



Yodlee® BillPay

TRAINING GUIDE (DRAFT)

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1 INTRODUCTION

Yodlee® BillPay enables consumers to pay bills by credit/debit cards or checking accounts that in turn generate interchange revenue for financial institutions. This product facilitates consumers to pay the large number of payees at no cost and least efforts. This product can integrate with other such Yodlee Products as Yodlee PersonalFinance, Yodlee FundTransfer, Instant Account Verification (IAV), Yodlee Customer Care, BillPay Account Accelerator (BPAA) and Yodlee Mobile to provide comprehensive solution to the payments made by the consumers.

1.1 DOCUMENT PURPOSE

The purpose of this document is to educate a Yodlee employee about Yodlee BillPay Product and provide a detailed description about the features of the product.

1.2 AUDIENCE

The audiences for this document are Yodlee Employees who want to understand the totality of Yodlee BillPay.

2 GLOSSARY OF TERMS

Please refer to the below document

http://intranet.yodlee.com/twiki/bin/view/TechnicalPublications/WebHome#Yodlee_Glossary

3 BILLPAY TEAM STRUCTURE

The Organization Chart is required to be centralized. A link to the centralized Organization Chart will soon be instituted here.

4 OVERVIEW

Please Note – This section talks about Bill Pay in general. Yodlee way of Bill Payment processing may differ.

4.1 What is BillPay?

BillPay refers to the payment of bills, which are issued by the biller, by the payor to the payee. There are two payment methods used to pay bills, namely, Paper based – Currency, Checks and Electronic – Cards, ACH (Automated Clearing House).

4.1.1 Offline BillPay

Offline BillPay refers to the payment of bills by the payor to the payee via non-electronic mechanism. The payments are generally made using the currency or negotiable instruments like checks, demand drafts etc. (For checks/demand drafts – Clearance process remains Business-As-Usual (BAU))

4.1.2 Online Bill Pay

Several different services are described as online bill pay:

- **Online bill pay offered by your bank**

The first type of online bill pay (online bill pay offered by your bank) is a service that sends money out of your bank account to whoever you wish. In some cases these online bill pay services will actually print a check and mail it to the recipient. If the company you want to send payments is setup within the banks system, the bank will simply transfer the money electronically when you use online bill pay.

To set up this type of online bill pay you will probably just need a copy of the bill that your service provider sends you.

Set up a new payee in the name of that company at your online bill pay website. Copy the address and your account number, and enter that information too. Each time you want to pay, you will just enter the amount of the bill and you are done.

[\[This is Yodlee's PayItAll Billpay\]](#)

- **Online bill pay offered by your Billers**

The second type of online bill pay (online bill pay offered by your Billers) is a service that will only allow you to pay one company – like your phone company for example.

To set up online bill pay with the phone company, you'll need to provide the company with a voided check and one or two forms and authorizations. The process is very similar to direct deposit but they call it online bill pay.

Once you have set things up, you can pay your bill without having to use paper checks or the mail.

[\[This is often referred to as BillerDirect model and is supported by Yodlee DirectPay\]](#)

Automatic Online Bill Pay

If you really like to automate things so that you don't have to think about them, you can automate online bill pay. Almost all online bill pay services will allow you to set up recurring payments. For example, you can have the online bill pay service take care of your phone bill every month or your insurance every quarter.

Another way you can let online bill pay run on auto-pilot is to allow your biller to pull money out of your account without you having to click anywhere. In other words, the biller just "asks" the online bill pay company for payment and the payment is made without any activity on your part. If you authorize these types of payments, make sure you have a good handle on your budget and available funds.

[\[This is also supported by Yodlee DirectPay\]](#)

- **Online bill Pay Service Providers**

The third type of Online billpay (online bill pay offered by your service provider) is a service that will engage a third party service provider (e.g. PayPal) who will

debit the bill amount from your bank account and credit the billers account. You have to initiate the payment (with your credentials) at the service provider host, which will process the payment and debit payor's account and credit billers account.

