

Memorandum

To: Coss, David
CC: Saunders, G.
From: Schubert, James
Date: 6/24/2008
Re: Bill of Detail

Sirs,

The new office space is designed for the new Web Discs Fulfillment Center, which distributes CDs and DVDs for three not-for-profit organizations. The center will stock 19,500 titles. The office itself is 44' by 110', and has a server room, a stock room, a lunch room, a meeting room, a controller room, and an office shared between web and telephone sales. There will be four workstations in the "office" area, and three workstations in the shipping and receiving area. The office is designed using a star topology, because there are so few users.

The following report is a Bill of Detail in response to your memos requesting the project package. Included is a list of up-front costs to prepare the new office with furniture, hardware, and software. Also included in the Bill of Detail are the monthly and yearly recurring costs. Recurring costs for hardware and software are estimated at 12% of the initial outlay.

As previously stated, the network is designed in a star topology. All workstations will run Microsoft Windows Vista. The application server, web server, and firewall will run Redhat Linux Enterprise edition. All workstations will run WebNPO, which handles all facets of the company's operations. WebNPO is designed by NPO Works of Richmond, VA, and manages order entry, credit card authorization, inventory management, and inventory purchasing. Also included in the software proposal is a 10-user license of Norton Antivirus. Although the office and all servers will be shielded from the internet by a hardware firewall, user access to the internet opens workstations to viruses, spyware, malware, and other threats. Norton Antivirus proactively protects computers from these threats.

I have chosen Dell servers and workstations (with the exception of the low-end computers) because of Dell's solid reputation for customer server and warranty fulfillment. The low-end computers are made by Lenovo, a company which was acquired by the IBM Personal Computing Group 4 years

June 24, 2008

ago. Lenovo is low-end in cost, but not in quality. The company has a fairly good reputation for customer service.

The barcode scanners and the barcode printers are high-quality and easy to use. Both items are USB devices, making integration very easy. The Wireless Access Point, located in the meeting room, is the emerging standard 802.11-N. Although there will be few users connected to the access point at any given time, the higher speeds and signal strength will allow roaming in the office. The multifunction color laser printer, Canon Image Runner C3380i, is capable of saddle stitching and is PCL-5 and PCL-6 compliant, per your request.

The internet service from Cavtel, and the phone service from USLEC are T1 connections. The modems for these connections are provided under contract from each provider.

