulation	POST_BUREAU_FRAUD	Applicant
9		HIGH_AMOUNT_SELF_EMPLOYED_R	Self employed with high customer stated income	Document	Income Verification	Applicant
10		HIGH_MONTHLY_INCOME	High monthly income	Document	Income Verification	Applicant
11		LESS_60DAYS_DELINQUENT	Delinquency under 60 days	Stipulation	Credit History	Applicant
12		PAYOFF_REQUIRED	Payoff loan balance required	Stipulation	Credit History	Applicant

Do not make any changes to row three in the spreadsheet to prevent errors on verification or ADb generation, as these are the names used in the DM code to refer to the values contained in the rows following row three.

Add Stipulations

Complete the following steps to add a new stipulation(s) to the Stipulations Excel workbook file while it's open:

1. Click Enable Editing.
2. Insert a new row anywhere after row three to add new stipulation details.
 - a. Enter the code in column A.
 - b. Enter the description of the stipulation code in column B.
 - c. Enter the category in column C.
 - d. Enter the type in column D.
 - e. Enter the level in column E.
3. Save the Excel sheet with the same name after adding all new stipulation(s).



Note You should always save it as an Excel file type (*.xlsx). However, if you change the file name, the DM code should be changed accordingly. Check data method, "*dm_copyStipulations*", for code details and sample.

Create Stipulations

Complete the following steps to create a new Stipulations Excel workbook file:

1. Open a blank Excel workbook and save it as an “.xlsx” (Excel workbook) with an applicable name (e.g., ABOC_stips.xlsx).
2. Give a name to each worksheet (tab) within the Excel workbook.
3. Enter the stipulations using the following template:
 - A1 value: “Row”
 - B1 value: “=”
 - A2 value: “Col”
 - B2 value: “=”
4. Row three contains the column names without spaces (e.g., stipulationCode, stipText, stipCategory). These are used in the DM code.
5. The remaining rows after row three are the values associated with the column names.
6. Values are read separately in each of the columns.

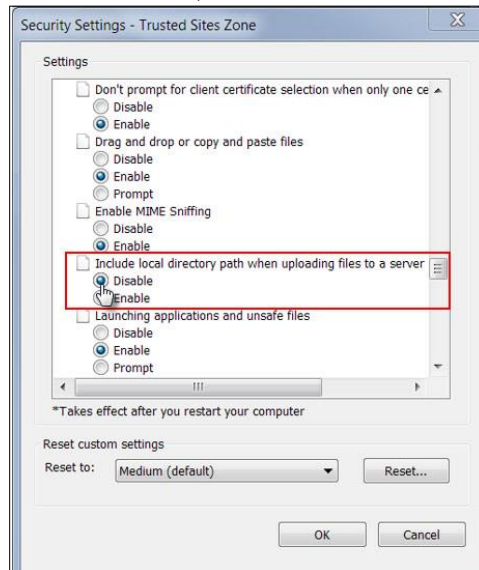
```
//Excel Loopup for StipulationText
xStipulationText := ExcelCellValue("Stipulations", "Stipulations", "stipText", "Alpha", xStipulationCode, "Alpha");
if (ExcelCellValueError("") = "true") then
  xStipulationText := "EXCEL LOOKUP ERROR - " + ExcelCellValueLastError("");
endif
//
```



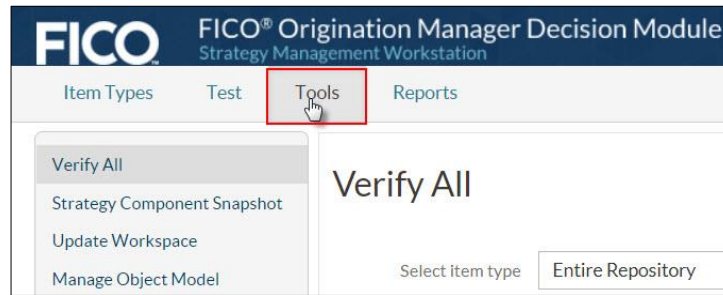
Note The DM reads from the Stipulations Excel file's Stipulations tab. The output value is found within the “stipText” column, which is matching input value in the “xStipulationCode”. As a result, the DM reads only one value at a time.

Complete the following steps to upload a Stipulations Excel workbook file to DM:

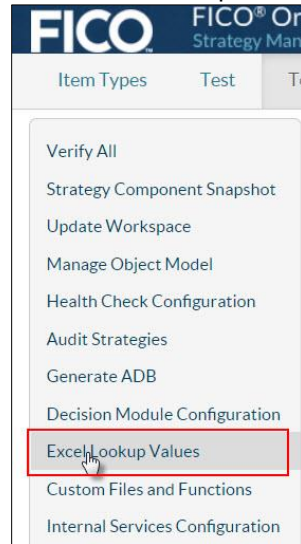
1. Ensure that your internet option, “Include local directory path when uploading files to a server”, is set to Disable.



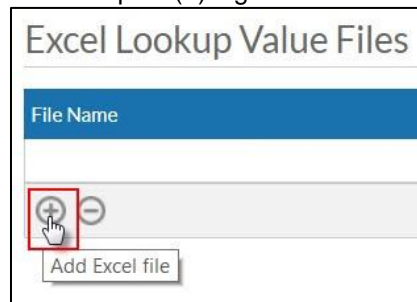
- Log in to the DM and click the Tools tab.



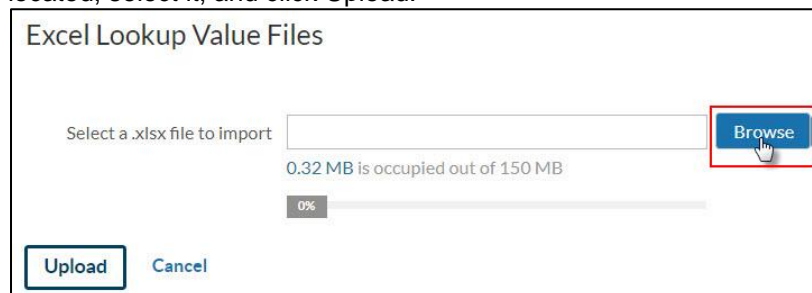
- Click Excel Lookup Values from the menu on the left side of your window.



- Click the plus (+) sign.



- Click Browse to search where the Stipulations Excel workbook file is located, select it, and click Upload.





Note For new files, ensure that the file has read/write permissions on the server if the DM code is failing to access the same.

Configured Attributes for Display in APM

Clients might wish to see specific attributes or characteristics and their values in specific areas within the APM, namely in the Bureau Report Card, Derived Attributes, and Custom Attributes sections of the application. Most often, the attributes they wish to see are those sent in credit bureau report data or calculated by the DM, which are most commonly considered in scoring, decisioning, and manual credit review activities.

DM configuration enables this construction using data methods to set the labels, values, and details of these attributes, so when they are sent in the DM response to the APM, they appear in the desired section and display in rank order.

The label and values for these attributes are calculated in the DM within the Data Method, 'dm_setLabelNameValues'.

