

# **INSTALLATION GUIDE FOR THE INTELLIJET PRINT PROCESS MANAGER 30**

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# 1 About This Guide

This guide is for internal use only. The following prerequisites and working knowledge are necessary to perform this installation:

- ≡ P/I Output Manager 10
- ≡ Windows 2008 Enterprise R2
- ≡ HP c7000 BladeSystem
- ≡ HP Virtual Connect Flex 10 Ethernet Module
- ≡ HP ProLiant BL 4600 G6 Blade Server
- ≡ IntelliJet 30 Printing System

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## 2 Overview of the IntelliJet Print Process Manager

### Scale to meet evolving demands

The IntelliJet Print Process Manager is based on a modular, scalable, multi-tasking architecture. It can be configured to meet the diverse output requirements of transaction print and mail operations—from simple monochrome statements to highly complex, variable data, full color TransPromo communications. As your customer needs evolve, the system can grow with you—scaling up in processing power to match changing demands.

### Achieve new levels of performance and integrity

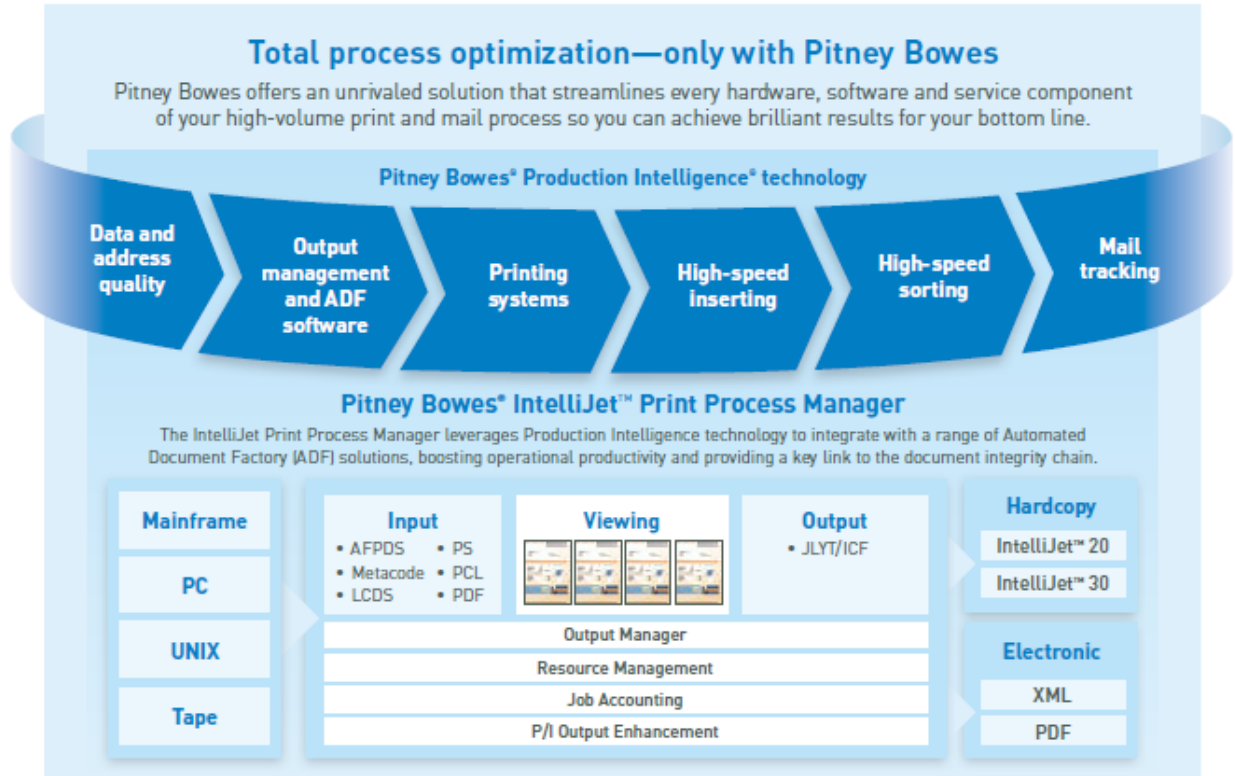
Maintaining maximum throughput with the highest integrity is essential to meeting demanding service level agreements. The IntelliJet Print Process Manager provides real-time concurrent input and print processing for the most extensive set of Page Description Languages (PDLs) on the market, reducing first page out time and significantly improving printing system performance. Additionally, its powerful indexing component provides page-level tracking throughout the print process, reducing the potential for costly rework.

