Prodapt powering global telecom

Charge your customers in real-time using Online Charging Systems

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Growing demand of data, OTT and adjacent market digital services – Biggest drivers for OCS

Gartner®

Contributions of adjacent market digital services like Pay TV, VOD, M2M communications and data-only connections towards a CSP's revenue is all set to grow in the next year. It is therefore important for them to launch these services immediately and cost-efficiently.

Online Charging System (OCS) enables CSPs to implement a real time, convergent, and flexible charging for digital services thus streamlining a regular cash-flow to pursue additional growth opportunities.

Following are the benefits of OCS:

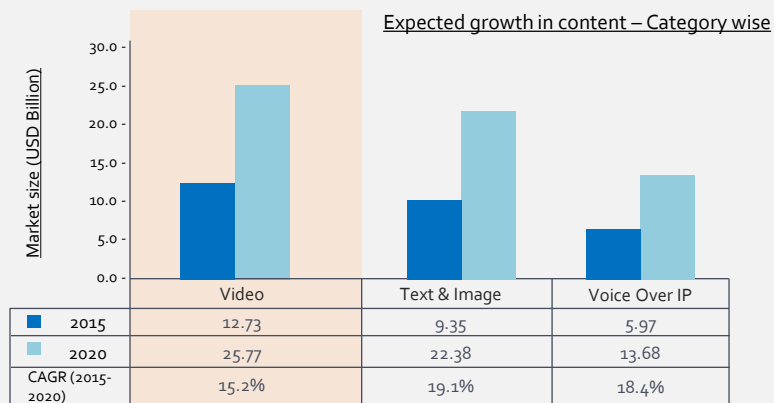| **Various Charging Methods**	**Service Type**
Content-based, Volume- & Time-based, Real-time service control	Voice, Data, Messaging, Video, Content etc.
Network Technologies	**Payment Methods**
Fixed, Wireless, Broadband etc.	Prepaid, Post-paid and Hybrid

Though there is an increased demand for OCS, CSPs are still finding it difficult to operate it efficiently and leverage its full potential. This paper focusses on providing insightful solutions to typical operational challenges posed by OCS.

Expected growth in content – Region wise

Market size (USD Billion)

	North America	Europe	APAC	Latin America	MEA
2015	12.13	8.33	4.33	1.87	1.38
2020	23.42	16.26	14.34	4.53	3.48
CAGR (2015-2020)	14.1%	14.3%	27.1%	19.4%	20.3%

Source- MarketsandMarkets

Expected growth in content – Category wise

Market size (USD Billion)

	Video	Text & Image	Voice Over IP
2015	12.73	9.35	5.97
2020	25.77	22.38	13.68
CAGR (2015-2020)	15.2%	19.1%	18.4%

Source- MarketsandMarkets

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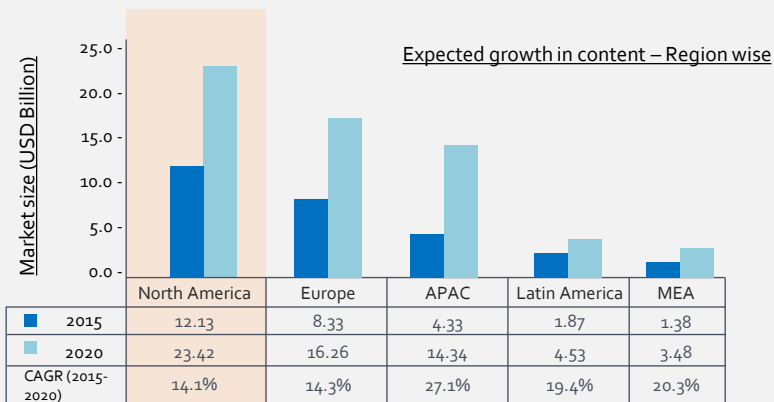
Challenges in operating OCS and their solutions

Challenges

Real-time operational challenges:

- OCS, being a critical/real-time function, requires proactive and immediate issue resolution. But lack of **real-time visibility** into OCS platform keeps it vulnerable and prone to SLA breaches
- Traditional trouble ticketing approach is not enough
- Traditional communication/alert mechanism is not enough

Solution

- Introduce **real-time operations dashboard** to monitor the OCS system health across different applications/ interfaces/nodes and automate the alerts.
- Built-in feature of **automated ticket creation** to notify the concerned teams at the earliest. This feature along with strong triaging tools help to execute RCA and isolate issues related to OCS and network.
- Use **collaborative tools** like WhatsApp and other messenger apps to keep real-time monitoring & communication.

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Challenges in operating OCS and their solutions

Challenges

High-cost incurred for support

Complete dependency on the product vendor for implementation, support & professional services becomes very expensive and time-consuming.

Revenue reporting inconsistencies across departments
Inconsistent revenue reports across departments (e.g. Finance and product management) lead to wrong evaluation of total revenue. To standardize it, reconciliation of CDRs is required which OCS' default configuration cannot provide.

Revenue from promotions unaccounted

Revenue collected from promotional offers by 3rd party vendors do not reflect in the reports generated by BI tools. This results in miscalculation of the financial health of the organization.

Solution

- L1/L2 support to be done by in-house operations team or external operations partner (with OCS expertise)
- Only L3 support to be availed from product vendor

Reconciliation tool
Automated scripts to analyze and process the utilization data on voice, SMS and data across subscriber accounts split into different buckets (e-wallets). The output provides a summarized view and 'distributed services by subscriber' view to zero in on the missing monetary value.

- Automated script that can perform a full account reconciliation by collecting revenue related data from main account and dedicated accounts (promotional offers)
- The script categorizes data under primary revenue and promotional revenue while reconciling across mediation & OCS and provide it to the BI tool at regular intervals

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Challenges in Operating OCS and their Solutions

Challenges

Passive subscriber MSISDNs not getting decommissioned

MSISDNs of passive subscribers remain in the dormant state for too long due to synchronization delays. This leads to old numbers not getting reprovisioned. E.g. After crossing the passive state, a MSISDN is released from OCS. But it doesn't get decommissioned from CRM and HLR, keeping it unavailable for reprovisioning.

Uneven load sharing

Uneven load sharing and traffic distribution across OCS servers due to lack of optimum utilization of resources. E.g. 90% of recharge requests hit one node while only 10% reaches another node.

Solution

Subscriber-state synch tool
synchronizes the passive subscriber MSISDNs across HLR, CRM and OCS. This way, the lifecycle state of every subscriber is intact across systems and MSISDNs of deactivated subscribers reaches the allotment pool faster.

Load monitoring tool
- Automated scripts to monitor load sharing across OCS nodes on an hourly basis
- Status reports to stakeholders/vendors to initiate corrective measures on reaching the maximum threshold
- Conducting performance review meetings at regular intervals covering key aspects like performance design, traffic engineering, latency and throughput optimization

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Key Takeaways

By bringing the L1/L2 support of OCS to in-house team or outsourcing to operations partner, OPEX can be brought down by **60%**.

OCS operations need to be real time. Implementing an operations dashboard with a real-time data feed from OCS improves the visibility into OCS' operational performance. It also reduces the number of revenue-loss causing incidents by **80%**.

Implementing automated ticket creation, collaboration and triaging tools can help to isolate issues between OCS and network **95%** of the times.

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