The screenshot shows the 'Data Method Properties' window for the data method 'dm_setLabelNameValues'. The window has a toolbar at the top with icons for edit, save, delete, and other actions. The main area contains the following properties:

- Name:** dm_setLabelNameValues
- Description (optional):** this will set the labelname, value, rank in DMAttributesList. these will be displayed on creditSummary web block of APM UI
- Context:** Application
- Result type:** string
- ☐ Save history

The rank assigned to each attribute in the Data Method Properties determines the order in which the attributes are displayed in the applicable window.


```
if (applicantFinancial.housingRatio <> null) then
  xLabelName := "Housing ratio";
  xLabelRank := 18;
  xLabelValue := NumStr(applicantFinancial.housingRatio);
  dm_attachLabelNameValues(xPersonID, xLabelName, xLabelValue, xLabelRank, xMainMenuFlag);
endif
```


Bureau Report Card Attributes

Bureau Report Card attributes are displayed in the Bureau Report Card within the Credit Review section (see 'Credit Score', 'Debt to Income (DTI)', 'Months since most recent derogatory' through 'Highest bank revolving trade line credit amount' in the following example).

Credit Review

System Recommended Decision
Recommend Approve

 1. Review for Income

SSOLEIMANII KKARBALAA Credit Report

Pull Credit Report

ExperianPreciseID
Pulled 2019-01-18 08:04:09

Credit score	639	Full Credit Report
Debt to Income (DTI)	0.003	Summary Calculations
# open trade lines	6	
Months since most recent 60+ delinquency	51	
Months since most recent derogatory	36	
Lowest rating trade lines reported last 24 months	0	
# Times 30 Days Delinquent Trade Lines Last 12 Months	0	
% trade lines 60+ ever	14	
# rev trades w/bal >= 100% of credit amount	0	
Total bank revolving trade line credit amount	15500	
# bank/nat'l inquiries 0-5 months	0	
Highest bank revolving trade line credit amount	14000	

The DM data method, “dm_setLabelNameValues,” includes the following logic to set these labels and values. In the following example, note that the ‘xMainMenuFlag’ is equal (=) to “true”, which means these attributes are displayed in the Bureau Report Card.

```
xMainMenuFlag := true;

for every Application.creditApplication.personalApplicant.creditSummary relative to personalApplicant do

  if (creditSummary.bureauScore <> null) then
    xLabelName := "Credit score";
    xLabelRank := 1;
    xLabelValue := NumStr(creditSummary.bureauScore);
    xLabelValue := Mid(xLabelValue, 1, StrLen(xLabelValue) - 7 );
    dm_attachLabelNameValues(xPersonID, xLabelName, xLabelValue, xLabelRank, xMainMenuFlag);
  endif

endfor

for every Application.creditApplication.personalApplicant.consumerExternalDataSource.consumer.DataSource.Response.Output.Analysis.Characteristics relative to PersonalApplicant do

  if (xDTI <> null) then
    xLabelName := "Debt to Income (DTI)";
    xLabelRank := 2;
    xLabelValue := NumStr(xDTI);
    xLabelValue := Mid(xLabelValue, 1, StrLen(xLabelValue) - 4 );
    dm_attachLabelNameValues(xPersonID, xLabelName, xLabelValue, xLabelRank, xMainMenuFlag);
  endif

  if (Characteristics.numOpenTL <> null) then
    xLabelName := "# open trade lines";
    xLabelRank := 3;
    xLabelValue := NumStr(Characteristics.numOpenTL);
    xLabelValue := Mid(xLabelValue, 1, StrLen(xLabelValue) - 7 );
    dm_attachLabelNameValues(xPersonID, xLabelName, xLabelValue, xLabelRank, xMainMenuFlag);
  endif

  if (Characteristics.mosSncMostRcnt60pDelq <> null) then
    xLabelName := "Months since most recent 60+ delinquency";
    xLabelRank := 4;
    xLabelValue := NumStr(Characteristics.mosSncMostRcnt60pDelq);
    xLabelValue := Mid(xLabelValue, 1, StrLen(xLabelValue) - 7 );
    dm_attachLabelNameValues(xPersonID, xLabelName, xLabelValue, xLabelRank, xMainMenuFlag);
  endif

endif
```

Derived Attributes

Derived Attributes is a window under Summary Calculations in which Derived attributes can be configured and displayed in the DM. In the example below, the ‘Total Monthly Payment’, ‘Debt to Income (DTI)’ and ‘Gross Monthly Income’ are derived attributes which are configured for display in the Derived Attributes window under Summary Calculations.

Summary Calculations			
Application OM2321			
Tim Hall			
TransUnionUSConsumer 10/22/2018 08:18:03			
<div> <div>Derived Attributes</div> <div>Summary Attributes</div> <div>Custom Attributes</div> </div>			
Derived Attributes			
Combined gross monthly income	10000.000	Combined net monthly income	7500.000
Combined monthly payments	1000.000	Combined monthly housing expenses	0.000
Combined net disposable income	6500.000	Combined current debt to income ratio	13.333
Combined current debt to income ratio with housing	13.333	Total housing ratio	0.000
Age	28	Months working with current employer	0
Total gross monthly income	10000.000	Net monthly income	0.000
Net disposable income	0.000	Monthly housing expense	0.000
Total monthly payments	684.560	Current debt to income ratio	6.846
Current debt to income ratio with housing	6.846	Housing ratio	0.000

The data method, "dm_setLabelNameValues", includes the following logic to set these labels and values. Note that the 'xMainMenuFlag' is equal to (=) false; which means these attributes are NOT displayed in the Bureau Report Card.

```
xMainMenuFlag := false;

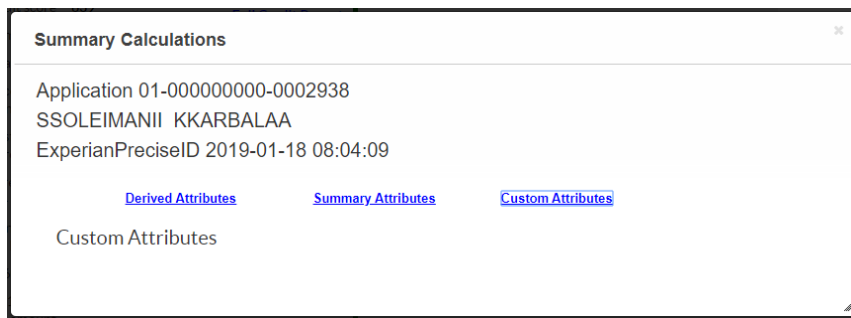
if (xTotalPayments <> null) then
  xLabelName := "Total Monthly Payment";
  xLabelRank := 1;
  xLabelValue := NumStr(xTotalPayments);
  xLabelValue := Mid(xLabelValue, 1, StrLen(xLabelValue) - 4 );
  dm_attachLabelNameValues(xPersonID, xLabelName, xLabelValue, xLabelRank, xMainMenuFlag);
endif

if (xGrossIncome <> null) then
  xLabelName := "Gross Monthly Income";
  xLabelRank := 2;
  xLabelValue := NumStr(xGrossIncome);
  xLabelValue := Mid(xLabelValue, 1, StrLen(xLabelValue) - 4 );
  dm_attachLabelNameValues(xPersonID, xLabelName, xLabelValue, xLabelRank, xMainMenuFlag);
endif

if (xDTI <> null) then
  xLabelName := "Debt to Income (DTI)";
  xLabelRank := 3;
  xLabelValue := NumStr(xDTI);
  xLabelValue := Mid(xLabelValue, 1, StrLen(xLabelValue) - 4 );
  dm_attachLabelNameValues(xPersonID, xLabelName, xLabelValue, xLabelRank, xMainMenuFlag);
endif
```

Custom Attributes

If a client's bureau report subscription includes them, Custom Attributes can be configured to display in the Custom Attributes window similarly to Bureau Report Card and Derived Attributes. In the following example, the client does not subscribe to any custom attributes from any credit bureau, hence no Custom Attributes are displayed in the window.