[\[This is Yodlee.com Billpay as a portal\]](#)

4.2 What is an online billing and payment service?

With an online billing and payment service, you can receive, view, and pay your online bills from one personalized, secure Web site. E.g. Mycheckfree.com, Paytrust.com, YODLEE.COM

4.2.1 Benefits of using an online billing and payment service?

- Save time and money - No checks. No stamps. No hassle. You can select bills from hundreds of local and national companies and billpay providers will retrieve those bills for you in seconds!
- You schedule the date to make payments and gain greater control over the bill management process through your personalized Billpay Provider's Web site, which they automatically set up for you. You can view, pay, and track your bills from one, central place. All of your monthly bill information - right at your fingertips!
- Receive your bill statements online, instead of through the mail. Your bills can even be sent directly to your e-mail address or appear on your Billpay provider's site. You can see the amount you owe, the due date, view the bill detail, and pay the bill. Each month you'll receive a reminder e-mail to login and review each new bill.

4.3 What is an e-Bill?

An e-Bill, or electronic bill, is like the paper statement you receive each month now in an electronic format for viewing online. You can see all of the same detail in an e-Bill that you can in a paper statement, and more. These bills can be hosted by the biller host or a service provider to enable the consumer to make online payments. There are two ways with which billers can provide e-bills to the service provider. These are referred to as Thick Bill Model and Thin Bill Model

4.3.1 Thick Bill Model

In this model, the billers send over a file of actual bills to the service provider and the service provider hosts the bill details for the biller. At times, the presentment of the bill is same as the physical bill. The consumer can view the bill details as served by the service provider without accessing the any data at the biller's website.

4.3.2 Thin Bill Model

In this model, the billers provide a summary of the bill details (like account number, amount, due date etc.) to the service provider. At times along with the details, URL link to the actual bill is also provided. The consumer can view the bill details in nutshell at the service provider host or full details using the URL, which is provided to the service provider by the biller. Here, the URL access concept is mostly like SSO (Single Sign On) integration.

How do Yodlee e-Bills work?

Yodlee functions more like one of scrapped bill providers. Using credentials provided by the user, Yodlee Agents logs inside the billers website and extract bill details. This is indirectly Thin Bill Model.

4.4 Clearing and Settlement

<< Details to be included >>

4.5 References

Please refer to the following documents for low level details on Payments. These documents are from the third party meant for Training Sessions on Payments concepts. There are more references inside these documents,

[\projects\Platform\main\ProductManagement\BillPay\Training\Payments_Part I_Oct07.doc](#)

[\projects\Platform\main\ProductManagement\BillPay\Training\Payments_Part II_Oct07.doc](#)

5 BILLPAY AS A PRODUCT

Yodlee BillPay enables consumers to pay any biller or individual via Credit/Debit Card or Checking Account. Some billers are paid electronically while the other billers/individuals are paid by paper check.

5.1 Product Choices

5.1.1 Yodlee DirectPay

It is the product that enables consumers to make bill payments on the billers website using a credit card or a debit card. Only billers that allow payments through their website using Credit or Debit card can be supported by Yodlee DirectPay. The internal processing involves Yodlee Agents, which login into the biller's website using credentials provided by the consumer and initiate payment.

5.1.2 Yodlee PayItAll

It is the product that enables consumers to make electronically initiated electronic or paper-based payments to all billers and individuals. Originators send the payments to the product for processing. The payments based on many deciding factors route the transactions to the appropriate payment processor. The payment processor makes the electronic or paper based credit to the biller. The debit to the Originators checking account is done via ACH process.

5.1.3 Yodlee Payment Gateway

It is the product that enables financial institutes to send payment transactions in a batch file. Yodlee Payment Gateway processes these transactions and batches them to be routed to the appropriate processor or to Yodlee Proprietary Network for further processing.

Payment Originators can send the file directly to Payment Gateway for processing in which case Yodlee Payment Gateway acts more like a service provider than a product.

