

# BlueStar Notification Server

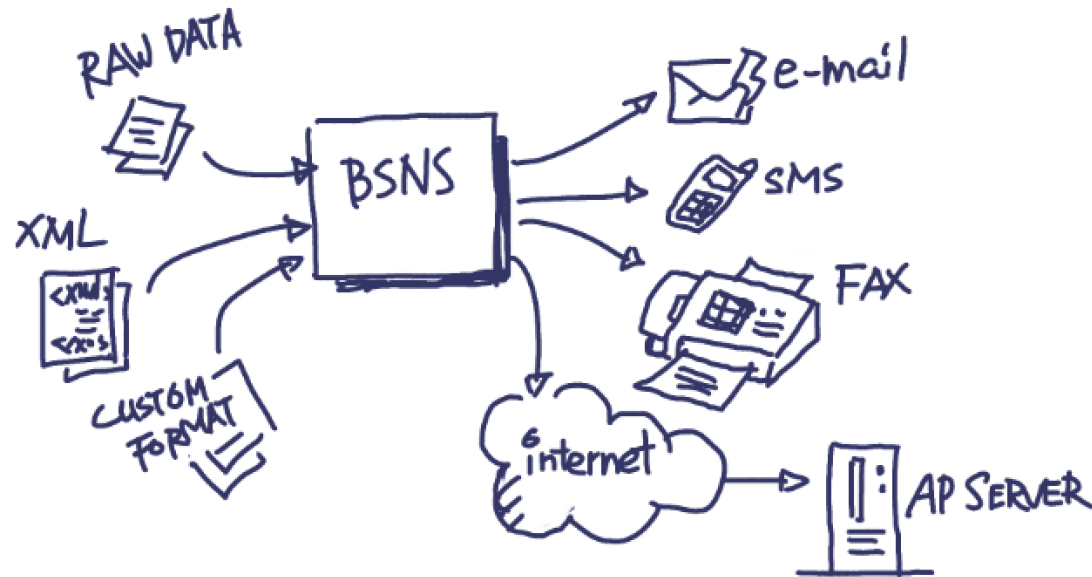
build: 2014

# Outline

- What is BSNS?
- Features
- Look Inside
- Technology Stack
- System Requirements

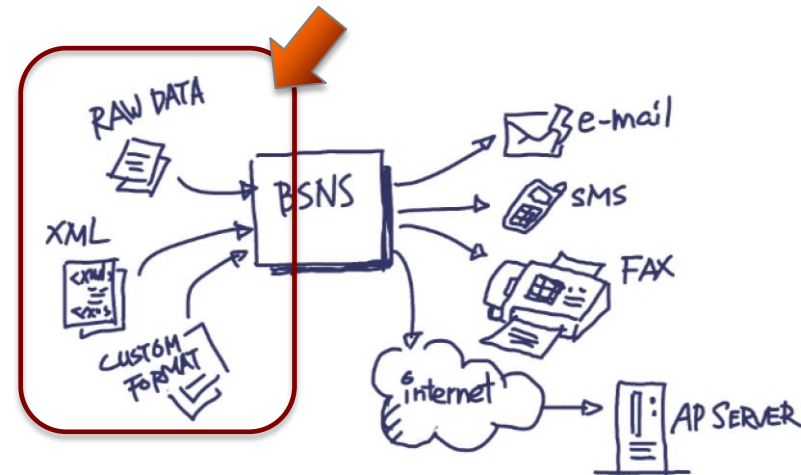
# What Is BSNS?

- BlueStar Notification Server (BSNS) is a platform designed for message generation and delivery



# Features

- Supported Input Format
  - XML
  - RAW Data (with various Encoding, such as:
    - EBCDIC
    - Unisys
    - ASCII, big5
    - Unicode)

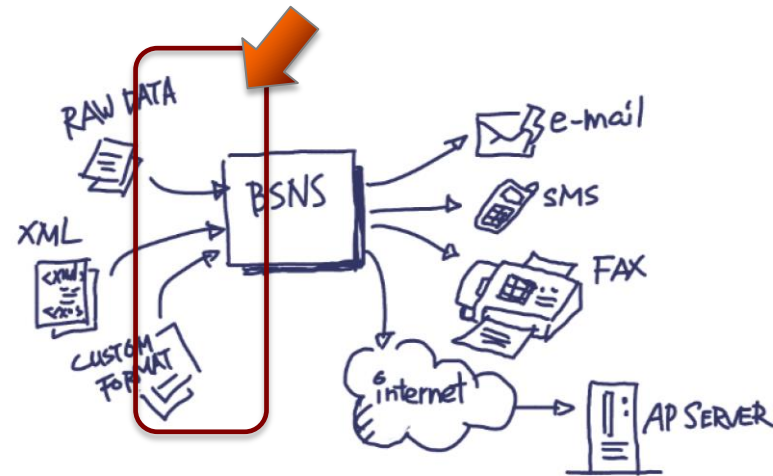


# Features

- Supported Input Channels
  - UNC
  - FTP\*
  - Web Service\*

*or other channel such as MSMQ, IBM MQ, TIBCO ESB... etc.*

- \* may require customization depending on security policy and other environmental issues

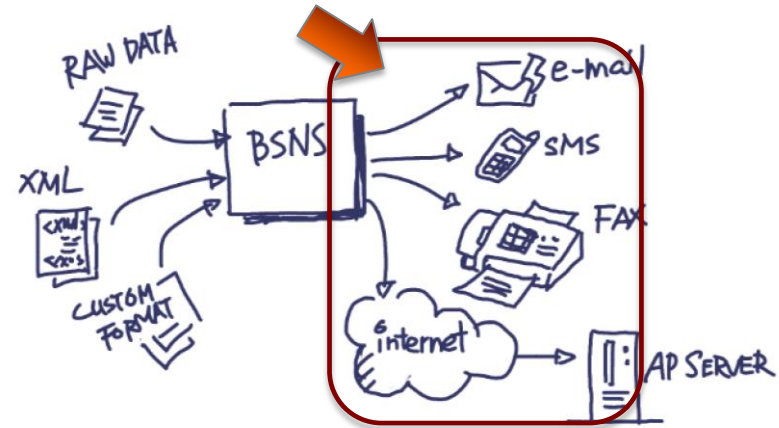


# Features

- Supported Delivery Channels

- E-mail (SMTP)
- HTTP
- SMS\*
- FAX\*
- Web Service\*

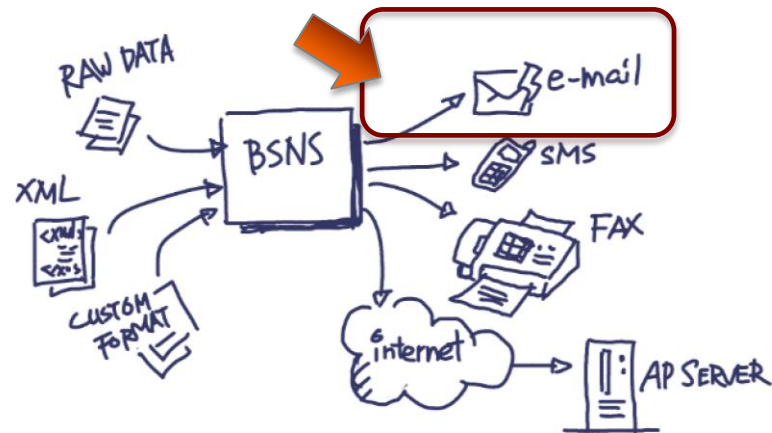
*or other channel such as MSMQ, ... etc.*



\* Required customization depending on vendor spec

# Features

- Supported E-mail Attachment Format
  - HTML
  - XML
  - Plain Text
  - PDF<sup>1,2</sup>
  - ZIP<sup>1</sup>