CHAPTER 4 Set Up New Data Acquisition Module Client

When used with the APM, the Data Acquisition Module (DAM) can obtain consumer and business credit reports as part of the APM workflow. If you are using the DAM and Analytic Module (AM), the APM can send data obtained from the DAM to the AM for scoring.

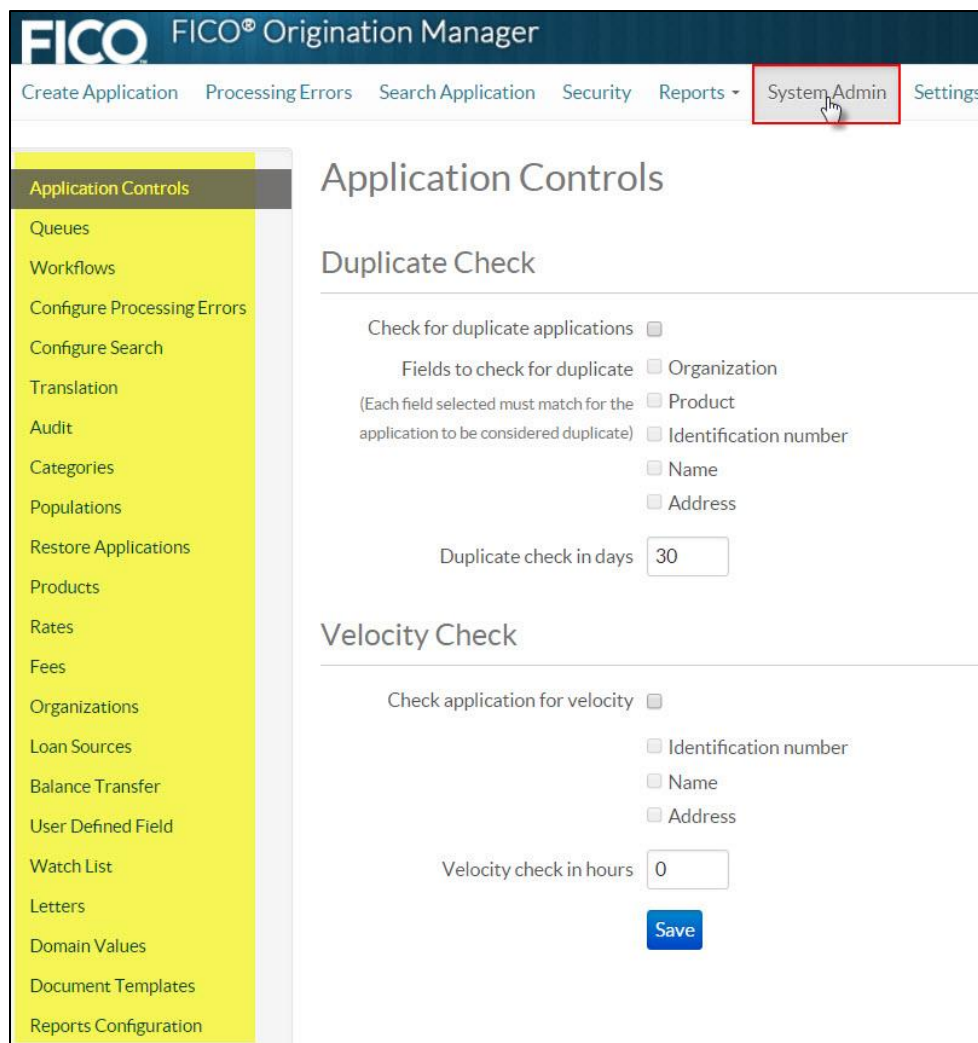
Once you have acquired the DAM component and built a solution, you can configure the APM to invoke the DAM and receive responses. After you have set up a new DM client, refer to chapter 4, Data Acquisition Module Configuration, within the *FICO Origination Manager Data Acquisition Module User's Guide* for the steps to set up a new DAM client in the APM.

CHAPTER 5 Copy Client in APM

Once a default client has been configured in the APM, the next step is to create a Client by copying the default client's configurations, and define for the new client the following information:

- System Administrator
- Application Branding
- Advanced Configuration

The Copy configuration element within the Client feature located in the menu on the left side of your window enables you to perform this task when setting up a new client. The configurations that are copied include many, but not all, of the configurations maintained for the default client via the OM APM System Admin menu.

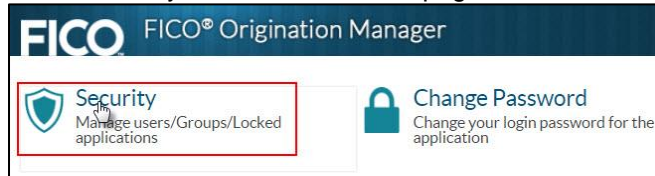


The screenshot shows the FICO Origination Manager interface. The top navigation bar includes 'Create Application', 'Processing Errors', 'Search Application', 'Security', 'Reports', 'System Admin' (highlighted with a red box and a mouse cursor), and 'Settings'. The left sidebar lists various configuration options under 'Application Controls', including Queues, Workflows, Configure Processing Errors, Configure Search, Translation, Audit, Categories, Populations, Restore Applications, Products, Rates, Fees, Organizations, Loan Sources, Balance Transfer, User Defined Field, Watch List, Letters, Domain Values, Document Templates, and Reports Configuration. The main content area is titled 'Application Controls' and contains two sections: 'Duplicate Check' and 'Velocity Check'. The 'Duplicate Check' section has a checkbox for 'Check for duplicate applications', a list of fields to check for duplicates (Organization, Product, Identification number, Name, Address), and a 'Duplicate check in days' input field set to 30. The 'Velocity Check' section has a checkbox for 'Check application for velocity', a list of fields to check for velocity (Identification number, Name, Address), and a 'Velocity check in hours' input field set to 0. A 'Save' button is located at the bottom right of the main content area.

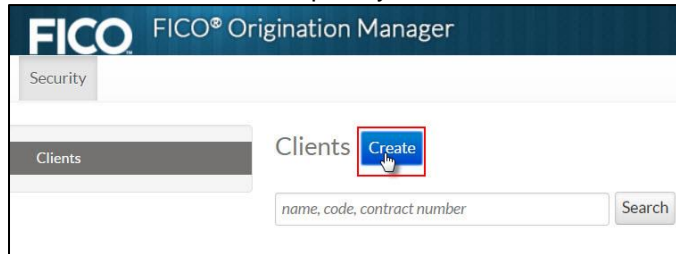
See the Index tab in the Admin Configuration Workbook.xlsx for additional details related to which configurations are copied from the default client and which must be configured manually for the new client.