5.1.4 Yodlee UrgentPay

This product enables consumers to make the same day payments to the billers via their checking account. The payments made are real time. The internal processing uses Western Union biller network to make payments.

Western Union today has relationship with more than 4000 billers. Yodlee-Western Union integration makes Yodlee Product attractive to prospective customers and competitive with key competitors. This integration also helps Yodlee to be price-competitive with other processors.

For more information, please visit the detailed documents in Doors at the below location,

<doors://rws-doors:36677/?version=1,prodID=0,dbid=461b325a24ae7d92,container=00001600>

5.2 Processing Models

Yodlee Product can take any of the following models to process the transactions.

5.2.1 Risk Based Funds

- The credit is sent to the processor with 4 days lead time for paper items and 1 day lead time for electronic items.
- Due Date is the date on which these lead times are calculated.
- The debit is sent to the posting hub on Due Date, so the funds are debited from the funding account on the due date.

5.2.2 Good Funds

- The debit is sent to the posting hub on Process Date.
- The credit is sent to the processor after the Debit Reject Date.
- The exact timing of the release of the credit to the processor is configurable at the co-brand

Please note: A fund is called Good based if Debit happens before Credit even though both credit and debit may be initiated at the same time.

<< Will to include links to important FSDs for reference>>

5.3 Processing Rails

Rails are defined as processing routes through which a payment flow from Processor to the biller. [rails include Electronic vs. Paper]

5.3.1 To Us (or On Us)

The debit and credit happens locally within the bank. The payment does not leave the bank. Here, the Payee and Payor belong to the same bank.

- The debit and credit file are sent to the co-brand's processing hub at in the same file.
- The co-brand processes the debit leg first, successfully completing a memo post for the debit leg prior to releasing the credit leg to continue processing in the posting hub.

5.3.2 Through Us

In this, the Payee and Payor do not belong to the same bank. The bank may hold Payee's Account.

<<Need Will to elaborate more on this >>

5.4 Deployment Choices

Yodlee BillPay product can be deployed at the financial institute site in one of the following ways,

5.4.1 Processing Only

In this kind of deployment, Payment Gateway is used as a payment processor. There is no UI. The Originator sends a batch file directly to the Payment Gateway. The payment gateway processes the file and send credit request to the appropriate payment processor (like RPPS, ORCC, Harland etc)

5.4.2 Hosted BillPay (Yodlee BillPay)

The application is hosted on the Yodlee maintained servers, which connects to the customer maintained servers. This method of deployment is also called ASP.

