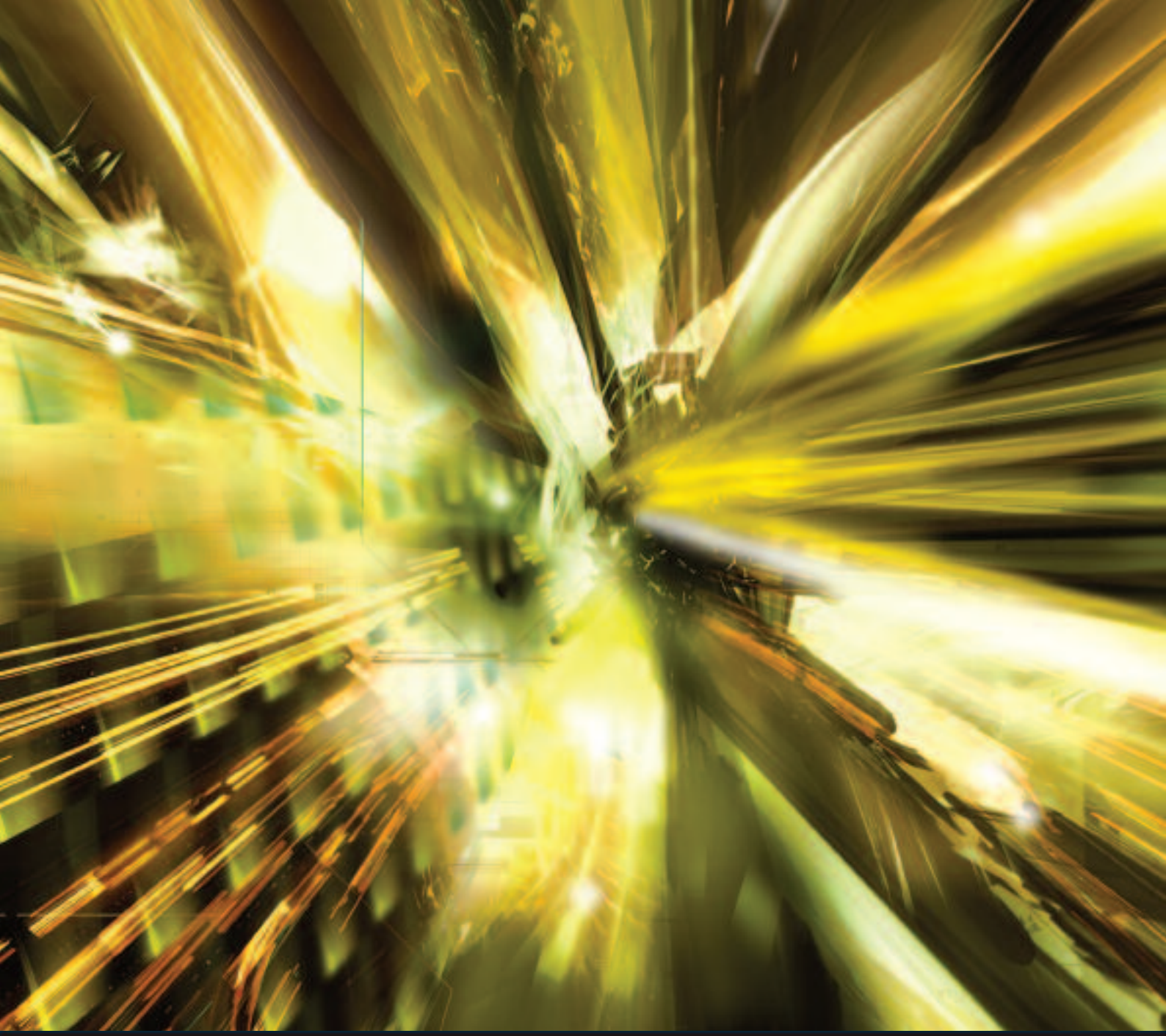


Output Management

VPS® Solutions for Document Delivery Throughout the Enterprise

Every day, companies route business-critical documents to a variety of network destinations, including printers, fax servers, email addresses, web browsers, and various platforms. Those documents are generated by applications on multiple operating systems, which make it difficult for the complex web of networks and communications protocols to connect each platform to the necessary destinations.