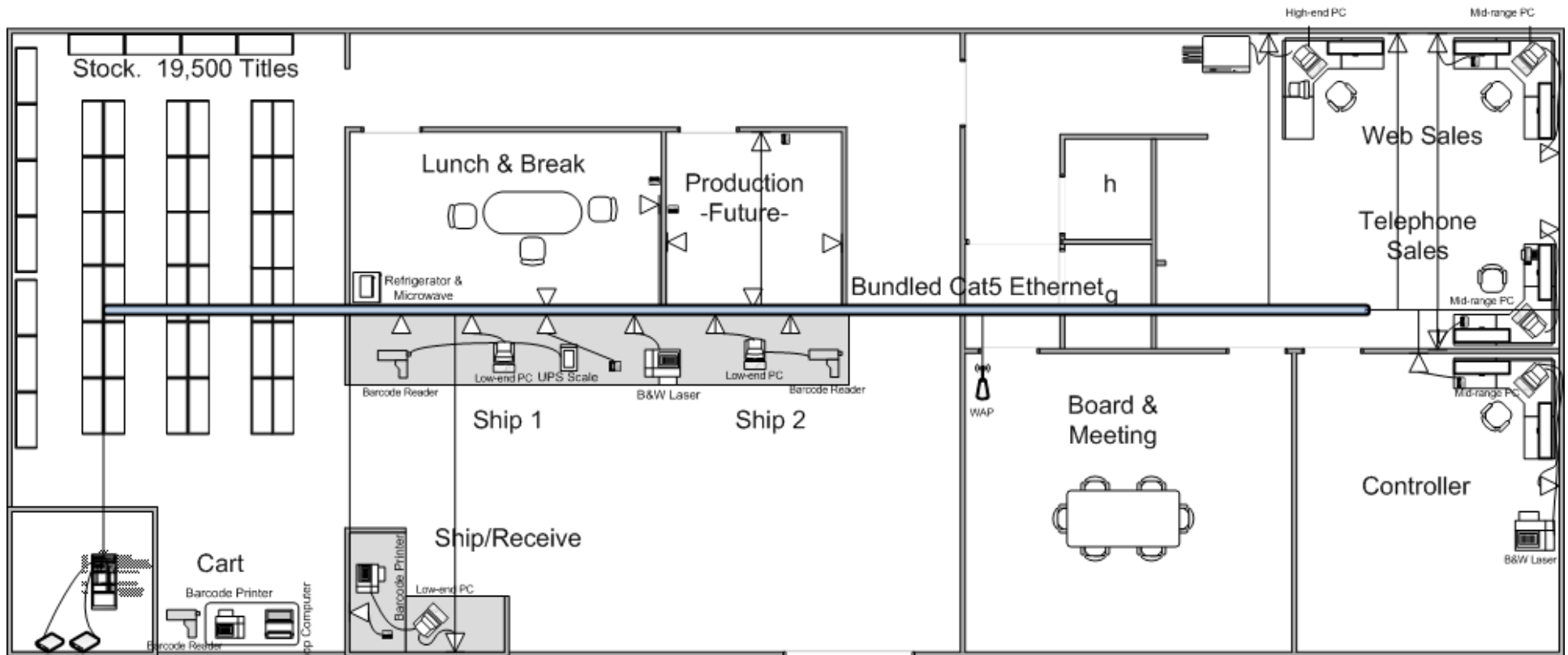
The Redhat Linux and Microsoft Office products offer a 20% discount for site licensing. In the Bill of Detail, they are shown as a price per installation with a reduction afterward. The freeware software listed is only a suggestion for improved web site maintenance, and video production. VirtualDubMod is an encoding utility useful for outputting samples of video. The XviD codec is an opensource codec with compression rates which rival Windows Media format. MemcacheD is a object cache optimization system, used in such social networks as Facebook and LiveJournal. It helps drastically reduce server loads. Finally, phps is a php shell integration used in PHP development. This tool will be useful if the website runs PHP4 or PHP5. No commercial tape-backup software is included in this proposal, because Redhat Linux offers the tape backup utilities 'mt' and 'tar', which can easily be scheduled to create automatic backups. Simple shell scripts can be written to backup and load tape information. The tape backup operates through a high-speed SCSI interface.

Most of the other configurations should be evident. However, I am available for questions.

Sincerely,

James Schubert

JUNE 25, 2008



Cavtel Service
USLEC Service

Low-end PC
 Processor:
 Pentium Dual-core 2.0 GHz
 Ram: 2GB DDR2
 HDD: 320 GB
 Monitor Size: 19"
 NIC: 10/100

Mid-range PC
 Processor:
 Pentium Dual-core E2180
 Ram: 2GB DDR2
 HDD: 320 GB
 Monitor Size: 19"
 NIC: 10/100

High-end PC
 Processor:
 Quad Core Intel Xeon (2.0GHz)
 Ram: 8GB
 HDD: 500GB
 Monitor Size: Dual 19"
 NIC: Gigabit

Cart Notebook
 Processor:
 Intel Core 2 Duo T5550 (1.83 GHz)
 Ram: 3GB
 HDD: 250GB
 Monitor Size: 17"
 NIC: 10/100