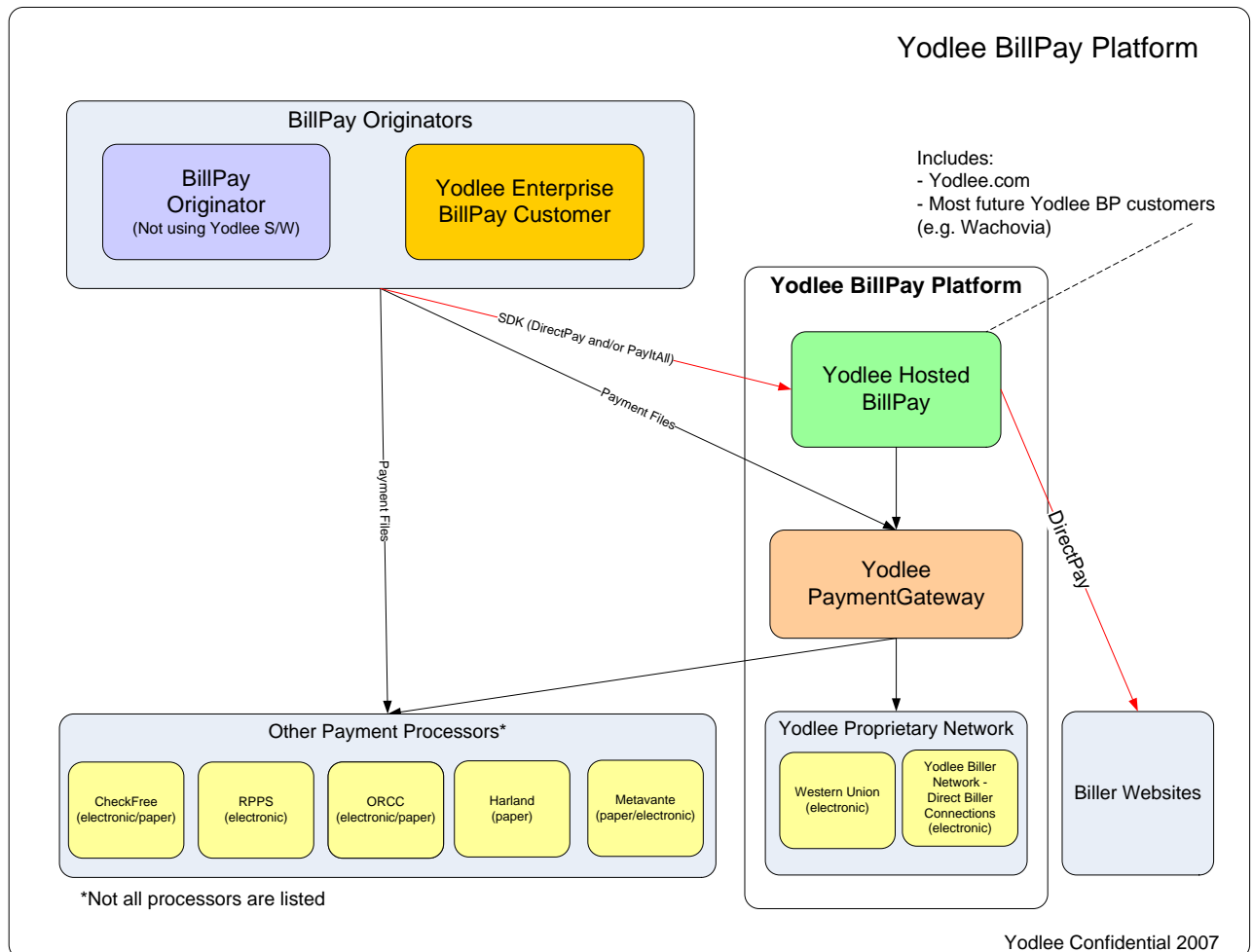
5.4.3 SDK

This method of deployment is chosen by those customers who wish to integrate Yodlee application into their system and build their own User Interface. In technical terms, Yodlee delivers the APIs to the customers. Other support is provided as per the contract with the customer.

5.4.4 Enterprise BillPay

The complete suite is deployed by the customer at their site. The application runs on the customer maintained servers. Yodlee provides support during the deployment.

5.5 Yodlee BillPay Platform



Note: For latest version of the above diagram, visit the following link,

<< \projects\Platform\main\ProductManagement\BillPay\BillPayPlatform.vsd>>

The above diagram shows flow of payments that are initiated by the BillPay Originator. An originator can be an Enterprise Customer or one not using Yodlee software.

Unlike BillPay Originators (Not using Yodlee S/W), Enterprise Customer processes the payments in-house. These customers can send payment files to Yodlee Payment Gateway or can have direct relations with the Payment Processors.

In case of SDK or ASP deployment, the originator sends the DirectPay and PayItAll payments to Yodlee Hosted BillPay server. Yodlee Hosted BillPay uses agents to make Card Direct Payments via biller's website on behalf of the user. Here, user has to provide

his credentials to enable Yodlee application to enter biller website and make payments. PayItAll payments are processed by the Yodlee Hosted BillPay. These payments are batched and sent to payment Gateway for processing.

Payment Gateway can receive payment files from three sources, namely,

- a) Enterprise Customer (files are transmitted directly to the Gateway)
- b) BillPay Originator – not using Yodlee S/W (files are transmitted directly to Gateway – Refer Processing type deployment where Gateway acts as a service provider)
- c) Yodlee Hosted BillPay (PayItAll payments)

Payment Gateway processes the batch files and further batches them to send to the appropriate processor. Payment Gateway may send the file to the WU network (for same day payment) or to the Yodlee Biller Network. Payment processors receive the credit files from Payment Gateway and make electronic or paper payments to the biller.