1. with password protection
2. generate using form-fill or draw directly

# Features

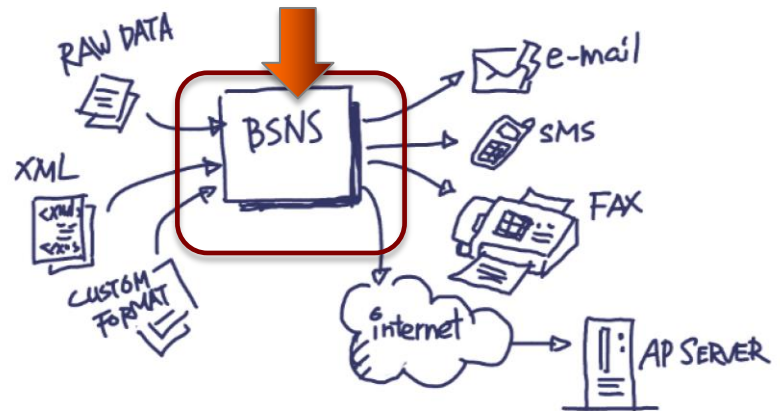
- Data Transformation

- XSLT

- For Standard XML
    - PDF Form-Fill
    - PDF Direct Draw

- Flat File To XML

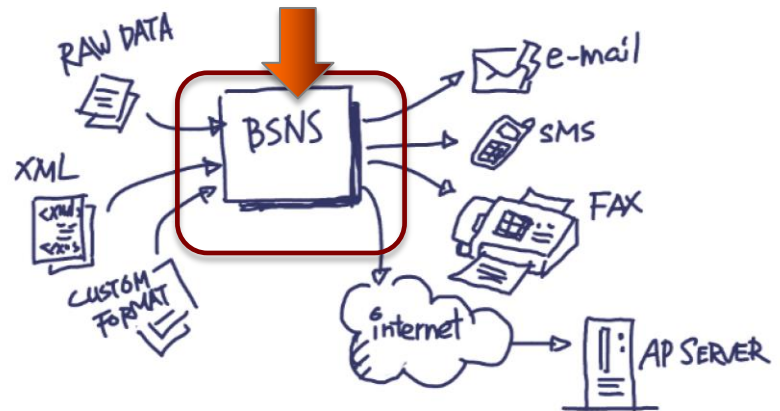
- via BlueStar Integration Server





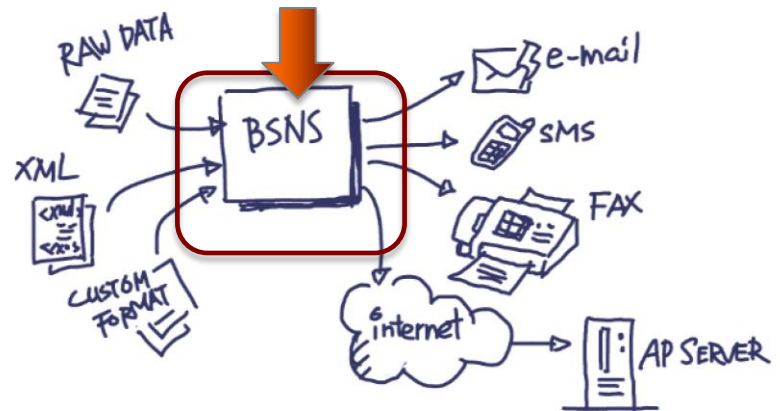
# Features

- Flow Engine for Data Processing
- Customizable Processor
- Processors Run In Parallel
- Web-based Management And Monitoring Tool (Portal)



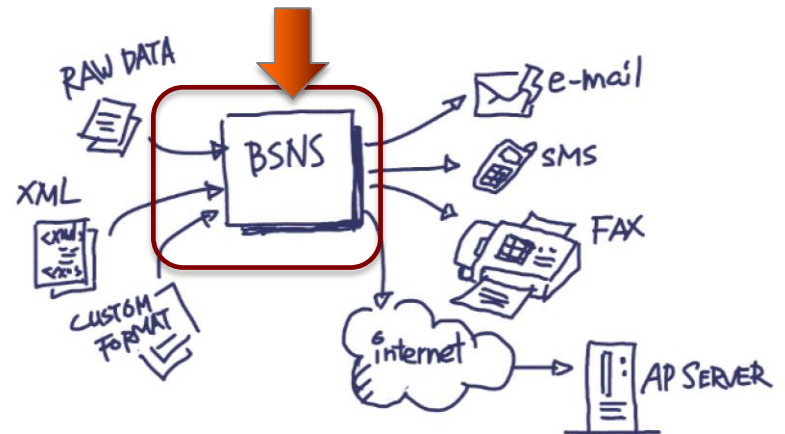
# Features

- Supports Visual Studio Development
  - Code Snippet (C#)
  - File Handler Project (C#)
- Leverage log4net Logging Mechanism