Complete the following steps to copy a current client's configurations when creating a new client:

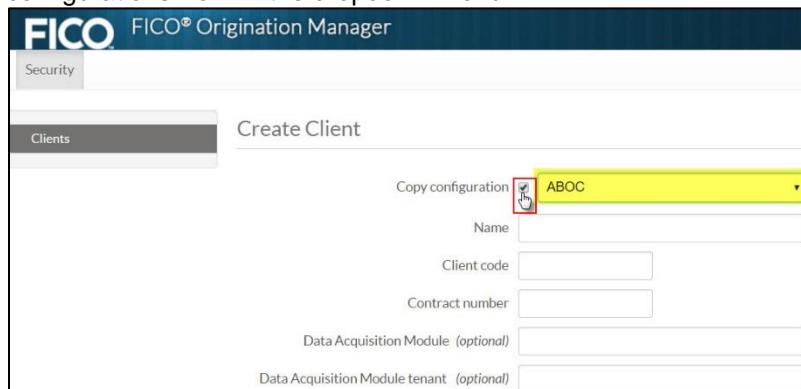
1. Click Security from the Home page of the Loan Origination application.



2. Click Create near the top of your window. A Create Client window appears.



3. Click the Copy Configuration check box and select the client you want to copy configurations from in the dropdown menu.



4. Complete the following steps for the Create System Administrator section:

- a. Enter the first and last name of your client's (primary) system administrator in the Name fields.
- b. Enter your client's (primary) system administrator's email address in the Email field.
- c. Enter your client's (primary) system administrator's phone number in the Phone field.
- d. Enter your client's (primary) system administrator's fax number in the Fax field (if applicable).

5. Complete the following steps for the Application Branding section:

Application Branding

Theme

FICO.css

Browse...

.CSS file of maximum size 10 KB

Logo

FICO.png

Browse...

.PNG, .JPG, .JPEG file of maximum size 10 KB

Application name

ApplicationName.png

Browse...

.PNG, .JPG, .JPEG file of maximum size 10 KB

- Click Browse under the Theme section to select the .css file representing your client's desired style sheet. The .cascading style sheet file size must not exceed 10KB.
 - Click Browse under the Logo section to select an image file representing your client's desired logo. The accepted image files include .PNG and/or .JPG. The .JPG file must not exceed 10KB.
 - Click Browse under the Application name section to select an image file representing your client's desired application name image. This should be the same file for all your clients unless you allow each client to independently name or brand their application. The accepted image files include .PNG and/or .JPG. The .JPG file must not exceed 10KB.
6. Complete the applicable fields for the Advanced Configuration section. See the table below for information about each element in this section:

Groups

Users

User Passwords

Clients

Advanced Configuration

Manage client configuration

Federal Agency

FIS UDIB System

FIS UDIB Username

Main Bank ID

Max Number of Authorized Users

OFAC/IDV Acquirer ID

OFAC/IDV Customer ID

OFAC/IDV User Name

Secondary Bureau

Tertiary Bureau

FIS UDIB Password

OFAC/IDV Password

Field	Action
Federal Agency	Configures the Federal Agency which governs your client; drives which agency is included in Decline/Adverse Action Letters.
FIS UDIB System	Configures your client's back-office booking system; used for authentication in web services. Valid values are B (Base 2000), S (TBS St. Pete), or M (TBS Madison).
FIS UDIB Username	Configures your client's user name for authentication in web services.
Main Bank ID	Configures the Main Bank ID for your client; used in web services.
Max Number of Authorized Users	Specifies maximum number of authorized users allowed on an application and controls when the Add Authorized User button is disabled after the maximum number has been reached. This should be set so the applicant, co-applicant (if enabled), and the maximum number of authorized users cannot exceed four (4).
OFAC/IDV Acquirer ID	Configures your client's Acquirer ID to send in OFAC/IDV web service.
OFAC/IDV Customer ID	Configures your client's customer ID to send in OFAC/IDV web service. This parameter value is sent as customer ID for all organizations within the Client UNLESS a value has been added in Admin > Organization > Client ID for the organization on the application. If so, then Organization > Client ID is passed as customer ID in OFAC/IDV web service.
OFAC/IDV User Name	Configures your client's user name to send in OFAC/IDV web service.
Secondary Bureau	Specifies your client's secondary bureau agency; Specify the Name of the CRA Configuration (setup by Client Administrator via Admin > CRA Configuration) that the client wishes to designate as Secondary Bureau.
FIS UDIB Password	Configures your client's password for authentication in web services. Passwords are encrypted and masked.
OFAC/IDV Password	Configures your client's password to send in OFAC/IDV web service. Passwords are Encrypted and Masked.

7. Complete the applicable check boxes for the Advanced Configuration section. See the table below for information about each element in this section:

Allow Account Setup Customer Facing	<input type="checkbox"/>
Allow ATM Account	<input type="checkbox"/>
Allow ATM Account Customer Facing	<input type="checkbox"/>
Allow Authorized Users	<input type="checkbox"/>
Allow Authorized Users Customer Facing	<input type="checkbox"/>
Allow Auto Booking	<input type="checkbox"/>
Allow Auto Pay	<input type="checkbox"/>
Allow Auto Pay Customer Facing	<input type="checkbox"/>
Allow Balance Transfers Customer Facing	<input type="checkbox"/>
Allow Card Design Customer Facing	<input type="checkbox"/>
Allow Card Image Uploads	<input type="checkbox"/>

Check Box	Action
Allow Account Setup Customer Facing	Specifies whether Account Setup in customer facing screens (online application) is enabled for your client. If True (Y), All Account Setup web blocks are subject to display on External Results page when the decision that's returned is Approve and this parameter value is set to True (Y). Each web block within Account Setup in External Results page is controlled independently by client configuration parameters specific to the web block.
Allow ATM Account	Specifies whether ATM Account is enabled for your client. If True (Y), ATM Account web block is enabled on Internal Account Setup page.
Allow ATM Account Customer Facing	Specifies whether ATM Account in Customer Facing Screens (Online Application) is enabled for this client where it is defined as being displayed/enabled when this parameter value is set to True (Y), and if Client Config Allow Account Setup Customer Facing is also set to True (Y), and if Decision returned is Approve.
Allow Authorized Users	Specifies whether Authorized Users are enabled for this client. If True (Y), Authorized Users web block is enabled on internal pages where it is defined as being displayed/enabled when this parameter value is set to True (Y).
Allow Authorized Users Customer Facing	Specifies whether Authorized Users in Customer Facing Screens (Online Application) are enabled for this client where it is defined as being displayed/enabled when this parameter value is set to True (Y).
Allow Auto Booking	Configures whether your client allows auto-booking on an application in Approve status, which meets all validation criteria for booking. If True (Y), approved applications which pass booking validations will bypass Pending Account Setup status and automatically go directly to Ready to Book.
Allow Auto Pay	Specifies whether auto pay is enabled for your client. If True (Y), Auto Pay web block is enabled on Internal Account Setup page when this parameter value is set to True (Y).
Allow Auto Pay Customer Facing	Specifies whether auto pay is enabled in Customer Facing Screens (Online Application) for the client where it is defined as being displayed/enabled when this parameter value is set to True (Y), and if Client Config Allow Account Setup Customer Facing is also set to True (Y), and if Decision returned is Approve.
Allow Balance Transfers Customer Facing	Specifies whether Balance Transfers are enabled in Customer Facing Screens (Online Application) for the client where it is defined as being displayed/enabled when this parameter value is set to True (Y), and if Client Config Allow Account Setup Customer Facing is also set to True (Y), and if Decision returned is Approve.
Allow Card Design Customer Facing	Specifies whether Card Design Selection is enabled in Customer Facing Screens (Online Application) for the client where it is defined as being displayed/enabled when this parameter value is set to True (Y), and if Client Config Allow Account Setup Customer Facing is also set to True (Y), and if Decision returned is Approve.
Allow Card Image Uploads	Specifies whether your client allows card image files to be uploaded in Admin > Additional Product Details. If set to False (N), the ability to upload card image files in Additional Product Details is disabled.

