

# Print Management Challenges in an Epic Environment

Jim VanderMey, Chief Technology Officer  
April 2, 2010



Epic makes integrated software for mid-size to large medical groups and integrated healthcare organizations. One database spans clinical, access and revenue functions and extends into the home. With the advent of Care Everywhere and support for a larger community of care, Epic is creating a connected community of patients, remote physicians and affiliates in a way that is unique in the healthcare IT industry.

Epic provides this industry-leading application through a variety of platforms, application hosts and databases. The applications are tightly coupled, but the IT infrastructure necessary to support this family of applications ironically does not include a single output management solution. There is a dependence on OS native spooling features on Windows and UNIX, local print drivers and document transformation services written by Epic in order to be platform independent. As a result, printing can be complicated and identifying problems in printing for a mobile, connected clinical community can be very difficult. The basic OS spoolers and management tools do not provide print confirmation, error handling, or high-availability queues can often require multiple domain experts to configure or troubleshoot.

There are a set of issues which Epic sites have in common:

- Dependence on the Universal Print Driver or Windows printer drivers can cause reliability or availability problems for output.
- Multiple print sources mask the originating system from the user so that problem descriptions can be difficult to communicate to the helpdesk.
- Output cannot be redirected to a failover device, regardless of manufacturer, resulting in inability to have device-independent high availability printing.
- Print queue failover and high availability is difficult due to dependence on host-based services.
- Managing print jobs from source to destination is difficult with no feedback on print jobs that have failed.
- The helpdesk is unable to reroute printing when a device has failed or a maintenance event has occurred.
- There are security and confidentiality issues. Misdirected output with PHI data may result in a HIPAA breach. The lack of an audit trail makes compliance reporting more difficult.
- Introducing a modern thin-client solution based upon VDI or Citrix can make output management even more difficult. Maintaining the driver stack or queues in a centralized desktop solution is a significant point of administrative complexity.

As Epic is introduced to a healthcare system, the complexity of point-to-point printer and queue administration coupled with legacy print requirements creates a setting in which printing problems can commonly be at the top of the list of helpdesk calls. Addressing these problems requires an enterprise-

wide output management solution. HP Output Server (HPOS) is an IT infrastructure solution brought to the market by Hewlett Packard, the world's largest IT company. HP has products from the datacenter to the desktop and the printer. Deployed in organizations with up to 50,000 printers, HPOS has the ability to scale from community hospitals to large regional networks. HPOS provides a unique set of features that address the complexity of Epic printing:

- The promise of driver-independent printing whereby drivers are no longer specific to operating system and printer models.
- A single point of administration for all queues regardless of source operating system or platform reducing the cost and complexity of system management.
- Integration with all major operating systems – HP-UX, Solaris, AIX, Windows, LINUX, Mainframe, etc. – enables customers to standardize printing as a service for the entire enterprise. This extends the best in class infrastructure of Epic into the rest of the hospital application spaces.
- Supports high-availability queues and failover print with retries to disparate devices for a significant improvement in availability and better recovery mechanisms.
- Print job retention and the use of hold queues for excellent queue failure recovery.
- Output security is enhanced through the capability for “follow-me” printing which does not release output until the user has entered a PIN code or authenticated with their badge at the printer.
- Support for a variety of output types – web delivery, email, fax, traditional print or file transfer – all through the same delivery mechanisms. Output can even failover across types through the use of a flexible rules engine. So if the primary printer at the affiliate is unavailable, the document can be sent to the recipient via secure fax if requested.
- Print jobs can be tracked from source to destination with visibility into errors or success at any given midpoint. A common set of tools provide the helpdesk staff with a view of the job at any stage of the process and the ability to redirect the output to an alternative device in the event of failure.
- Continues to work with Epic's Print Server (EPS) for document transformation.
- Integrates with the larger HP print partner ecosystem for excellent cost-reducing solutions for pharmacy label printing, scanning, web delivery, secure output management and ID/Wristband printing.
- Dramatically simplifies the printer setup and administration through common definition, common client and common drivers.

Implementation of HPOS is performed by HP's services organization and partners. A pilot project for an Epic client can be built in less than a week and implementations are typically performed in three to four weeks depending on the complexity of the print and output environment. Backed by HP in partnership with you and Epic, HPOS can deliver the intelligent link that gets critical documents to nearly any destination reliably, efficiently and cost effectively.

To learn more about how OST can help you address your Epic print management challenges, call Dave Spieker at 616.581.7694.