Payment Processor: It is third party enabler who takes Credit/Payment File from the Payment Gateway to make appropriate payments to the biller/individual. The payment may involve issuing a Paper-Check or sending a batch file to the ACH network.

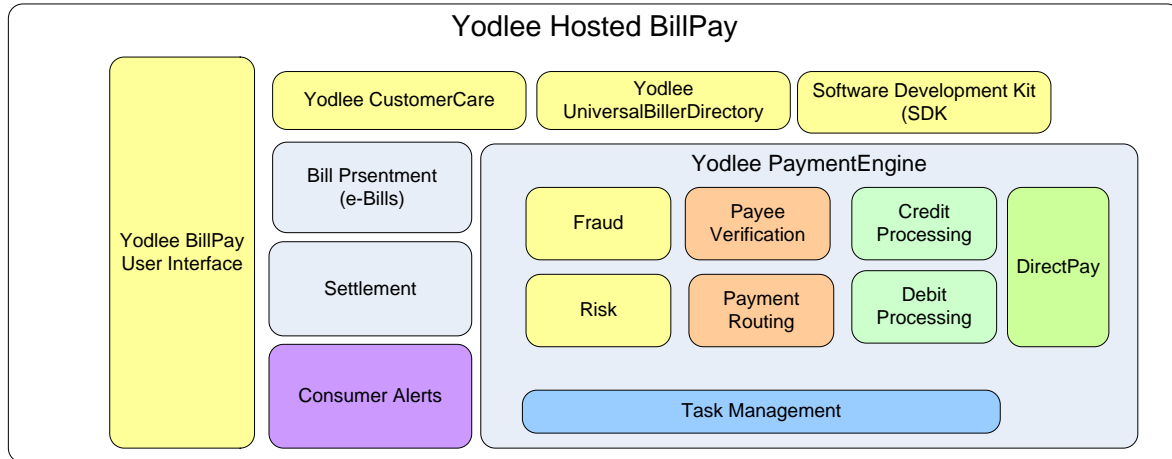
If the Processor have relationship with the biller then the mode of payment is generally electronic else the payments are made using Paper-Check. There are 3 different kinds of Paper-Checks,

- a) Consumer Draft (Also called Laser Draft)
- b) Bank Draft
- c) Processor Draft (Also called Yodlee Draft)

Bank Draft and Processor Draft may also be called Corporate Draft

<< Details to be included about each type of Paper Check. Also Credit (via processor) and Debit processing (via ACH) to be discussed [Note- Credit and Debit processing for Enterprise Solution is discussed in Section 5.5.3] >>

5.5.1 Yodlee Hosted BillPay



For latest version, Please visit:

<< \projects\Platform\main\ProductManagement\BillPay\BillPayPlatform.vsd>>

5.5.1.1 Payment Engine

Payment Engine is the heart of the Yodlee BillPay Product. When the Payment Engine is instantiated, it creates instances of various Task Managers which interact with the Databases and perform the required task.

Payment Engine performs a number of checks, verifications etc. The following tasks are performed by the Payment Engine,

File Level	Instruction Level	Misc
Retrieve Originator Payment File From FTP	OFAC Payee	Missed Payment File Alert
Retrieve Processor Confirmation File From FTP	OFAC Payor	Missed Conf / Adj File Alert
Retrieve Processor Adjustments File From FTP	Risk Check	Payments Not Routed In Timeframe
Retrieve Processor Errors File From FTP	Fraud Check	
Push Processor Payments File To FTP	Address Validation	

