



RFP-38-19

CITY OF CLEARWATER  
STORAGE AREA NETWORK (SAN) EQUIPMENT



JUNE 27, 2019

**COPY**

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## Transmittal Letter

Purchasing Office  
100 S Myrtle Ave  
Clearwater FL 33756

Date: June 19, 2019

Re: Transmittal Letter

Enclosed for approval is Extensys, Inc. (Extensys) bid for IT #38-19 – Storage Area Network (SAN) Equipment.

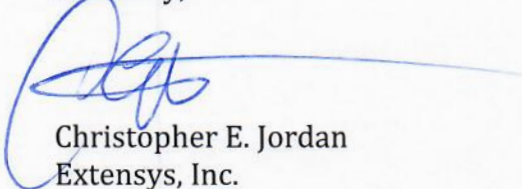
Extensys is responding to all parts of the RFP. We believe we are uniquely qualified to deliver this solution based on our vast Server, Storage, SAN, and VMware experience. Our bid response is proposing Cisco UCS Blade Servers, Cisco MDS SAN Switches, and PureStorage All Flash Array. Extensys is very confident in a successful implementation for the City of Clearwater. This solution will provide outstanding performance, ease of management, and increased capabilities over the existing environment.

The following team members have been assigned to complete this project:

- Christopher Jordan (VP of Technology)
- Steve Gorham (VP of Services)
- Mike Wilkinson (Senior Consultant)
- Greg Renner (VP of Technology CCIE #5869)
- Vince Bauer (Program Management)

The Extensys team welcomes the opportunity to present our bid in person if requested.

Sincerely,



Christopher E. Jordan  
Extensys, Inc.  
VP of Technology



## Team List

<b>Christopher Jordan, VP</b>	<b>Mike Wilkinson, Senior Consultant</b>
253 Pine Ave N., Building B Oldsmar, Florida 34677	253 Pine Ave N., Building B Oldsmar, Florida 34677
(813) 855-3909	(813) 855-3909
(813) 855-3922 fax	(813) 855-3922 fax
<a href="mailto:chris.jordan@extensysinc.com">chris.jordan@extensysinc.com</a>	<a href="mailto:Mike.wilkinson@extensysinc.com">Mike.wilkinson@extensysinc.com</a>
<b>Greg Renner , VP Technology (CCIE #5869)</b>	<b>Vince Bauer, Program Manager</b>
253 Pine Ave N., Building B Oldsmar, Florida 34677	253 Pine Ave N., Building B Oldsmar, Florida 34677
(813) 403-5551	(813) 855-3909 x1118
(813) 855-3922 fax	(813) 855-3922 fax
<a href="mailto:Greg.renner@extensysinc.com">Greg.renner@extensysinc.com</a>	<a href="mailto:Vince.bauer@extensysinc.com">Vince.bauer@extensysinc.com</a>



## **Additional Information**

### **History and Company Overview**

Extensys, Inc. (Extensys) is an enterprise IT solutions integrator and managed services provider. The company has been delivering IT services and solutions since 2002. Extensys currently has been purchased by Compucom, a subsidiary of Office Depot and maintains our office in Oldsmar, FL with a regional office in Miami, FL. Additionally, we have technical and supporting resources located throughout the state of Florida.

We partner with our clients to help design, implement, and manage infrastructure that supports mission-critical business applications.

What sets Extensys apart is our ability to leverage our broad technology expertise across various industries, coupled with a streamlined and flat organizational structure. This allows Extensys to be agile and flexible with our solutions and to have rapid response times to customer needs and challenges.

### **Internet of Things (IoT)**

Extensys is leading the charge in Florida supported by Cisco Systems and Cisco Eco Partners in the delivery of IoT solutions, enhancing unified communications with life safety; emergency notification and physical security for Local Government, Education and Healthcare. We are rapidly expanding our IoT solutions to include energy management via smart lighting, HVAC and sensor management.

### **Structured Cabling Solutions**

Extensys offers design, installation, testing, and maintenance of high-performance connectivity and Structured Cabling systems utilizing fiber optics, copper, and wireless solutions. Our Information Transport Systems (ITS) division is led by professionals with over 35 years of industry experience in managing installations. We are state certified contractors in both the Electrical and Low Voltage fields and employ technicians with key disciplines including BICSI and Manufacturers certification.

Whether you are looking to integrate a data center, building, or campus for audio visual, data, security, sound, or telephone, Extensys has the expertise to support your structured cabling requirements. Our structured cabling systems will support any current or future applications designed for data transmission over the link as defined by the TIA/EIA.

Our goal is complete customer satisfaction, ensuring adherence to industry standards, and high-quality performance with quick turnaround time.



### **Flexible Financing Solutions**

Through our strategic partnerships, Extensys has a wide array of financial services to assist customers meet their preferred technology consumption model. We offer our customers customizable financing options with the ability to combine all of your technology-related costs (hardware, software, maintenance, services, etc.) into a bundled financed option. We can also provide the following flexible financing products and services:

- Vendor agnostic financial offerings
- Deferred payment options
- Payments that align to cash flows
- Operating or capital lease structures to match accounting goals

#### **Extensys Methodology and Implementation Process**

Our approach is centered on ITIL, which formalizes sound Planning, Design, Management and Service Delivery. In ITIL terms this is known as Service Strategy, Service Design, Service Transition, etc. In 2014 Extensys committed itself to ITIL and associated training for all engineers and service employees. This means detailed understanding of all aspects of our projects are documented as primary input to the design and planning phase of the project. Finally, a detailed design is constructed which maps to the OSI model. Physical layouts of each rack at both data centers is documented in elevation diagrams, front and back. Power consumption and estimated heat dissipation tables are provided. Cable and patch cord map of each data component is documented. The logical and physical Visio's we produce at this stage provide us a blue print for deployment. Build checklists are utilized and configurations captured. All documents are then adjusted to reflect as-built solutions and are a critical component of the solution we turn over to customers to operate.

Extensys utilizes a three phased approach to delivering a successful project:

Phase I – Discovery

Phase II – Planning and Design

Phase III – Execution

In order to accomplish this objective, Extensys will gather and deliver all relevant and pertinent information and produce a holistic technology design and execute the design with industry best practices and highly technical engineering talent. With Extensys' unique skillset and project approach, Extensys is poised to deliver a best of breed solution.

## Other Forms

**Bid Pricing form (Exhibit A)**



**Invitation to Bid #38-19**  
**Exhibit A - Equipment and Services Pricing**

Qty	Unit	Manufacturer Part #	Description	Unit Price	Line Price
			<b>Location #1 Pure Storage FlashArray</b>		
1	EA	FA-X50R2-FC-44TB-22/22-EMEZ	Pure Storage FlashArray X50R2-FC-44TB-22/22-EMEZ	\$ 165,265.00	\$ 165,265.00
36	MO	FA-X50R2-44TB 1MO,PRM,GOLD	FA-X50R2-44TB 1 Mo. Evergreen Gold Subscription, 4 Hr Delivery, 24/7	\$ 2,275.00	\$ 81,900.00
1	EA	PS-FLASHARRAY-INSTALL	FlashArray ( //m, //x) Install Service	\$ 3,740.00	\$ 3,740.00

			<b>Location #2 Pure Storage FlashArray</b>		
1	EA	FA-X50R2-FC-44TB-22/22-EMEZ	Pure Storage FlashArray X50R2-FC-44TB-22/22-EMEZ	\$165,265.00	\$ 165,265.00
36	MO	FA-X50R2-44TB 1MO,PRM,GOLD	FA-X50R2-44TB 1 Mo. Evergreen Gold Subscription, 4 Hr Delivery, 24/7	\$2,275.00	\$ 81,900.00
1	EA	PS-FLASHARRAY-INSTALL	FlashArray ( //m, //x) Install Service	\$3,740.00	\$ 3,740.00

			<b>Location #2 FlashStack</b>		
			<b>Cisco MDS 9132T</b>		
4	EA	DS-C9132T-8PMESK9	MDS 9132T 32G FC switch, 8 FC ports, 8X16G SW, exhaust	\$ 2,260.00	\$ 9,040.00
4	EA	DS-CAC-650W-E	650W AC PSU Port side Exhaust	\$ 274.19	\$ 1,096.76
8	EA	DS-C32S-FAN-E	MDS 9132 FAN tray, port side Exhaust	\$ 66.47	\$ 531.76
4	EA	DS-CAC-650W-E	650W AC PSU Port side Exhaust		\$ -
8	EA	CAB-C15-CBN	Cabinet Jumper Power Cord, 250 VAC 13A, C14-C15 Connectors		\$ -
8	EA	DS-C32S-FAN-E	MDS 9132 FAN tray, port side Exhaust		\$ -
32	EA	DS-SFP-FC16G-SW	16 Gbps Fibre Channel SW SFP+, LC		\$ -
16	EA	SFP-10G-SR-S=	10GBASE-SR SFP Module, Enterprise-Class	\$ 232.65	\$ 3,722.40
4	EA	DS-9132T-KIT-CSCO	MDS 9132T Accessory Kit for Cisco		\$ -
4	EA	M91S5K9-8.2.1	MDS 9100 Supervisor/Fabric-5, NX-OS Software Rel. 8.2(1)		\$ -
32	EA	DS-SFP-FC16G-SW	16 Gbps Fibre Channel SW SFP+, LC	\$ 110.34	\$ 3,530.88
4	EA	M9132T-PL8	MDS 9132T 32G FC switch 8-Port upgrade license	\$ 1,927.65	\$ 7,710.60
4	EA	CON-3SNT-91328PME	3YEAR SNTC 24X7X4 MDS 9132T 32G FC switch, 8 FC ports, 8X1	\$ 864.00	\$ 3,456.00