Check Box	Action
Allow Co-Applicant (max 1)	Specifies the number of Co-Applicants allowed by the Client, Max 1. If set to 0, 'Add Co-Applicant' button is disabled on Create/Edit Application page and External Start Application page.
Allow Collateral Account	Specifies whether collateral account is enabled for your client. If True (Y), Collateral Account web block is enabled on Internal Account Setup page.
Allow Collateral Account Customer Facing	Specifies whether Collateral Account is enabled in Customer Facing Screens (Online Application) for the client where it is defined as being displayed/enabled when this parameter value is set to True (Y), and if Client Config Allow Account Setup Customer Facing is also set to True (Y), and if Decision returned is Approve.
Allow Credit Life Protection	Specifies whether credit life protection is enabled for your client. If True (Y), Credit Life Protection web block is enabled on Internal Account Setup page.
Allow Credit Life Protection Customer Facing	Specifies whether Credit Life Protection is enabled in Customer Facing Screens (Online Application) for the client where it is defined as being displayed/enabled when this parameter value is set to True (Y), and if Client Config Allow Account Setup Customer Facing is also set to True (Y), and if Decision returned is Approve.
Allow Expedited Delivery	Specifies whether Expedited Delivery is enabled in Customer Facing Screens (Online Application) for the client where it is defined as being displayed/enabled when this parameter value is set to True (Y), and if Client Config Allow Account Setup Customer Facing is also set to True (Y), and if Decision returned is Approve.
Allow Expedited Delivery Customer Facing	Specifies whether credit life protection is enabled for your client. If True (Y), Credit Life Protection web block is enabled on Internal Account Setup page.
Allow Overdraft Protection	Specifies whether Overdraft Protection is enabled in Customer Facing Screens (Online Application) for the client where it is defined as being displayed/enabled when this parameter value is set to True (Y), and if Client Config Allow Account Setup Customer Facing is also set to True (Y), and if Decision returned is Approve.
Allow Overdraft Protection Customer Facing	Specifies whether participation programs are enabled for your client. If True (Y), Participation Programs web block is enabled on Internal Account Setup page.

Check Box	Action
Allow Participation Programs	Specifies whether Participation & Programs is enabled in Customer Facing Screens (Online Application) for the client where it is defined as being displayed/enabled when this parameter value is set to True (Y), and if Client Config Allow Account Setup Customer Facing is also set to True (Y), and if Decision returned is Approve.
Allow Participation Programs Customer Facing	Configures for your client whether authorized users should be reported to credit agencies; used in logic for Booking webservice.
Authorized Users Reported	Specifies the number of Co-Applicants allowed by the Client, Max 1. If set to 0, 'Add Co-Applicant' button is disabled on Create/Edit Application page and External Start Application page.

☐ Balance Transfers
 ☐ Custom Application Fields
 ☐ Duplicate App Check
 ☐ Existing Accounts Check
 ☐ ID Verification
 ☐ OFAC Check
 ☐ Precise ID Reports PostBureau
 ☐ Precise ID Reports PreBureau
 ☐ Send Approval Letter
 ☐ Send Decline Letter
 ☐ Show Card Image Name/Image
 ☐ Show Card Image URL
 ☐ Watch List Lookup

Check Box	Action
Balance Transfers	Specifies whether Balance Transfers are enabled for this client. If True (Y), Balance Transfers web block is enabled on internal pages where it is defined as being displayed/enabled when this parameter value is set to True (Y).
Custom Application Fields	Specifies whether Custom Application Fields (User Defined Fields) are enabled for this client. If True (Y), Custom Application (User Defined) Fields web block is enabled on internal pages where it is defined as being displayed/enabled when this parameter value is set to True (Y).
Duplicate App Check	Specifies whether duplicate application check step in workflow is enabled for this client. If True (Y), Duplicate Application Check is performed during PreBureau Validations; if False (N), Duplicate Application check is skipped.
Existing Accounts Check	Specifies whether existing accounts check step in workflow is enabled for your client. If True (Y), Existing Accounts Check is performed during PreBureau Validations; if False (N), Existing Accounts check is skipped.
ID Verification	Specifies whether ID verification check step in workflow (via OFAC/IDV WS) is enabled for your client. If True (Y), ID Verification Check is performed during PreBureau Validations; if False (N), ID Verification check is skipped. OFAC Check must be set to True (Y) for ID Verification to be included/performed when ID Verification is set to True (Y). If OFAC

Check Box	Action
	Check is set to False, ID Verification is not performed regardless of whether ID Verification is set to True or False.
OFAC Check	Specifies whether OFAC check step in workflow (via OFAC/IDV WS) is enabled for your client. If True (Y), OFAC Check is performed during PreBureau Validations; if False (N), OFAC check is skipped. OFAC Check must be set to True (Y) for ID Verification to be included/performed when ID Verification is set to True (Y).
Precise ID Reports PostBureau	Configures for client whether Experian Precise ID Reports block is available in Application Review, Application Fraud Review, Verification, Account Setup and Application Review Read Only pages in Post Bureau application statuses of Credit Review, Credit Review Supervisor, Fraud Review, Fraud Review Supervisor, Pending Verification, Pending Account Setup, Decline, Final Decline, Booked, Booking Error and Pending Withdraw Archive; If True, the block is displayed (if User has role/group permission).
Precise ID Reports PreBureau	Configures for client whether Experian Precise ID Reports block is available in Application Review, Application Fraud Review, Application Review Read Only pages in PreBureau application statuses of PreBureau Review, PreBureau Fraud, PreBureau Alerts, Pending Withdraw Archive, Decline, and/or Final Decline. If True, the block is displayed (if User has role/group permission).
Send Approval Letter	Configures whether an approval letter is included in Letters batch file. If True (Y), application is included in Letters batch file based on an application status change to Approve. Otherwise, application is not included in Letters batch file because of status change to Approve.
Send Decline Letter	Configures whether a decline letter is included in Letters batch file. If True (Y), application is included in Letters batch file based on an application status change to Decline. Otherwise, application is not included in Letters batch file because of status change to Decline.
Show Card Image Name/Image	Specifies whether your client displays card image name with card image in user interface for card images defined/uploaded in Admin > Additional Product Details. If set to True (Y), Show Card Image URL should be set to False (N) and Vice Versa.
Show Card Image URL	Specifies whether your client displays card image URL with card image in user interface for card images defined/uploaded in Admin > Additional Product Details. If set to True (Y), Show Card Image Name/Image should be set to False (N) and Vice Versa.
Watch List Lookup	Specifies whether Watch List Check step in workflow is enabled for this client. If True (Y), Watch List is checked during PreBureau Validations; if False (N), Watch List Check is skipped.

