

Printer Asset Management – Managing Printers & Their Vendors

By Robert Russell

Are printers part of your estate or IT portfolio?

If you answered “yes” to the above question, then the next logical series of questions are “How do you manage them?” and “Are these assets managed according to your IT Asset Management standards and objectives?”.

Many organizations are looking to streamline support of printers through helpdesk integration (i.e. Remedy, ServiceNow, etc.) and better integration/configuration management. These same organizations look to extract cost from printers and output devices through governance and better management of vendors. One example is a simple verification of vendor invoices using device utilization reporting, a core ITAM practice. Other organizations are extracting cost by improving end-user habits through the development and use of a Print Policy, coupled with the standardization of hardware and print drivers.

While some organizations choose to insource a management program for printers or multifunction devices, others choose to outsource to a printer manufacturer, dealer or supplies vendor. No matter what your preference is, the following are vital areas to consider:

- Data Security
- Governance & Vendor Management
- Central Asset Repository
- Asset Tracking, Alerting & Reporting

In this document, we will discuss both the challenges and best practices in these four important areas.

Data Security

The use of SNMP-based data collection tools has become fairly standard today for monitoring printers. This technology has enabled asset discovery, data collection, incident management, reporting and other valuable services. However, there are two specific challenges associated with these tools. First, many of these tools are developed by printer manufacturers and are thus not truly manufacturer agnostic. They can be somewhat effective if your printer inventory is homogeneous, however, reality has it that most printer or multifunction device fleets are composed of several different brands. Thus, simply put, an effective tool needs to work with all brands of printers.

The second and even greater challenge has to do with security. There are a few data collection tools available that are indeed manufacturer agnostic, however, they are typically deployed as part of a hosted architecture. The challenge that comes in to play is who has access to the data? These tools are used by printer manufacturers, dealers or supply vendors. In this model, the tool is offered at no-charge to an organization and the data is readily accessible to the vendor. This brings about concerns of data security, in addition to negotiation leverage as the vendor has access to vital data points that can impact end pricing provided to the organization. These include page volumes, coverage levels, key departmental workflows and print asset data.

A recommended alternative would be an on-premise deployment, whereby all data is contained within the organization and behind the firewall. This ensures data security, allowing organizations to share with vendors only what data they choose to share (ex. provide meter data and break/fix or supply notifications to vendors without disclosing sensitive asset identification data, such as IP address). An on-premise deployment model can also provide the key, necessary data to help an organization develop a RFP or bid solicitation. Other security considerations include protocols such as SNMPv3, TLS 1.2 and discovery by IP or DNS. The below diagram illustrates the on-premise architecture. Note the inclusion of locally connected printers in addition to scanners and large format devices utilizing SNMP and Windows Management Instrumentation.

Governance & Vendor Management

The discussion on data security naturally leads us to the topic of governance. The maturity and permanency of any organization’s IT Asset Management program is highly dependent upon how well it is governed and managed. Naturally, governance is of critical importance when it comes to managing printer costs. Costs are essentially driven from two main sources: Vendors and End-users.

Vendors

An effective governance and vendor management program should allow you to answer this question: Do our printer or supply vendors provide us with exactly what they invoice for?

As a means of evaluation, here are a sub-set of questions to drill down further on this topic:

- Does my current governance model provide the data points to easily validate vendor invoices for accuracy? Ex. compare cost-per-page billing to actual color & monochrome pages printed during a set time period
- Do we have a means to monitor and report on printer fleet health including contract SLAs or KPI targets? Ex. Service Level Management: Report on uptime, service response time, or consumable supply delivery. Generate a notification if devices falls below uptime target.
- Are we able to validate or substantiate vendor recommendations for new devices? Am I able to easily perform device utilization analysis or capacity planning by location, building, department or floor?

Reporting on specific printer problems including alerts and notifications is an important aspect of printer asset management

End-Users & Group Printer Policy

An effective governance program usually includes the development and adherence to a Group Printer Policy. A Group Printer Policy can bring full alignment with IT security, policies and infrastructure. However, a good Printer Policy is only effective if it is adhered to by end-users. Access to the key data points below are vital when it comes to managing Printer Policy adherence across the end-user population:

- Job Log Analysis: What type of documents are being printed? E-mail? Personal items or secure data?
- Asset Utilization: Validate new device requests by quickly analyzing historical usage by location, building, department, floor or user and compare with neighboring devices. Determine actual device type requirements including color vs. monochrome. Plan reutilization and redeployment of printer assets with visibility to device age and lifetime counters. Standardize printer fleets, minimizing the number of models, print drivers and supply items required
- Group Print Policy Targets: Access user and device data points such as duplex printing ratio, local/personal printer usage, volumes by user/department and color usage ratio vs. targets

Central Asset Repository

A secure, centralized asset repository is vital to the management of printer assets. As discussed earlier, it is advantageous if the repository is maintained securely behind the organization firewall.