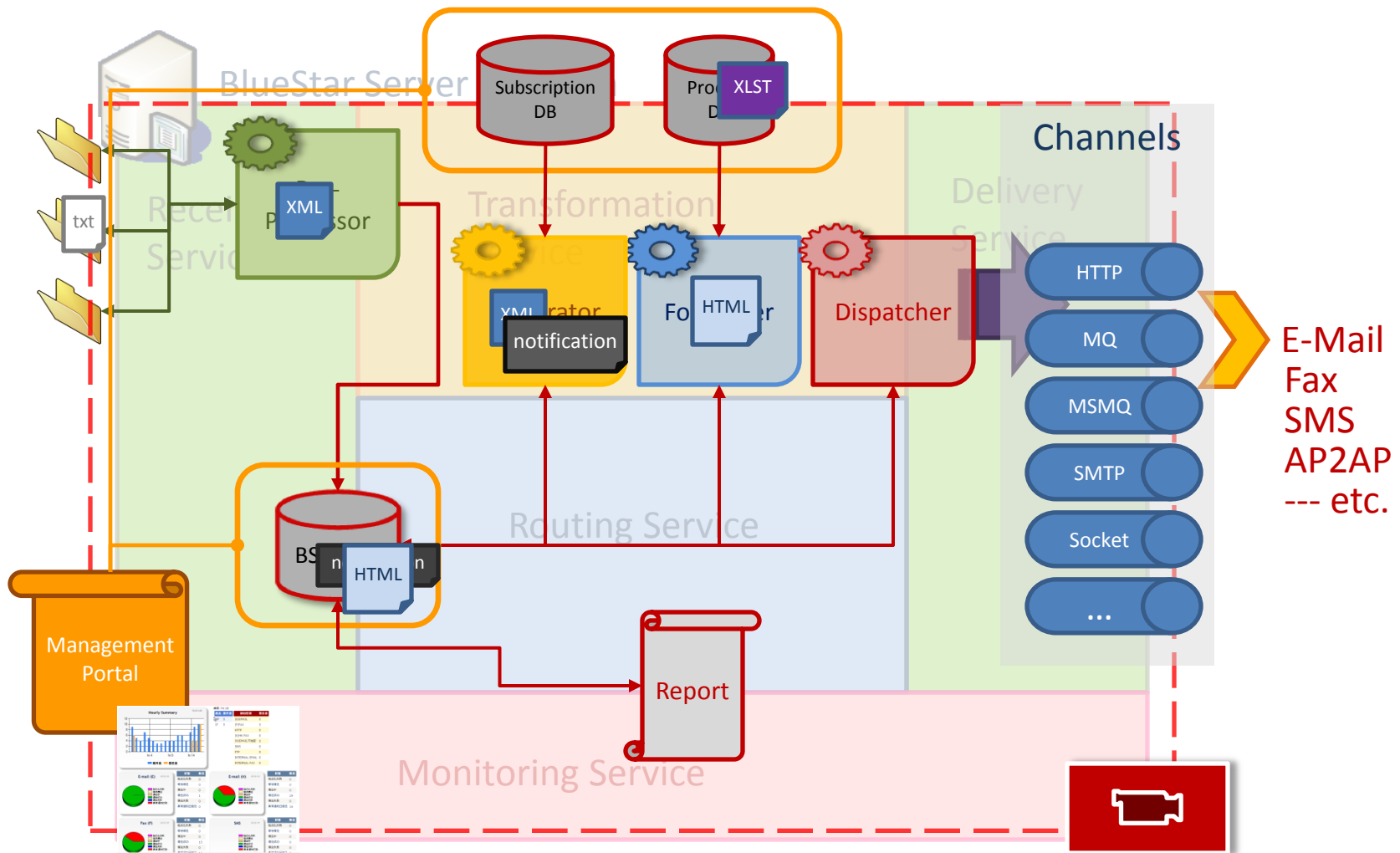


# Features

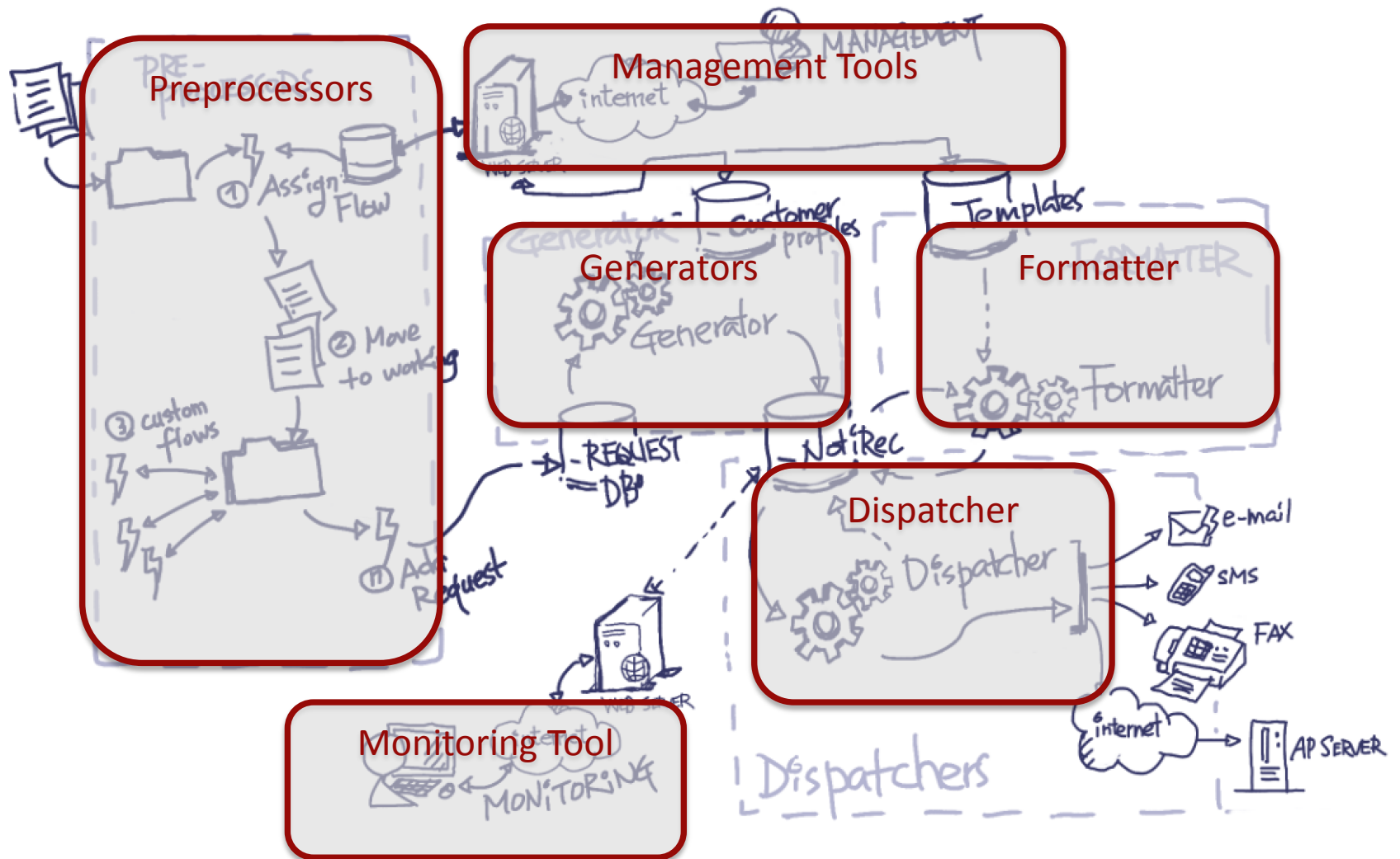
- Security
  - Integrate Windows Authentication
  - Role-based Management
  - Supports Windows User Group Mapping



