

State Of Mississippi

PaymentManager™:
System Administration Guide
(Agency)

Version 1.0

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1. Introduction

1.1 Purpose

The purpose of the System Administration Guide is to provide a guide for agencies wanting to integrate an application with PaymentManager™ to collect funds electronically for agency specific fees and service.

1.2 References

- WSDL (Charges web service)
- MS Charges Client Web Service Documentation
- Enterprise Payment Interface (EPIC) 1.1 & User Reference
- SAAS Payment Interface Design Document
- Portal Mapping Model Spreadsheet

1.3 Acronyms

- DFA = Department of Finance and Administration
- ITS = Information Technology Services
- MMRS = Mississippi Management and Reporting System
- SAAS = Statewide Automated Accounting System
- SPI = SAAS Payment Interface application

2. Integrate Application to PaymentManager

The purpose of the Integrate Application to PaymentManager section is to outline, at a high-level, the process involved with configuring and integrating a new Mississippi application to the PaymentManager.

2.1 Preparation

This section describes the activities that must occur before an application can begin using PaymentManager.

2.1.1 DFA Provides Information to VitalChek, Inc.

The agency completes the division setup form and submits to DFA. After review, DFA submits the form to ITS for signoff and acknowledgement.

Required information on the form includes:

- IP address for their application server (for both test and production) if agency hosted
- e-mail address that should receive chargeback notifications
- Division information which includes:
 - Agency name
 - application name(s)
 - what is being sold
 - yearly transaction volume
 - average transaction amount
 - maximum transaction amount (ceiling)
 - SAAS Agency ID for that Agency
 - payment methods accepted
 - Payment Card Industry (PCI) compliance statement of understanding

2.1.2 VitalChek Provides PaymentManager Information to DFA

DFA submits the division setup form to the VitalChek Account Manager as a request to setup an agency specific division number (merchant ID). It takes approximately 7-10 business days for VitalChek to set up a division with the payment processor. VitalChek then creates and delivers the following to DFA:

- Division Number
- Merchant ID
- Client ID

This information is necessary for using PaymentManager client objects and is passed on to the agency technical staff for application specific accesses.

2.1.3 Application Setup Using DFA Supplied Configuration Setup Files

DFA provides a configuration .zip file of the necessary objects and information required to submit payments and access agency specific data in the state's payment infrastructure. This .zip file contains the following:

- WSDL (Charges Web Service)
- MS Charges Client Web Service Documentation
- Enterprise Payment Interface Component 1.1 (EPIC) & User Reference
- SAAS Payment Interface Design Document
- Portal Mapping Model Spreadsheet

2.1.4 Determine Item Types and Charge IDs with DFA

Collaboratively, the Agency and DFA determine the Item Types and Charge IDs that should be created for an application and fill out the appropriate DFA Item Types/Charge IDs spreadsheet. Item Types consist of any fees, or breakdown of fees that an individual pays when using the application. A single application can contain an array of Item Types. These Item types are eventually entered into the common Portal Charges Table, which is used when submitting payments through the application.

The following is an example of the Item Types being used in the Board of Architecture Renewal application:

- In-state Renew Individual Architect License Fee
- Out-of-State Renew Individual Architect License Fee
- In-state Renew Individual Landscape Architect License Fee
- Out-of-State Renew Individual Landscape Architect License Fee
- In-state Renew Individual Architect License Late Fee
- Out-of-State Renew Individual Architect License Late Fee
- In-state Renew Individual Landscape Architect License Late Fee
- Out-of-State Renew Individual Landscape Architect License Late Fee
- Convenience Fee*

Note that there are actually 5 "things" that can be paid: Architect License Fee, Architect License Late Fee, Landscape Architect License Fee, Landscape Architect License Late Fee, and Convenience Fee. Four of these "things" are further sub-divided into in-state and out-of-state distinctions to assist in SAAS reporting.

**Due to SB2857 (2001 Legislative Session), convenience fee item(s) are required for online payment applications. Convenience fees are distributed to DFA-specified funds and are determined by DFA. Convenience fees are used to pay payment processor &*

VitalChek fees, bank transaction fees, and support of the payment infrastructure maintained by ITS and governed by the Electronic Oversight Committee (EOC).