Lan Project Assignment
INFO 300 Summer '08
James Schubert

BILL OF DETAIL

Description	QTY	Vendor	Part #	Model	Unit Price	Extended Price
UP FRONT COSTS						
Hardware						
Jack Field + Installation	28				\$65.00	\$1,820.00
Server						
TRIPP LITE SMART1000RM1U 1000 VA 640 Watts 6 NEMA 5-15R Outlets Smart Pro Rackmount UPS - Retail	1	Tripp-lite (newegg.com)	N82E16842111051	SMART1000RM1U	\$415.99	\$415.99
Switch: PowerConnect 3548, 48 Ports, Managed Switch, Stacking Capable	1	Dell	[223-5536]	3458	\$535.00	\$535.00
PE2410 Short Rack, 24U	1	Dell	[221-0362]	2410	\$645.00	\$645.00
Web Server: Quad Core Intel® Xeon® E5405, 2x6MB Cache, 2.0GHz, 1333MHz FSB	2	Dell	[223-4954]	PowerEdge 1950 III	\$2,157.00	\$4,314.00
Tape Backup: HP StorageWorks 1U SCSI Rack- Mount kit A7445B w/ DW064A HP StorageWorks LTO-1 Ultrium 232 Internal Tape Drive w/ 341177-B21 12 foot 68 Pin VHDCI to 68 Pin HD cable kit	1	HP.com		A7445B	\$3,612.00	\$3,612.00
Application Server: Dual Core Intel® Xeon® E5205, 6MB Cache, 1.86GHz, 1066MHz FSB	1	Dell	[223-6099]	PowerEdge 2950	\$4,404.00	\$4,404.00
Workstations						
Low-end PC: Ienovo IdeaCenter K Series K2.2 (57076162) Pentium dual-core E2180(2.00GHz) 2GB DDR2 320GB Intel GMA 3100 Windows Vista Home Premium - Retail	3	Lenovo (newegg.com)	N82E16883108192	IdeaCenter K-series	\$499.00	\$1,497.00
19" Monitor: ASUS VW193D Black-Silver 19" 5ms Widescreen LCD Monitor 300 cd/m2 850:1 - Retail	5	ASUS (newegg.com)	N82E16824236029	VW193D	\$180.00	\$900.00
19" Monitor: NEC Display Solutions ASLCD93VX-BK Black 19" 5ms LCD Monitor 300 cd/m2 800:1 - Retail	2	NEC (newegg.com)	N82E16824002404	ASLCD93VX-BK	\$260.00	\$520.00
High-end Workstation (Web Sales): Dell Precision Workstation T5400 (64bit)Quad Core Intel® Xeon® Processor E5405 (2.00GHz,2X6M L2,1333), Vista Ultimate 64-bit, 8GB, DDR2 SDRAM FBD Memory, 667MHz, ECC (4 DIMMS)	1	Dell	[223-4710]	T5400	\$2,577.00	\$2,577.00
Workstation (Web Sales and Telephone Sales) Dell - Inspiron Desktop with Intel® Pentium® Dual-Core Processor E2180	2	Dell (bestbuy.com)	8850255	I530S-107B	\$430.00	\$860.00
Big Notebook (Cart) Lenovo IdeaPad Y710(59013787) NoteBook Intel Core 2 Duo T5550(1.83GHz) 17.0" Wide XGA+ 3GB Memory 250GB HDD 5400rpm Dual layer DVD Burner ATI Mobility Radeon HD 2600 - Retail (comes equipped with numeric keypad)	1	Lenovo (newegg.com)	N82E16834146447	IdeaPad Y710	\$1,150.00	\$1,150.00
Misc. Office Equipment						
Phone: SoundPoint Pro SE-220 Corded Phone with Call Waiting Caller ID - 2-line Operation	8	Dell	A0020136	Polycom SoundPoint Pro SE-220	\$170.00	\$1,360.00
Barcode Printer: ZM400, Direct thermal & thermal transfer printing, 203 dpi, 4" print width, ZPL, 8MB Flash, 16MB DRAM, RS-232 Serial, USB, 10/100 Base-T Ethernet, 802.11g Wireless interface, US Power cord and Spindle Out	2	Zebra (Barcodes,Inc)	ZM400-2001-0300T	ZM400	\$1,580.00	\$3,160.00
Scanner: symbol LS2208- SR20007R RS232, Keyboard Wedge, Wand, IBM 468X/9X, USB, Synapse and Undecoded Barcode Scanner - Retail	4	symbol (newegg.com)	N82E16838134054	LS2208-SR20007R RS232	\$122.00	\$488.00
WAP: LINKSYS WAP4400N Wireless-N Access Point with Power Over Ethernet - Retail	1	LINKSYS (newegg.com)	N82E16833124075	WAP440N	\$150.00	\$150.00
B&W Laser: HP LaserJet P3005x Q7816A Workgroup Up to 35 ppm Monochrome Laser Printer - Retail	2	HP (newegg.com)	N82E16828104552	P3005x	\$899.00	\$1,798.00
Multifunction Laser w/ Saddle Stitch: Canon Image Runner C3380i (PCL-5, PCL-6)	1	Canon (amatteroffax.co m)	1459038	MP C4500	\$9,831.00	\$9,831.00
Frigidaire 14.8 cu. ft. Top Freezer Refrigerator White FRT15HB3DW - Retail	1	Frigidaire (newegg.com)	N82E16896767086	FRT15HB3DW	\$630.00	\$630.00
Panasonic 1250 Watts Microwave Oven NNSD797S Sensor Cook Stainless Steel - Retail	1	Panasonic (newegg.com)	N82E16896200060	NNSD797S	\$185.00	\$185.00
Fax Machine: Canon® FAXPHONE® L80 Plain-Paper Laser Fax	1	Canon (newegg.com)	N82E16828102148	9192A006	\$180.00	\$180.00
UPS Stainless Steel Scale (USB Compatible)	1		PS60U-5101-000	PS60U-5101-000	\$425.00	\$425.00
Total Hardware						\$41,456.99