### Get started easily

The IntelliJet Print Process Manager is controlled via a simple yet powerful graphical user interface that offers advanced queue management, document viewing and accounting features. The GUI is designed to enable operators to quickly set up new applications, assign profiles and manage the print queue from a central console, enhancing overall operational control while reducing workload.

### What Is Different About IntelliJet Print Process Manager In Comparison To P/I Output Manager?

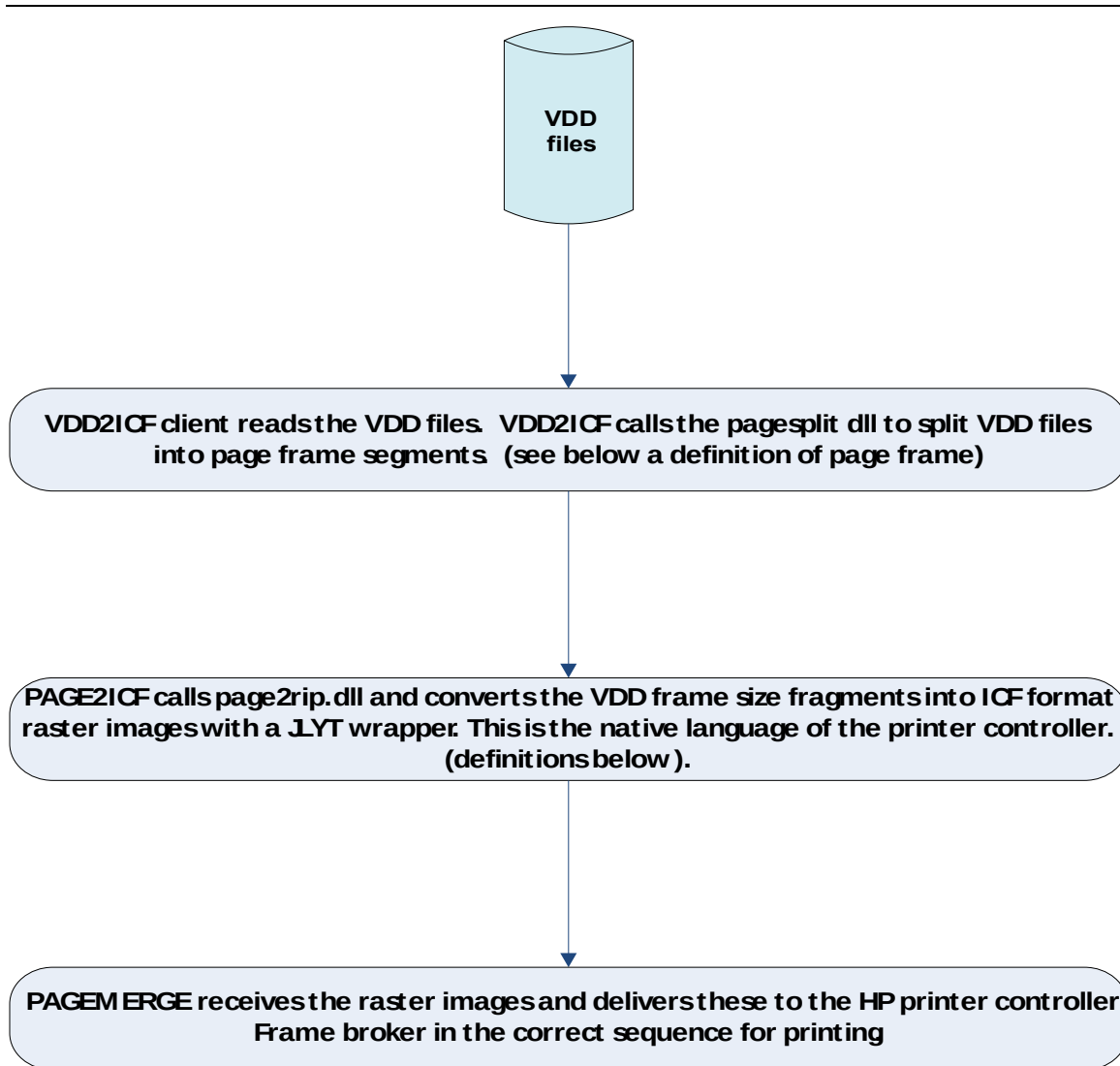
- ≡ New Output Client for IntelliJet Print Process Manager
- ≡ J-Layout (JLYT) PDL
- ≡ Indigo Compression Format (ICF) Planar Images for Formatting
- ≡ TCP/IP Bi-directional Streaming Protocol to Printer Controller
  - Dedicated Control Path
  - High Speed 10G Data Transfer to Each Print Engine
- ≡ Output Client Scalable RIP Architecture
- ≡ “Split” Client Distributes VDD Pages to Multiple RIP Processes
- ≡ Each RIP Process Converts VDD Pages to JLYT/ICF “Frames”
- ≡ “Merge” Client Receives Frames and Delivers to Printing System
- ≡ TCP/IP High Speed 10G Data Transfer
- ≡ Managed as a Single Output Client in User Interface (services)
- ≡ Infinitely Scalable