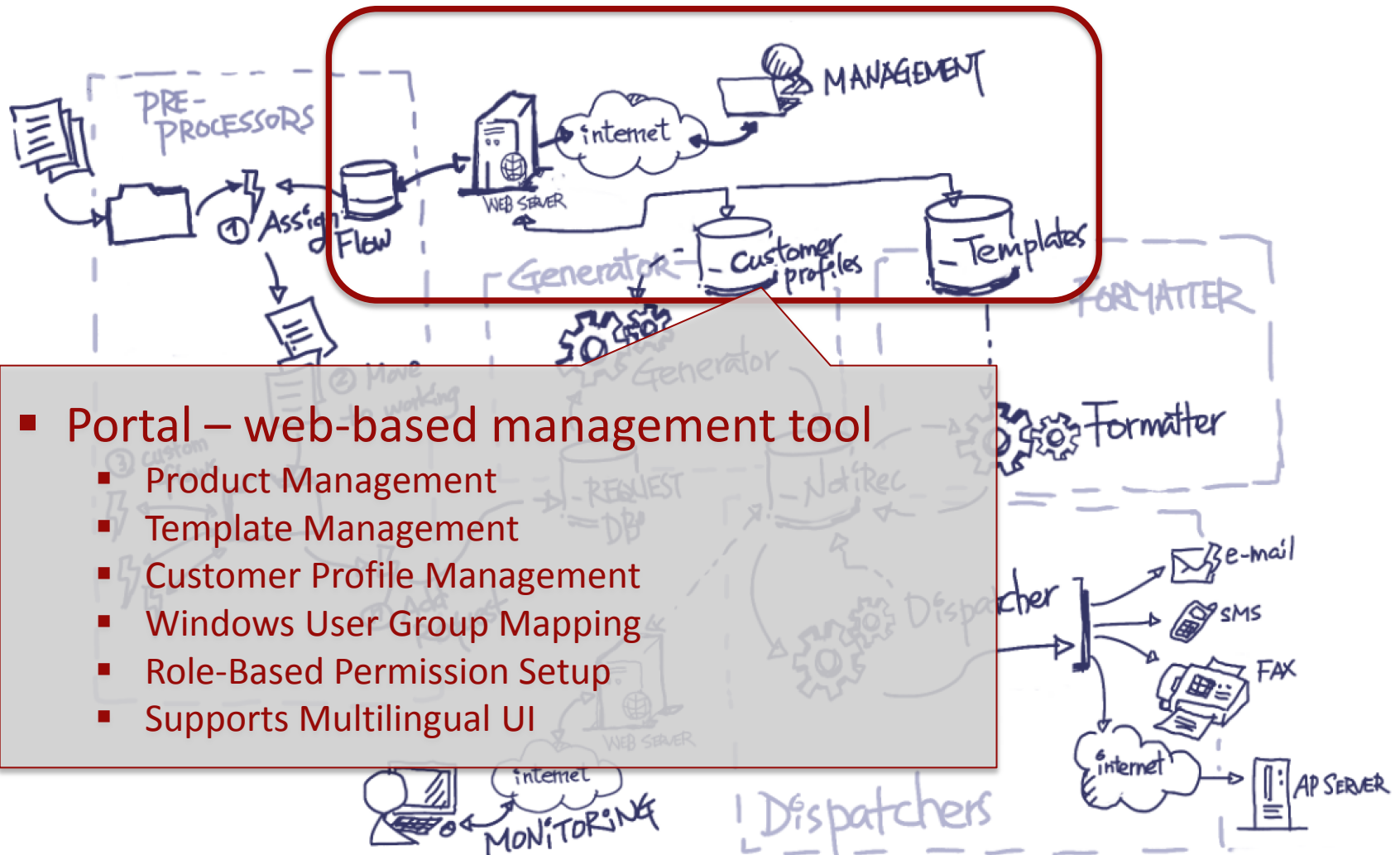
# Look Inside



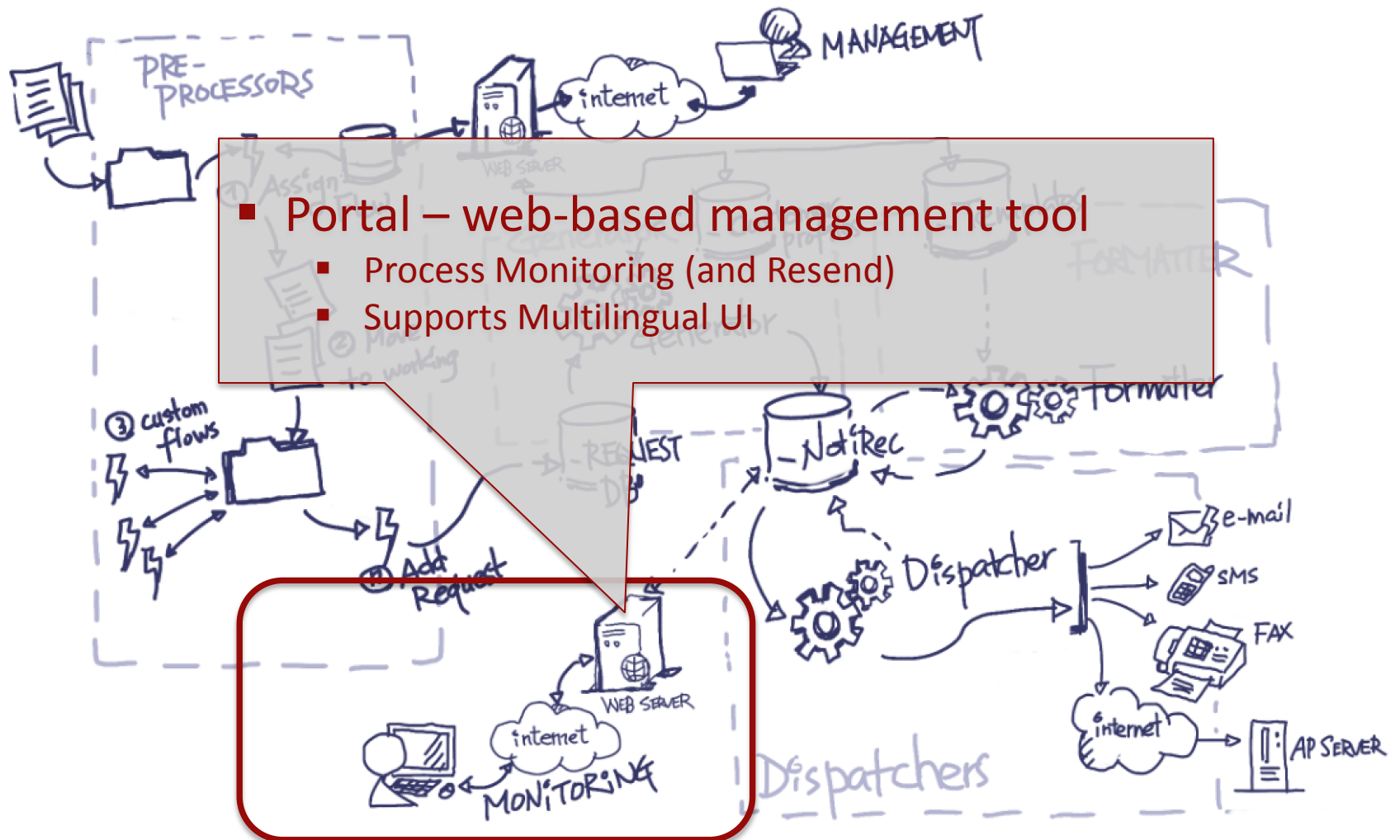
# Look Inside



# Look Inside



# Look Inside



# Look Inside

## System Configuration

- Generic – class categories
- Class – advanced usage: e.g. political means
- Channel

The screenshot displays the Cedar Fusion7M management interface. At the top, there's a header with "internet" and "MANAGEMENT" written in a hand-drawn style. Below the header, a navigation menu is visible on the left, listing various system components. The main area features a grid of 12 icons, each representing a different system configuration option. The icons are arranged in three rows and four columns. The first row includes Monitor, Template, Message, and Flow. The second row includes Channel, Navigation, Class, and Generic. The third row includes Role Mapping, Reset Password, Customers, and Approval. Each icon has a corresponding label and a brief description of its function. The interface also includes a search bar and a table of system components on the left side.

search:

root id	description
1000	monitoring message status
2000	System Admin Root
3000	
4000	System Admin Root
5000	

1 2

**Monitor**  
monitoring message status

**Template**  
managing message layout templates

**Message**  
managing message definitions

**Flow**  
managing pre-process setup

**Channel**  
managing channel definitions

**Navigation**  
managing navigation menu

**Class**  
managing class definitions

**Generic**  
managing generic info

**Role Mapping**  
managing mapping between NT user

**Reset Password**  
password reset

**Customers**  
managing customer profile

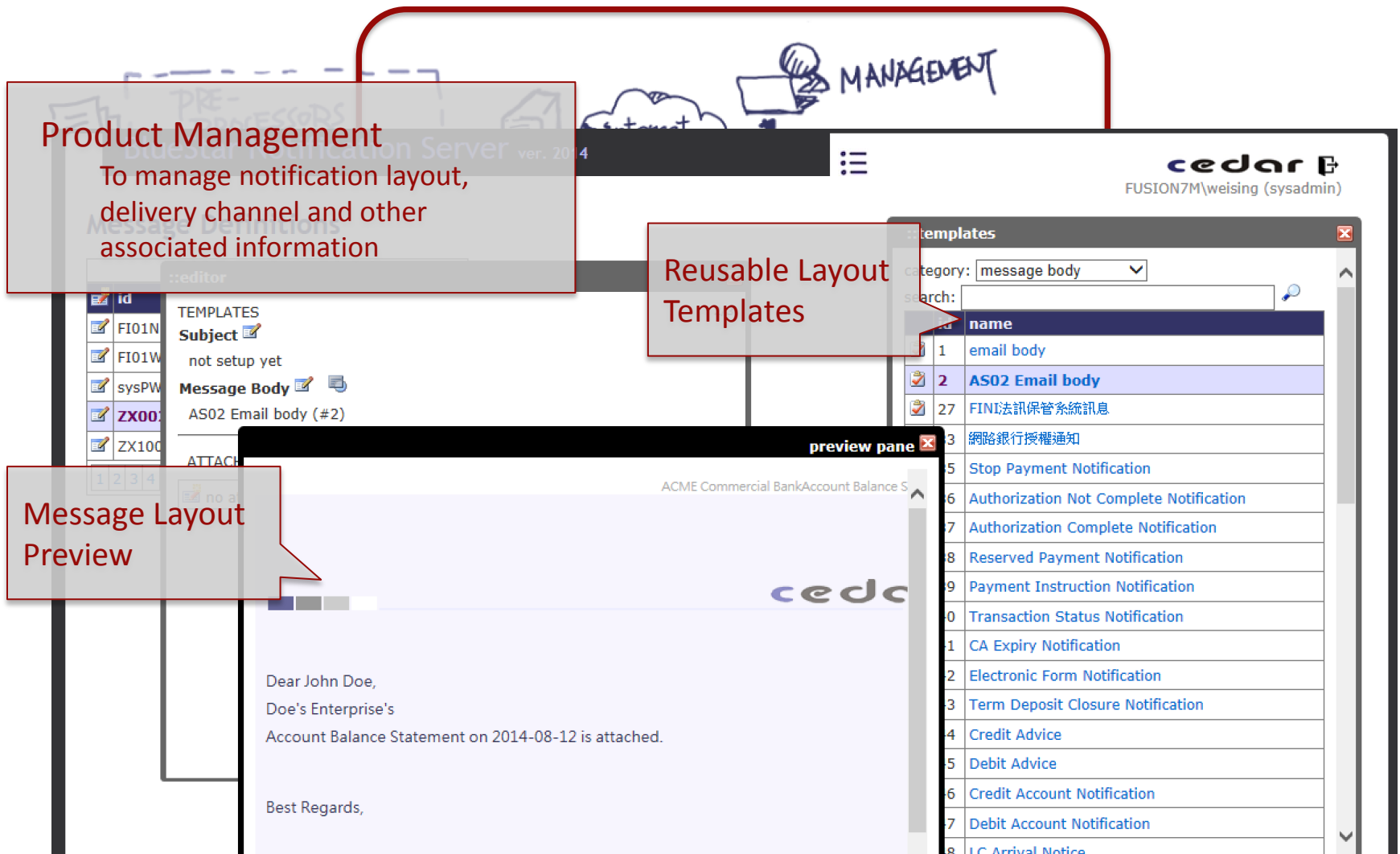
**Approval**  
customer profile update approvals