This struggle can ultimately lead to poor customer service, high operating costs, and difficulty in implementing change.

Business processes and IT infrastructure inevitably change, so an organization's document management strategy must be able to accommodate change without increasing costs or adding new problems. For more than 40 years, the world's leading businesses have relied on VPS® solutions from Levi, Ray & Shoup, Inc. (LRS) to help them adapt to change and efficiently manage the distribution of mainframe-generated documents throughout the enterprise. Since that time, LRS has developed a suite of products to form a complete Enterprise Output Server.

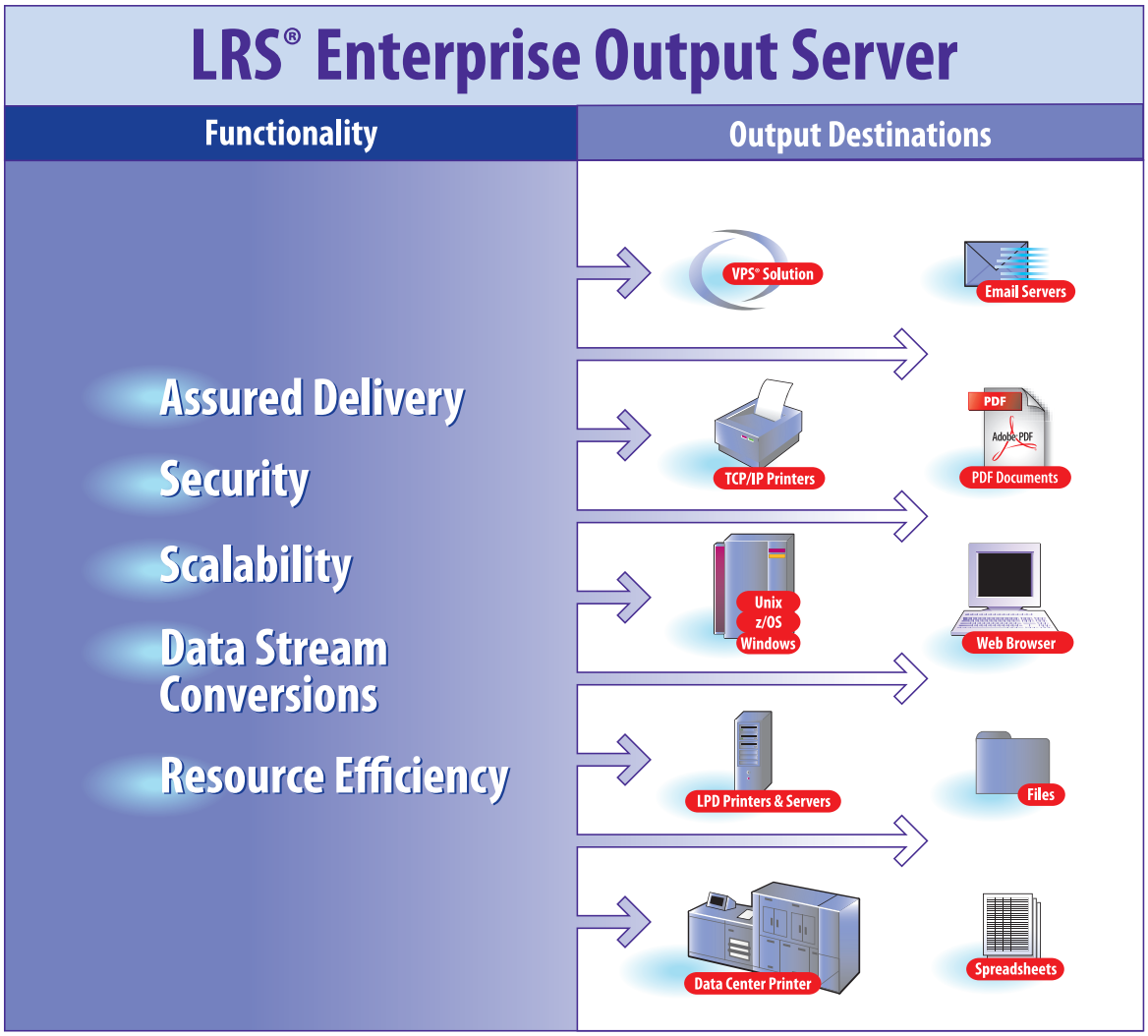
A worldwide shipping company found that the LRS solution enhanced end-user productivity by allowing users to direct their print jobs to the closest network printer. Before the company implemented the VPS/TCPIP solution, users could print their documents on just one printer per floor of the company's buildings.