**High Level Overview of the Print Process Manager**

Unlike most other VIP output clients the IntelliJet output client relies on a number of co-operating modules. Below are a couple of diagrams that I put together based on reading the various Enhancement Specifications and conversations with Drew.

The basic process flow is as follows:



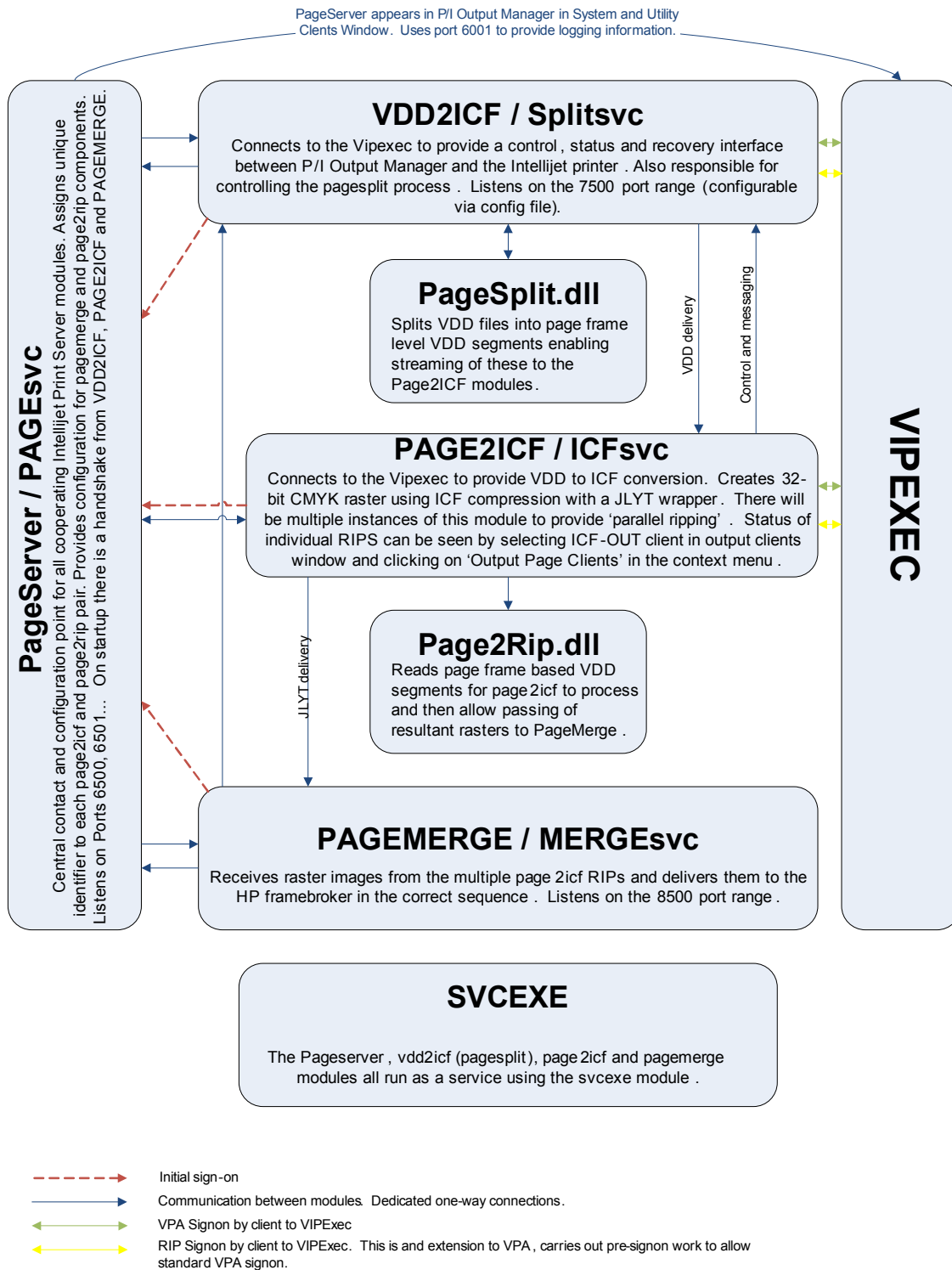
### Print Process Flow

**ICF** – Stands for Indigo Compression Format. This is a HP proprietary format which needs to be used when delivering the 32bit CMYK rasters produced by PAGE2ICF.

**JLYT** – J layout. This is a wrapper that the HP Frame broker expects to see around the ICF page or pages. The IntelliJet print server will always deliver a single frame at a time with an associated JLYT wrapper.

**Frame** – A frame covers the width of the web. The IntelliJet can support a substrate width of up to 30 inches and a printable width of up to 29.5 inches. If we are printing an A4 job 3-up (3 A4 images across the paper) then the page size would be 8.27” x 11.54” (A4 length is 11.69 but the IntelliJet requires 0.15” between frames so page lengths need to be reduced by this amount) and the frame size would be 24.81” x 11.54”.

The diagram below gives a view of the interaction between the various components that form the IntelliJet printer driver. Note that modules run as services.



### Output Client Detailed Architecture

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### What P/I™ Output Enhancement Solutions are in Scope for IntelliJet Print Process Manager

- ≡ 2-UP/3-UP/4-UP Or Custom Imposition
- ≡ Integrated Offset Shell Replacement
- ≡ TransPromo
- ≡ Control File Creation
- ≡ Indexing For Reprint


### What P/I™ Output Enhancement Solutions are not In Scope for IntelliJet Print Process Manager?

- ≡ VDE Merge
- ≡ Direct Integration with P/I Wizard (May Be Required for TransPromo Enablement)
- ≡ Mailsort / Cleanmail
- ≡ Utilized upstream solutions to enable them away from IntelliJet Print Process Manager

## 3 Hardware Specifications

- ≡ HP BladeSystem c-Class c7000 ROHS Enclosure
- ≡ 8 x HP ProLiant BL460c G6 Server Blades
- ≡ Expandable for Additional RIP Capacity Requirements
- ≡ Up to 16 Server Blades per Enclosure
- ≡ Multiple Enclosures Supported
- ≡ Sized for High Volume Transactional Output