8. Click Create. An activation email is sent to your client's system administrator. The activation link within the email opens a page where they can set their password.



- ✓ **Note** Have your client's system administrator click the link provided in their email, as this will direct them to their password setup screen in the OM's APM. Once their password is reset, they are navigated to the Login window.
- ✓ **Note** If the expected system administration values that were confirmed by referencing the Index tab of the Admin Configuration Workbook.xlsx are not automatically populated in the Copy Client feature of the APM, see Appendix A, System Admin Values Troubleshooting, of this user guide for assistance.

FIS Client System Administration in APM

It is recommended that the user(s) assigned to the System Administrator group in the APM is an FIS employee(s) working on behalf of your client to ensure cross-dependent configuration parameters are kept in sync across all FIS systems. Also, the FIS employees can prevent changes being made by your client, which might have adverse impact on FIS's application processing and other automated activities.

For information on setting up and maintaining required configurations (e.g., managing roles, creating users, creating groups) from within the Security tab of the APM, refer to Chapter 3, Application Processing Module Security, within the *FICO Origination Manager Application Processing Module Administrator's Guide*.

Refer to the *FICO Origination Manager Application Processing Module Administrator's Guide* for information on using the System Admin tool within the APM.

Additional information related to new or updated features, which are available in your APM implementation, might be found within the *Origination Manager Application Processing Module Supplement User Guide* and the *Origination Manager Application Processing Module Supplement Administrator's Guide*.

Many configurations should only be managed by your FIS system administrator on behalf of your client to prevent undesirable impact to user interface, workflows, web services, and/or other processes. You can optionally grant a client administrator access to limited System Admin menu items, which enable them to maintain other configurations that carry little or no risk to application processing and/or integrations.

For details around these recommendations as well as additional useful information related to capturing and maintaining each of the configurations in the APM for your client, see the Index tab of the *Admin Configuration Workbook.xlsx*.

Letters

The Letters feature within the System Admin tool of the APM is unique to FIS, so information related to its use by the FIS client system administrator is found only in this user guide.

The Letters feature allows you to configure a client-specific letter for approval, pre-bureau decline, post-bureau decline, or fraud decline. This enables the system to assign appropriately configured letter codes to applications that are being approved or declined in Pre-Bureau or Post-Bureau stages based on reasons assigned by decisioning rules or selected by operators.

For example, if an application is approved, the letter code of the configured default approve letter is assigned.

For applications that are declined, they are assigned the applicable letter code as follows:

- Systematically declined based on decisioning rules, the Letter code is assigned according to the rule with the highest-ranked DM Rule Reason with a Decline decision.
- Manually declined in PreBureau stage, the Letter code of the configured Default PreBureau Decline letter is assigned.
- Manually declined in PostBureau stage, the Letter code of the configured Default PostBureau Decline letter is assigned.

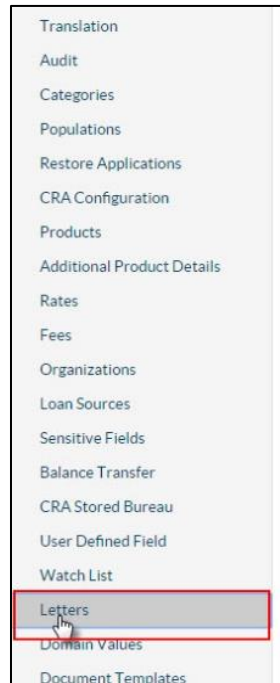
This section provides the procedures to create, edit, and delete client letter records.

Complete the following steps to create a client letter record:

1. Log in to the APM as a client system administrator and click System Admin.



2. Click Letters from menu on the left side of your window.

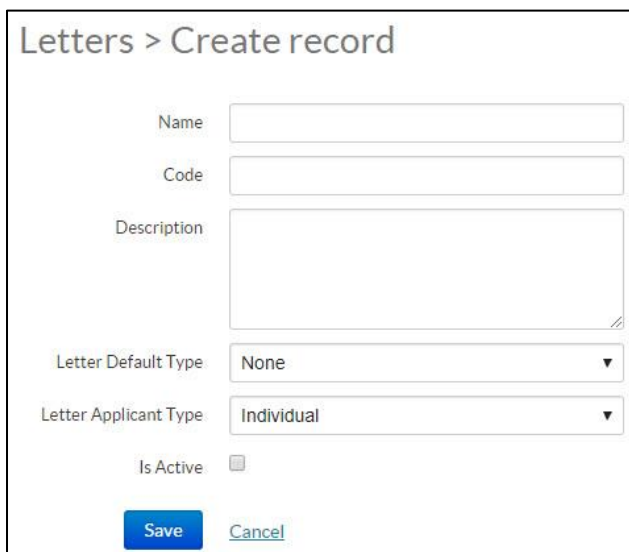


3. Click Create.



The screenshot shows the 'Letters' page header. A blue 'Create' button is highlighted with a red rectangular box. A tooltip with the text 'Add new Letter' is positioned over the button. Below the header, there is a search bar labeled 'Letter name', a 'Search' button, and links for 'Show inactive Letters' and 'Show all'.

4. Complete the fields to create a new letter record.



The screenshot shows the 'Letters > Create record' form. It contains the following fields and controls:

- Name:** A text input field.
- Code:** A text input field.
- Description:** A large text area with a small edit icon in the bottom right corner.
- Letter Default Type:** A dropdown menu currently set to 'None'.
- Letter Applicant Type:** A dropdown menu currently set to 'Individual'.
- Is Active:** A checkbox that is currently unchecked.
- Buttons:** A blue 'Save' button and a blue 'Cancel' button.

- a. Name – Name the letter in a recognizable way.
- b. Code – Enter the unique Letter code that specifies the letter template used during Letters batch processing.
- c. Description (Optional) – Enter a description of the letter if desired.
- d. Select the Letter Default Type:
 - Approve – Designate one letter as the default Approve letter.
 - PreBureau Decline – Designate one letter as the default Decline letter for PreBureau Declines. (This letter will usually not contain any fields related to credit bureau reports.)
 - PostBureau Decline – Designate one letter as the default Decline letter for PostBureau Declines (This letter will usually contain additional fields for credit bureau report data, score reasons, etc.).
 - None – Select 'None' for all remaining letters that are not the default letters described above, which might be assigned by the Decision engine based on Business Rules.
- e. Select the Letter Applicant Type:
 - Individual – Letter contains fields applicable only to a single applicant.
 - Joint – Letter contains fields applicable to more than one applicant on an application.
- f. Specify whether this letter Is Active. If left unchecked, the letter is not eligible for system assignment.

Once all letters are configured, the Letters window displays all letters.