Furniture						
Cart: Balt® Adjustable-Height Projection Stand	1	Balt (staples.com)	578462	81052	\$150.00	\$150.00
Bush Cubix Oval Conference Table, Hansen Cherry/Galaxy	2	Bush (staples.com)	442011	TR90484	\$330.00	\$660.00
Staples® Collins™ Manager's Chair	10	Staples (staples.com)	486152	15181-CC	\$100.00	\$1,000.00
Bush Somerset 60" Compact L-Desk, Hansen Cherry Finish	4	Bush (staples.com)	661605	WC81730	\$290.00	\$1,160.00
Staples® Black Fabric Task Chair	3	Staples (staples.com)	651546	15871-US	\$30.00	\$90.00
Nexel 4 Shelf Starter Unit 48inW/18inD/74inH	14	Nexel (tigerdirect.com)	G70-5947	G70-5947	\$160.00	\$2,240.00
Addon Shelves: Nexel 4 Shelf Add On Unit 48" (W) x 18" (D) x 74" (H)	33	Nexel (tigerdirect.com)	G70-5948	G70-5948	\$130.00	\$4,290.00
Total Furniture						\$9,590.00

Supplies						
HP Q7551X Black Print Cartridge with Smart Printing Technology - Retail (Yields up to 13,000 pages)	2	HP (newegg.com)	N82E16828104611	HP 51X	\$190.00	\$380.00
HP LTO1 Ultrium 200GB non-custom label data cartridge (20pk)	1	HP.Com		C7971AN	\$775.65	\$775.65
Total Supplies						\$1,155.65

Software						
WebNPO	12	NPO Works			\$3,500.00	\$42,000.00
Support Year 1	1				\$5,040.00	\$5,040.00
Redhat Linux Enterprise (20%)	3	Redhat			\$1,299.00	\$3,897.00
Adobe Dreamweaver CS 3	1	(newegg.com)	N82E16832105347		\$399.00	\$399.00
QuarkXPress 7	1	Quark		QuarkXPress 7	\$799.00	\$799.00
2008 10 User - Retail	1	(newegg.com)	N82E16832108310		\$150.00	\$150.00
- Retail	4	(newegg.com)	N82E16832116162		\$399.00	\$1,596.00
Discount (20%)	1					-\$319.20
VirtualDubMod (opensource)	2	sf.net			\$0.00	\$0.00
Xvid Codec (opensource)	2	xvid.org			\$0.00	\$0.00
system (opensource)	3	danga.com			\$0.00	\$0.00
phpsh	1	phpsh.org			\$0.00	\$0.00
Total Software						\$52,782.40

