

Bryan Enochs AT&T - Principal System Engineer 04/12/2018



Presenter



Bryan Enochs

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Key Skills

- Sybase, Oracle, PowerBuilder, Java J2EE, C#
- Agile Scrum Master and Lead Architect

Recent Projects

- 2018 Currently building a large scale solution for a multi year Federal Government Contract valued at \$13B over 10 years.
- 2018 State of California CIS Expansion to expand contract services for the states 88,000 agencies.



Agenda



- CIS Summary
- •Why PB and Appeon
- •Key Volume Metrics
- Key Functionality
- Architecture
- Technology Profile



Client Invoice Services (CIS)

- Client Invoice Services (CIS) is a <u>mobile enabled</u>, global application with servers in the US and England.
- Manages clients' expenses through validation against thresholds, contracts and inventory and applies payments of vendor invoices in country in currency for consolidated billing.
- Stores granular invoice detail and dynamic client specific information, and exports appropriate data to accounts payable and/or billing systems.
- Uses a Business Objects reporting server and a flexible report writer for ad hoc extracts.
- Is front ended by our EDI gateway that enables automated importing and exporting of vendor electronic data files, including EDI, CABS, XML and other delimited files.
- Processes approximately 300K invoices per month with 94% automation in support of AT&T large business customers.



Why PowerBuilder and Appeon?

AT&T has invested millions of dollars into this large scale application. It has been kept current with versions, infrastructure and needed a mobile facelift.

It would have been too costly to rewrite our client/server app and we needed a ipad, iphone mobile enabled.

With support from Appeon and their partners, we made some minor changes across the appand delivered a mobile enabled version within a few months.

Since this time, another large scale app called the Integrated Billing System has decided to move forward with the same approach for their PB app.



CIS Key Volume Metrics

Average Annual Revenue Supported	\$X.XB
% Automation	94%
Active Clients	350+
Active Vendors	4,000+
Active Accounts	450,000+
Average Number of Invoices Per Month	300,000+ (Some invoices have 30000+ circuits)
Invoice Detail Lines Per Month	10,000,000+
Call Detail Records Per Month	25,000,000+

CIS manages large volumes of granular invoice detail data to meet custom requirements for large mega deals.



CIS Key Functionality

External Suppliers

Vodafone, Telus, Optus, Allstream, Verizon, Frontier, Qwest, Granite, Telco Malaysia, Singtel, BT, COLT, CZTel, EIRCOM, EMC, GTS, SWISCOM...

Internal Billers

Onenet, CRIS, VTNS, DCS, Execubill, UB, GBP, ABOM, CABS, COBRA, OPUS, DPSS, UCC, Ccard..

INVOICE	CLIENT INVOICE SERVICES			CUS
VALIDATION	EDI Engine	Language Support		AGC
CDR LEVEL	Currency Engine	Rerating Engine		DAT STA
VALIDATION *	Validation Engine	Language Translator		EXF
INVENTORY VALIDATION	Auto Mapping Engine	Dynamic Setting Engine		MAI
PAY IN COUNTRY	Client Attributes	EU Privacy Compliant*		REC EXF RE\
CURRENCY				

CUSTOM DATA AGGREGATION

DATA STANDARDIZER

EXPENSE MANAGER

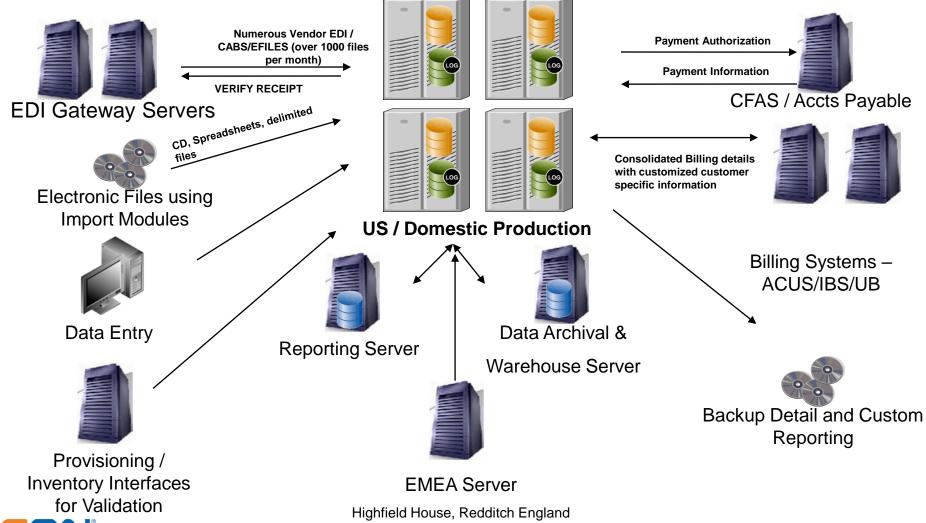
RECONCILE EXPENSE TO REVENUE

Target Architecture Global Invoice Payment, Validation & Consolidation system delivering a single, custom, consolidated global bill to the customer for all their Worldwide Telco Services!



CIS System Architecture

Scalable Cloud Based Servers Production-Alpharetta / DR-Hayward Data Centers





Technology Profile

System Technology

- High End Cloud Based Solution
- HP DL580 G3 Windows Servers
- HP-UX 11i OS and Windows Server 2012 servers
- Oracle 12G
- Appeon Mobile Enablement
- PowerBuilder Enterprise 12.5 IDE
- Microsoft ASP.NET Integration
- EDI Server EC Gateway, EC Real Time Processor & EC Mapping Development software (comparable to Sterling Gentran)
- SVN Source Code management

Required Personnel Skill sets

- Senior PowerBuilder / .NET Developers / Appeon
- Linux Cron / Shell scripter experts
- EDI Mapping Specialists / Connect Direct specialists
- SQL Programmers extensive T-SQL Stored procedure/trigger developers
- Data Modeling / Design Experts using PowerDesigner
- Oracle 12G DBAs with knowledge of PL SQL and Administration
- System Architects dealing with extensive knowledge of large scale systems