Complete the following steps to edit a letter record:

1. Click the edit (✎) icon under the action column next to the letter record you want to edit from within the Letters window.
2. Edit the desired field(s) and click Save.

Letters > Edit Letter Approve ADV108

Name: Approve ADV108

Code: ADV108

Description: Single Approval

Letter Default Type: Approve

Letter Applicant Type: Individual

Is Active: ☒

Save Cancel

A confirmation message appears near the top of your window informing you that the letter configuration details were successfully updated.

Letters Create

Letter 'Approve ADV108' updated successfully.

Letter name Search Show inactive Letters | Show all

Complete the following steps to delete a letter:

1. Click the delete (⊖) icon under the action column next to the letter record you want to delete from within the Letters window. An alert appears asking you to confirm deletion.
2. Click OK.

Are you sure?

OK Cancel

✓ **Note** It is recommended that letters which are no longer applicable should be deactivated instead of deleted, so they can still be viewed via the Show Inactive

Letters link (located next to the Search field) for reactivation purposes if needed.

External Customer Users

The Customer Users feature within the System Admin tool of the APM is unique to FIS, so information related to its use by the FIS client system administrator is found only in this user guide.

FIS clients might expose URLs on their websites or third-party vendor sites to provide their customers and/or the general public with the ability to apply online for any product offered by the client via OM's external (customer-facing) application screens.

To authenticate access to these external application screens, a valid customer user must be configured in the APM for the client. Typically, the customer user will be something like *ServicesAPIUser@client.com*. However, because this is neither shared with nor required by external users, any active user which exists for the client in the APM can be used for this purpose.

Complete the following steps to configure this access:

1. Log in to the APM using System Administrator login credentials.
2. Click on the Customer User from the System Admin menu.
3. Complete the Username and Password fields.

- a. Enter the exact user name as configured in the APM (e.g., *ServicesAPIUser@client.com*) in the Username field.
- b. Enter the exact password as configured in the APM for the entered username in the Password field.
- c. Click Save and note any validation error message, correcting any invalid username and/or password.



Note If a valid username and password combination is not available at this time or you decide not to make changes before clicking Save, you can click Cancel, which reverts any changes made and display existing values (including blanks).

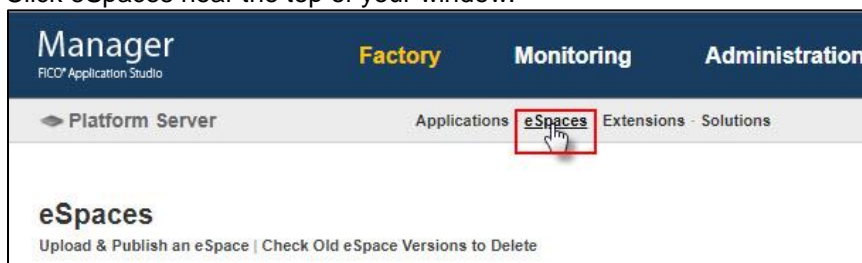
APPENDIX A System Admin Values Troubleshooting

In case the System Admin values for Product, Category, CRA Configurations, Domain Values, etc. are not automatically populated during the client copying process (see chapter 5 in this user guide), complete the following troubleshooting steps:

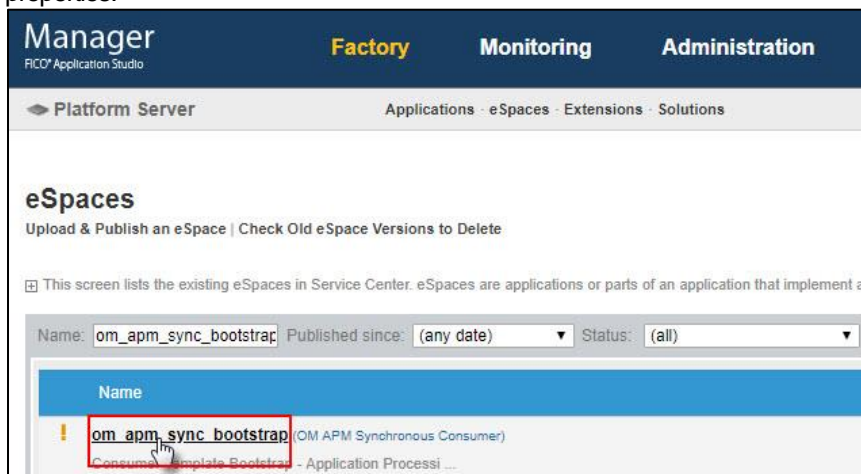
1. Connect to FAST Manager using URL `https://<Server_Name>/ServiceCenter` and login using the FAST administrator credentials.
2. Click Factory at the top of your window.



3. Click eSpaces near the top of your window.



4. Search for “om_apm_sync_bootstrap” and click it from the search results to open the espace properties.



5. Navigate to the Tenants tab and select the newly created client.

eSpace om_apm_sync_bootstrap
eSpaces List | General Log | Screen Log | Error Log | Timer Log | Processes Log | Software Units

☐ An eSpace is an application or part of an application that implements a set of related business services covering a range of ...

Please check the eSpace Status before testing it to avoid runtime errors.

Application: OM APM Synchronous Consumer

Description: Consumer Template Bootstrap - Application Processing Module - Origination Manager 4.9.2

Status: This eSpace module has outdated references. Check References tab for more details. You should open the eSpace ...

Last Published: 12/10/2018 16:46:35 by Administrator

[Download Published Version](#) [Redeploy Published Version](#)

Versions | Permissions | Dependencies | Single Sign-On | Solutions | Integrations | **Tenants** | Site Properties | Timers | Operation

Create Tenant in om_users

A Tenant site is an instance of an eSpace explicitly defined as Multi-Tenant. Tenants implement the same application behaviour, but their data is isolated from each other.

Name: [Create](#)

6. Navigate to the Timers tab and run the timer “CopyTenant.”

Tenant RTNT
[Back to eSpace om_users](#)

☐ A Tenant site is an instance of an eSpace explicitly defined as Multi-Tenant. Tenants implement the same application behaviour, ...

Name:

Active: ☒

Site Properties | **Timers** | Application Phones

☐ eSpace timers on the Tenant. To edit the properties of a timer, select the its name. Activate timers to allow them to resume ...

[Run Now](#) [Activate](#) [Deactivate](#)

[check all](#) | [clear all](#)

Name	Schedule
<input type="checkbox"/> ApplicationBatchTimeOut (om_apm_sync_consumer(deleted0))	
<input type="checkbox"/> ApplicationBatchTimeOut (om_apm_sync_consumer)	
<input type="checkbox"/> ApplicationStatusBatchTimeOut (om_apm_sync_consumer(deleted0))	11:45
<input type="checkbox"/> ApplicationStatusBatchTimeOut (om_apm_sync_consumer)	11:45
<input type="checkbox"/> Archive (om_apm_archive(deleted0))	00:30

7. Complete the following steps to resolve any error(s):

- Look at the (error) message to see in which table the error is occurring.
- Log in to the service center and click the Factory tab near the top of your window.



- Click the eSpaces tab near the top of your window.

- Enter the applicable eSpace name in the Name field and click Filter on the right.

