

iLabs - FAMIS Integration

Background

The Division of Research at Texas A&M University contracted with Agilent to use their iLabs hosted product to coordinate scheduling of core facilities across the Texas A&M University System (the System). In addition to scheduling, billing for usage is also available.

To facilitate the billing component of iLabs, information needs to be shared between the System account application FAMIS and iLabs. The Division of Research (the Division) facilitates this data sharing via multiple channels.

The final stage of billing integration requires the posting of billing transactions to FAMIS. Transactions can be billed either by the IDT or AR process. To allow automated posting of transactions, a business process and software has been developed by the Division in coordination with FMO. This document sets forth how that business process works and is supported by the software that has been developed.

On-boarding Process

To use the iLabs/FAMIS integration a core **must** contact the Division of Research to schedule it's on-boarding. The on-boarding process can take up to one month depending on a number of factors. The onboarding process consisting of the following:

- Verification that any revenue codes used are in the allowable table and that only revenue codes are used.
- Designation of the cores revenue account, official name, billing address, email and phone number
- Designation of the core's billing manager(s)
- PO Number formatting

High Level Overview

Every night an automated process is run that receives data from iLabs, processes and stores the data and then passes that data on to FAMIS for insertion into the accounting system.

iLabs Data

The Division created and maintains a JSON (javascript object notation) file specification for the interchange of data between the iLabs application and Division services. This specification

defines how invoices are to be represented and the data fields that are required to be sent each time a data exchange occurs.

Data exchanges occur at a specified time every night. This data exchange represents all transactions in any billing events that have occurred in the 24 hours since the last data exchange.

Billing Events

A billing event is initiated by a core and includes all invoices that have been selected by the core as part of the event.

A billing event will contain at least one invoice and affect at least one of each of the following entities:

- Core billing office
- Owner of account
- Responsible accountant
- Departmental billing office
- System billing office

Division Processing of iLabs Transactions

Following the successful exchange of data. The downloaded JSON file is processed per the file specification. All invoices are validated, stored in a Division database, assigned a Unique Identifier (UID) and a unique FAMIS invoice number in the I3XXXXX range.

Invoices are then processed to identify if it is an IDT or an AR transaction. The invoices are grouped together into IDT or AR feeds based upon their originating System part. If the billing core is within the same system part as the expense account, an IDT will be performed. If the billing core is not in the same system part as the expense account, an AR will be performed.

IDT and AR feeds are then uploaded to FAMIS for insertion into the accounting system.

The Division then sends notifications to all entities defined in the Billing Event.

Business Process Requirements

To support the efficient automated billing of iLabs invoices, requirements need to be met by the cores

Revenue and Expense Codes

All services and equipment must have a revenue code assigned to it. These codes must come from an approved table of revenue codes.

When an invoice is processed each transactions revenue code will be verified against the approved table and in cases where it is invalid a default revenue will be used.

All expense codes used in the IDT process will be derived from the approved revenue tables matching expense codes.

Revenue	Expense
0410	5683
0420	5670
0422	4013
0435	5810
0443	5864
0441	5864
0496	5670
0499	4013
0522	4025
0523	4012
0525	4075
0526	4075
0556	4040
0596	5610
0602	5670
0603	5654
0609	5684
0616	5619
0620	5670
0638	5665
0655	5654

Per Account Allowable Expense Codes

Every IDT transaction will also verify the expense code is allowed for the account. In cases where the code is outside the allowable range the transaction will be held and the responsible accountant will be notified of the exception. See Exception Notifications: Invalid Object Code.

Customer Account Numbers

All AR invoices will verify the customer account number is available for usage in the system part of the billing core. In cases where the customer account number is not available for usage in the billing core's system part the invoice will be held and not sent to FAMIS for insertion into the accounting system.

Each subsequent evening the invoice will be validated again to determine if the customer account number has become allowable for usage in the billing core's system part. If it is determined to be valid then it will be released for insertion.

External Customers

If a core services external customers PO Numbers may be used. iLabs allows external customers to be entered through the PO Number facility. If an external customer does not require a PO Number the FAMIS Customer Number should be entered as the PO Number

However if an external customer requires a PO Number the following format for the PO Number must be used.

PO Number Format

Format: Customer Number|PO Number
Example: 6010045030000|4327860001

Designated iLabs Billing Managers

Every core and system billing office must select at least one billing manager who will receive notifications for their respective core and system parts.

Core

A core billing manager will receive copies of all invoices and any notifications relating to exceptions in the billing process for that core. They will also have access to the web interface to view and manage invoices for that specific core.

System

A system billing manager will receive copies of all invoices and any notifications relating to exceptions in the billing process for that system part. They will also have access to the web interface to view and manage invoices for that specific system part. In addition, a billing manager will be able to change details relating to the billing notifications that are sent for that system part.

To request a billing manager account, please contact the Division of Research.

Notifications

Billing

Once all invoices have been processed from the JSON file and validated against business rules pertaining to customer account numbers, revenue codes and expense codes notifications will be sent to the following entities:

- **PI** - the designated account owner will receive a notification with a link to their invoice or receipt depending on whether the transaction is an AR or IDT.
- **Responsible accountant** - the designated responsible accountant UIN will be notified with a link to the invoice or receipt depending on whether the transaction is an AR or IDT.
- **Departmental billing office** - the designated departmental billing office email address for an account will receive a notification with a link to their invoice or receipt depending on whether the transaction is an AR or IDT.
- **Core billing manager(s)** - the designated billing managers for a core will receive a summary of all transactions specific to the core, if any occur, for the current day.
- **System billing manager(s)** - the designated billing managers for a system part will receive a summary of all transactions specific to the system part, if any occur, for the current day.

Exception Notifications

Once all invoices have been processed and billing notifications have been sent, the exception notifications will be sent. The types of exceptions and who will be notified are listed below.

Invalid Customer Account Number

Exception notification reports will be sent when there are one or more transactions containing customer account number not allowable for usage within a system part. Each system part

representing one or more of these transactions will receive a notification containing this report in csv format. Each line of the csv will contain the following information

- the campus code for the revenue account
- the customer account that needs to be added - which is comprised of the the following
 - campus code
 - account number
 - sub account number

The following entities will receive the Invalid Customer Account Number exception reports:

- **System billing manager** - All designated system billing managers for a system part that incurs one of these transactions will receive a report listing each account that needs to be added to that specific system part.

Invalid Object Code

Exception notification reports will be sent when there are one or more transactions containing an invalid object code for the transactions expense account. Each responsible accountant representing one or more of these transactions will receive a notification containing this report in csv and excel format. Each line of the file will contain the following information

- the campus code for the revenue account
- the customer account that needs to be added - which is comprised of the following
 - campus code
 - account number
 - sub account number

The following entities will receive the Invalid Object Code exception reports:

- **Responsible accountant** - A responsible accountant for account that incurs one or more of these transactions will receive a report listing each invoice that needs to be fixed.