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Next Generation MPS Platforms

A Necessity for Print Transformation

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A Necessity for Print Transformation

The advent of mobility, cloud computing, business analytics and social business[1] has led to the dawn of enterprise wanting flexibility and scalability, greater efficiency, reduced operating expenses[2] and capital costs. Managed print services (MPS) show a ray of hope for printer OEMs. It holds the potential to take printers beyond their traditional role of managing print to integrating workflows with IT infrastructure allowing management of digitized information and business processes. However, this potential can be tapped only if MPS can adapt to next generation trends like Bring Your Own Device (BYOD) and on demand solutions, create meaningful dialogue between a heterogeneous printer fleet and off-premise/hosted software, and integrate multiple vertical solutions and workflows. Next Generation Open Multi-vendor MPS Solutions Platforms can make this magic happen.

Based on open-layered, modular and SKU-based architecture, the Next Generation MPS Platforms can enable mobile printing ecosystems, interface with competitive MFPs, run vertical workflow solutions on any MFP device using web services and address emerging technology needs like cloud enablement.

Footnotes:

1) According to the "Tech Trends 2012: Elevate IT for digital business" Report by Deloitte, this year's trends are manifestations and applications of digital forces – analytics, mobility, social business, cloud and cyber security – already in play.

http://www.deloitte.com/assets/Dcom-India/Local%20Assets/Documents/Thoughtware/TechTrends2012.pdf

2) What was once a peripheral device in the corner of every floor of an insurance company or a bank branch is now come into the limelight as a cost guzzler resulting in almost 10% of IT/facilities budgeting. Until 2 years ago, 90% of organizations did not know how many printers were in their fleet and what their document output costs were. And with this realization, the business of Managed Print Services was born and today, they want much more.

Open Multi-Vendor Solutions Platform: Need of the hour for print OEMs

Traditionally, most print OEMs, also offering MPS solutions, replaced existing fleet devices with their own devices to manage print. But, the dawn of the revitalized enterprise with the consumerization of IT, increasing prevalence of BYOD and virtualization of IT resources/assets has resulted in the enterprise demanding more for less (cost). The new age enterprise demands include enhanced document management, workflow, archiving, business process and control over unstructured and structured data entering the organization. How does an OEM satisfy these demands?

Let us understand this further through a use case. Jason, a sales manager in a MFP OEM, is expected to make applications work seamlessly in a mixed fleet and connect to the existing IT infrastructure. The traditional pressures of quick solution implementation and customization across verticals remain. Achieving such a seamless, plug and play MPS experience would need the solution to integrate with multiple MFP brands without dependencies on vendor specific extensibility platform, quick customization of applications and cloud/mobile enablement. An Open Multi-Vendor MPS Platform can achieve the same. The solution would include a vendor specific UI and database mapping, separate business logic in applications, pre-built vendor specific extensibility adapters, pre-built common functionalities, and browser based UI.

Open Multi-Vendor MPS Platform

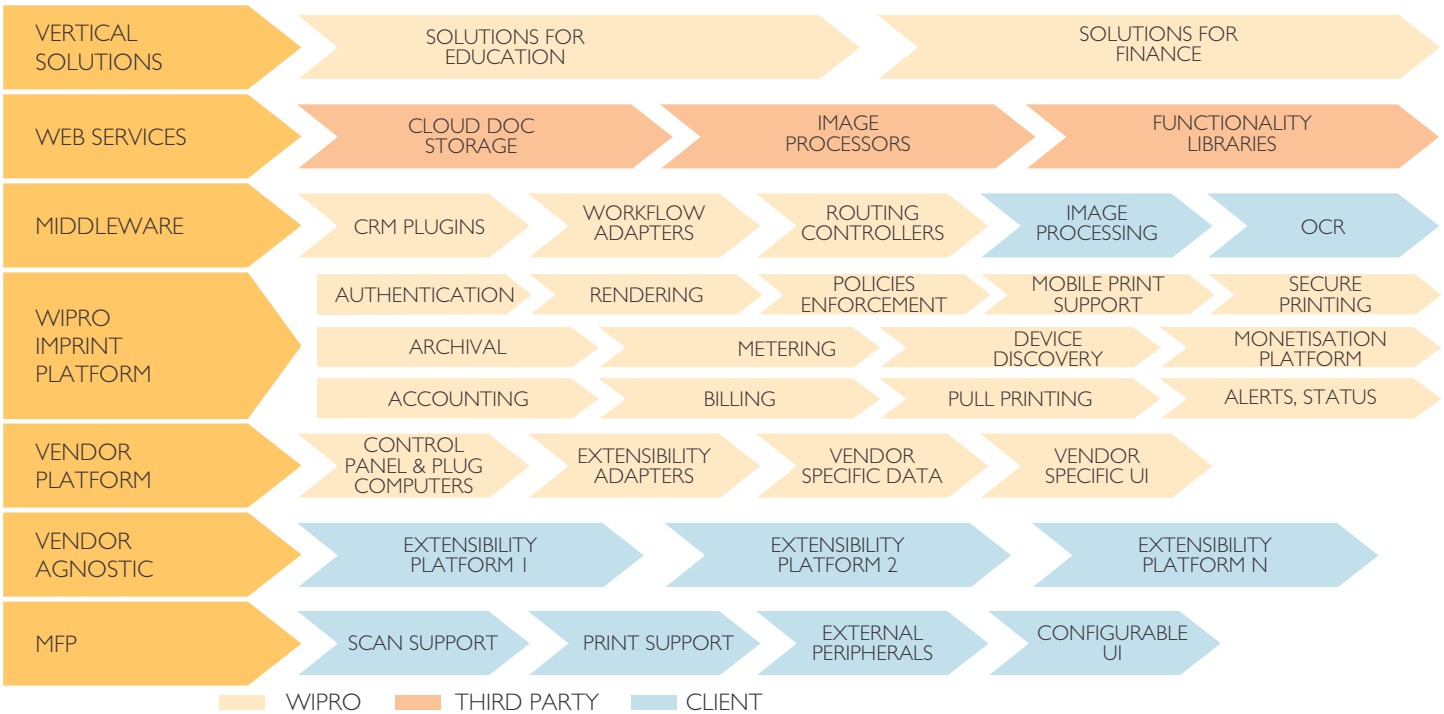
An open multi-vendor solution platform must be designed using a layered architecture approach. The approach will decouple each aspect of the platform for easy extensibility and allow integration of newer OEMs and devices onto the platform. A streamlined communication process between the layers using clearly defined interfaces and the modules using exposed web services, helps build a seamless, plug and play MPS experience.

