

Crestel Digital Billing & Revenue Management

As digital transformation sweeps the world of telecommunications, with customers communicating increasingly over various IP Address-based media, for many CSPs, legacy billing systems are starting to become irrelevant. A major reason for this is that these systems do not provide the capabilities required by today's IP Address based real-time micro-services platforms.

More realistically, it is the cost of maintaining these legacy networks that hurts them the most, at a time when most telecom players are vying to improve revenue margins and remain economically viable by optimizing their operating outflow.

The CSPs are facing a multitude of challenges from services, network, value chain and new business models. They need a better approach towards targeted revenue opportunities, whereby they can create more value with partnership offerings and can monetize the same using smart charging, Policy and Charging Rules Function (PCRF) and subscriber management solutions.

This will become possible by deploying Next Generation Digital Billing and Revenue Management (DBRM) system capable to enable competitive customer management, interlinked charging and policy management, network offloading and smart convergent billing for all services.

The CSPs need a technology partner, to join them in their Digital Transformation journey to transform and strengthen their networks to foster business agility and the spirit of innovation.

Tap into new revenue growth opportunities through next-generation offerings in multiservice & multi-technology environment

	Legacy BSS/OSS Systems	Crestel DBRM
System Architecture	Monolithic	Componetized Websacle-enabled
Business Model	Individualistic	Partner and Customer-centric
Standards used	Proprietary	Open
Transaction Management	Batch-based	Real-time
Analytics	Offline, reporting	Real-time customer insight, Pre-emptive
Business processes	Ad-hoc/limited	Best practices/Event-driven
View of subscriber & services	Scattered and incomplete	Holistic end-to-end view
Policy Awareness	Policy unaware	Policy aware
Service Delivery	Mass market	Personalized
Time to Market	Months/Years	Days

Crestel Digital Billing & Revenue Management: An Overview

Crestel DBRM is a carrier-grade, convergent BRM system that enables next generation data, voice and video services over wireline and wireless networks. It delivers an end-to-end billing solution that acts as a competitive business driver while preventing revenue leakage, two critical factors in a multi-technology, multiservice world.

Crestel DBRM offers end-to-end ecosystem, from mediation and provisioning, to real-time rating, convergent billing, invoicing, partner management and customer care to operators in today's high growth markets. Web-scale driven DBRM delivers high performance and scalability compared to the industry standards. It is compliant with TM Forum's Business Process Framework – eTOM processes.

Via its standard-based API, it can interoperate with any third party system easily, dissolving independent of technology barriers. The new platform supports open standards and innovative technologies for billing and rating of a rich basket of services like Mobile, Broadband VoIP, Wi-Fi, cable, wireless/wireline, LTE and more.

Key Value Proposition

Sterlite Tech's Crestel DBRM offers a single convergent platform that can be easily extended to offer multiple voice, video & data service on the same platform and operator does not have to incur additional cost to roll out new services.

This platform delivers scale & stability (99.999% uptime) to:

- › Manage complex and modular SLAs for multiple variants of multiple services
- › Handle existing complex systems with ease via open integration support

Flexible, robust and scalable in approach to model client-specific requirements in less time and cost

- Solid track record of over 15 years in offering high quality, cost effective, flexible and future ready solutions.
- Modular as well as pre-integrated cloud platform
- Configuration based platform – quick roll out of new services & promotions
- Delivers large-scale Digital Transformation projects, Change Management & Phased Migration approach with Parallel Run Strategy enabling operator to roll out converged services before complete migration is done
- Open architecture ensures extremely short and cost-effective deployments while retaining flexibility to accommodate next generation services easily.

Low TCO and OPEX

- Single vendor for multiple applications
- Single AMC
- Single team for consulting & implementation
- Multi-vendor interoperability and access agnostic platform
- Multi-tier architecture enables easy integration with leading equipment vendor solutions and standards-based interfaces
- Proven successful IOT with most of leading providers

Standard compliance

- Latest 3GPP Release (Sy, Gy, Gx, Rx, Ro, Rf, S6a, S9, RFC 3588, etc.)
- TM Forum Standard based offerings (eTOM, TAM, SID)
- Ipv6 support
- 5G, SDN/NFV WiMAX PCC and ETSI TISPAN standards

In depth understanding and proven experience across network and IT nodes & processes