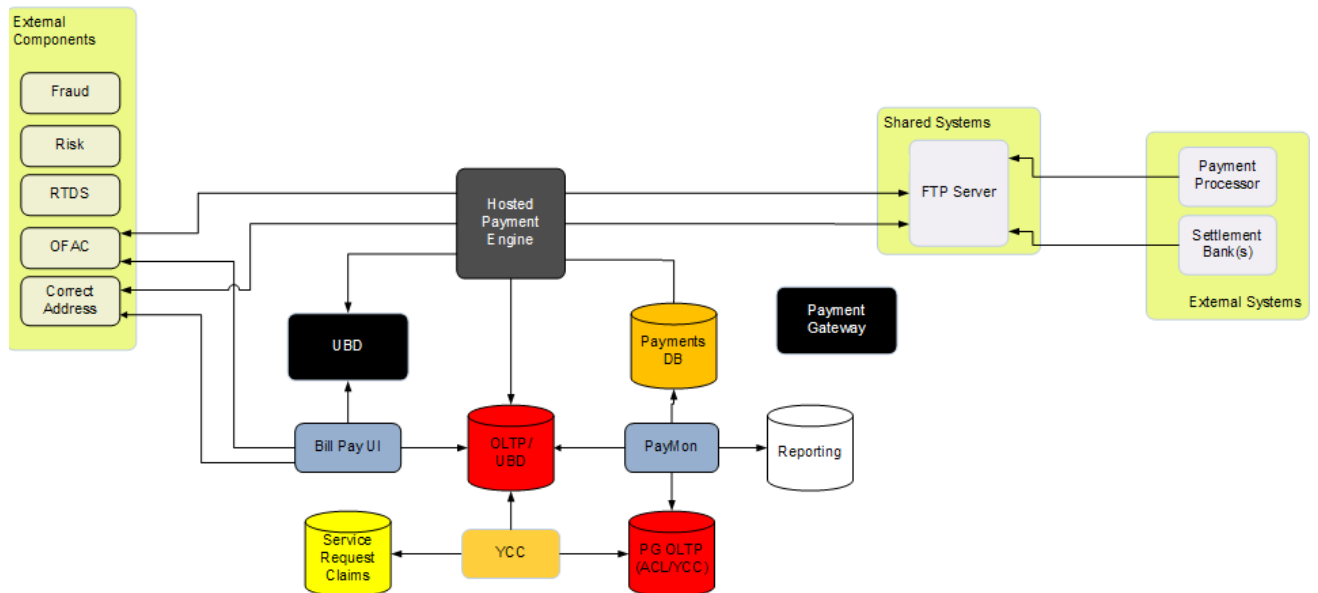
Push Originator Confirmation File To FTP	Payee Verification	
Push Originator Adjustments File to FTP	Payment Routing	
Push Originator Settlement Report to FTP	Send Realtime Payment To Web Service	
Push Originator UBD File To FTP		
Retrieve Payment File From FTP Server		
Push File(s) to FTP Server		
Decrypt File		
Encrypt File		
Import File		
Export File		
Normalize File		
Pull Pmts From OLTP		
Push Pmt Updates to OLTP		
Generate Processor Payments File		
Generate Originator Confirmation File		
Generate Originator Adjustments File		
Generate Originator Settlement File		

For more details, please refer the following documents,

<\\projects\\Platform\\main\\Engineering\\Designs\\Payments\\Architecture\\PaymentEngine.doc>

<\\projects\\Platform\\main\\Engineering\\Designs\\Payments\\Architecture\\Payment Engine Tasks.doc>