**Integrated Window Authentication**

**App-like Style Navigation Menu**



# Look Inside



# Look Inside

## Template Management

To manage various layout templates such as message body, subject, PDF page layout, request normalization... etc.

Template (mostly XSLT),  
Sample Data Upload

Run-Time Generated  
Preview

The screenshot displays the Cedar FUSION7M web application interface. At the top, there is a header with the Cedar logo and the text "FUSION7M\weising (sysadmin)". Below the header, there is a navigation bar with a menu icon and the word "MANAGEMENT" written in a handwritten style. The main content area is divided into two panels. The left panel, titled "Template Management", contains a form for editing templates. It includes fields for "Category" (set to "message body"), "Template Name" (set to "ACME mail"), "Class Total" (set to "0"), "Template (XSLT)" (with a "Browse..." button), and "sample data" (with a "Browse..." button). The right panel, titled "preview pane", shows a preview of the generated email template. The preview includes the Cedar logo, a salutation "Dear John Doe,", a message body "Doe's Enterprise's Account Balance Statement on 2014-08-12 is attached.", and a closing "Best Regards,". The interface also features a sidebar with a list of templates and a table with columns for "category", "name", "by", and "time".

# Look Inside

## Flow Management

To manage process flow definition in “Preprocessor” stage for each notification



### Preprocessors

search  search

class id	name
BD01	Credit Advice
BD02	Debit Advice
BD03	Credit Account
BD04	Debit Account
BE01	LC Arrival No
BE03	Export Negot
BE04	Export Bill A
BE05	Export Finan
BT01	LC Issuance
BT02	Import Bill D

Modify process order and which handler (program) is responsible for the task

step	process
1	Pathch Info
10	SplitEByContacts
15	Cdata2Pdf
20	DirectRequest
255	pause

### Process Definitions

code	name	description
3DB	DirectRequest	insert non-batch request XML file to DB
c2Pdf	Cdata2Pdf	convert cdata content to pdf attachment
mapch	mapping channel	mapping channel for BSNS
pause	pause	reserved process to halt the flow
pinf	Pathch Info	patch subscriber info
spic	SplitEByContacts	split notification channel E requests with password protected attachments by contacts

Pre-defined handler to insert into the flow

cedar B  
FUSION7M\weising (sysadmin)

SERVER

# Look Inside

## Role Mapping

To map Windows User Groups with  
BSNS built-in User Roles

Role Mapping

User group – Role  
mapping editor


Role-based  
Permission Preview


	search				
add new	user group	role			
Edit Delete	Administrators	System Admin		7/11/2014 6:28:14 PM	sys
Edit Delete	OctoApprover	Teller Managers		7/11/2014 6:40:53 PM	WIN-S5JFPI7BCKA\Administrator
Update Cancel	OctoDev	Master Developers		7/17/2014 6:36:23 PM	S0021MMAST06\bluestar
Edit Delete	OctoUser				


### ::navigation preview


navigation id: 1000


**Generic**  
managing generic info


**Message**  
managing message definitions


**Monitor**  
monitoring message status

**Template**  
managing message layout templates

**Flow**  
managing pre-process setup

**Navigation**  
managing navigation menu

**Customers**  
managing customer profiles and subscriptions

**Role Mapping**  
managing mapping between NT user

# Look Inside

## Role-Based Permission Setup

To Setup the usage permissions by roles

## Available Functions

## Granted Functions

## Navigation Preview

search:  search

root id	description
1000	Dev Master Root

### ::navigation editor

**Generic**  
managing generic info

**Message**  
managing message definitions

**Monitor**  
monitoring message status

**Temp**  
managing layout tem

**Flow**  
managing pre-process setup

**Navigation**  
managing navigation menu

**Customers**  
managing customer profiles and subscriptions

**Role Mapping**  
managing mapping between NT user

**Class**  
managing class definitions

**Channel**  
managing channel definitions

### ::function list

id	name
101	Generic
102	Channel
103	Class
104	Message
105	Monitor
106	Template
107	Flow
108	Nav
109	Role
201	Cus
202	Pw

### ::permission list

	id	function id	name
✗	1001	101	Generic
✗	1004	104	Message
✗	1005	105	Monitor
✗	1006	106	Template
✗	1007	107	Flow
✗	1008	108	Navigation
✗	1009	201	Customers
✗	1010	109	Role Mapping
✗	1011	103	Class

# Look Inside

## Customer Profile Management

### Basic Info

### Contacts

### Contact's Associated Subscriptions

### Contact Details:

Contact addresses such as E-mail, URL (for AP2AP) ... etc.

### List of Available Notifications

### Subscription Details

\* password protection for the notification can be set here

The screenshot shows the Cedar B Customer Profile Management interface. At the top, there are handwritten notes: "PRE-PROCESSORS" and "internet" with a cloud icon, and "MANAGEMENT" with a person icon at a laptop. The interface includes several windows and panels:

- Customer Profile Editor:** Contains fields for ID (rogue), Name (X-Men), and a checkbox. It also shows a last update timestamp: 2014/06/04 12:06:56 by: FUSION7M\weising.
- Contact Details:** A form showing contact information for "Magneto", including type (E-mail), address (magneto@x-men.org), status (updating), and last update (2014/07/25 14:05:22 by: FUSION7M\weising).
- Notification List:** A table listing available notifications.
- Subscription List:** A table listing subscriptions for the selected contact.
- Subscription Details:** A form showing details for a specific subscription, including address, class, channel, password, status, and last update.
- Contacts Table:** A table listing all contacts.

id	name	channel
DEMO01A	e-mail msg A	SMTP

address	message id	name	channel
magneto@x-men.org	DEMO01	demo one	SMTP

address:	magneto@x-men.org		
class:	DEMO01	channel:	SMTP
password:	[none]		
status:	(2) deleting		
last update:	2014/07/21 14:05:22 by: FUSION7M\weising		

name	type	address
Magneto	E-mail	magneto@x-men.org
Summers	E-mail	cyclops@x-men.org
Jean Grey	E-mail	jean@x-men.org
Logan	E-mail	wolverine@x-men.org
Xavier	E-mail	professorX@x-men.org
gateway	HTTP	http://gateway.x-men.org
Logan	E-mail	wolverine@x-men.org
Wagner	E-mail	nightcrawler@x-men.org

# Look Inside

## Multilingual GUI Supports

Language switches automatically according to the browser's preferred language setup

Add the languages you use to read websites, listing in order of preference. Only add the ones you need, as some characters can be used to impersonate websites in other languages.