			<b>Cisco UCS 6332 FI</b>		
1	EA	UCS-SP-FI633216-2X	UCS SP Select 2 x 6332-16UP FI		\$ -
2	EA	UCS-SP-FI6332-16UP	(Not sold standalone) UCS 6332-16UP FI/4 QSFP+,8SFP+	\$ 10,890.00	\$ 21,780.00
4	EA	UCS-PSU-6332-AC	UCS 6332 Power Supply/100-240VAC		\$ -
4	EA	CAB-C13-CBN	Cabinet Jumper Power Cord, 250 VAC 10A, C14-C13 Connectors		\$ -
8	EA	QSFP-H40G-CU3M	40GBASE-CR4 Passive Copper Cable, 3m		\$ -
8	EA	QSFP-40G-SR-BD	QSFP40G BiDi Short-reach Transceiver		\$ -
8	EA	DS-SFP-FC16G-SW	16 Gbps Fibre Channel SW SFP+, LC		\$ -
2	EA	N10-MGT015	UCS Manager v3.2		\$ -
8	EA	UCS-FAN-6332	UCS 6332/ 6454 Fan Module		\$ -
2	EA	UCS-ACC-6332	UCS 6332/ 6454 Chassis Accessory Kit		\$ -



**Invitation to Bid #38-19**  
**Exhibit A - Equipment and Services Pricing**

2	EA	CON-3SNTP-SP16UP	3YEAR SMARTNET 24X7X4 UCS 6332-16UP FI/N	5362	\$	10,724.00
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Cisco UCS 5108 Chassis						
1	EA	UCS-SP-5108-AC3	UCS SP Select 5108 AC2 Chassis w/2304 IO, 4x SFP cable 3m	8630	\$	8,630.00
4	EA	UCSB-PSU-2500ACDV	2500W Platinum AC Hot Plug Power Supply - DV		\$	-
4	EA	CAB-C19-CBN	Cabinet Jumper Power Cord, 250 VAC 16A, C20-C19 Connectors		\$	-
4	EA	QSFP-H40G-CU3M	40GBASE-CR4 Passive Copper Cable, 3m		\$	-
8	EA	N20-FAN5	Fan module for UCS 5108		\$	-
1	EA	N20-CAK	Accessory kit for UCS 5108 Blade Server Chassis		\$	-
8	EA	N20-CBLKB1	Blade slot blanking panel for UCS 5108/single slot		\$	-
1	EA	N01-UAC1	Single phase AC power module for UCS 5108		\$	-
1	EA	UCSB-5108-PKG-HW	UCS 5108 Packaging for chassis with half width blades.		\$	-
1	EA	N20-FW015	UCS 5108 Blade Chassis FW Package 3.2		\$	-
2	EA	UCS-IOM-2304	UCS 2304XP I/O Module (4 External, 8 Internal 40Gb Ports)		\$	-
1	EA	CON-3SNTP-5108AC3	3YEAR SMARTNET 24X7X4, UCS SP Select 5108 AC2 Chassis w/2304 I	693	\$	693.00

Cisco UCS B200 M5 Blade						
6	EA	UCSB-B200-M5-U	UCS B200 M5 Blade w/o CPU, mem, HDD, mezz (UPG)	\$1,194.81	\$	7,168.86
6	EA	UCSB-MRAID12G	Cisco FlexStorage 12G SAS RAID controller with Drive bays	\$248.93	\$	1,493.58
12	EA	UCS-SD240GBMS4-EV	240GB 2.5-inch Enterprise Value 6G SATA SSD	\$243.95	\$	2,927.40
6	EA	UCSB-MLOM-40G-04	Cisco UCS VIC 1440 modular LOM for Blade Servers	\$464.96	\$	2,789.76
6	EA	N20-FW016	UCS 5108 Blade Chassis FW Package 4.0		\$	-
6	EA	UCS-MSTOR-SD	Mini Storage Carrier for SD (holds up to 2)		\$	-
6	EA	UCSB-HS-M5-F	CPU Heat Sink for UCS B-Series M5 CPU socket (Front)		\$	-
96	EA	UCS-DIMM-BLK	UCS DIMM Blanks		\$	-
6	EA	UCSB-HS-M5-R	CPU Heat Sink for UCS B-Series M5 CPU socket (Rear)		\$	-
12	EA	UCS-CPU-I6230	2.1GHz/125W 6230 20C/27.50MB 3DX DDR4 2933MHz	\$2,160.29	\$	25,923.48
48	EA	UCS-MR-X64G2RT-H	64GB DDR4-2933-MHz RDIMM/2Rx4/1.2v	\$1,358.00	\$	65,184.00
6	EA	CON-3SNTP-BB200M5U	3YEAR SNTC 24X7X4 UCS B200 M5 Blade w/o CPU, mem, HDD, mezz	\$1,023.00	\$	6,138.00

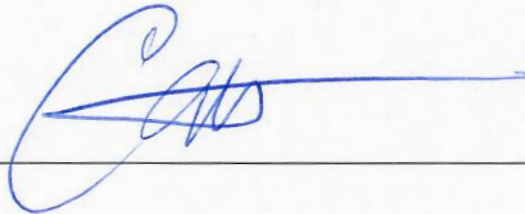
Professional Services						
		Installation, configuration, data migration, and registration of all necessary licenses (itemized list to be included)		\$ 18,500.00	\$	-
		Configuration of Pure Storage replication services in compliance with best practice failover strategies		\$ 1,480.00	\$	-
		Product and solution training (include description of services)		\$ 2,960.00	\$	-

**Invitation to Bid #38-19**  
**Exhibit A - Equipment and Services Pricing**

Other Service Rates			
1	HR	Hourly rate for other services listed below (minimum 1 hour charge)	<div>\$185.00</div> <div>Per Hour</div>

List of additional services with hourly rates:

Signature



Date

6/26/2019



## BID PRICING

---

Pursuant to the contract specifications enumerated and described in this solicitation, we agree to furnish the SAN Equipment to the City of Clearwater at the price(s) stated on attached Exhibit A.

Any additional services with hourly rates must be stated in Exhibit A.

### DELIVERY REQUIREMENTS

**FOB: Destination, Freight Prepaid and Allowed**

**Freight Costs: Unit prices should include all freight and transportation charges**

### PAYMENT TERMS

Select one choice of payment terms:

- ☒ Net 30, City of Clearwater's standard payment terms
- ☐ 2%15, Net 30
- ☐ \_\_\_\_%10, Net 30 (identify discount not less than 3%)
- ☐ Procurement card (Bank of America Visa card):
  - Credit processing fees apply
  - Invoices under \$2,500 paid by department

Vendor: Extensys, Inc. Date: June 3, 2019



**W-9 Form**



## Request for Taxpayer Identification Number and Certification

► Go to [www.irs.gov/FormW9](http://www.irs.gov/FormW9) for instructions and the latest information.

Give Form to the  
requester. Do not  
send to the IRS.

Print or type.  
See Specific Instructions on page 3.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank. <b>Extensys, Inc.</b>		
2 Business name/disregarded entity name, if different from above		
3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only one of the following seven boxes.  <input type="checkbox"/> Individual/sole proprietor or single-member LLC <input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ► Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is not disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner. <input type="checkbox"/> Other (see instructions) ►	4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):  Exempt payee code (if any) _____  Exemption from FATCA reporting code (if any) _____  <small>(Applies to accounts maintained outside the U.S.)</small>	
5 Address (number, street, and apt. or suite no.) See instructions. <b>253 Pine Ave N., Building B</b>	Requester's name and address (optional)	
6 City, state, and ZIP code <b>Oldsmar, FL 34677</b>		
7 List account number(s) here (optional)		

### Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

**Note:** If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number										
				-				-		
or										
Employer identification number										
6	1			-	1	4	0	6	5	3 9

### Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

**Certification instructions.** You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign  
Here

Signature of  
U.S. person ►

Date ► 1/31/18

## General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

**Future developments.** For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to [www.irs.gov/FormW9](http://www.irs.gov/FormW9).

### Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)

- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See *What is backup withholding*, later.



**Exceptional / Additional Materials / Addenda form**

## EXCEPTIONS/ADDITIONAL MATERIALS/ADDENDA

Bidders shall indicate any and all exceptions taken to the provisions or specifications in this solicitation document. Exceptions that surface elsewhere and that do not also appear under this section shall be considered invalid and void and of no contractual significance.

### Exceptions (mark one):

**Note – Any material exceptions taken to the City's Standard Terms and Conditions will render a Bid Non-responsive.**

- ☒ No exceptions  
☐ Exceptions taken (describe--attach additional pages if needed)

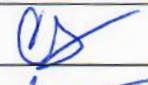
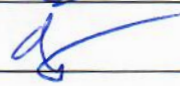
### Additional Materials submitted (mark one):

- ☒ No additional materials have been included with this bid  
☐ Additional Materials attached (describe--attach additional pages if needed)

### Addenda

Bidders are responsible for verifying receipt of any addenda issued by checking the City's website at <http://www.myclearwater.com/business/bid-information/> prior to the bid opening. Failure to acknowledge any addenda issued may result in a response being deemed non-responsive.