2.1.5 Determine Fund Distribution with DFA

After determining the Item Types, the Agency and DFA determine the Fund Distribution for each Item Type and fill out the appropriate DFA Item Types/Charge IDs spreadsheet. A Fund Distribution describes how the amount collected for the item will be split up among SAAS accounting funds. For example, a fishing license of \$20 might have 2 Fund Distributions. The first may put \$5 in one fund. The second may put the remainder in another fund.

Once the Fund Distribution has been successfully determined, DFA enters the Fund Distributions into the SAAS master Fund Distribution Table. The SPI process uses the SAAS Fund Distribution Table at runtime to disperse the various fees to the appropriate Mississippi accounting funds.

Note: An Item Type can be split into multiple funds based on percentage, fixed amount or a combination of both techniques.

2.1.6 Enter Item Types in SAAS CT Document

Before entering this step, the DFA Item Types/Charge IDs spreadsheet must have been completed and approved.

DFA enters the Item Type/Charge ID records into SAAS via the CCPD transaction. This process ensures the accounting coding block is valid for the agency prior to generating the details required for the online application's use. An overnight batch process creates the Charges Table file (full file) and the Fund Distribution file for the next business day use.

Each Item Type requires at least one corresponding Charges Table record. The Charges Table maps an Item Type to a SAAS Agency ID, SAAS distributing Agency ID, description of the Item Type, and amount charged for the Item Type. These fields are used within the application to process payments through PaymentManager.

Refer to Figure 1.0 for the layout of the Charges Table:

Figure 1.0: Charges Table Layout

Column Name	Type	Nullable	Description
FISCAL_YEAR	DECIMAL(10,0)	NO	Fiscal Year for which this charge is effective. (Currently part of the Primary Key)
CHARGEID	VARCHAR(25)	NO	Unique Identifier for this charge. Primary key for this table. (Part of the Primary Key)
PE_AGENCY_ID	VARCHAR(25)	NO	Payment Manager Agency ID. This field is included in the Invoice and must match an AgencyID in the PaymentManager

Column Name	Type	Nullable	Description
			Agency table. In the Mississippi implementation, this Agency ID is the Agency ID passed as the originating Agency to SAAS. It has the same value as the STATE_AGENCY_ID.
PE_DEPT_NO	VARCHAR(25)	NO	Payment Manager Department Number. This field is included in the Invoice and must match a DeptNo in the PaymentManager Agency table. In the Mississippi implementation, the department number is a SAAS Agency ID. It is the SAAS Agency ID passed as the distribution Agency to SAAS.
STATE_AGENCY_ID	VARCHAR(25)	NO	The State Agency ID is the SAAS Agency ID of the Agency whose application is using this charge. It has the same value as the PE_AGENCY_ID, but also serves as part of the Primary Key.
DESCRIPTION	VARCHAR(255)	YES	A description of the charge, which is used in the PaymentManager Payment Export. This description could be presented to the user, depending on the application needs. For example, if an application presents the user with multiple items that can be paid, the table-driven description can be used to provide a name and detail for each item.
AMOUNT	DECIMAL(9,2)	YES	The amount of the charge.
APPLICATION	VARCHAR(20)	NO	This is a shortname, or abbreviation, for an

Column Name	Type	Nullable	Description
			application. It allows charges to be easily associated to a particular application. "Application" must be determined prior to entering Charge IDs, and it must be unique for the Agency. (Part of the Primary Key)
ITEM_TYPE	VARCHAR(25)	NO	Agency's identifier for all associating fees paid by user. Maps to a SAAS Fund Distribution Table Item Type.
EFFECTIVE_DATE	DATE	NO	The date this charge record becomes effective. (Should become part of the Primary Key)
EXPIRATION_DATE	DATE	YES	The date after which this charge is no longer effective.