INITIAL OUTLAY Subtotal						\$51,046.99
Tax (5%) (Excludes Services)						\$2,300.35
INITIAL OUTLAY Total						\$53,347.34

RECURRING COSTS						
Monthly						
Supplies (estimate)	1				\$500.00	\$500.00
Internet Service	1	Cavtel			\$400.00	\$400.00
Phone Service	1	USLEC			\$750.00	\$750.00
to 13,000 pages)	1	(newegg.com)	N82E16828104611	HP 51X	\$190.00	\$190.00
Costs						\$1,840.00
Yearly						
Yearly Software Support	1					\$535.00
Redhat Linux Enterprise (20%)	3	Redhat			\$1,299.00	\$3,897.00
Yearly Hardware Support	1					-\$779.40
Costs						\$4,974.84
Total Recurring Costs						\$6,814.84

WEB DISCS FULFILLMENT CENTER

PURCHASE ORDER

Web Discs Fulfillment Center
Richmond, VA

DATE: JUNE 24, 2008
P.O. # [100]

VENDOR A Matter of Fax
105 Harrison Ave
Harrison NJ 07029 US
800-433-3329
Customer ID [ABC12345]

SHIP TO Web Discs Fulfillment
Center
Richmond, VA

SHIPPING METHOD	SHIPPING TERMS	DELIVERY DATE

QTY	ITEM #	DESCRIPTION	JOB	UNIT PRICE	LINE TOTAL
1	1459038	Canon Image Runner C3380i (PCL-5, PCL-6)		\$9831.31	\$9831.31

SUBTOTAL	\$9831.31
SALES TAX	\$491.57
TOTAL	\$10322.88

- 1. Please send two copies of your invoice.
- 2. Enter this order in accordance with the prices, terms, delivery method, and specifications listed above.
- 3. Please notify us immediately if you are unable to ship as specified.
- 4. Send all correspondence to:

Web Discs Fulfillment Center
Richmond, VA

Authorized by

Date

WEB DISCS FULFILLMENT CENTER

PURCHASE ORDER

Web Discs Fulfillment Center
Richmond, VA

DATE: JUNE 24, 2008
P.O. # [100]

VENDOR BarcodesInc
218 South Wabash, 5th floor
Chicago, IL 60604
1-800-351-9962
Customer ID [ABC12345]

SHIP TO Web Discs Fulfillment
Center
Richmond, VA

SHIPPING METHOD	SHIPPING TERMS	DELIVERY DATE

QTY	ITEM #	DESCRIPTION	JOB	UNIT PRICE	LINE TOTAL
2	ZM400-2001-0300T	ZM400, Direct thermal Barcode Printer		\$1580	\$3160

SUBTOTAL	\$3160
SALES TAX	\$158
TOTAL	\$3318

- Please send two copies of your invoice.
- Enter this order in accordance with the prices, terms, delivery method, and specifications listed above.
- Please notify us immediately if you are unable to ship as specified.
- Send all correspondence to:

Web Discs Fulfillment Center
Richmond, VA

Authorized by

Date

WEB DISCS FULFILLMENT CENTER

PURCHASE ORDER

Web Discs Fulfillment Center
Richmond, VA

DATE: JUNE 24, 2008
P.O. # [100]

VENDOR Bestbuy.com
Customer ID [ABC12345]

SHIP TO Web Discs Fulfillment
Center
Richmond, VA

SHIPPING METHOD	SHIPPING TERMS	DELIVERY DATE

QTY	ITEM #	DESCRIPTION	JOB	UNIT PRICE	LINE TOTAL
2	8850255	Dell - Inspiron Desktop with Intel® Pentium® Dual-Core Processor E2180		\$430	\$860