**Acknowledgement of Receipt of Addenda (initial for each addenda received, if applicable):**

Addenda Number	Initial to acknowledge receipt
1	
2	

Vendor Name Extensys, Inc. Date: June 20, 2019

**Vendor Information form**



**EXCEPTIONS/ADDITIONAL MATERIALS/ADDENDA**

---

Company Legal/Corporate Name: Extensys, Inc.

Doing Business As (if different than above): \_\_\_\_\_

Address: 253 Pine Avenue, Bld. B

City: Oldsmar State: FL Zip: 34677 -

Phone: (813) 855-3909 Fax: (813) 855-3922

E-Mail Address: chris.jordan@extensysinc.com Website: www.extensysinc.com

DUNS # 118576243

Remit to Address (if different than above):

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Order from Address (if different from above):

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

**Contact for Questions about this bid:**

Name: Christopher Jordan Fax: (813) 855-3922

Phone: (727) 434-1112 E-Mail Address: chris.jordan@extensysinc.com

Day-to-Day Project Contact (if awarded):

Name: Christopher Jordan Fax: (813) 855-3922

Phone: (727) 434-1112 E-Mail Address: chris.jordan@extensysinc.com

\_\_\_\_\_ Certified Small Business Certifying Agency: \_\_\_\_\_

\_\_\_\_\_ Certified Minority, Woman or Disadvantaged Business Enterprise Certifying Agency: \_\_\_\_\_

\_\_\_\_\_

**Offer Certification form**



## OFFER CERTIFICATION

**By signing and submitting this Bid, the Vendor certifies that:**

- a) It is under no legal prohibition on contracting with the City of Clearwater.
- b) It has read, understands, and is in compliance with the specifications, terms and conditions stated herein, as well as its attachments, and any referenced documents.
- c) It has no known, undisclosed conflicts of interest.
- d) The prices offered were independently developed without consultation or collusion with any of the other respondents or potential respondents or any other anti-competitive practices.
- e) No offer of gifts, payments or other consideration were made to any City employee, officer, elected official, or consultant who has or may have had a role in the procurement process for the services and or goods/materials covered by this contract.
- f) It understands the City of Clearwater may copy all parts of this response, including without limitation any documents and/or materials copyrighted by the respondent, for internal use in evaluating respondent's offer, or in response to a public records request under Florida's public records law (F.S. 119) or other applicable law, subpoena, or other judicial process; provided that Clearwater agrees not to change or delete any copyright or proprietary notices.
- g) Respondent hereby warrants to the City that the respondent and each of its subcontractors ("Subcontractors") will comply with, and are contractually obligated to comply with, all Federal Immigration laws and regulations that relate to their employees.
- h) Respondent certifies that they are not in violation of section 6(j) of the Federal Export Administration Act and not debarred by any Federal or public agency.
- i) It will provide the materials or services specified in compliance with all Federal, State, and Local Statutes and Rules if awarded by the City.
- j) It is current in all obligations due to the City.
- k) It will accept such terms and conditions in a resulting contract if awarded by the City.
- l) The signatory is an officer or duly authorized agent of the respondent with full power and authority to submit binding offers for the goods or services as specified herein.

**ACCEPTED AND AGREED TO:**

Company Name: Extensys, Inc.

Signature: 

Printed Name: Christopher Jordan

Title: VP of Technology

Date: June 20, 2019

**Scrutinized Business form**



## SCRUTINIZED BUSINESSES FORM

### SCRUTINIZED COMPANIES THAT BOYCOTT ISRAEL LIST CERTIFICATION FORM THIS FORM MUST BE COMPLETED AND SUBMITTED WITH THE BID/PROPOSAL. FAILURE TO SUBMIT THIS FORM AS REQUIRED MAY DEEM YOUR SUBMITTAL NONRESPONSIVE.

The affiant, by virtue of the signature below, certifies that:

1. The vendor, company, individual, principal, subsidiary, affiliate, or owner is aware of the requirements of section 287.135, Florida Statutes, regarding companies on the Scrutinized Companies that Boycott Israel List, or engaged in a boycott of Israel; and
2. The vendor, company, individual, principal, subsidiary, affiliate, or owner is eligible to participate in this solicitation and is not listed on the Scrutinized Companies that Boycott Israel List, or engaged in a boycott of Israel; and
3. "Boycott Israel" or "boycott of Israel" means refusing to deal, terminating business activities, or taking other actions to limit commercial relations with Israel, or persons or entities doing business in Israel or in Israeli-controlled territories, in a discriminatory manner. A statement by a company that it is participating in a boycott of Israel, or that it has initiated a boycott in response to a request for a boycott of Israel or in compliance with, or in furtherance of, calls for a boycott of Israel, may be considered as evidence that a company is participating in a boycott of Israel; and
4. If awarded the Contract (or Agreement), the vendor, company, individual, principal, subsidiary, affiliate, or owner will immediately notify the City of Clearwater in writing, no later than five (5) calendar days after any of its principals are placed on the Scrutinized Companies that Boycott Israel List, or engaged in a boycott of Israel.

Authorized Signature

**Christopher Jordan**

Printed Name

**VP of Technology**

Title

**Extensys, Inc.**

Name of Entity/Corporation

STATE OF **FLORIDA**

COUNTY OF **PINELLAS**

The foregoing instrument was acknowledged before me on this 20th day

of **June**, 20**19**, by **Christopher Jordan** (name of person

whose signature is being

notarized) as the **Vice President** (title) of **Extensys, Inc.**

(name of corporation/entity), personally known to me as described herein \_\_\_\_\_, or

produced a \_\_\_\_\_ (type of identification) as identification, and who did/did not

take an oath.

**Vincent F. Bauer**

Notary Public

**Vincent F. Bauer**

Printed Name



VINCENT F BAUER  
Commission # GG 227304  
Expires June 11, 2022  
Bonded Thru Budget Notary Services

My Commission Expires: **June 11, 2022**

NOTARY SEAL ABOVE

## Warranty Information

All **PureStorage** equipment is priced with 3 years of Evergreen Gold Subscription, 4 Hour Delivery, 24/7 Support, DSE capable

<https://www.purestorage.com/content/dam/purestorage/pdf/EvergreenStorageProgramDescription.pdf>

All **Cisco** equipment is priced with 3 years of the manufacturer SmartNet Support SNTP. This support level is defined as: SNTC 24x7x4 (Onsite Engineer=RMA / Software Application Updates=Yes / Maintenance Releases=Yes / TAC Access=Yes / Advance Hardware Replacement= Yes)

These details can be found at:

<https://connectthedots.cisco.com/connectdots/serviceWarrantyFinderRequest?fl=sf>

Cisco Warranty Details:

DS-C9132T-8PMESK9 has the following Warranty:

<https://www.cisco.com/c/en/us/products/warranties/warranty-doc-c99-740608.html>

UCS-SP-FI6332-16UP has the following Warranty:

<https://www.cisco.com/c/en/us/products/warranties/warranty-doc-c99-740599.html>

UCS-SP-5108-AC3 has the following Warranty:

<https://www.cisco.com/c/en/us/products/warranties/warranty-doc-c99-740599.html>

UCSB-B200-M5-U has the following Warranty:

<https://www.cisco.com/c/en/us/products/warranties/warranty-doc-c99-740599.html>



## References

1	<b>Name of Agency</b>	Pinellas County Schools
	<b>Contact Person &amp; e-mail address</b>	Dave Galvin / <a href="mailto:galvind@pcsb.org">galvind@pcsb.org</a>
	<b>Title</b>	Director, Networking and Telecommunications
	<b>Past or Current Client</b>	Current – 10 years
	<b>Telephone Number</b>	(727) 588-6059
2	<b>Name of Agency</b>	Saint Leo University
	<b>Contact Person &amp; e-mail address</b>	Darren Cooper / <a href="mailto:darren.cooper@saintleo.edu">darren.cooper@saintleo.edu</a>
	<b>Title</b>	Director, Infrastructure
	<b>Past or Current Client</b>	Current – Six years
	<b>Telephone Number</b>	(352) 588-7574
3	<b>Name of Agency</b>	City of Miami
	<b>Contact Person &amp; e-mail address</b>	Joseph Pontillo / <a href="mailto:jpontillo@miamigov.com">jpontillo@miamigov.com</a>
	<b>Title</b>	Network Administrator
	<b>Past or Current Client</b>	Current – 3 months
	<b>Telephone Number</b>	(305) 416-1574

## Addendums





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**Addendum #1**  
**ITB # 38-19, Storage Area Network (SAN) Equipment**  
**6/5/2019**

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**NOTICE IS HEREBY GIVEN** that the following addendum serves to provide clarification and to answer the questions received on ITB # 38-19, Storage Area Network (SAN) Equipment.

Question 1: Are you open to other manufacturers or is Pure Storage the only option?

**Answer to Question 1:** Refer to RFP DETAILED SPECIFICATIONS, 5. VENDOR QUALIFICATIONS, NOTE: the city is not accepting bids from alternative hardware vendors....., page 16.

Question 2: Does the services request include the Cisco UCS Blade Server installation for location #1 or #2?

**Answer to Question 2:** The services request includes the Cisco UCS Blade Server installation at location 2.

Question 3: If UCS is included in services, is this a full build out to installing VMware hypervisor and integrate with vCenter?