Language:

Chinese (Traditional, Taiwan) [zh-TW]  
English (United States) [en-US]

Display Chinese  
When zh-TW is  
preferred

## Language Preference

Add the languages you use to read websites, listing in order of preference. Only add the ones you need, as some characters can be used to impersonate websites in other languages.

Language:

English (United States) [en-US]  
Chinese (Traditional, Taiwan) [zh-TW]

Move up

Move down

Display English When en-US is preferred

BlueStar Notification Server ver. 2014

客戶資料

客戶代碼:  查詢

客戶代碼	名稱
0000	0000
0000	0000
0000	0000
0000	0000

基本資料修改

消檔 放棄修改 送審

ID: 03077208

訂閱清單

Customer Profiles

profile editor

customer ID: 0006802 Name: 000680 active: ☒ status: editing

claim lock drop edit submit

contact details

contact name: Rachel.weng type: E-mail address: Rachel.weng@ctcbank.com

subscription list

address	message id	name	channel
Rachel.weng@ctcbank.com	BD01N	Credit Advice	SMTP

# Look Inside

## Message Monitoring

To monitor each notification record's processing status  
Manually resend the message when necessary

## Resend message

## Search Condition Setup

## Processing Status in Details

BlueStar Notification Server ver. 2014

Message Status Query

nid	channel	customer id	address	class id	status	process	started	complete
1792	E	16159928	weising.jeng@msa.hinet.net	DP12N	formatted	dispatch	1/1/2014	
1793	E	16159928	weising.jeng@msa.hinet.net	DP12N	formatted	dispatch	12/31/2013	
1794	E	16159928	weising.jeng@msa.hinet.net	DP12N	dispatching	dispatch	12/31/2013	

Search Filter

time interval: ☐ process start time ☐ schedule time ☐ generate time ☐ send time  
2010/01/01 ~ 2014/12/31 [start search](#)

customer: ?  
class id: ?  
status: ?  
tracking id: ?  
batch id: ?  
extra: ?

channel: ALL  
resent: don't care  
pid: ?

request id: ?  
nid: ?

message details

resend

status (3) dispatching

nid 1794

request id 5211

batch id 3291

importance 100

schedule 12/25/2013 3:09:40 AM

class\_id DP12N

channel E

customer id 16159928

name

contact Wei-Sing Jeng

address weising.jeng@msa.hinet.net

tracking id 12345

time generated 12/25/2013 3:09:40 AM

time sent 2/7/2014 2:51:03 AM

resend ☒

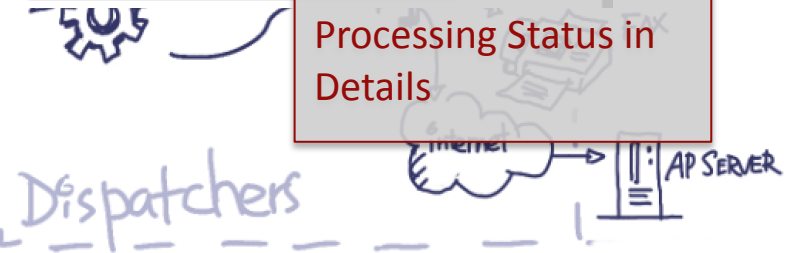
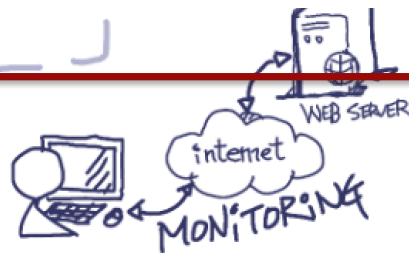
pid 1792