A major challenge among organizations today is that they do not know what printer assets exist or where they reside. A baseline discovery or ‘self-assessment’ using an SNMP tool offering a comprehensive asset repository can address this challenge. This can also support printer lifecycle management and planning.

What to look for: Access to the following key functions and data points

- Organizational Hierarchy: List asset inventory by location, building, department or floor based on IP range (ex. if a new device is discovered, it automatically classifies itself in the correct location)
- Holistic Asset Inventory: Local/USB connected printers should be included using basic Microsoft Windows protocol and without the requirement to deploy a workstation agent
- Custom Data Views/Filtering: Easy filtering and analysis capability, including access to data that cannot be directly obtained from the printer itself (Ex. printer age, device type, low/high utilization)
- MACRR: Move-Add-Change-Redeploy-Retire Reporting: Reporting and notifications on department and IP address changes, location changes, newly discovered devices and redeployed or retired assets (devices automatically retired when no longer available, placed back into service when re-discovered)
- Custom Field Creation: Option to create custom fields to maintain items such as cost/TCO data including printer lease term, cost-per-page and other device attributes. Custom fields should be included in notifications and reporting menu options
- Integrated Printer Asset Mapping: To maintain a useful and accurate inventory, the ability to graphically map printer assets to floor plans is very useful. Visualizing printer asset data helps with analysis, including determining if a device is properly placed given its volume and utilization. Such mapping also helps with the development of and adherence to a Group Printer Policy.

Asset Tracking Alerting & Reporting

Identifying and tracking changes associated with printer assets is an important part of Printer Asset Management. In addition, an efficient reporting process is key to the success of any program.

Through the use of notifications, alerts and threshold settings, many routine device requirements can now be automated. These include such things as consumable supply fulfillment, break/fix service and device meter readings, just to name a few. Typically, a printer manufacturer, dealer or supply retailer will have the capability to intake and react to notifications based on supply threshold levels or service alert criteria.

By leveraging this technology, there are multiple wins for an organization. These include less printer related helpdesk tickets and less overall burden on an IT organization. It also removes the end-user from the process as they no longer need to order supply items or initiate service requests. All of this results in a more efficient and productive organization, thus driving down cost. Of course, there are also efficiency benefits to vendors providing the supplies and service.

What to look for: Access to the following key functions and data points

- Track lease or maintenance contract expiration, vendor contract renewal dates or other data points through the use of custom fields and a reporting or notifications menu
- Automation of Incident Management: Drive customized, pro-active notifications and alerts for break/fix service and other support requirements. Integration with existing helpdesk system (ex. Remedy) to automate the creation and routing of service tickets
- Configuration Management: Check print queues and printer drivers to ensure that they are set up correctly. Identify and remove old drivers, ensure firmware levels are consistent and updated
- Stale Device Reporting: Report on devices no longer available or communicating in a single report
- Supply Automation: Ability to set custom supply threshold levels instead of relying on printer display alerts set by manufacturer. Manufacturer sensors in toner cartridges are prone to display alerts sometimes with as much as 35 to 40% of toner cartridge capacity remaining. If the sensor does not detect toner in the optical window, it attempts to estimate toner level, often times leading to inaccurate and premature supply replacement
- Automatically route replacement notifications for JIT supply fulfillment. View estimated pages/days remaining in each printer asset. Forecast supply inventory requirements.

Conclusion

There is much that can be accomplished by implementing an effective Printer Asset Management program. In addition to alignment with IT security and asset management standards, objectives and policies, there is the added benefit of efficiency and user productivity through governance and better vendor management. Of course, efforts to optimize, standardize and better manage a printer fleet will certainly drive down cost. This benefit compounds when duplex printing is increased and color and total page volume is driven down over time. On the matter of infrastructure, there also a potential benefit by integration with Helpdesk systems, Enterprise Asset Management systems or ERP using e-mail, web services or API.

The reality is, even just implementing some of these suggestions can result in noteworthy cost reduction and efficiency gains.

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