2.2 Integrate Application with PaymentManager

2.2.1 Implementation Standards for Building New Mississippi.gov Payment Applications

All new applications developed to use the Mississippi Payment Portal are required to use EPIC. The following pieces of PaymentManager are utilized in the state's payment portal:

- Enterprise Payment Inc Component (EPIC)
- Payment Tracker
- Internal Payment Tracker
- Financial Reporting
- Refund functionality

2.2.2 Within Application, Use Centralized Charges Table to Create an Invoice for PaymentManager

There are three major items of information required to complete the payment process: payer data, payment data (regular e-check or credit/debit) and invoice data. The invoice consists of an Invoice Key and line items. The Invoice Key is a field that allows the merchant to link the payment back to the corresponding application data. Line items provide a detailed breakdown of the invoice. You must have at least one line item. These line items are added to the invoice for a transaction by passing the required parameters listed below using specified client objects:

- An Item Key that - like the Invoice Key - allows you to relate that line item back to the application data.
- The PaymentManager Agency ID of the Agency responsible for that line item.
- The department number of the department responsible for that line item.
- A date associated with that line item.
- A quantity of items.
- A unit cost per item.

- The amount of the line item.
- A currency code to indicate what currency the payment is made in. **(Only US_Dollars is supported.)**

To accommodate the accounting requirements for uploading transactions into SAAS, Mississippi applications have special requirements for building the line items. Information in the Charges Table must be used to create the Line Item fields as follows:

- The Item Key must contain the first nine characters of the SAAS Item Type, as well as its description, which is concatenated.
- The Agency ID must be the SAAS Agency ID of the originating Agency application requiring that Item
- The Department Number must be the SAAS Distribution Agency ID, which is used when distributing the funds from the Line Item for SAAS

Figures 2.0, 2.1 and 2.2 illustrate the mapping between the SAAS Fund Distribution Table, common Portal Charges Table, and a Simplified Invoice.

Figure 2.0: Partial Example of an Agency's Fund Distribution Table in SAAS (Note: the full table layout is located in the SAAS Payment Interface Design Document)

Item Type	Item Type Description	Fund Number	Amount	SAAS Agency ID
000000001	ARCHITECT IN STATE LIC RENEWAL FEE	1100	\$200.00	848
000000002	ARCHITECT IN STATE LIC RENEWAL/LATE FEE	1200	\$10.00	848
000000888	ARCHITECT IN STATE LIC RENEWAL/CONV FEE	1300	\$2.00	130
000000888	ARCHITECT IN STATE LIC RENEWAL/CONV FEE	1400	\$3.00	130

Figure 2.1: Partial Example of a Charges Table

CHARGEID	PE_AGENCY_ID	PE_DEPT_NO	DESCRIPTION	APPLICATION	ITEM_TYPE
000000001	848	848	ARCHITECT IN STATE LIC RENEWAL FEE	BOA	000000001
000000002	848	848	ARCHITECT IN STATE LIC RENEWAL/LATE FEE	BOA	000000002
000000003	848	130	ARCHITECT IN STATE LIC RENEWAL/CONV FEE	BOA	00000888

Figure2.2: Partial Example of a Simple Invoice (This example includes partial Line Items)

Line Item	Item Key	PE_AGENCY ID	PE_DEPT_NO
1	000000001ARCHITECT IN STATE LIC RENEWAL FEE	848	848
2	000000002ARCHITECT IN STATE LIC RENEWAL/LATE FEE	848	848
3	00000888ARCHITECT IN STATE LIC RENEWAL/CONV FEE	848	130

2.2.3 Testing an Application's Integration to PaymentManager

After integrating PaymentManager into the application, the Agency/ITS and DFA must work with the VitalChek Account Manager to test the division setup as well as the configuration between the Agency application and Mississippi's PaymentManager. This testing process takes a minimum of five business days or until the agency is ready to move to the certification process.

2.2.3.1 Overview of Test Environments

To accommodate various needs, VitalChek hosts multiple instances of the Mississippi PaymentManager:

1. Production – For load balancing and fail-over, PaymentManager is hosted on two different production machines. “Live” payments where money is actually transmitted to the State bank account can only occur through the Production MS PaymentManager.
2. Mississippi Test (Betaweb) – This instance of the MS PaymentManager is used by the applications hosted in Jackson to make test payments. Payments made in this instance are included in test payment exports to SAAS. This environment is available to agency during normal work hours.
3. VitalChek Test (Systest) – This instance of the MS PaymentManager is used internally by VitalChek to make test payments. Payments made in this instance are not included in test payment exports to SAAS.