VPS® Solutions

The VPS software suite manages, monitors, and delivers documents to network destinations throughout the organization. Since its introduction in 1981, VPS has evolved into a suite of software solutions that provides extensive facilities for managing the delivery of business documents to nearly any destination on the network.

Originally designed for VTAM-controlled SNA networks, LRS added TCP/IP functionality and pioneered the migration of enterprise printing to the popular, open TCP/IP network protocol. Thousands of organizations have implemented the VPS solution for TCP/IP printing to help them leverage their investment in network printing resources and lower their costs.

The VPS solution offers web browser-based monitoring and control capabilities enabling administrators, operators, and end users to control production printing.



Assured Delivery

When the printer jams, runs out of toner, or has some other error condition, all too often the document is lost and the print job has to be rerun. The LRS® Enterprise Output Server offers the capability to recover after an error is corrected and resumes printing automatically.

Because printer status information is available in VPS, end users can use the monitor and control facilities to track the progress of their reports through the computing environment. Users can determine whether their report is waiting in a print queue, printing, on hold because of an error condition, or printed.

Secured Transmission

To protect sensitive or confidential reports during transmission to a printer, the VPS® solution enables encryption of documents transmitted between the mainframe and TCP/IP-connected printers and servers. VPS software uses the Advanced Encryption Standard and supports the exchange of encrypted data between Windows, Unix, and z/OS mainframes.

Scalability

An Enterprise Output Server must be scalable to meet your ever-changing output requirements. Whether your print environment has one printer or thousands, and whether your applications are legacy or distributed, you need a solution that can scale as your needs grow. A scalable Enterprise Output Server allows companies to create a single point of control, and provides an architecture that enables the solution to grow with the organization. VPS® software makes it easy to expand functionality, add destinations and devices as you need them, now or in the future.

Data Stream Conversions

While some products specialize in converting print data streams, the LRS® Enterprise Output Server solves the end-to-end processes of printing and delivering the required data stream. Our solutions allow you to evolve beyond your applications' embedded data streams without adding more servers and conversion hardware. The VPS solution handles popular data streams such as PCL, PDF, IPDS, LCDS, or XES over any network.

Resource Efficiency

Our customers are concerned with the efficient use of CPU cycles, network bandwidth, and people. Implementing a solution that improves the efficiency of these resources simply improves a company's return on their investment in information systems. VPS customers save money and improve resource efficiency by eliminating manual delivery processes for printed output and by reducing and resolving printer-related errors. Further savings and efficiencies come when organizations route output to a common network printer, thereby eliminating proprietary printer hardware and redundant network infrastructure. VPS solutions allow you to consolidate all your output into a single Enterprise Output Server which reduces training and implementation costs.

Email Delivery

It is easy to deliver information and documents directly from your mainframe to users at workstations on your network. Delivering output to anyone outside of the network, including workers in remote offices and employees who travel constantly, is much more difficult. The VPS solution offers options for delivering mission-critical documents via email to users anywhere in the world.