Architecture Diagram

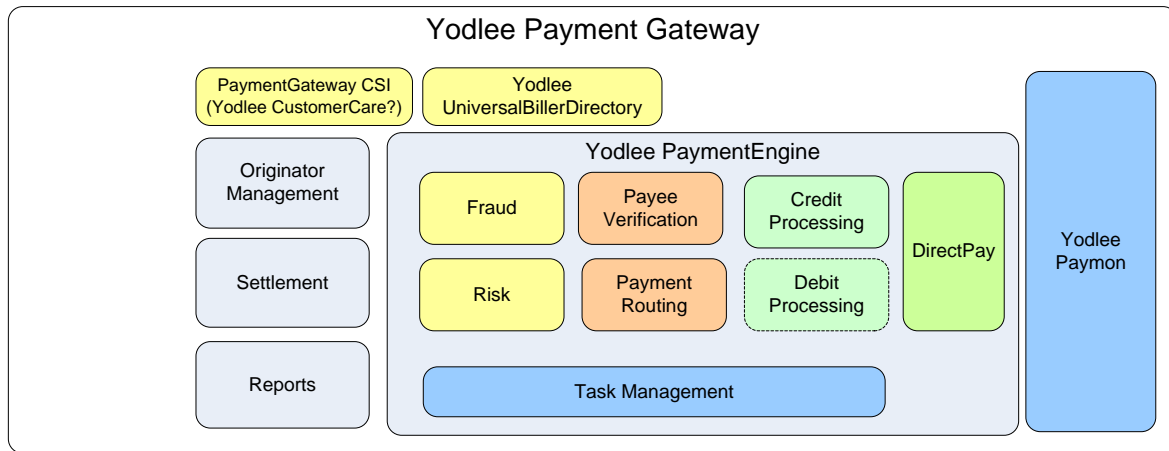


Please note:: For latest version of the Architecture Diagram, please visit the following link

<//projects/Platform/main/Engineering/Designs/Payments/Payments Project Guide.doc>