tag dispatch

time\_started 12/31/2013 12:36:20 PM

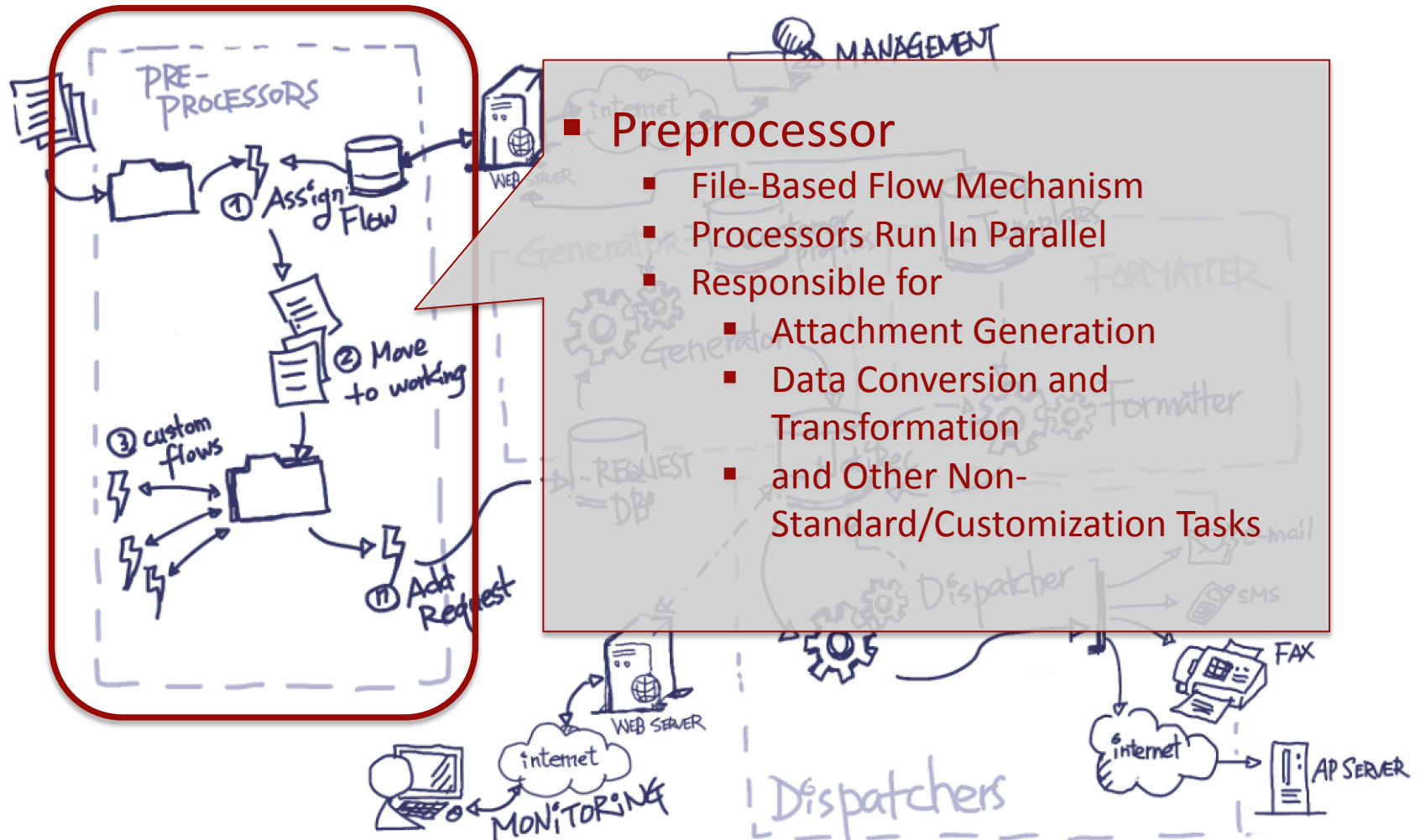
time\_complete 12/31/2013 12:36:40 PM

result OK





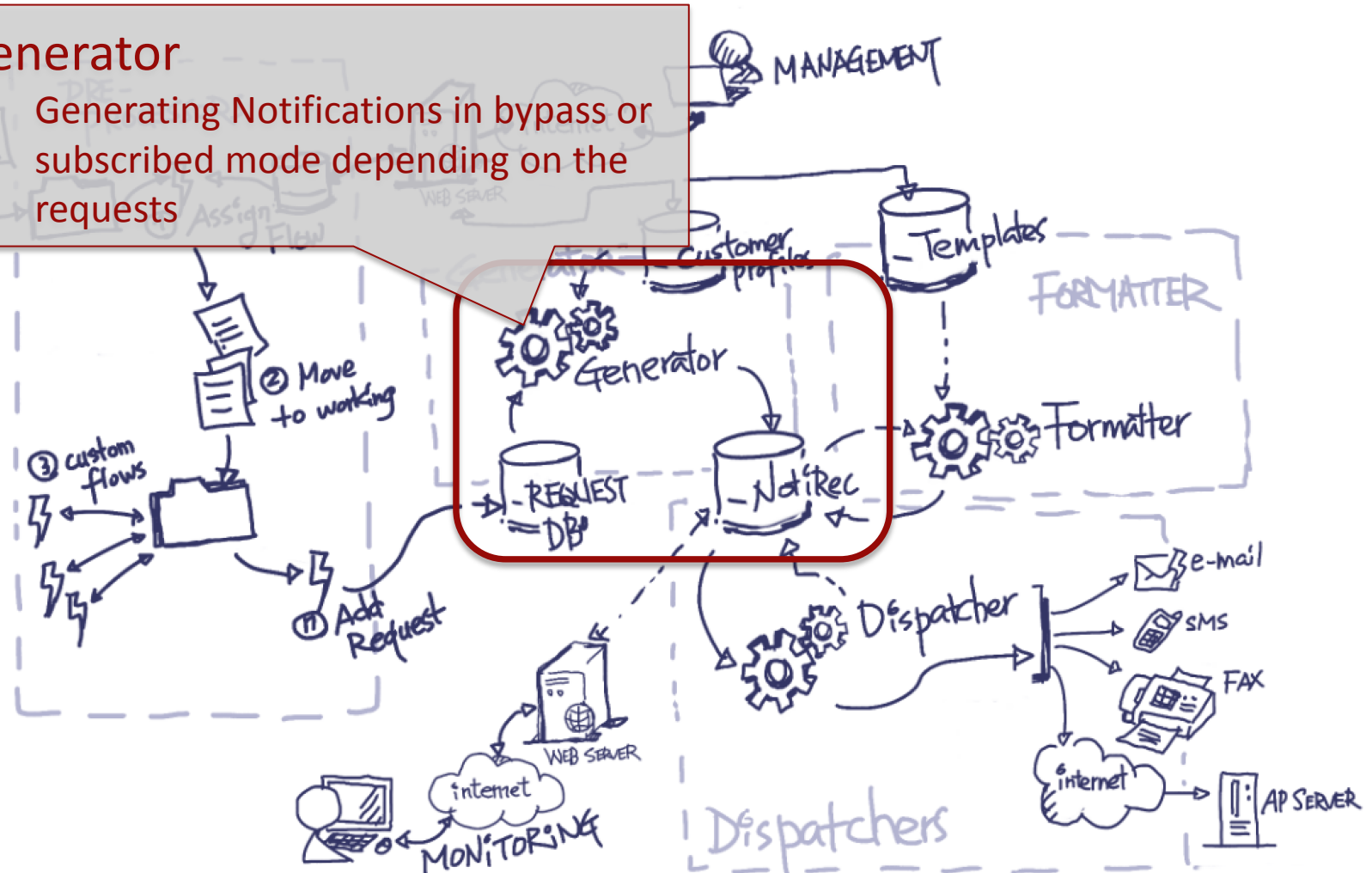
# Look Inside



# Look Inside

## ■ Generator

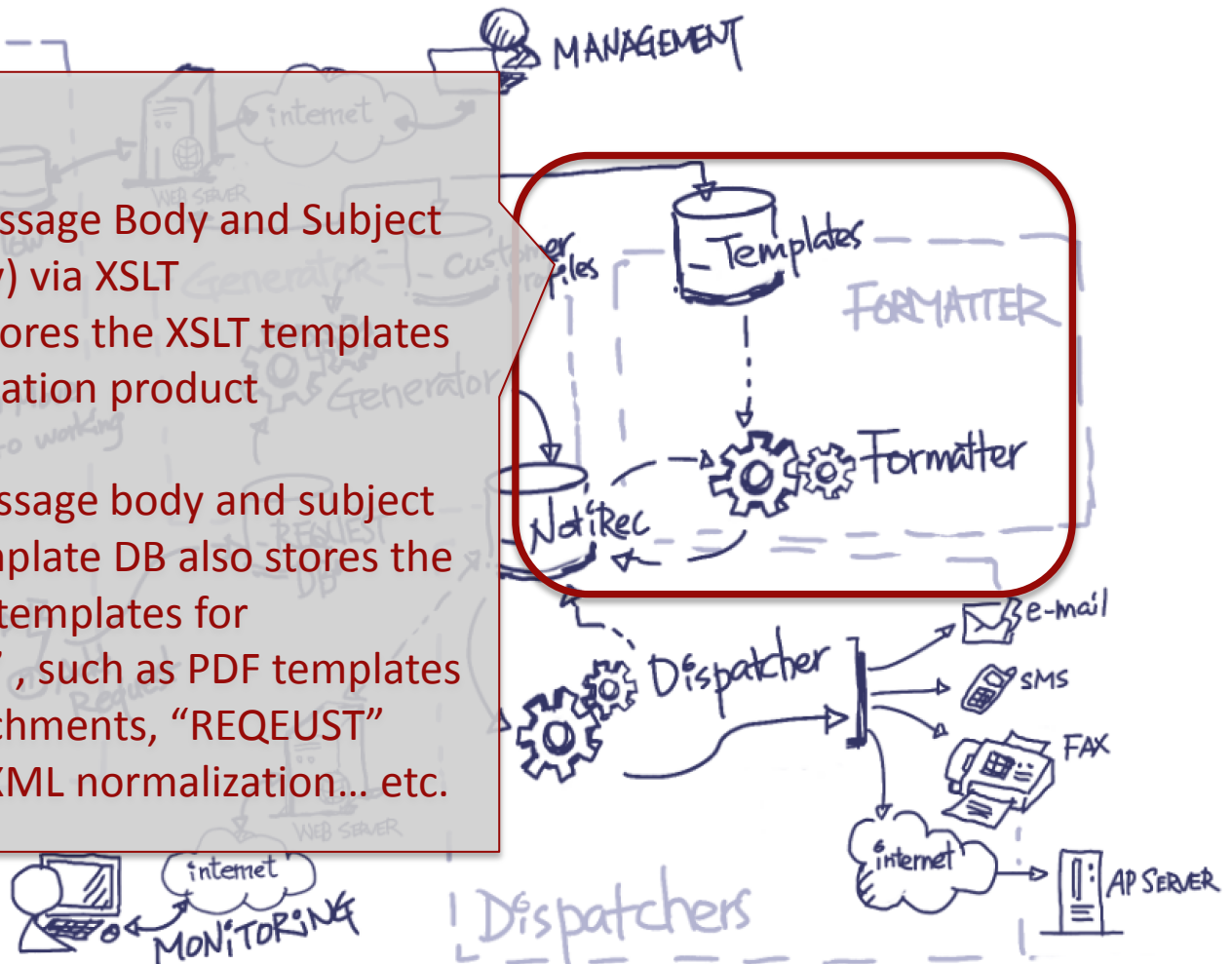
- Generating Notifications in bypass or subscribed mode depending on the requests