## 4 Pre-Installation “Field Kit” Checklist

- ≡ Hasp Key (Dongle)
- ≡ Accompanying Guides (reference the Appendix)
- ≡  Fully powered HP c7000 Blade Enclosure
- ≡ Physical and network access to the c7000 Blade Enclosure
- ≡ Laptop or PC running Microsoft Windows XP Service Pack 3 or later
- ≡ 3<sup>rd</sup> Party Applications and Patches (install once for the blade enclosure from a PC or laptop)
  - cp012226.exe – HP BladeSystem c-Class Virtual Connect Firmware for Windows
  - getConfigScript – HP c-Class Enclosure configuration script
  - vcConfig\_vc\_domain-20100505 – HP c-Class Virtual Connect configuration script
- ≡ 3<sup>rd</sup> Party Applications and Patches (install on each blade server)
  - 7z465-x64.msi – 7-Zip version 4.65 open source file archiver
  - Firefox Setup 3.6.exe – Firefox web browser preferred for IntelliJet 30 press UI screens
  - wireshark-win64-1.2.7.exe – Ethernet tracing utility for support and troubleshooting
  - en\_windows\_server\_2008\_r2\_standard\_enterprise\_datacenter\_web\_x64\_dvd\_x15-50365.iso – Microsoft Windows 2008 Server Enterprise R2 ISO image
  - psp-8.30.w2k8R2.x64.exe – HP ProLiant Support Pack for Microsoft Windows 2008 R2
- ≡ Pre-installation scripts (run on each blade server)
  - DisableSmb2Client.bat – Disables SMB2 client for Windows folder sharing due to incompatibilities with P/I Output Manager
  - LanmanServer.Parameters.Smb2.0.reg – Disables SMB2 in the Windows Lanman Server service due to incompatibilities with P/I Output Manager
  - Tcpip6.DisabledComponents.reg – Disables IPv6



## 5 Installation

### 5.1 Server Enclosure

- 5.1.1 Pitney Bowes will provide a new 42U rack for the IntelliJet Print Process Manager front end to the IntelliJet Printing System. This document outlines the specifications of a single rack unit required for each printing system.

The rack system is based on the HP c7000 blade enclosure and ProLiant BL460c blade server platforms. It contains 1 blade enclosure and 8 blade servers and supporting peripherals as outlined in the table below:

#### Rack Contents:

<i>Qty</i>	<i>Mfg Product Code</i>	<i>Product Description</i>
1	AF034A	HP 10642G2 200mm Extension Shock Rack
1	507019-B21	HP BLc7000 CTO 3 IN LCD ROHS Enclosure
8	507864-B21	HP BL460c G6 CTO Blade
8	P72-04219	Microsoft Windows Server 2008 R2 Enterprise
8	507794-L21	Intel E5540 Processor FIO Kit
8	507794-B21	Intel E5540 Processor Kit
96	500658-B21	HP 4GB 2Rx4 PC3-10600R-9 Memory Kit (48 GB Memory per Blade)
16	512545-B21	HP 72GB 6G SAS 15K 2.5in DP ENT HDD
8	467799-B21	HP BLc NC532m NIC Adapter Option Kit
8	462968-B21	HP 256MB P-Series Cache Upgrade
1	434879-B21	HP BLc SB40c CTO Storage Blade
6	507127-B21	HP 300GB 6G SAS 10K 2.5in DP ENT HDD
4	455880-B21	HP BLc VC Flex-10 Enet Module Option
4	453154-B21	HP BLc VC 1Gb RJ-45 SFP Option Kit
1	517521-B21	HP 6X 2400W High Efficiency FIO Power Supply
1	456204-B21	HP BLc7000 DDR2 Enclosure Management Option
1	413379-B21	HP BLc7000 Single Phase FIO Power Module Option
1	517520-B21	HP BLc 6X Active Cool 200 FIO Fan Option
1	AF616A	HP 0x2x8 KVM Server Console G2 SW
1	AG052A	HP TFT7600 US Rackmount Keyboard 17in Monitor
1	AF613A	HP 1x4 KVM Console 6ft USB Cable
1	AF605A	HP BLc KVM Interface Adapter
<b>2</b>	<b>AF511A</b>	<b>HP Mod PDU Core 48A/3Phs NA Kit</b>
<b>2</b>	<b>AF500A</b>	<b>HP C-13 PDU Extension Bar Kit</b>
1	AF090A	HP 10K Rack Airflow Optimization Kit
1	AF074A	HP Rack Grounding Kit
1	AF062A	HP 10K G2 600mm Stabilizer Kit
1	AF054A	HP 10642 G2 Sidepanel Kit
1	263474-B22	HP IP CAT5 Qty-8 6ft/2m Cable
2	487649-B21	HP BLc SFP+ .5m 10GbE Copper Cable