- Experience working with 70+ operators
- 40+ BSS/BRM implementations
- Multiple Broadband solution deployments in production
- Multiple successful LTE implementations
- 25+ successful OCS implementations across LTE, 2G/3G, IMS, Wireline/ ADSL, IPTV, Wi-Fi, WiMAX, CDMA, PSTN
- Transformation experience in data migration from legacy systems for Tier-1 providers
- Proven repetitive business with Tier-1 customers across
- SAARC, EMEA & SEA regions
- Impeccable delivery track record with operators globally

Enhanced subscriber experience

- 360-degree view of subscriber with a single centralized data model for all the key data entities such as customer, account, services, product etc.
- Subscriber self-monitoring and activation of services
- Dialogue-based order store, Reduced Cycle Time, Right first time & personalised customer experience

End-to-end support from a single team for entire project lifecycle and support

- Ready LAB Setup for Customer Project Simulation, New Technology Testing, Partner IOT & Joint Solution Set up, New Hardware Platform & Application Environment Testing.
- 350+ Experienced Telecom Professionals driving the roadmap and support of Sterlite Tech products with 100+ SMEs dedicated to ongoing research and development efforts.
- Flexibility and commitment to plan the solution roadmap through a collaborative dialog with clients and partners like NEPs/SIS.
- Capability to respond and adapt to new and unique project requirements

Product Lifecycle Management

- Robust product catalogue management
- Enables providers of rapid deployment of variety of plans, bundling enterprise tariffs and defining and managing of service level agreements on variety of parameters thus reducing time to market
- Diameter, HTTP, SOAP etc. for easy integration with other systems such as Order Management Systems, Provisioning Systems, and SLA Monitoring Systems.
- Modular Platform supports multiple types of deployment architectures such as DR, Geo Redundant, 'Active-Active' & 'Active-Passive'

Mediation

- Enhanced to behave as CGF (Charging Gateway Function)
- Scalable Mediation system with Mediation Services:
 - Can run as multiple instances on single server or across multiple servers
 - Supports Collection from multiple devices
 - Capture SLA / Performance / Utilization records from NMS / EMS systems
 - Supports Multiple Protocols viz. FTP, FTAM, X.25, HTTP/XML
 - Pluggable & Modular System with:
 - o Easy 3rd Party Integration to have unified CDR
 - o Mapping via GUI
 - Dynamic Mediation rules for filtering and enrichment
 - Builds Business Intelligence and prevent revenue leakage
 - Failed Call Summary Report, Mediation CDR file Statistics, Date-wise CDR Summary, Auto-Repaired CDR Detail Report, Error CDR Summary Report

Real-time Rating & Charging

- Prepaid-Post-paid convergence
- Differential rating to provide different rates on different time/ days- Peak/Off-peak, holiday list with support for special discounts
- Flat/ tiered, rule-based, slab-wise rating
- Policy-based rating (based on combination of various attributes in CDRs)

SLA & Contract Management

- Threshold Violation Discount Configuration - The discount allowed for % downtime
- Maintenance Period Configuration- Uploading maintenance time details
- Service Level Agreement Configuration
 - › Uptime
 - › Minimum Downtime
 - › Deduction Downtime
 - › Cap Discount
 - › Discount Configuration Cycle
 - › Threshold Violation Discount
 - › Maintenance Period
- Contract Management- Search, View, Edit, Delete, Update
- Contract Parameter and Template Configuration
- Contract Association with Customer Account

Payment & Collection

- Single payment against multiple invoices
- Multiple modes of payment collection like cash, cheque, coupon, credit/debit card, direct debit, demand draft etc
- Supports generation of credit & debit notes
- Online payment integration
- Supports partial & advance payment, payment reversal, Refund and Transfer Deposits
- Bulk payment upload

Work Order Management System

- Integrated Order Entry process for various aspects of products, services geographic locations & clients
- Supports for Order Capture & Validation, Order Orchestration, Order Tracking, Order Closure & Intimation to stakeholders and Billing Initiation
- Work-Flow-Driven: Maps entire process in work-flow
- Enhanced business agility with robust and centralized framework for creating, coordinating & monitoring business processes
- Scalable architecture enables interoperable applications to be implemented and deployed quickly & easily
- Work-flow and application tracking reports

Inventory Management

- Create and manage logical inventory of all types of hardware such as SIM cards, CPEs like handsets, modems, prepaid cards and recharge cards (vouchers), etc
- Inventory Lifecycle Management- Tracking & Blacklisting of inventory/numbers, Status change
- Inventory Order & Warehouse Management
- Dynamic pairing & un-pairing support

Ticketing & Alerts

- User-friendly interface for ticket logging
- Multiple problem category definition and ticket logging
- Ticket escalation matrix is available in auto as well as manual modes
- Reporting & notification of events to users as well as customers
- Alerts on threshold limits raised

Web Self Care

Provides a user-friendly interface for customers. Acts as an interface to provide exhaustive customer information such as:

- Account Status
- Billing & Payment details
- Pending dues
- Bill Plans
- Log suggestions/feedback/complaints

There are also opportunities for service providers for promotions, new plans, messages, etc. Web self-care can be used for single as well as group accounts.