**Answer to Question 3:** Cisco UCS is included in services and will be a full buildout to installing VMware hypervisor and integration with vCenter.

Question 4: Does the services request Include the Cisco MDS FC Switch Installation? If yes, a pair for each Location #1 & #2 or just one location?

**Answer to Question 4:** The services request includes the Cisco MDS FC Switch installation at both locations.

Question 5: Is the source storage co-located with the new Pure for data migration? If not, are we migrating the data across the WAN?

**Answer to Question 5:** The services request includes data migration across the WAN (WAN is Gigabit fiber.)

Question 6: Does the data to be migrated consist of only VMware Datastores?

**Answer to Question 6:** The data to be migrated consist of only VMware Datastores.

Question 7: For Pure Storage replication does the City have any other tools i.e. SRM that need to be implemented or is this only Pure Replication?

**Answer to Question 7:** The City does not have SRM. Replication will be just Pure Replication.

Question 8: For training are official courses required or is informal knowledge transfer training with detailed documentation sufficient?

**Answer to Question 8:** Knowledge transfer is sufficient for training purposes.

End of Addenda



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**Addendum #2**  
**ITB # 38-19, Storage Area Network (SAN) Equipment**  
**6/18/2019**

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**NOTICE IS HEREBY GIVEN** that the following addendum serves to provide clarification and to answer the questions received on ITB # 38-19, Storage Area Network (SAN) Equipment.

Question 1: Please confirm that the 3rd Clearwater site SAN will remain as is.

**Answer to Question 1:** *The third (3rd) Clearwater SAN system will remain the same and is not a part of this solicitation.*

Question 2: Please confirm the make and model of the current SANs that will be replaced.

**Answer to Question 2:** *The current SAN systems are Dell EMC Compellent SC8000.*

Question 3: Please confirm how the current SANs are attached and what storage fabric is currently being used.

**Answer to Question 3:** *The current SAN systems are attached with Fiber Channel / Cisco MDS 9148 / UCS 6248up.*

Question 4: What is the current compute stack at site one?

**Answer to Question 4:** *The current compute stack is Cisco UCS running VMware ESXi 6.0.*

Question 5: Will the city make the full Rvtools pull for site one and two available?

**Answer to Question 5:** *Yes, the Rvtools pull will be available for both sites.*

*End of Questions & Answers*

*End of Addenda*

## Partner Letters





June 4, 2019

Extensys, Inc.  
253 Pine Avenue N  
Building B  
Oldsmar, Florida 34677-4630

Attn: Chris Jordan, Vice President, Technology

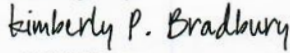
Ref: Letter of Authorization for City of Clearwater/Invitation to Bid #38-19  
Storage Area Network (SAN) Equipment

Dear Mr. Jordan,

This letter is to confirm that Extensys, Inc. is an authorized reseller in good standing of Pure Storage, Inc. ("Pure Storage") products and services. As such Extensys, Inc. is authorized to sell all Pure Storage products and services in support of any contract resulting from the above-referenced solicitation.

Should you require any additional information, please feel free to contact me at [kim.bradbury@purestorage.com](mailto:kim.bradbury@purestorage.com), cell (301) 717-9968 or fax (410) 414-2117.

Sincerely,

DocuSigned by:  
  
B97819797A454C9...

Kimberly P. Bradbury  
Director, Public Sector Contracts

## PureStorage FlashArray Installation Services:

### Installation Preparation - Validate Account Information, Configuration and Hardware Ordered

The Pure Storage Installation team will work with Pure Storage Account Team and the Customer to confirm pre- install technical and logistical information, including:

- Setting up a Pre-Call Introduction to discuss expectations and requirements for onsite engagement
- Identify Customer Contact, Data Center Address, Access Tickets opened
- Review Site Survey Requirements (Power, rack unit availability)
- Address any product discrepancies that may be identified (FC vs. iSCSI, additional cables/cards)

### On-Site Hardware Installation

The Pure Storage on-site installation resource will confirm the installation of the chassis with the customer, and perform the following steps to rack and power up the hardware, including:

- Unpack array and ensure all components are present and functional
- Mount Rails, Controllers & Shelves
- Connect SAS Cables from shelves to the controllers (if required)
- Connect customer supplied Ethernet management cables to the Array controllers
- Connect customer supplied FC and/or iSCSI SAN connections to the array controllers
- Connect customer supplied Replication network connections to the array controllers

### Purity Software Enablement and Installation

**Note: Initial configuration is based off of a Pre-Installation Checklist supplied by the customer**

Once installed in the rack, the Pure Storage on-site installation resource will confirm the installation of the chassis with the customer and then follow the steps in the latest FlashArray installation manual to power on and configure the FlashArray.

### To configure the array the Pure Resource will:

Validate the appropriate level of code is on the FlashArray. If the FlashArray arrives on-site with a lower revision of code, or a version of code that has not been validated by the customer, the appropriate version of code will be loaded and configured. Next, they will configure the FlashArray by:

- Booting up Primary Controller and executing the Purity Installation script.
- Booting up Secondary Controller and executing the Purity Installation script.

Once the FlashArray has been configured, Pure will perform a complete health check and run configuration and hardware tests for all services to validate the array has been installed correctly and is in a healthy state.

### Connect to the customers SAN Infrastructure and validate connectivity

Once the array is up and running, connectivity to the block storage network (FC or iSCSI) will be validated.



**Note:** The customer is responsible for configuring and providing connectivity to FC and/or iSCSI SAN networks along with FC zoning configuration.

- For FC Configurations:

- If not already completed above, connect FC connections, presented by the customer in the rack location of the Pure Storage Array, to the Pure Storage Array.
- Validate FC connectivity from all the array ports to the SAN switch.

- For iSCSI Configurations:

- If not already completed above, connect 10G Ethernet connections (Fiber or TwinAx), presented by the customer in the rack location of the Pure Storage Array, to the Pure Storage Array.
- From the Pure GUI or CLI, assign IP address information including MTU size (provided by the customer) to the iSCSI interfaces and ensure that all ports have been enabled.
- Confirm that the Ethernet switch shows LINK on all iSCSI Ports.
- Confirm that the Pure Array shows IQNs on all iSCSI ports.

### **Knowledge transfer**

After the array has been installed, the installer will answer any questions the customer might have regarding the installation. Additionally, the Pure implementation engineer will take 10-20 mins to walk the customer through the Pure FlashArray GUI guiding them to perform basic tasks, some of which are listed below:

- Change the pureuser password
- Create Host and Host Groups
- Create Volumes
- Connect the Host to the volumes
- Open a Remote Assist Session
- View Host Connections and show balancing (if hosts are present)
- Walk the customer through the other screens within the GUI



## FlashStack solution and cooperative support

- All-flash enterprise-grade CI
- Lower risk and cost with multi-vendor skilled partner teams
- Flexible design and scale
- Validated, fully tested and documented architecture

### THE FLASHSTACK ADVANTAGE

- Simple no trade-off architecture eliminates disparate hardware silos
- Proven, validated inter-operability and for confident application deployment
- Infrastructure for both traditional and converged operating models so you can consolidate operations at your pace
- Converged infrastructure for multi-hypervisor, bare metal or container deployments
- Built for the cloud, including full integration with cloud platforms from Cisco, VMware, OpenStack and others

### ARCHITECT ONCE AND ADOPT NEW TECHNOLOGY WITHOUT DISRUPTION

IT Infrastructure sprawl hinders the agility needed to adapt to changing business dynamics and the ability to scale on demand. As a result, new technology is slow to deploy requiring regular and time-consuming changes to data center architectures. FlashStack's fully modular and non-disruptive architecture abstracts hardware into software for non-disruptive changes which allow customers to seamlessly deploy new technology without having to rearchitect their data center solutions.

### REDEFINE BUSINESS CONTINUITY AND DISASTER RECOVERY

Business continuity is a major requirement for most enterprises, regardless of size. FlashStack delivers high availability (HA) by leveraging Cisco and Pure technologies: Cisco UCS, Nexus switching with ACI Anywhere, and Purity ActiveCluster together provide these capabilities.

ActiveCluster has use cases within and between data centers. It enables live migration between any two FlashStack systems, or rack-level HA clustering of four controllers for maximum resiliency. ActiveCluster really shines in the metro use case: simply take a running volume and "stretch" it between two sites up to 150 miles apart, with zero additional configuration required. Finally, ActiveCluster is fully-integrated with asynchronous snapshot replication, enabling a third replication copy to be set to a datacenter anywhere on the globe.



### Pure Storage

- Pure Storage all-flash storage system – the FlashArray or FlashBlade
- Storage capacity from 5.5TB to 1.5PB
- Block/File/Object functionality, scale-up and scale-out designs
- Backwards and future compatible, in-chassis upgrades

### Cisco UCS

- Cisco Unified Computing System (UCS) -- highly dense, modular, policy-driven compute platform
- From 2 to 160 individual UCS hosts (one UCS-M domain)
- UCS B-series and UCS C-series, fabric extenders, fabric interconnects
- UCS "mini" support
- Backwards and future compatible, in-chassis upgrades

### Cisco Fabric

- State-of-the-art data center fabric switching
- Fibre Channel or Ethernet/iSCSI storage interconnect
- Nexus 5K, 7K, 9K. MDS. Customer-defined choice for configurations

## PureStorage Online Training

The City of Clearwater will receive access to Pure Storage's online training modules. Each 15-20 minute module walks you through the steps to implement various capabilities: define snapshots, setup async replication between FlashArrays, VMware integration, etc. Several City engineers will be setup with ongoing access the video training library.