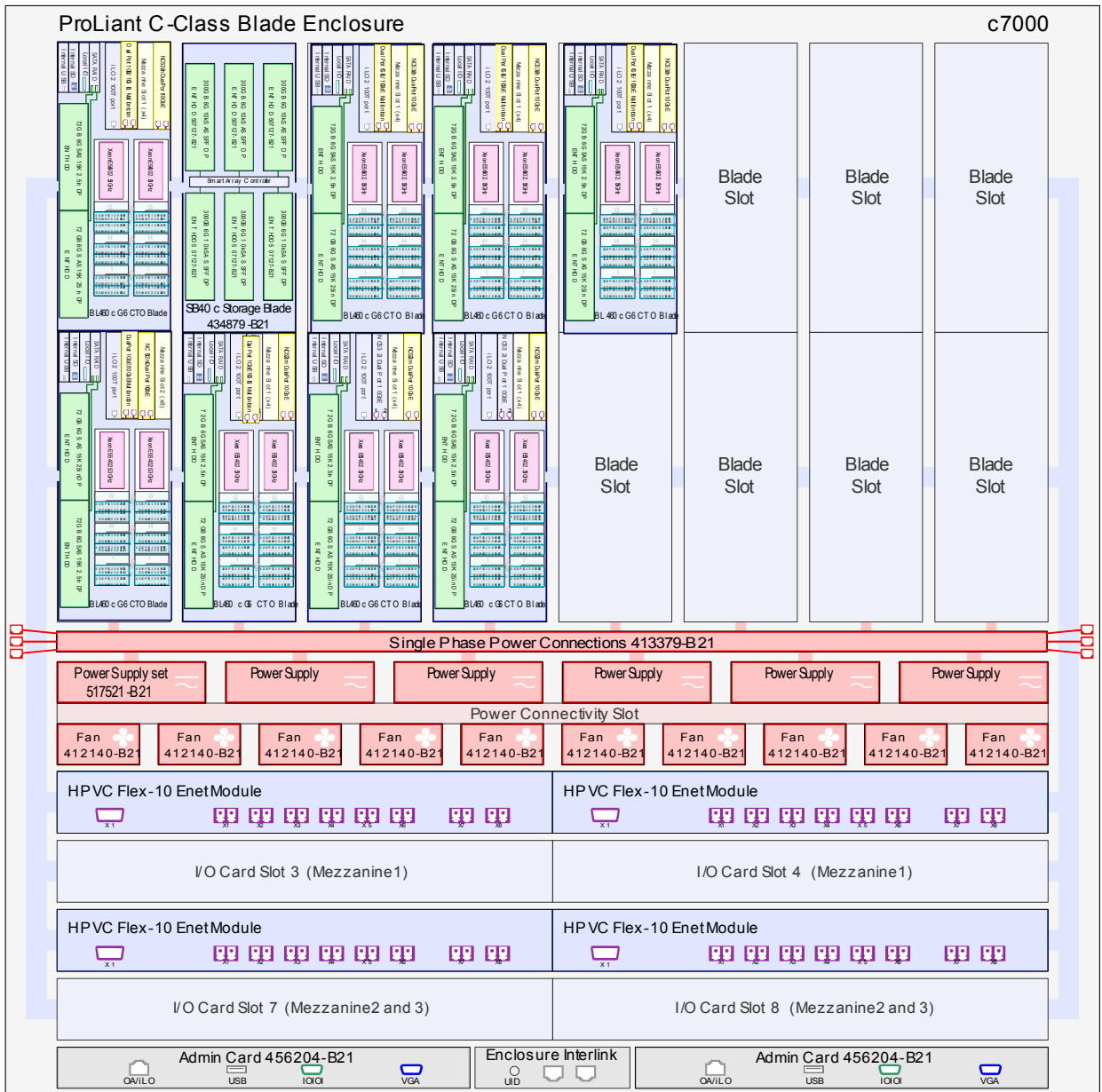
For international assistance, contact HP directly

### 5.2 Facility Requirements

<b>Dimensions:</b>	H = 73.5 inches, D = 47.2 inches, W = 24 inches
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<b>Weight:</b>	707 lbs.
<b>BTU:</b>	19,854 per Hour
<b>Incoming Power Requirement:</b>	Two (2) IEC60309 3 pole, 4 wire, 208VAC 60A, IEC 460C9W, 460R9W, or equivalent drops from separate power sources (i.e. separate circuit breakers)