Plug-based adapters allow the extensibility of the platform while retaining existing devices in the fleet. This can impact customer bottom-line positively. For instance, for a leading OEM, such a platform could result in a saving of USD 10-15 million annually. Features like secure printing, duplex enforcement and print polices alone can bring down OPEX by 20-30%.

Further, an open and multi-vendor MPS platform must be able to scale easily and go beyond the traditional usage of printing. For instance, it should allow inclusion of horizontal functionalities like metering, monetization, policies, and archival. This would help a retail client create a robust customer ID, presence and loyalty solution from the platform or allow a publishing client build a seamless content processing, distribution and communication hub.

However, defining such a layered open multivendor MPS architecture and stitching together the layers/components to form a scalable and holistic solution is no easy task. A Multi-Vendor solution (figure 1.0) can be one approach to create these next generation MPS platforms.

FIGURE 1: Multi-Vendor solution



Differentiating components of this solution would include the Core Services Platform, Vendor Agnostic Layer and vertical applications. The core services platform must have core modules capable of providing multi-vendor flexibility. Each module should implement a set of horizontal functionalities like authentication and authorization, metering and billing infrastructure, device discovery, common print usage scenarios (PC printing, secure printing, mobile printing), rendering and document conversion, required by the other layers.

The vendor agnostic layer, comprising of Control Panel & Plug Systems, Extensibility Adaptors, Vendor Specific UI module and Vendor Specific Data Module, would help one provide a common interface, allowing connectivity and integration among multiple devices in the existing fleet/new fleet. The vendor specific UI module, for instance, would allow seamless interface with the OEM specific UI built under a specific technology landscape like Browser-based UI or Core Java applets or Qt Widgets. Similarly, the Vendor Specific Data Module would store OEM specific data structures needed for interaction and seamless integration.

Lastly, customizable Vertical Apps would be crucial for end-use case realizations and integration of multiple vertical solutions/workflows. For instance, the vertical app targeting an educational institution must integrate automatic grading systems, admission process and Quota-based Print Management. Similarly, a BFSI vertical app must integrate Claims Processing solution, Forms Automation solution, variable data and content aggregation solution and Secure Pull Printing modules.

Challenges Enroute

Arriving at this next generation MPS platform isn't hassle free. One of the key challenges faced involves creation of a common reference implementation capable of addressing the disparities of different OEM devices (like data collection using Simple Network Management Protocol (SNMP) Object ID (OIDs). Implementation of features at stages guaranteed by a layered and filtered architecture can be one solution. For instance, for SNMP data collection, a base access layer will implement data collection from standard Management Information Base (MIBs) repositories including host resources MIB while subsequent layers would implement data collection from printer platform specific MIBs.

Road Ahead

Looking ahead, products and services will continue to get smart and connected. This would result in the value axis of computing shifting from software to ecosystems. A look around shows the trend has begun. OEMs are moving from selling point devices to holistic solutions. Interoperability between multiple systems to drive such smart devices/solutions is soon becoming the demand voiced by OEMs. However, the current middleware, applications, data models and security will fall short to support such ecosystem level of engagement. In such a scenario, heterogeneous systems support, multi-vendor capabilities, Machine-to-machine communication and web services will become necessities ahead to build the inevitable future of 'Connected Content'!

About the Author

Raghavendra K.M. heads Wipro's Product Engineering led Peripherals and Storage business across the globe. He has been instrumental in building and nurturing large accounts in the area of Peripherals, Retail and Banking related devices. Raghavendra is also known for nurturing new client relationships and taking them into higher levels of engagement.

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About Product Engineering Solutions

Wipro's product engineering business delivers engineering solutions that impact consumers and businesses in the connected and mobile world. Market proven engineering building blocks enable customers make the right choices to deliver innovative products and solutions. Wipro has over 15 years of experience in the peripherals industry, providing solutions to a large customer base including printer/MFP manufacturers, industrial printer manufactures, label printer manufacturers, ATM manufacturers and other point of service manufacturers. Wipro's expertise has helped OEMs ideate and conceptualize new products, manage the entire product life cycle and integrate devices in a cloud and mobile environment. Zinnov Management Consulting ranked Wipro as the No 1 Global R&D service provider in computer peripherals and storage domain for two consecutive years

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