## Details on the replication capabilities and ports used for replication (assuming 10Gb)...

### FlashArray Replication Firewall Requirements

In order to replicate between two FlashArrays, the arrays must be able to communicate via the following ports.

Service/Port Type	Firewall Port
Management ports	443
Replication Ports	8117



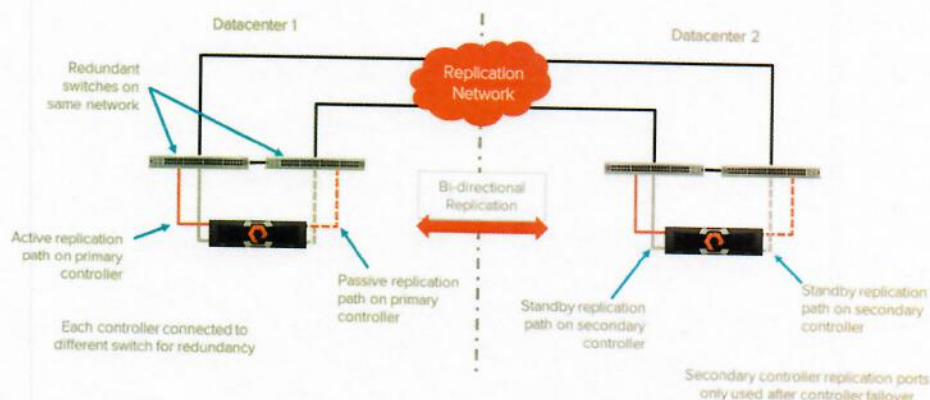
### Redundant Replication Network Design

The following image describes a redundant network design. In order to achieve a fully redundant design each controller must have its replication ports attached to different redundant switches on the same network. Directly connecting the source and target storage arrays is not supported as this may prevent the primary controller in one storage array from being able to access the primary controller in the other storage array as the role of primary can dynamically move from one controller to the other. The orange connections represent the two connections, one active and one passive, that are configured into the replbond interface on the primary controller. The grey



© Pure Storage 2017 | 12

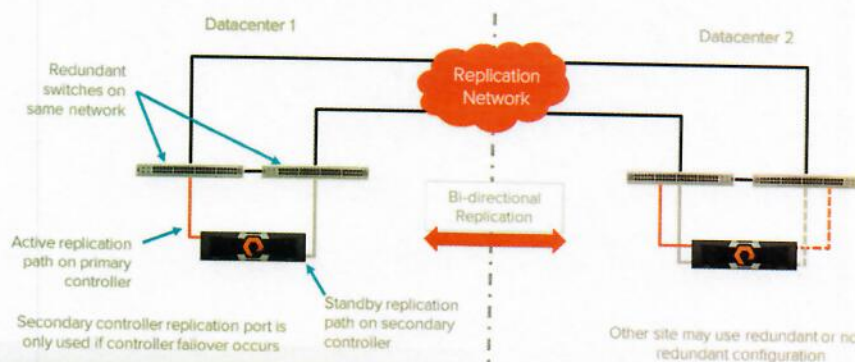
connections represent the replication ports on the secondary controller that are connected to the switches, however these standby ports are only used if the secondary controller becomes the primary in the event of a failover.



Note: The replbond interface does not exist on the secondary controller, as such the network ports are not live until a failover occurs and may not show an active link on the switch.

### Non-Redundant Replication Port Network Design

All available FlashArray platforms provide options for redundant replication ports, however in some environments it may not be possible to connect each controller redundantly. The following image describes a non-redundant network configuration. In this configuration each controller has only one port connected for replication. In this design a replbond interface is still used, however the replbond interface contains only one physical port. In the image below the orange connection represents the only replication port on the primary controller. The grey connection represents the standby connection on the secondary controller, which will only be used in the case of a controller failover when that controller becomes primary.





## Cisco UCS 6332 - 16UP Fabric Interconnect

Cisco UCS 6332-16UP Fabric Interconnect



### Get Flexible, Scalable, Converged Infrastructure

Gain uniform access to both networks and storage with the Cisco UCS 6332-16UP 40-Port Fabric Interconnect. The 6332-16UP is a core part of the Cisco Unified Computing System (Cisco UCS), and is typically deployed in redundant pairs.

### Features and Capabilities

The 6332-16UP Fabric Interconnect is the management and communication backbone for Cisco UCS B-Series Blade Servers, C-Series Rack Servers, and 5100 Series Blade Server Chassis. All servers attached to a 6332-16UP Fabric Interconnect become part of one highly available management domain.

Because it supports unified fabric, the Cisco UCS 6300 Series Fabric Interconnect provides both LAN and SAN connectivity for all servers within its domain.

The 6332-16UP offers 40 ports in one rack unit (RU), including:

- 24 40-Gigabit Ethernet and Fibre Channel over Ethernet (FCoE)
- 16 1- and 10-Gbps and FCoE or 4-, 8-, and 16-Gbps Fibre Channel unified ports

Enhanced features and capabilities include:

- Increased bandwidth up to 2.43 Tbps
- Centralized unified management with Cisco UCS Manager
- Efficient cooling and serviceability such as front-to-back cooling, redundant front-plug fans and power supplies, and rear cabling

### Highly Scalable Architecture

Cisco Fabric Extender technology scales up to 20 chassis in a single unified system without additional complexity. This means that customers can eliminate dedicated chassis management and blade switches, as well as reduce cabling.

### Virtual-Machine-Optimized Services

Cisco Virtual Machine Fabric Extender technology helps enable a consistent operational model and visibility between physical and virtual environments. This technology also simplifies enforcement of security and network policy when moving virtual machines across hosts.

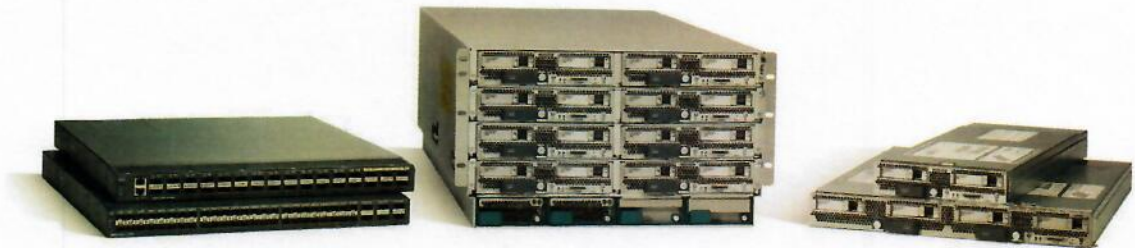
### Cisco SingleConnect Technology

SingleConnect is an easy, intelligent, and efficient way to connect and manage computing in the data center. SingleConnect offers one connection for:

- Rack servers and blade servers
- LAN, SAN, and systems management
- Physical servers and virtual machines

## Cisco UCS 5100 Series Blade Server Chassis

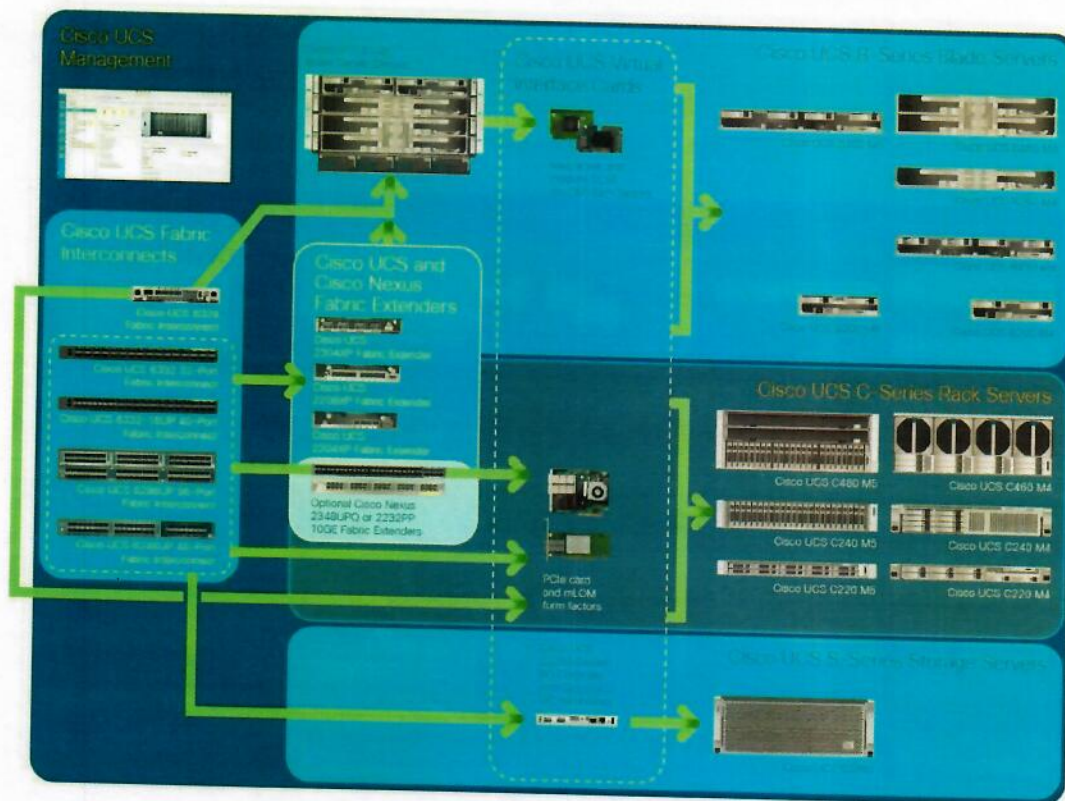
# Cisco UCS 5100 Series Blade Server Chassis



## Cisco Unified Computing System Overview

The Cisco Unified Computing System™ (Cisco UCS®) is a next-generation data center platform that unites computing, networking, storage access, and virtualization resources into a cohesive system designed to reduce Total Cost of Ownership (TCO) and increase business agility. The system integrates a low-latency, lossless 10/40 Gigabit Ethernet unified network fabric with enterprise-class, x86-architecture servers. The system is an integrated, scalable, multichassis platform in which all resources participate in a unified management domain (Figure 1).