Use the following HP c7000 Blade enclosure diagram for reference:



The following Client/Server Distribution Table accompanies the aforementioned diagram:

<b>Service Name</b>	<b>Device Bay</b>
<b>VIPExec</b>	Bay 1
<b>Connect</b>	Bay 1
<b>Input Clients</b>	Bay 1
<b>PageServer</b>	Bay 1
<b>VDD2ICF</b>	Bay 1
<b>PageMerge</b>	Bay 3
<b>Page2ICF (Multiple instances)</b>	Bay 4 – Bay 16

### HP ProLiant BL460c G6 Specifications

The base configuration will include 8 HP ProLiant BL460c blade servers with the following specifications. For additional capacity or for cold failover, up to 15 blades can be integrated into a single HP c7000 blade enclosure (with HP BLc SB40c blade storage). Enclosures may be stacked in the unlikely event that more than 15 blades are required.

#### Blade Server Specifications:

<b>Qty</b>	<b>Product Description</b>
1	HP BL460c G6 CTO Blade
1	Microsoft Windows Server 2008 R2 Enterprise x64
2	Intel Xeon E5540 2.53 Ghz Processors
12	HP 4GB 2Rx4 PC3-10600R-9 Memory (48 GB Memory per Blade)
2	HP 72GB 6G SAS 15K 2.5in DP ENT HDD (RAID1 mirrored set)
1	HP 256MB P-Series Disk Write Cache Upgrade
1	HP BLc NC532i 10Gb Dual Port NIC LOM Adapter
1	HP BLc NC532m 10Gb Dual Port NIC Mezzanine Adapter

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## HP BLc SB40c Storage Blade Specifications

The SB40c Storage Blade delivers direct attached storage for c-Class servers, with support for up to six hot plug small form factor (SFF) SAS or SATA hard disk drives. The enclosure backplane provides a PCI Express connection to the adjacent c-Class server blade (Bay 1) and enables high performance storage access without any additional cables. The SB40c Storage Blade features an onboard Smart Array P400 controller with 256 MB battery-backed write cache, for increased performance and data protection.

### Storage Blade Specifications:

<b>Qty</b>	<b>Product Description</b>
1	HP BLc SB40c CTO Storage Blade
6	HP 300GB 6G SAS 10K 2.5in DP ENT HDD

Configured as a single RAID1+0 logical disk with 832 GB usable disk space for the IntelliJet PrintServer application and user folders.

1. Verify the memory count for the BladeServer during bootup.

## 5.3 Power Up the Enclosure

### Three-phase power configuration

To cable the enclosure using a three-phase AC configuration where the AC power cables are already attached to the enclosure:

1. Connect the AC power cables to the AC power source.
2. Turn on the AC circuit breakers that power the power cables installed in the enclosure.

### 5.2.1 Setting up the HP BladeSystem Insight Display

When the enclosure is powered up for the first time, the Insight Display launches an installation wizard to guide you through the configuration process. After configuring the enclosure, the Insight Display verifies that there are no installation or configuration errors.

If errors are present, the Insight Display guides you through the process of correcting the errors.

*To set up an enclosure with network connectivity to the Onboard Administrator with KVM:*

1. On the Enclosure Settings screen, confirm the default settings.
  - ≡ Use the navigation arrows to navigate to a particular setting, and then press OK.
  - ≡ Navigate to the ? box next to a setting, and then to get help, press OK.
2. Confirm the Power mode for the power supplies, which is typically AC Redundant.
3. If the facility must limit AC power to the enclosure below what the power supplies can draw, set the Power Limit.
4. To provide the highest power efficiency without affecting server performance, enable Dynamic Power Savings.
5. Change the OA1 and OA2 IP address. This information is needed when deploying the management software.
  - ≡ Navigate to the address, and then press OK. Use the up and down arrows to select Static IP address. Use the up and down arrows on each field to set the IP, netmask, and gateway one octet at a time. Press OK, and then press OK again on Accept to confirm the new IP address settings.
  - ≡ *For OA1, use the following settings: For OA2, use...*

- 
1. Connect PC to OA1.
  2. Define IP address on the PC to connect to OA1.
  3. Open a browser and connect to the active Onboard Administrator with KVM module using the Onboard Administrator with KVM IP address that was configured during the Insight Display installation wizard process.
  4. Administrator with KVM IP address that was configured during the Insight Display installation wizard process.
  5. Enter the user name and password from the tag supplied with the Onboard Administrator with KVM module to access the remote Onboard Administrator with KVM web interface and complete the Onboard Administrator with KVM first time installation wizard.