<< Details to be included on a high level – Payment Flow is to be discussed >>

5.5.2 Yodlee Payment Gateway

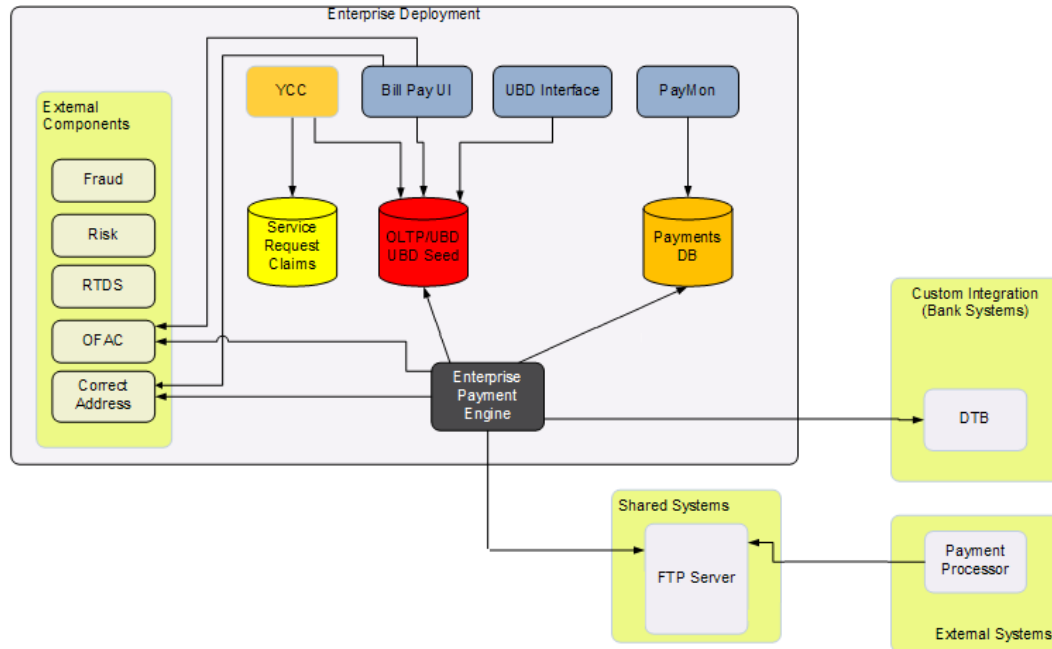


<< Details to be included on a high level – Payment Flow is to be discussed >>

5.5.3 Yodlee Enterprise BillPay

Architecture Diagram

FoF

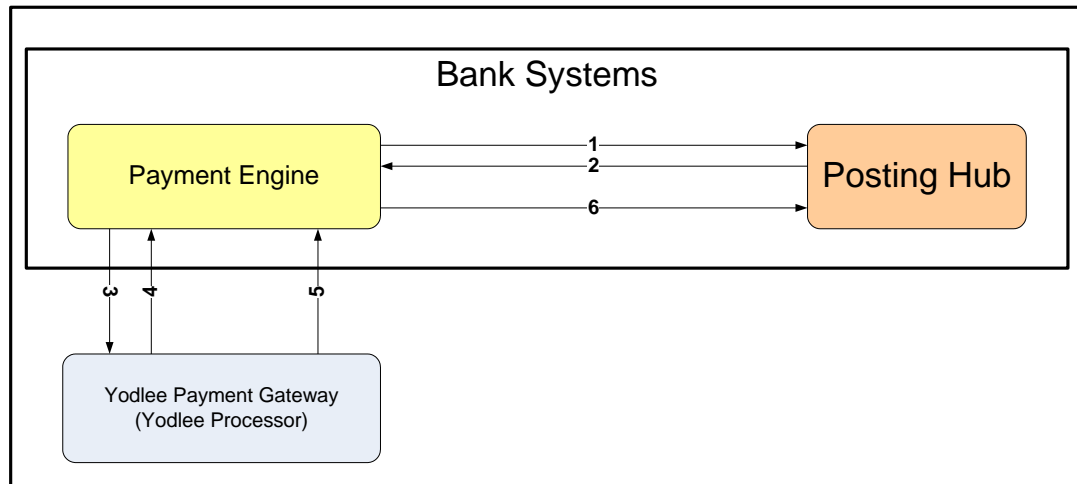


For latest version of the diagram, please visit:

<//projects/Platform/main/Engineering/Designs/Payments/Payments Project Guide.doc>

<< Details to be included on a high level – Payment Flow is to be discussed >>

Payment processing (Credits and Debits)



Posting Hub

It is in-house to the Bank System. Payment Engine sends a Debit File to the Posting Hub to make appropriate debits and credits. A debit reject file is transmitted back to the payment engine. Posting Hub also receives a Check Cleared File from the Payment Engine.

1. Debit File	<p>The debit file contains all debits to be posted to funding accounts.</p> <p>The debit file can contain re-presentments.</p> <p>The debit file can contain both debits and reversals</p> <p>The file can contain items created under Risk-Due Date, Good Funds-Process Date, or ToUs items.</p>
2. Debit Exception File	<p>The debit exception file contains items that could not post to the funding account for either NSF or account status reasons.</p>
3. Credit File	<p>The file can contain items created under Risk-Due Date, Good Funds-Process Date, or ToUs items.</p>
4. Confirmation File	<p>The response back from the processor with the validation status of the</p>

	<p>payments contained in the credit file.</p> <p>The payments have not been submitted to the biller at this point.</p>
5. Adjustment File	Contains credit financial rejects, credit information rejects and reversals
6. Check Cleared File	Contains corporate drafts cleared on the processors account

<< There is total of 9 files...above table is required to be updated. Also, step by step scenarios is to be discussed about the payments>>

6 BPAA (BillPay Account Accelerator)

Please visit the BPAA FSD for details,

[//projects/Platform/7.2/Marketing/FSD/APP_BillPayAccountAccelerator/FSD_Bill_Pay_Account_Accelerator-7.2.](#)

<< Details to be discussed on a high level >>

7 FUTURE ROADMAP

Please visit the following site for the latest version,

[doors://rws-](#)

[doors:36677/?version=1,prodID=0,dbid=461b325a24ae7d92,container=000013e7,object=159](#)

8 RELEASE HISTORY

Release	Description

<< Provide description about the contents of past releases in brief and link to the release folder >>

9 DOCUMENT HISTORY

Rev. #	Date	Section#	Revision Summary	Author
1.0	7 th Nov'07	DRAFT	DRAFT Version	

10 APPENDIX

<< Provide link to important documents >>