**Figure 1.** The Cisco Unified Computing System Is a Highly Available Cohesive Architecture



With the [Cisco UCS 6324 Fabric Interconnect](#), the management flexibility and cable reduction of the full-scale Cisco UCS solution is now available in a single-chassis implementation. The Cisco UCS 6324 Fabric Interconnect



allows a single Cisco UCS chassis to be managed and configured in the same way as a full-scale Cisco UCS solution, providing the advantages of Cisco UCS to smaller businesses and remote sites.

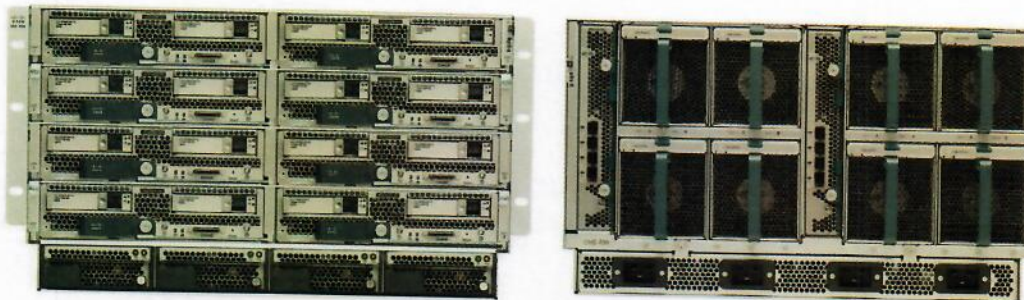
## Product Overview

The Cisco UCS 5100 Series Blade Server Chassis is a crucial building block of the Cisco Unified Computing System, delivering a scalable and flexible blade server chassis for today's and tomorrow's data center while helping reduce TCO.

The Cisco UCS 5108 Blade Server Chassis (Figure 2) is six Rack Units (6RU) high and can mount in an industry-standard 19-inch rack. A chassis can house up to eight half-width Cisco UCS B-Series Blade Servers and can accommodate both half-width and full-width blade form factors.

Four hot-swappable power supplies are accessible from the front of the chassis, and single-phase 2500 W AC, 2500 W -48 VDC, and 2500 W 200 - 380 VDC power supplies and chassis are available. These power supplies are up to 94 percent efficient and meet the requirements for the 80 Plus Platinum rating. The power subsystem can be configured to support nonredundant, N+1 redundant, and grid-redundant configurations. The rear of the chassis contains eight hot-swappable fans, four power connectors (one per power supply), and two I/O bays that can support either Cisco UCS 2000 Series Fabric Extenders or the Cisco UCS 6324 Fabric Interconnect. A passive midplane provides up to 80 Gbps of I/O bandwidth per server slot and up to 160 Gbps of I/O bandwidth for two slots. The chassis support 40 Gigabit Ethernet standards with the 2304 Fabric Extender.

**Figure 2.** Cisco UCS 5108 Blade Server Chassis with Blade Servers Front and Back



## Features and Benefits

The Cisco UCS 5108 Blade Server Chassis revolutionizes the use and deployment of blade-based systems. By incorporating unified fabric, integrated, embedded management, and fabric extender technology, the chassis uses fewer physical components, has no need for independent management, and enables greater energy efficiency than traditional blade server chassis. This simplicity eliminates the need for dedicated chassis management and blade switches, reduces cabling, and enables Cisco UCS to scale to 20 chassis without adding complexity. The Cisco UCS 5108 chassis is a critical component in delivering the Cisco UCS benefits of data center simplicity and IT responsiveness.

In addition, the Cisco UCS 5108 chassis has the architectural advantage of not having to power and cool excess switches in each chassis. With a larger power budget per blade server, Cisco can design uncompromised expandability and capabilities in its blade servers, as evidenced by the new Cisco UCS B200 M5 and B480 M5 Blade Servers.



Table 1 summarizes the features and benefits of the Cisco UCS 5108.

**Table 1.** Features and Benefits

Feature	Benefit
Management by Cisco UCS Manager	<ul style="list-style-type: none"> <li>Reduces TCO by managing servers, networking, and storage from a single interface</li> </ul>
Unified fabric	<ul style="list-style-type: none"> <li>Reduces TCO by reducing the number of Network Interface Cards (NICs), Host Bus Adapters (HBAs), switches, and cables that need to be managed, cooled, and powered</li> </ul>
Support for one or two Cisco UCS 2100, 2200, or 2300 Series Fabric Extenders	<ul style="list-style-type: none"> <li>Eliminates switches from the chassis along with complex configuration and management of those switches, allowing a system to scale without adding complexity and cost</li> <li>Allows use of two fabric extenders for both redundancy and aggregation of bandwidth</li> <li>Enables bandwidth scaling based on application needs; blades can be configured from 1.25 Gbps to 40 Gbps or more</li> </ul>
Support for Cisco UCS 6324 Fabric Interconnect	<ul style="list-style-type: none"> <li>Allows the simplicity and consistency of a Cisco UCS managed solution to be economically achieved for single-chassis implementations</li> </ul>
Autodiscovery	<ul style="list-style-type: none"> <li>Requires no configuration; like all Cisco UCS components, chassis are automatically recognized and configured by Cisco UCS Manager</li> </ul>
High-performance midplane	<ul style="list-style-type: none"> <li>Provides investment protection for new fabric extenders, fabric interconnects, and future blade servers</li> <li>Supports up to 2 x 40 Gigabit Ethernet for every half-width blade server slot when used in high-availability mode</li> <li>Provides 8 blades with 1.2 terabits (Tb) of available Ethernet throughput to meet future I/O requirements</li> <li>Provides reconfigurable chassis to accommodate a variety of current and future blade server formfactors and functions</li> </ul>
Redundant hot-swappable power supplies and fans	<ul style="list-style-type: none"> <li>Provides high availability in multiple configurations</li> <li>Increases serviceability</li> <li>Provides uninterrupted service during maintenance</li> </ul>
Hot-pluggable blade servers and fabric extenders	<ul style="list-style-type: none"> <li>Provides uninterrupted service during maintenance and server deployment</li> </ul>
Comprehensive monitoring	<ul style="list-style-type: none"> <li>Provides extensive environmental monitoring on each chassis</li> <li>Allows use of user thresholds to optimize environmental management of the chassis</li> </ul>
Efficient front-to-back airflow	<ul style="list-style-type: none"> <li>Helps reduce power consumption and increase component reliability</li> </ul>
Tool-free installation	<ul style="list-style-type: none"> <li>Requires no specialized tools for chassis installation</li> <li>Provides mounting rails for easy installation and servicing</li> </ul>
Mixed blade configurations	<ul style="list-style-type: none"> <li>Allows up to 8 half-width or 4 full-width blade servers, or any combination thereof, for outstanding flexibility</li> </ul>

## Specifications

The Cisco UCS 5100 Series is designed for use in the Cisco UCS environment and requires Cisco UCS Manager, UCS 6200 Series or 6300 Series Fabric Interconnects, and UCS 2200 or 2300 Series Fabric Extenders and blade servers, or the UCS 6324 Fabric Interconnect and blade servers to function in this integrated environment.

Table 2 summarizes the specifications for the Cisco UCS 5100 Series. Table 3 summarizes regulatory standards compliance.