## For more information

For more detailed setup and configuration information, see the *HP BladeSystem c-Class Solution Overview* and the *HP BladeSystem c7000 Enclosure Setup and Installation Guide*. You can also find information on the HP website (<http://www.hp.com/go/bladesystem/documentation>).

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Part Number 411762-006

### 5.2.2 Setting up the onboard administrator with KVM module.

### 5.2.3 HP Virtual Connect Ethernet Module Setup and Wiring

1. Access virtual connect web browser.
2. Run virtual connect setup wizard.
3. Import virtual connect enclosure settings.
4. Wire connecting enclosure to IntelliJet 30 PEC cabinet.
5. Wire connecting enclosure to customer's network.
6. Wire connecting enclosure to other Pitney Bowes' products.

### 5.2.4 Blade Server Installation

1. Configure logical disks and write caching.
2. Load the operating system.
3. Configure the operating system.
4. Load HP patches.
5. Load the third party software.

### 5.2.5 Install Application

1. Install the application on the executive server.
2. Install window services.
3. Conducted basic configuration.

The following are the PIOE capabilities that will be available in the base IntelliJet Print Process Manager configuration

-  Capabilities = VDE\_Add
- Capabilities = VDE\_Barcode
- Capabilities = VDE\_Calculate
- Capabilities = VDE\_Colour
- Capabilities = VDE\_Delete
- Capabilities = VDE\_Detect
- Capabilities = VDE\_DeviceControl
- Capabilities = VDE\_Disk
- Capabilities = VDE\_ExtractBarcodeData
- Capabilities = VDE\_Index

- 
- Capabilities = VDE\_Insert
  - Capabilities = VDE\_PageControl
  - Capabilities = VDE\_SQL
  - Capabilities = VDE\_SmartStream
  - Capabilities = VDE\_Split
  - Capabilities = VDE\_Switch
  - Capabilities = VDE\_XML
4. Initial startup test.
  5. Install remote GUI packages.

### 5.2.6 Testing IntelliJet Print Process Manager

1. Configuring IJET simulator.
2. Running “golden jobs” to IJET simulator.
3. Connect IntelliJet Print Process Manager to IntelleJet PIA and framebrokers.
4. Running “golden jobs” to IntelliJet.

## 6 Post Installation

Imposition

Banner Pages

## 7 Appendix

### 7.1 Supporting Documents

IntelliJet 30 Printing Systems Products and Services (<http://www.pb.com/equipment/Envelope-and-Document-Printers/Document-Printers/IntelliJet-Printing-System.shtml>)

IntelliJet 30 Product Brochure ([http://www.pb.com/docs/US/Products-Services/Equipment/Envelope-Document-Printers/Document-Printers/IntelliJet/pdf/IntelliJet30\\_Brochure-2010.pdf](http://www.pb.com/docs/US/Products-Services/Equipment/Envelope-Document-Printers/Document-Printers/IntelliJet/pdf/IntelliJet30_Brochure-2010.pdf))

IntelliJet 30 Print Process Manager Datasheet (<http://www.pb.com/docs/US/pdf/Products-Services/Equipment/IntelliJet-Print-Process-Manager-Datasheet-2010.pdf>)

## 8 Index

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# Technical Support

## North and South America

### Telephone (all products)

*ACD Loop 9-5:30 Eastern (active call directory)*

**(1) (866) 220 1014**

*After Hours*

**(1) (877) 677 3375**

### Email

*Output Management products*

[sptus@pb.com](mailto:sptus@pb.com)

*ADF Products*

[adfsupport@pb.com](mailto:adfsupport@pb.com)

## EMEA & Asia Pacific

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**(44) (0)1923 279300**

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Fax: (1) (203) 739 3704

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