SUBTOTAL	\$860
SALES TAX	\$43
TOTAL	\$903

- 9. Please send two copies of your invoice.
- 10. Enter this order in accordance with the prices, terms, delivery method, and specifications listed above.
- 11. Please notify us immediately if you are unable to ship as specified.
- 12. Send all correspondence to:

Web Discs Fulfillment Center
Richmond, VA

Authorized by *Date*

WEB DISCS FULFILLMENT CENTER

PURCHASE ORDER

Web Discs Fulfillment Center
Richmond, VA

DATE: JUNE 24, 2008
P.O. # [100]

VENDOR **HP.COM**
Customer ID [ABC12345]

SHIP **Web Discs Fulfillment**
TO **Center**
Richmond, VA

SHIPPING METHOD	SHIPPING TERMS	DELIVERY DATE

QTY	ITEM #	DESCRIPTION	JOB	UNIT PRICE	LINE TOTAL
1	A7445B	HP StorageWorks 1U SCSI Rack-Mount kit Tape Backup		\$3612	\$3612
1	C7971AN	HP LTO1 Ultrium 200GB non-custom label data cartridge (20pk)		\$775.65	\$775.65

SUBTOTAL	\$4387.65
SALES TAX	\$219.38
TOTAL	\$4607.03

- 17. Please send two copies of your invoice.
- 18. Enter this order in accordance with the prices, terms, delivery method, and specifications listed above.
- 19. Please notify us immediately if you are unable to ship as specified.
- 20. Send all correspondence to:

Web Discs Fulfillment Center
Richmond, VA

Authorized by *Date*

WEB DISCS FULFILLMENT CENTER

PURCHASE ORDER

Web Discs Fulfillment Center
Richmond, VA

DATE: JUNE 24, 2008
P.O. # [100]

VENDOR Newegg.com
Customer ID [ABC12345]

SHIP TO Web Discs Fulfillment
Center
Richmond, VA

SHIPPING METHOD	SHIPPING TERMS	DELIVERY DATE

QTY	ITEM #	DESCRIPTION	JOB	UNIT PRICE	LINE TOTAL
1	N82E16842111051	SMART1000RM1U Rackmount UPS		\$416	\$416
1	N82E16883108192	Lenovo IdeaCenter K-series		\$499	\$499
5	N82E16824236029	ASUS VW193D Black-Silver 19" LCD Monitor		\$180	\$900
2	N82E16824002404	NEC Display Solutions ASLCD93VX-BK Black 19" LCD Monitor		\$260	\$520
1	N82E16834146447	Lenovo IdeaPad Y710		\$1150	\$1150
4	N82E16838134054	symbol LS2208-SR20007R RS232 Barcode Scanner		\$122	\$488
1	N82E16833124075	LINKSYS WAP4400N Wireless-N Access Point		\$150	\$150
2	N82E16828104552	HP LaserJet P3005x		\$899	\$1798
1	N82E16896767086	Frigidaire 14.8 cu. ft. Top Freezer Refrigerator		\$630	\$630
1	N82E16896200060	Panasonic 1250 Watts Microwave Oven		\$185	\$185
2	N82E16828104611	HP Q7551X Black Print Cartridge		\$190	\$380
1	N82E16832108310	Symantec Norton Antivirus 2008 10 User - Retail		\$150	\$150
1	N82E16832116162	Microsoft Office Ultimate 2007 - Retail		\$399	\$1596
1	N82E16828102148	Canon FAXPHONE L80 9192A006 33.6Kbps Laser Fax/ Phone - Retail		\$180	\$180

1	N82E16832105347	Adobe Dreamweaver CS 3 - Retail		\$399	\$399
	Discount	Microsoft Site License		-\$319.20	-\$319.20
				SUBTOTAL	\$9121.80
				SALES TAX	\$456.09
				TOTAL	\$9577.89

21. Please send two copies of your invoice.
22. Enter this order in accordance with the prices, terms, delivery method, and specifications listed above.
23. Please notify us immediately if you are unable to ship as specified.
24. Send all correspondence to:

Web Discs Fulfillment Center
Richmond, VA

Authorized by

Date

WEB DISCS FULFILLMENT CENTER

PURCHASE ORDER

Web Discs Fulfillment Center
Richmond, VA

DATE: JUNE 24, 2008
P.O. # [100]

VENDOR NPO Works
Richmond, VA
Customer ID [ABC12345]

SHIP TO Web Discs Fulfillment
Center
Richmond, VA

SHIPPING METHOD	SHIPPING TERMS	DELIVERY DATE

QTY	ITEM #	DESCRIPTION	JOB	UNIT PRICE	LINE TOTAL
12		WebNPO		\$3,500.00	\$42,000.00
1		Yearly Support		\$5040.00 N	\$5040.00 N

SUBTOTAL	\$47040.00
SALES TAX	\$2100.00
TOTAL	\$49140.00

- 25. Please send two copies of your invoice.
- 26. Enter this order in accordance with the prices, terms, delivery method, and specifications listed above.
- 27. Please notify us immediately if you are unable to ship as specified.
- 28. Send all correspondence to:

Web Discs Fulfillment Center
Richmond, VA

Authorized by

Date

WEB DISCS FULFILLMENT CENTER

PURCHASE ORDER

Web Discs Fulfillment Center
Richmond, VA

DATE: JUNE 24, 2008
P.O. # [100]

VENDOR Redhat Corporate Headquarters
1801 Varsity Drive
Raleigh, North Carolina 27606
USA
1-919-754-3700
Customer ID [ABC12345]

SHIP TO Web Discs Fulfillment
Center
Richmond, VA

SHIPPING METHOD	SHIPPING TERMS	DELIVERY DATE

QTY	ITEM #	DESCRIPTION	JOB	UNIT PRICE	LINE TOTAL
3		Redhat Linux Enterprise		\$1,299.00	\$3,897.00
1		RHE Site License Discount (20%)		-\$779.40	-\$779.40

SUBTOTAL	\$3117.60
SALES TAX	\$155.88
TOTAL	\$3273.48

- 29. ase send two copies of your invoice.
- 30. Enter this order in accordance with the prices, terms, delivery method, and specifications listed above.
- 31. Please notify us immediately if you are unable to ship as specified.
- 32. Send all correspondence to:

Web Discs Fulfillment Center
Richmond, VA

Authorized by

Date

WEB DISCS FULFILLMENT CENTER

PURCHASE ORDER

Web Discs Fulfillment Center
Richmond, VA

DATE: JUNE 24, 2008
P.O. # [100]

VENDOR STAPLES
500 Staples Drive Framingham
MA 01702
1-800-3STAPLE
Customer ID [ABC12345]

SHIP TO Web Discs Fulfillment
Center
Richmond, VA

SHIPPING METHOD	SHIPPING TERMS	DELIVERY DATE

QTY	ITEM #	DESCRIPTION	MODEL	UNIT PRICE	LINE TOTAL
1	578462	Cart: Balt® Adjustable-Height Projection Stand	81052	\$150.00	\$150.00
2	442011	Bush Cubix Oval Conference Table, Hansen Cherry/Galaxy	TR90484	\$330.00	\$660.00
10	486152	Staples® Collins™ Manager's Chair	15181-CC	\$100.00	\$1,000.00
4	661605	Bush Somerset 60" Compact L-Desk, Hansen Cherry Finish	WC81730	\$290.00	\$1,160.00
3	651546	Staples® Black Fabric Task Chair	15871-US	\$30.00	\$90.00
SUBTOTAL					\$3060
SALES TAX					\$153
TOTAL					\$3213

- 33. Please send two copies of your invoice.
- 34. Enter this order in accordance with the prices, terms, delivery method, and specifications listed above.
- 35. Please notify us immediately if you are unable to ship as specified.
- 36. Send all correspondence to:

Web Discs Fulfillment Center
Richmond, VA

Authorized by

Date