**Table 2.** Product Specifications

Item	Specification
Height	10.5 in. (26.7 cm); 6RU
Width	17.5 in. (44.5 cm); fits standard 19-inch square-hole rack
Depth	32 in. (81.2 cm)
Blade server half-width slots	8
I/O slots	2



Item	Specification			
Fabric extenders	<ul style="list-style-type: none"><li>• Cisco UCS 2204XP with 4 x 10 Gigabit Ethernet external ports and 16 x 10 Gigabit Ethernet internal ports</li><li>• Cisco UCS 2208XP with 8 x 10 Gigabit Ethernet external ports and 32 x 10 Gigabit Ethernet internal ports</li><li>• Cisco UCS 2304 with 4 x 40 Gigabit Ethernet external ports and 4 x 40 Gigabit Ethernet internal ports</li><li>• All ports Fibre Channel over Ethernet (FCoE) capable</li></ul>			
Fabric interconnect	Cisco UCS 6324 with 4 x 10-Gbps uplinks, 1 x 40-Gbps Enhanced Quad Small Form-Factor Pluggable (QSFP+) expansion port, and 16 x 10-Gbps internal ports <ul style="list-style-type: none"><li>• All ports Fibre Channel over Ethernet (FCoE) capable</li></ul>			
Power supplies		AC power supply	-48V DC power supply	200 to 380V DC power supply
	Input voltage	100 to 120V AC 200 to 240V AC	-40 to -62V DC	200 to 380V DC
	Maximum output power	1300 watts (W) at 100 to 120V input 2500W at 200 to 240V input	2500W	2500W
	Frequency	50 to 60 Hz	-	-
	Efficiency	94%	92%	94%
	Redundancy	Nonredundant, N+1 redundant, and N+N grid redundant		
Fans	8 hot-swappable fans			
Management	<ul style="list-style-type: none"><li>• Cisco UCS 6200 Series Fabric Interconnects provide management for mutichassis configurations</li><li>• Cisco UCS 6300 Series Fabric Interconnects provide management for mutichassis configurations</li><li>• Cisco UCS 6324 Fabric Interconnect provides management for single/dual-chassis implementations</li></ul>			
Backplane	1.2 Tbps of aggregate throughput; supports 10BASE-KR connections for 8 blades			
Temperature: Operating	50 to 95°F (10 to 35°C) (as altitude increases, maximum temperature decreases by 1°C per 300m)			
Temperature: Nonoperating	-40 to 149°F (-40 to 65°C); maximum altitude is 40,000 ft			
Humidity: Operating	5 to 93% noncondensing			
Humidity: Nonoperating	5 to 93% noncondensing			
Altitude: Operating	0 to 10,000 ft (3000m); maximum ambient temperature decreases by 1°C per 300m			
Altitude: Nonoperating	40,000 ft (12,000m)			

**Table 3. Regulatory Standards Compliance: Safety and EMC**

Specification	Description
<b>Regulatory compliance</b>	Products comply with CE Markings per directives 2004/108/EC and 2006/108/EC
<b>Safety</b>	<ul style="list-style-type: none"> <li>• UL 60950-1</li> <li>• CAN/CSA-C22.2 No. 60950-1</li> <li>• EN 60950-1</li> <li>• IEC 60950-1</li> <li>• AS/NZS 60950-1</li> <li>• GB4943</li> </ul>
<b>EMC: Emissions</b>	<ul style="list-style-type: none"> <li>• 47CFR Part 15 (CFR 47) Class A (FCC Class A)</li> <li>• AS/NZS CISPR22 Class A</li> <li>• CISPR2 2 Class A</li> <li>• EN55022 Class A</li> <li>• ICES003 Class A</li> <li>• VCCI Class A</li> <li>• EN61000-3-2</li> <li>• EN61000-3-3</li> <li>• KN22 Class A</li> <li>• CNS13438 Class A</li> </ul>



Specification	Description
EMC: Immunity	<ul style="list-style-type: none"> <li>• EN50082-1</li> <li>• EN61000-6-1</li> <li>• EN55024</li> <li>• CISPR24</li> <li>• EN300386</li> <li>• KN 61000-4 Series</li> </ul>

## Warranty Information

Find warranty information at Cisco.com on the [Product Warranties](#) page.

## Cisco Unified Computing Services

Using a unified view of data center resources, Cisco and our industry-leading partners deliver services that accelerate your transition to a unified computing environment. Cisco® Unified Computing Services help you quickly deploy your data center resources and optimize ongoing operations to better meet your business needs. For more information about these and other Cisco Data Center Services, visit <https://www.cisco.com/go/dcservices>.

## Why Cisco?

Cisco has significant experience in listening to customer requirements and providing solid technology innovation for the enterprise data center. Cisco delivers standards-based solutions backed by a broad partner ecosystem of industry leaders to provide end-to-end customer solutions. Unified computing elevates the traditional product classification of network, server, storage, operating systems, and applications to a data center-wide vision. Cisco, as one of the largest technology providers in the world, has the resources, expertise, and customer focus to deliver on the unified computing vision.

## Cisco Capital

### Financing to Help You Achieve Your Objectives

Cisco Capital can help you acquire the technology you need to achieve your objectives and stay competitive. We can help you reduce CapEx. Accelerate your growth. Optimize your investment dollars and ROI. Cisco Capital financing gives you flexibility in acquiring hardware, software, services, and complementary third-party equipment. And there's just one predictable payment. Cisco Capital is available in more than 100 countries. [Learn more.](#)

## For More Information

For more information about the Cisco UCS 5100 Series Blade Server Chassis, visit <https://www.cisco.com/en/US/products/ps10279/index.html> or contact your local Cisco representative.



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## Cisco UCS B200 M5 Blade Server





For remote sites or data centers, the enterprise-class Cisco UCS® B200 M5 Blade Server delivers market-leading performance, versatility, and density without compromise for workloads ranging from web infrastructure to distributed databases.

## Product Overview

The Cisco UCS B200 M5 Blade Server delivers performance, flexibility, and optimization for deployments in data centers, in the cloud, and at remote sites. This enterprise-class server offers market-leading performance, versatility, and density without compromise for workloads, including Virtual Desktop Infrastructure (VDI), web infrastructure, distributed databases, converged infrastructure, and enterprise applications such as Oracle and SAP HANA. The B200 M5 server can quickly deploy stateless physical and virtual workloads through programmable, easy-to-use [Cisco UCS Manager](#) and Cisco Intersight™ and simplified server access through Cisco [SingleConnect](#) technology. It includes:

- 2<sup>nd</sup> Gen Intel® Xeon® Scalable and Intel Xeon Scalable processors with up to 28 cores per socket
- Up to 24 DDR4 DIMMs for improved performance with up to 12 DIMM slots ready for Intel Optane™ DC Persistent Memory
- Up to 2 GPUs
- Up to 2 Small Form-Factor (SFF) drives
- Up to 2 SD cards or M.2 SATA drives
- Up to 80 Gbps of I/O throughput

## Main Features

The Cisco UCS B200 M5 server is a half-width blade. Up to eight servers can reside in the 6-Rack-Unit (6RU) Cisco UCS 5108 Blade Server Chassis, offering one of the highest densities of servers per rack unit of blade chassis in the industry. You can configure the B200 M5 to meet your local storage requirements without having to buy, power, and cool components that you do not need.

The Cisco UCS B200 M5 provides these main features:

- Up to two 2<sup>nd</sup> Gen Intel Xeon Scalable and Intel Xeon Scalable processors with up to 28 cores per CPU
- 24 DIMM slots for industry-standard DDR4 memory at speeds up to 2933 MHz, with up to 3 TB of total memory when using 128-GB DIMMs. Up to 12 DIMM slots ready for Intel Optane DC Persistent Memory to accommodate up to 6 TB of Intel Optane DC Persistent Memory
- Modular LAN on Motherboard (mLOM) card with Cisco UCS Virtual Interface Card (VIC) 1440 or 1340, a 2-port, 40-gigabit Ethernet (GE), Fibre Channel over Ethernet (FCoE)–capable mLOM mezzanine adapter



- Optional rear mezzanine VIC with two 40-Gbps unified I/O ports or two sets of 4 x 10-Gbps unified I/O ports, delivering 80 Gbps to the server; adapts to either 10- or 40-Gbps fabric connections
- Two optional, hot-pluggable, Hard Disk Drives (HDDs), Solid-State Drives (SSDs), or Nonvolatile Memory Express (NVMe) 2.5-inch drives with a choice of enterprise-class Redundant Array of Independent Disks (RAID) or pass-through controllers
- Support for Optional SD Card or M.2 SATA drives for flexible boot and local storage capabilities
- Support for up to 2 optional GPUs
- Support for one rear storage mezzanine card
- Support for one 16-GB internal flash USB drive

## Product specifications

Table 1 lists the specifications for the Cisco UCS B200 M5 Blade Server.

**Table 1.** Specifications

Item	Specifications
<b>Processors</b>	Up to 2 Intel Xeon Scalable processors (1 or 2)
<b>Memory</b>	24 DDR4 DIMM slots: 16, 32, 64, and 128 GB at up to 2933 MHz
<b>Intel Optane DC Persistent Memory</b>	12 DIMM slots: 128, 256, and 512 GB at up to 2666 MHz
<b>mLOM</b>	mLOM slot for Cisco UCS VIC 1440 or 1340
<b>Mezzanine adapter (rear)</b>	1 rear mezzanine adapter for: <ul style="list-style-type: none"> <li>• Cisco UCS VIC 1480 or 1380 mezzanine card</li> <li>• Cisco® port expander mezzanine card</li> <li>• Cisco nVIDIA P6 GPU rear mezzanine card</li> <li>• Cisco blade NVMe storage card</li> </ul>
<b>Mezzanine adapter (front)</b>	1 front mezzanine adapter for: <ul style="list-style-type: none"> <li>• Cisco FlexStorage 12-Gbps SAS RAID Controller</li> <li>• Cisco FlexStorage 12-Gbps SAS RAID Controller with 2-GB cache</li> <li>• Cisco FlexStorage NVMe or pass-through module</li> <li>• Cisco nVIDIA P6 GPU frontmezzanine card</li> </ul>

Item	Specifications
Internal storage	<p>2 hot-pluggable front-access 2.5-inch drives:</p> <ul style="list-style-type: none"> <li>• <b>HDD:</b> 10,000 or 15,000 RPM with up to 1.8 TB per drive</li> <li>• <b>SSD:</b> Enterprise Performance and Value SSDs with up to 7.6 TB per drive</li> <li>• <b>NVMe:</b> Up to 7.7 TB per drive</li> </ul> <p><b>Note:</b> Drives require a RAID or pass-through controller in the front mezzanine adapter slot.</p> <p>Choice of either:</p> <ul style="list-style-type: none"> <li>• 2 internal SD cards (32-, 64-, or 128-GB with boot-mirroring or</li> <li>• Up to 2 M.2 SATA drives (240 or 960 GB) supported via LSI software RAID</li> </ul>
Management	<a href="#">Cisco Intersight software</a> <a href="#">Cisco UCS Manager Release 4.0(4)</a> <a href="#">Cisco UCS Central Software Cisco</a> <a href="#">UCS Director Cisco UCS Performance Manager</a>
Temperature: operating	50° to 95°F (10° to 35°C)
Temperature: nonoperating:	-40° to 149°F (-40° to 65°C)
Humidity: operating	5% to 93% noncondensing
Humidity: nonoperating	5% to 93% noncondensing
Altitude: operating	0 to 10,000 ft (0 to 3000m); maximum ambient temperature decreases by 1°C per 300m
Altitude: nonoperating	40,000 ft (12,000m)

## System Requirements

Table 2 lists system requirements for the server.