Electronic Document Delivery

Many organizations use preprinted forms for invoices, purchase orders, and other business documents. These companies discover significant savings when they convert to electronic forms stored on the LRS Enterprise Output Server. Electronic forms merge with data to produce documents that can be printed on existing TCP/IP-connected devices throughout the enterprise instead of impact printers dedicated solely to forms printing. Organizations save the cost of buying and storing forms, as well as the time required to change form stock.

Organizations can achieve significant savings by using the VPS solution to deliver documents electronically as industry standard Portable Document Format (PDF) files.

Technical Notes

The VPS® solution for TCP/IP printing provides support for the following network devices and hosts. The capabilities of your existing hardware will determine which one is right for you.

Network-Attached Printers

Bi-Directional Internet Printing (BIP)

- VPS utilizes the Printer Job Language (PJL) support provided by most HP compatible printers to provide the highest level of control and recovery.
- Provides full-status feedback, guaranteed delivery to paper, and page-level recovery and restart
- Bi-directional communication enables direct feedback from the printer and enables users to cancel output directly from the printer control panel.

Direct Sockets connection

- Guarantees delivery to printer
- Suitable for devices that do not support the PJL command language
- Includes support for repositioning and restart checkpointing

Line Printer Requester/ Line Printer Daemon (LPR/LPD)

- Supported by most network devices
- Simple protocol for print delivery
- Limited restart capabilities and no repositioning support

UNIX and Windows Hosts

Line Printer Requester/ Line Printer Daemon (LPR/LPD)

- Utilizes native LPD support available on most hosts
- Provides delivery to remote print queue

AnyQueue® Output Server

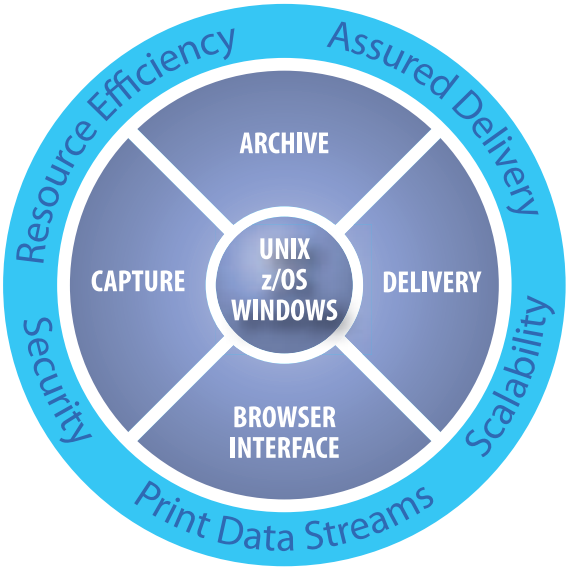
- Advanced communication includes support for compression and encryption of print data.
- Delivery to remote file, print queue, email recipient, or temporary archive for browser-based viewing
- Provides direct delivery to network printers
- Administered locally or remotely via web interface

z/OS host

DRS

- Provides direct output delivery to remote JES spool, while preserving original SYSOUT attributes
- Offers TCP/IP alternative to SNA NJE transfer for print output
- Includes support for compression and encryption between hosts
- Provides seamless integration of ACIF conversion for delivery of self-contained AFPDS files with all external resources

LRS® Enterprise Output Server



For over four decades, LRS has solely focused on developing and refining the most comprehensive Enterprise Output Server available. The LRS Enterprise Output Server combines flexible document management components with comprehensive capabilities to meet the most demanding requirements.

Delivery

VPS® solutions are designed to meet the demands of today's business climate, which dictates that documents reach the right destination on time, without exception. Our VPS/TCPIP product provides robust document delivery to numerous TCP/IP network destinations, including network printers, email addresses, fax servers, and web browsers.

Monitor and Control

Users throughout the organization are more efficient when they have control over their documents. Our Monitor and Control solutions provide a consistent web-based interface for administrators and other users regardless of the platform they use. This enables users to monitor the status of their own devices and documents, which can reduce print-related help desk calls.