- e. Click the applicable eSpace name from the search results.

The screenshot shows the 'eSpaces' management interface. At the top are tabs for 'Factory', 'Monitoring', 'Administration', and 'Analytics'. Below is a sub-header 'Platform Server' with links for 'Applications', 'eSpaces', 'Extensions', and 'Solutions'. The main section is titled 'eSpaces' with a sub-header 'Upload & Publish an eSpace | Check Old eSpace Versions to Delete'. A note states: 'This screen lists the existing eSpaces in Service Center. eSpaces are applications or parts of an application that implement a ...'. Below this is a search filter bar with fields for 'Name' (containing 'om_apm_tenant_info'), 'Published since' (set to '(any date)'), 'Status' (set to '(all)'), and 'Uploaded by me' (with a checkbox). There are 'Filter' and 'Reset' buttons. The results table has two columns: 'Name' and 'Last Published'. One result is shown: 'om_apm_tenant_info' with a status icon and a red box around the 'om_apm' link, and 'Last Published' as '2018-09-06 16:11:59 by Jeremy Breidenbach'.

- f. Click the Site Properties tab.

The screenshot shows the 'eSpace om_apm_tenant_info' details page. At the top are links for 'eSpaces List', 'General Log', 'Screen Log', 'Error Log', and 'Software Units'. A note states: 'An eSpace is an application or part of an application that implements a set of related business services covering a range of ...'. Below this is a section 'Please check the eSpace Status before testing it to avoid runtime errors.' with fields for 'Application' (OM APM), 'Description' (No description available), 'Status' (with two warning messages: 'This eSpace module has an outdated User Provider.' and 'This eSpace module has outdated references. Check References tab for more details. You should open...'), and 'Last Published' (2018-09-06 16:11:59 by Jeremy Breidenbach). At the bottom is a tabbed interface with tabs for 'Versions', 'Permissions', 'Dependencies', 'Single Sign-On', 'Solutions', 'Integrations', 'Tenants', 'Site Properties' (highlighted with a red box), and 'Timers'. Below the tabs is a note: 'Site properties used by the eSpace at runtime. To edit them, select the property name.'

- g. Click IgnoreList.

The screenshot shows the 'Site Properties' tab. A note states: 'Site properties used by the eSpace at runtime. To edit them, select the property name.' Another note states: 'Note: Multi-tenant Site Properties can be edited in the tenant detail page, under the Tenants tab.' Below is a table with columns 'Name', 'Data Type', and 'Effective Value'. The 'IgnoreList' property is highlighted with a red box. The table contains two rows: 'DateList' (Text, DurationStartDate, DurationEndDate) and 'IgnoreList' (Text, ManualDecision, ManualOverrideDecision, ManualDeclineDecision, CreditBureauLookup, CRAReport, DocumentInfoSync, SmallBusiness, DeclineReason).

- h. Add the table name(s) in the Effective Value field. If there are multiple table errors, separate each table name by a comma (no spaces).

The screenshot shows the 'Site Property IgnoreList' edit form. At the top is a link 'Back to eSpace om_apm_tenant_info'. Below are fields for 'Description' (No description available), 'Data Type' (Text), and 'Default Value' (DocumentInfoSync, DeclineReason, Notes, WorkflowLog, WorkflowStepInstanceDetails, WorkflowInst...). The 'Effective Value' field contains a long list of table names, which is highlighted with a red box. At the bottom are buttons for 'Apply', 'Use Default', and 'Cancel'.

- i. Click Apply. The Site Property IgnoreList is updated.

Site Property IgnoreList

[Back to eSpace om_aprm_tenant_info](#)

Description: (No description available)

Data Type: Text

Default Value: ManualDecision,ManualOverrideDecision,ManualDeclineDecision,CreditBureauLookup,CRAReport,DocumentInfoSync,SmallBusiness,DeclineReason,Notes,WorkflowLog,WorkflowStepInstanceDetails,WorkflowInstance,WorkflowStepBinary,WfStepPartialInterval,TempOrgUser,TransactionTracker,WorkflowStepInstance,Log_Error,PersonApplicant,CRACELLogs,TransactionTrackerWorkflowInstance,BaseApplicationProduct,ApplicationOffer,Plugin_Translation,Application,Plugin,PluginType,OrganizationBusinessBureau,BusinessBureauConfiguration,CRAConfiguration,OrganizationCRA,Document,DocumentType,UserDisclosure,Disclosure_Translation,BaseFeeType,ApplicationOfferFee,BaseFee,ProductExtension,ApplicationStipulation

Effective Value:

Ideally, if all the tables causing errors are there in the Site Property IgnoreList, the general logs will no longer show any errors.

APPENDIX B Contacting FICO

FICO provides clients with support and services for all our products. Refer to the following sections for more information.

Product Support

FICO offers technical support and services ranging from self-help tools to direct assistance with a FICO technical support engineer. Support is available to all clients who have purchased a FICO product and have an active support or maintenance contract. You can find support contact information and a link to the Customer Self Service Portal (online support) on the Product Support home page (www.fico.com/en/product-support).

The FICO Customer Self Service Portal is a secure web portal that is available 24 hours a day, 7 days a week from the Product Support home page. The portal allows you to open, review, update, and close cases, as well as find solutions to common problems in the FICO Knowledge Base.

Product Education

FICO Product Education is the principal provider of product training for our clients and partners. Product Education offers instructor-led classroom courses, web-based training, seminars, and training tools for both new user enablement and ongoing performance support. For additional information, visit us at www.fico.com/en/product-training or email producteducation@fico.com.

Product Documentation

FICO continually looks for new ways to improve and enhance the value of the products and services we provide. If you have comments or suggestions regarding how we can improve this documentation, let us know by sending your suggestions to techpubs@fico.com.

Sales and Maintenance

If you need information on other FICO products, or you need to discuss maintenance contracts or other sales-related items, contact FICO by:

- Phone: 1-888-342-6336 or +44 (0) 207 940 8718
- Web: www.fico.com and use the available contact forms

Related Services

Strategy Consulting: Included in your contract with FICO might be a specified amount of consulting time to assist you in using Falcon Fraud Manager to meet your business needs. Additional consulting time can be arranged by contract.

Conferences and Seminars: FICO offers conferences and seminars on our products and services. For announcements concerning these events, go to www.fico.com or contact your FICO account representative.

FICO Community

The FICO Community is a great resource to find the experts and information you need to collaborate, support your business, and solve common business challenges. You can get informal technical support, build relationships with local and remote professionals, and improve your business practices. For additional information, visit the FICO Community (community.fico.com/welcome).

About FICO

FICO (NYSE:FICO) powers decisions that help people and businesses around the world prosper. Founded in 1956 and based in Silicon Valley, the company is a pioneer in the use of predictive analytics and data science to improve operational decisions. FICO holds more than 165 US and foreign patents on technologies that increase profitability, customer satisfaction, and growth for businesses in financial services, telecommunications, health care, retail, and many other industries. Using FICO solutions, businesses in more than 100 countries do everything from protecting 2.6 billion payment cards from fraud, to helping people get credit, to ensuring that millions of airplanes and rental cars are in the right place at the right time. Learn more at www.fico.com.