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Cable & Wireless. Single product provisioning platform.

Abstract

Glue Reply was engaged by Cable & Wireless (C&W), one of the world's leading international communications companies, to support the architecture and design of a single provisioning IT platform, a platform flexible enough to support complex business processes. C&W provides enterprise and carrier solutions to the largest users of telecoms services across the UK, US, continental Europe and Asia, and wholesale broadband services in the UK.

Background

Glue Reply was originally engaged on the architecture and design of part of the provisioning platform for the C&W wholesale access IT platform. This platform manages complex business processes, with high volumes of messages per day and long-lived orders (orders 'active' for weeks) and is architected on webMethods 6.5 platform using standard protocols (JMS, JDBC, SOAP). The solution delivered was as follows:

- Applied Glue Reply methodologies to develop a business and service architecture framework based on core business capabilities
- Designed and built webMethods models to support complex business scenarios including the handling of amendments, cancellations and rejections of in-flight orders.
- Built a customised business rules engine in webMethods to support traditional BPMS to handle complex business process scenarios
- Built re-usable service layers in webMethods to support existing and new interfaces for the provisioning solution

Externally facing B2B interfaces are in the process of being replaced with webMethods 7.1 solutions as part of the migration of the core platform to the new version.

Glue Reply provided architectural, design, development and support resources to the wholesale access delivery project over a period of 3 years. During this time C&W introduced a further product to its portfolio and Glue Reply was engaged in the first phase of design and delivery of this product's IT platform.

Platform for re-use and agility

Glue Reply took advantage of having designed the architecture for the wholesales access platform to reduce the timeframe for the delivery of the second product platform, by analyzing the similarities between the two platforms and identifying re-use of common components. Having built the original platform on a Service Oriented Architecture (SOA) it provided a standards-based, reusable component repository that accelerated and simplified the solution design of the second platform. This

re-use was also supported by the availability of interfaces that had been built with re-usable service layers. The second platform was delivered as follows:

- Designed and built webMethods models to support business scenarios.
- Re-used and enhanced the webMethods customised business rules engine to support varying business process scenarios
- Built in webMethods a configurable order mapping interface to support multiple order types for future projects
- Order Management layer developed to support traffic routing and batching/ queuing of messages to mitigate against outages and exceptional message volumes

The second platform development approach ensured that two diverse provisioning solutions could sit on the same platform running within a generic, reusable BPMS and service framework. Glue Reply worked within C&W's development best practices enhanced with SOA principles. We created a repository for all components, and documented the design and implementation of each component to allow future development projects to benefit from their re-use.

Single platform architecture

In late 2008 C&W recognised that their product roadmap may be better serviced on a single provisioning platform and invited Glue Reply to create the conceptual, logical and physical architecture for this platform. We worked with the product managers to understand the future product roadmap in order to establish the future platform requirements. We also took the opportunity to review the two existing provisioning platforms to identify areas of enhancement (e.g. performance, re-use, single product catalogue) that could be implemented once the two platforms were merged. The analysis highlighted where duplicate systems could be removed - e.g. order management systems, and where legacy systems such as billing could have improved integration.

The aim of the new platform was to bring together the current solutions onto a single platform, and provide the capability to rapidly deploy additional products and services onto the platform in a consistent and cost-effective manner, through the exploitation a services-oriented business and IT-architecture.

The new platform was envisioned to be a true multi-product solution providing a highly integrated, highly automated platform architecture incorporating CRM (inc. product configuration/catalogue), Order Management, Monitoring and Jeopardy Management, Inventory Allocation, Service Activation, CPE Procurement, Billing and Trouble-Ticketing capability.

The platform needed to provide resilience and high availability supporting business-to-business interaction via web services, for last-mile access products such as LLU, WLR, next-generation broadband services such as WBC/WBCC and Fixed/ Mobile Convergence (at subscription level). The functional model (and all reference models) was eTOM aligned for standardisation. We also produced an enterprise level eTOM process architecture model.

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DELIVERABLES. The engagement produced a number of deliverables to support the concept of the single platform architecture, including the following:

- Conceptual Architecture for the Platform: SOA and integration best practice principles for guidance when designing the logical and physical architecture
- Platform Conceptual Architecture Tips & Guidelines: analysis principles and options for development of CRM functionality for the Platform
- Glue Reply Platform Logical Design Patterns: E2E unit of work model and UoW patterns, with example Service Architecture patterns. Included as reference material for subsequent logical modelling
- Platform Fundamental Business Architecture Patterns: a set of UoW patterns describing the main processes for service, site and subscription
- Platform Functional Reference Model: SOA-based reference model prepared for Platform (built on standard SOA/Integration models from the Conceptual Architecture) provides a basis for integration and logical/functional modelling
- Platform/C&W Access operating Model: Describes the To-Be operating model for C&W Access in terms of value proposition, drivers, principles, governance, IT architecture, business architecture

The full end-state logical/functional/phsyical architecture was outlined as part of the operations model deliverable (extrapolated from C&W's IT roadmap)

To support the concepts of reuse and service-orientation which underpin the design of the single provisioning platform, a number of business architecture and service architecture design patterns were included as deliverables. These patterns describe a standardised approach to modelling business capabilities, processes and IT services in a complementary manner, to enable reuse of process and IT solutions across all products supported by the new platform.

"Cable&Wireless Worldwide engaged Glue Reply to support the design and development of webMethods components of our Wholesale Access Delivery platform. The Glue Reply consultants showed a good understanding of our business and developed solutions to meet our business requirements both today, and in the future.

Glue Reply managed the deployment of the solutions and, in doing so, ensured the design and architecture, based on SOA, is retained and re-used. This has provided us with a technology platform that allows the introduction of new products in a timely and cost-efficient way.

We have an open, honest and collaborative relationship with our Glue Reply consultants and were impressed with their continued focus on us, the customer".

Debbie Best, Director Access Platform

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This extensive engagement was delivered on a fixed price basis over a period of three months with a team of two senior solution architects, supported by senior technologists. It required a high level of input from the business and IT and produced deliverables that underpin the main IT product platform architecture currently in use and are held as part of the future IT architectural requirements for C&W. Glue Reply accelerated the deliverables using existing IP in Telco reference architecture, business patterns and enterprise architecture.

Glue Reply is UK's leading consulting services organisation focused exclusively on optimising IT/Business alignment and minimising the cost of business and IT technology change. Our core proposition is to help organisations maximise the value from their change and technology investments by helping them define, design, implement and resource best practice:

- Enterprise architecture and business/technology change management processes, roadmaps and competencies;
- Business design and process management initiatives;
- SOA, integration and data management platforms.

For further information: www.gluereply.eu

Reply [REY IM] is a leading Consulting, Systems Integration, Application Management and Business Process Outsourcing company, specialising in the creation and implementation of solutions based on new communication networks and digital media. Reply's offer is aimed at fostering the success of its customers through the introduction of innovation along the whole economic digital chain. Given its knowledge of specific solutions and due to consolidated experience, Reply addresses the main core issues of the various industrial sectors. Reply specialises in creating effective business solutions based on innovative technologies enabling communication between clients, partners suppliers and collaborators.

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