**Table 2.** System requirements

Item	Requirements
Blade chassis	Cisco UCS 5108 Blade Server Chassis
Fabric interconnect	Cisco UCS 6248 UP, 6296UP, 6332-16UP, 6332, 6324, and 6454 Fabric Interconnects
Fabric extender	Cisco UCS 2204, 2208, 2304 Fabric Extenders
Cisco UCS Manager software	Current: Release 4.0(4) or later; refer to the UCSM Release Notes for supported releases for this platform.



## Ordering Information

Table 3 provides ordering information for the Cisco UCS B200 M5.

**Table 3.** Ordering information

Part number	Description
UCSB-B200-M5	Cisco UCS B200 M5 Blade w/o CPU, memory, HDD, mezzanine
UCSB-B200-M5-U	Cisco UCS B200 M5 Blade w/o CPU, memory, HDD, mezzanine (UPG)
UCSB-B200-M5-CH	DISTI: Cisco UCS B200 M5 w/o CPU, memory, drive bays, HDD, mezzanine

For information about installing or upgrading your server, see the [Cisco UCS B200 M5 hardware installation guide](#).

For ordering information, see the [Cisco UCS B200 M5 Blade Server specification sheet](#).

## Warranty Information

Cisco UCS B200 M5 Blade Servers have a 3-year Next-Business-Day (NBD) hardware warranty and go-day software warranty.

Augmenting the Cisco Unified Computing System™ (Cisco UCS) warranty, Cisco Smart Net Total Care® and Cisco Solution Support services are part of Cisco's technical services portfolio. Cisco Smart Net Total Care combines Cisco's industry-leading and award-winning foundational technical services with an extra level of actionable business intelligence that is delivered to you through the smart capabilities in the Cisco Smart Net Total Care portal. For more information, please refer to <https://www.cisco.com/c/en/us/support/services/smart-net-total-care/index.html>.

Cisco Solution Support includes both Cisco product support and solution-level support, resolving complex issues in multivendor environments on average 43 percent more quickly than with product support alone. Cisco Solution Support is a critical element in data center administration, helping rapidly resolve any issue encountered while maintaining performance, reliability, and return on investment.

This service centralizes support across your multivendor Cisco environment for both our products and solution partner products that you have deployed in your ecosystem. Whether there is an issue with a Cisco product or with a solution partner product, just call us. Our experts are the primary point of contact and own the case from first call to resolution. For more information, please refer to <https://www.cisco.com/c/en/us/services/technical/solution-support.html>.

## Takeback and Recycle Program

For more information, please refer to <https://www.cisco.com/c/en/us/about/product-innovation-stewardship/product-recycling/takeback-recycle-program.html>.



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## Cisco and Partner Services

Cisco and our industry-leading partners deliver services that accelerate your transition to a Cisco UCS B-Series Blade Servers solution. Cisco Unified Computing Services can help you create an agile infrastructure, accelerate time to value, reduce costs and risks, and maintain availability during deployment and migration. After deployment, our services can help you improve performance, availability, and resiliency as your business needs evolve and help you further mitigate risk. For more information, visit <https://www.cisco.com/go/unifiedcomputingservices>.

## Cisco Capital

### Flexible payment solutions to help you achieve your objectives

Cisco Capital makes it easier to get the right technology to achieve your objectives, enable business transformation and help you stay competitive. We can help you reduce the total cost of ownership, conserve capital, and accelerate growth. In more than 100 countries, our flexible payment solutions can help you acquire hardware, software, services and complementary third-party equipment in easy, predictable payments. [Learn more](#).

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## Attachment A – Extensys Statement of Work



CUSTOMER INFORMATION:

SOW DATE	CUSTOMER NAME	SOW NAME	SOW NUMBER
June 19, 2019	City of Clearwater	Storage Refresh	3714

EXECUTIVE SUMMARY:

The City of Clearwater (City) is requesting the assistance of Extensys, Inc. (Extensys) to refresh their storage environment. Specifically, Extensys will:

- I. Deploy and configure 2 new Pure storage arrays plus new MDS
- II. Deploy and configure 1 new Cisco UCS Blade Environment
- III. Configure and upgrade existing UCS ESXi servers
- IV. Migrate virtual machines from the current compellent to Pure array
- V. Deploy and update VCenter to 6.7
- VI. Build out disaster recovery site (includes MDS, UCS and Pure mentioned above)

SCOPE:

- I. Discovery
  - i. Validate equipment to be replaced and current configurations.
  - ii. Validate networking environment
  - iii. Validate power and rack space
  - iv. Validate dependency's for VCenter upgrades
  - v. Determine required maintenance windows
  - vi. Validate DR site and requirements
  - vii. Validate change management requirements
- II. Planning & Design
  - i. Create a new detailed design and cutover plan including but not limited to:
    - a. Proposed PURE storage configuration (including LUN design)
    - b. Proposed UCS configuration changes
    - c. Proposed server migration order
    - d. Timeline for cutover(s)
    - e. Customer acceptance and sign-off on design document
    - f. Customer acceptance and sign off on phased cut-over strategy
- III. Execution
  - i. Production
    - a. Verify Pure deployment
    - b. Rack / Configure new MDS switches
    - c. Cable Pure to MDS switches

- d. Prepare cabling from MDS switches to required systems (Either UCS Interconnect, or prepare to migrate/cutover from old MDS)
    - e. Configure existing UCS ESXi servers to discover new Pure storage
    - f. Configure Pure storage LUNs according to best practices
    - g. Perform Pure / MDS failover tests to ensure proper failover with existing UCS configuration
    - h. Migrate virtual machines from Compellent to Pure
    - i. Ensure proper storage distribution across LUNs
  - ii. vCenter upgrade
    - a. Deploy vCenter 6.7 Update 2 VCSA Appliance
    - b. Ensure new VCSA appliance is fully updated
    - c. Migrate existing vCenter configuration / performance databases to the new 6.7 appliance
    - d. Migrate vCenter management to the VCSA appliance
    - e. Ensure existing hosts connect to the new appliance
  - iii. DR Build
    - a. Verify Pure deployment
    - b. Rack / Configure MDS switches
    - c. Cable Pure / MDS / Interconnect
    - d. Configure UCS according to best practices
    - e. Deploy ESXi 6.7 Update 2 (Or 6.5 Update 2)
    - f. Add ESXi servers to vCenter
    - g. Deploy updates to new ESXi servers
    - h. Configure Pure to replicate from production Pure

**DELIVERABLES:**

- I. Discovery:
  - i. Discover document and findings
  - ii. Customer sign-off on findings
  - iii. Weekly status reports
- II. Planning & Design:
  - i. Proposed "To Be" design
    - a. Detailed Visio drawing of proposed environment
    - b. Customer sign off
  - ii. Proposed cutover strategy
    - a. Detailed cutover strategy document
    - b. Customer sign off
  - iii. Weekly status reports
- III. Execution:
  - i. Installation and configuration as designed
  - ii. Knowledge transfer
  - iii. Acceptance testing
  - iv. Final "As Built" Visio document
  - v. Customer sign-off





## STATEMENT OF WORK

### ASSUMPTIONS, RISK, & CONCERNS:

- I. Adequate rack space and power exists to accommodate new devices
- II. Any needed cabling, patch cords, and patch panels will be provided
- III. Migration of production to new fabric requires a complete outage
- IV. It is assumed that all current ESX hosts are version 6.0 or higher
- V. Backups of environment will be performed and validate by City staff prior to any migrations

### NOT INCLUDED IN SOW:

- I. Any installation, configuration, or remediation not specifically outlined in this SOW is not included
- II. This SOW does not include any hardware or software
- III. This SOW does not include any physical cabling of supplies

### INVESTMENT:

- ☒ Estimated Time and Materials  
☐ Fixed Fee

DESCRIPTION	HOURS	RATE	TOTAL
Senior Server Engineer	124	\$185.00	\$22,940
Total			\$22,940

### APPROVAL:

DATE	NAME	SIGNATURE

#### Terms & Conditions

Signing this agreement constitutes accepting terms and conditions located at [Extensys Terms and Conditions](#) or signed master services agreement.