Channel Partner Management

- Billing, Reconciliation and Settlement of all the entities
- Enforce risk sharing policies, adherence to SLAs, related discounts and rebates
- Multi-party billing and conditional settlement
- Portals for channel partners to purchase, view the order/package information and track account information
- Revenue & commission management

Reports

- A number of reports can be generated based on business requirements:
- Reports for senior management
- Service plan-wise performance reports for marketing team
- Customer complaint reports for network and customer care team
- Support for filtering information in the reports

Services & Billing System Mapping

Services / Production Catalogue	Charge Items	Billing Type & Charge Patterns
<ul style="list-style-type: none"> • Internet Leasedline • MPLS • Ethernet • IPLC / NPLC • Content Delivery • Network 	<ul style="list-style-type: none"> • Charge Types: <ul style="list-style-type: none"> >Fixed & Usage - Fixed: Based on Bandwidth -Usage: Volume & Time. 	<ul style="list-style-type: none"> • Prepaid Billing (Advance Billing – Monthly, Bimonthly, Half Yearly, Annual) • Percentile Based Billing, Average Billing (Real time Billing Based on CDRs) Postpaid Billing. (Monthly, Bimonthly, Bill Arrears)
<ul style="list-style-type: none"> • Cloud Based DDos • Unified Threat • Management devices • Intrusion Detection & Prevention System • Managed Hosting 	<ul style="list-style-type: none"> • Charge Types: <ul style="list-style-type: none"> >Fixed & Usage - Fixed: Based on Bandwidth, boxes or Units -Usage: Based on Volume, Routes, Application usage 	<ul style="list-style-type: none"> • Prepaid Billing (Advance Billing – Monthly, Bimonthly, Half Yearly, Annual) • Postpaid Billing. (Monthly, Bimonthly, Half Yearly in Arrears)
<ul style="list-style-type: none"> • Co-location • Managed Hosting 	<ul style="list-style-type: none"> • Charge Types: <ul style="list-style-type: none"> >Fixed - Fixed: Based on Bandwidth, rack space, size, volume of traffic etc. 	<ul style="list-style-type: none"> • Prepaid Billing (Advance Billing – Monthly, Bimonthly, Half Yearly, Annual) • Postpaid Billing. (Monthly, Bimonthly, Half Yearly in Arrears)

Key Benefits

Crestel DBRM is a complete convergent solution with a unified view for prepaid-post-paid and single bill to customers for multiple services for a next generation platform.

Single subscriber view

Enables operators to manage the entire subscriber relationship management through a single solution integrating customer care and Billing. It is a unified platform that offers a single bill to customers for multiple services over multiple networks. This leads to more informed business decisions by faster, accurate and accessible view of business metrics.

High revenue, high margins

Brings service providers the ability to launch novel revenue generating packages quickly. The platform enables operators to create complex bundled plans to create fine market segmentation, attracting and retaining high value customers. It enables cross-selling and up-selling of services, cross-discounts and promotions, generating greater usage and raising Average Revenue per User (ARPU).

Low cost of integration and operation- Lower TCO

The billing system delivers compelling cost of ownership, cost efficient scalability and enhanced system availability. It also reduces operating expenses by automating system supervision and management through revenue management, partner management, web-based customer care, real-time revenue assurance and transaction management.

Future-proof solution

Functioning on a J2EE-based, fully customizable, modular architecture, the platform offers high scalability and flexibility with full systemic revamps as well as modular replacements. Open APIs ensure extremely short and cost-effective deployments while retaining flexibility to accommodate future next generation services easily.

Prevents revenue leakage

The platform offers complete control over billing and customer care with a central repository of customer and service level data that can be plugged into other modules, easy interface with network elements, efficient content and channel partner management, preventing billing errors and revenue leakage.