# Look Inside

## ■ Formatter

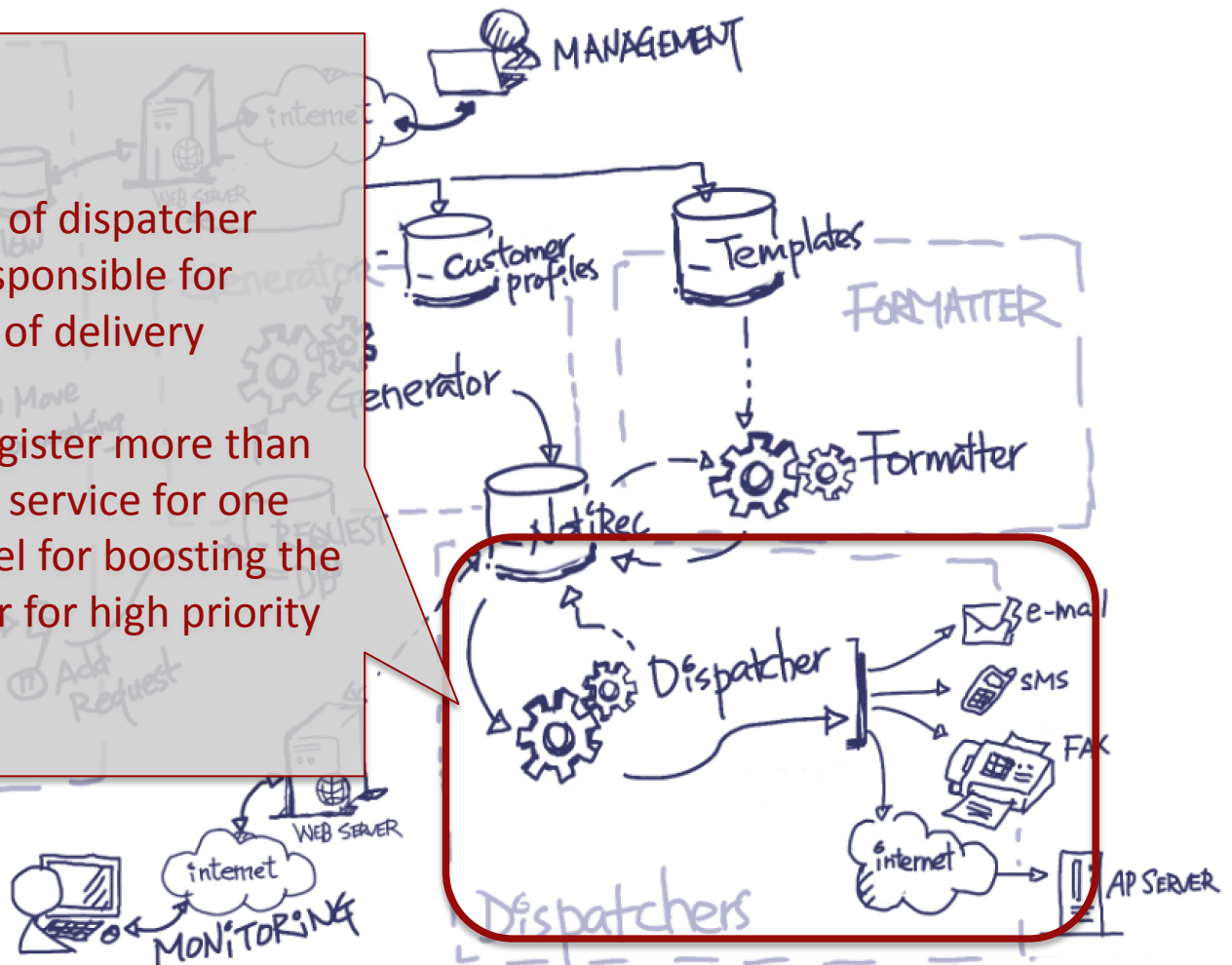
- Formatting Message Body and Subject (for e-mail only) via XSLT
- Template DB stores the XSLT templates for each notification product
- Other than message body and subject templates, Template DB also stores the other types of templates for “Preprocessor”, such as PDF templates for e-mail attachments, “REQUEST” templates for XML normalization... etc.



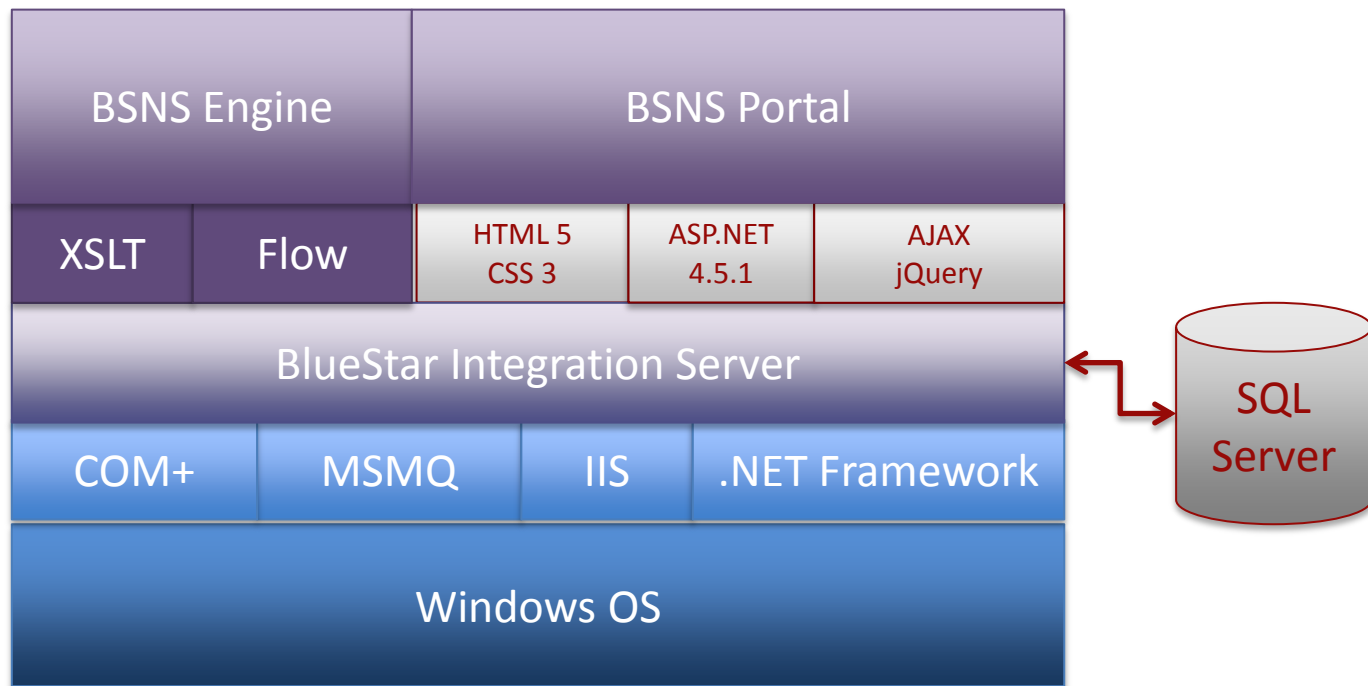
# Look Inside

## ■ Dispatchers

- Different types of dispatcher services are responsible for different types of delivery channels
- You can also register more than one dispatcher service for one delivery channel for boosting the performance or for high priority notifications



# Technology Stack



# System Requirements

- Windows Server 2008 R2 and up
- .NET Framework 3.5, 4.5.1
- SQL Server 2008 R2 and up (with CLR enable)
- BlueStar Integration Server 2008 and up
- Internet Explorer 11