Capture

Many organizations use a range of applications on multiple operating systems and platforms to generate business-critical documents. Managing those documents requires a document capture function compatible with all of the diverse systems the organization uses. Our capture solutions provide the capability to capture, manage, and control documents originating from any host, providing a single point of control.

Archive

To meet the requirements of government regulations and to support day-to-day business operations, organizations need to store many business documents for specific periods. Storing documents electronically and viewing them with web browsers can save time and money while meeting storage and security requirements.

PageCenter® software provides an enterprise-wide solution for archiving and viewing most business documents. Receiving documents directly from VPS, PageCenter maintains a mainframe-based archive accessible by authorized users throughout the organization, regardless of which computer platform they use.

The LRS® Enterprise Output Server includes the following products:

VPS® and VPS/TCPIP Route output to numerous network destinations, including printers, email, fax servers, and web browsers

VPS/Email Expands the print distribution channel to include direct email delivery from the host

VPS/PDF Dynamic conversion of AFP documents to Portable Document Format (PDF) for delivery via email, web, or file

VPS/Secure® Encrypted distribution of confidential documents from host-to-printer or host-to-host

VMCF Web Access Web interface to monitor and control the LRS Enterprise Output Server (3270 clients are also available)

VPS/PCL Enables the delivery of complex AFP documents to network printers

VPS/IPDS Converts AFP documents to IPDS (Intelligent Printer Data Stream) and routes the output to IPDS printers

VPS/LCDS Delivers Xerox data streams to network-attached high-speed Xerox printers

VPS/XES to AFP Converts XES data streams to AFP for routing to network printers

DRS Provides extensive facilities for capturing, managing, and controlling documents originating from any platform via the LRS Enterprise Output Server

DRS/OutputManager™ SAP R/3 users gain full control over document printing, along with feedback of print status, without leaving the SAP application

DRS/Secure® Encrypted distribution of sensitive documents from the network to the host or host-to-host

DRS/Natural Enables the LRS Enterprise Output Server to manage and deliver documents created by Software AG Natural applications

DRS/TCPIP Enables the LRS Enterprise Output Server to integrate business documents created on distributed platforms connected by TCP/IP networks

DMCF Web Access Web interface for monitoring and managing documents from multiple platforms through the LRS Enterprise Output Server (3270 clients are also available)

AnyQueue® Powerful functionality for the multi-platform distributed environment includes document capture, retention, management, and delivery

AnyQueue/WebTRAC® Enables facilities for retaining business documents, viewing, managing, and delivering them to network printers

AnyQueue/Secure® Encrypted distribution of confidential documents to network printers, to other AnyQueue systems, and to the host

AnyQueue/PageSorter® Adds processing capabilities to AnyQueue for decollating or broadcasting documents to multiple network printers

AnyQueue/Text to PDF Automatic conversion of text documents to Portable Document Format (PDF) for delivery throughout the network

VPSX® provides output management for UNIX and Linux for zSeries environments; Captures data from any platform and delivers it to fax servers, file servers, and printers

VPSX/OutputManager® Certified external output management solution for SAP applications; assures print delivery and uses BC-XOM interface to notify users and administrators of output status

PageCenter® Archives documents received from VPS for secure viewing with Web browsers on multiple platforms

PageCenter Plus® Enhances value of compressed documents archived on the network and viewable by PC users, who can search, query, analyze, and extract specific information

The Enterprise Output Managers

LRS has been providing solutions for the evolving Enterprise Output Management needs of organizations around the world for more than 40 years. More than half of the Fortune 500 and Fortune 500 Service companies rely on our industry-leading software for capturing documents and delivering them to diverse network destinations.

As the recognized Enterprise Output Managers, we are dedicated to constant innovation as we continue to develop the output management solutions that meet today's needs and anticipate tomorrow's demands.

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