2.2.3.2 Certification Testing in Mississippi Test Environment

The following activities, which typically take 2 days to complete, outline the steps required to test the application in the test environment for Certification:

1. DFA provides a Word document with test credit card and bank account numbers for use in certification testing. The document has a column for recording the results for each test case. The test cases contain all the required information for generating a payment transaction.
2. Once the test cases have been generated and the required results documented, the agency should return the certification document to DFA for review. DFA will review the results and determine whether the tests pass certification. If pass, this means the agency's application is now production ready. If not, DFA will provide specific information to the agency for correction of the problems. The agency must then correct the problem and restart the Certification process again.

2.2.3.3 Production "Live" Testing in Mississippi Production Environment

The following activities, which typically take 3 days to complete, outline the steps required to test the application in the production environment. There are optimum days for this test and DFA must be notified a minimum of 10 days in advance of when the agency is ready for the Live test. Production testing only occurs after passing certification in the test environment:

1. VitalChek, ITS, Agency, and DFA schedule the date and time for the Live test payment
2. VitalChek, ITS, and DFA will monitor the transaction through to bank deposit.
3. Once the Live test transaction is generated, the agency must disable application to outside access.
4. After successful flow of funds (from PaymentManager to SPI to SAAS with a matching deposit to the designated bank account), DFA certifies the application's integration with PaymentManager.
5. Once approval is given by DFA, the agency can then enable (open) the application for it's customers.

3. Table Maintenance Tips

3.1 Requesting Changes to the Charges Table

In order to make a change to the Charges Table, the DFA Item Types/Charge IDs spreadsheet must be revised and approved by the proper individuals. Contact the MMRS Call Center for assistance.

3.2 Adding to or Updating the Portal Charges Table

In order for a change made to the Portal Charges Table to take effect within an application, the application using the table must be restarted.

4. Refunds

A refund is defined as the returning of funds that have already settled. A refund is not triggered automatically; a refund requires a conscious decision to refund a specific payment by the agency. The refund request acts like an authorized transaction and is submitted for settlement with the authorized transactions for a settlement day.

Users must request the ability to initiate refunds through the Portal Security Maintenance form. Access to the Refund facility is through EPIC. Payment refund only involves the refund of monies involved in the transaction, so it is the Agency's responsibility to notify the user and update the user's information in the backend system properly after the refund has been granted. For example, if a payment is refunded for the purchase of a license renewal, the customer will still have a renewed license, until the agency makes the change required for the backend to invalidate the license renewal. The agency fee and all convenience fees are refunded 100% to the customer.

APPENDIX A: Portal Mapping Model

The Portal Mapping Model is the planning document used to define the Charge IDs, Item Types, and SAAS Fund Distribution for a specific application. It must be approved and signed by the appropriate resources to be valid.

FISCAL YR	STATE_AGY_ID	CHARGEID	PE_AGY_ID	PE_DEPT#	DESCRIPTION	AMT	EFF DATE	EXP DATE	APPL	ITEM_TYPE	SQ	DIST AMT	%	FUND	OR GN	S/O	ACTV	REV	S/R	PR OJ	RPT	LOC	OBJ
2003	848	000000001	848	848	ARCHITECT IN STATE EXAM REG FEE	60.00	01-Jul-02		BOA	000000001	01	100	3848					41415	1E				
2003	848	000000002	848	130	ARCHITECT IN STATE EXAM REG/CONV FEE	3.00	01-Jul-02		BOA	000000888													
2003	848	000000003	848	848	ARCHITECT IN STATE INITIAL REG FEE	200.00	01-Jul-02		BOA	000000002	01	100	3848					41415	1A				
2003	848	000000004	848	130	ARCHITECT IN STATE INITIAL REG/CONV FEE	7.00	01-Jul-02		BOA	000000888													
2003	848	000000005	848	848	ARCHITECT IN STATE RECIPROCAL REG FEE	250.00	01-Jul-02		BOA	000000003	01	100	3848					41415	1A				
2003	848	000000006	848	130	ARCHITECT IN STATE RECIPROCAL REG/CONV FEE	7.00	01-Jul-02		BOA	000000888													
			848	848	DEFAULT ACCOUNTING DISTRIBUTION					999999999	01	100	3848					41415					