



## City of Aurora Cisco UCS for CAD/RMS

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### Cisco Hardware and Software

	<b>Extended Price</b>
Cisco 6248 FI Port Expansion	13,632.00
Cisco UCS Chassis Expansion	11,528.00
Cisco UCS Blade Servers for Oracle DB	28,338.00
Cisco UCS Blade Servers for VMware	133,650.00
Cisco UCS Performance Manager	398.00
<b>Hardware and Software Sub-Total</b>	<b>187,546.00</b>

### Solution Maintenance & Support

	<b>Extended Price</b>
Hardware Maintenance - Five (5) Years	20,604.00
Software Support and Subscription - Five (5) Years	16,840.00
<b>Maintenance &amp; Support Sub-Total</b>	<b>37,444.00</b>

**Total Project:** Based on the combined purchase of all Hardware, Software, Professional Services, and Solution Maintenance from Sentinel as detailed in the attached Bill of Materials. Unbundling or materially reducing any of these essential elements of the solution may result in modifications to the cost of the remaining elements.

	<b>Extended Price</b>
Cisco Hardware and Software	187,546.00
Solution Maintenance & Support	37,444.00
Certified Professional Services Implementation	19,780.00
<b>Project Total</b>	<b>\$ 244,770.00 *</b>

*\* plus applicable shipping & handling*

**City of Aurora**  
**Cisco UCS Hardware**



<b>Cisco Hardware and Software for CAD/RMS</b>				
<b>Part Number</b>	<b>Description</b>	<b>Qty</b>	<b>Unit Price</b>	<b>Ext Price</b>
<b>Cisco 6248 FI Port Expansion</b>				
UCS-SPL-FI-L-4X	UCS SP Select 6200 Series Fabric Int port license 4Pk	4	-	-
UCS-LIC-10GE=	UCS 6200 Series Fabric Int 1port 1/10GE/FC-port E-license	16	795	12,720
SFP-H10GB-CU3M=	10GBASE-CU SFP+ Cable 3 Meter	16	57	912
		<b>Sub-Total</b>	<b>13,632</b>	
<b>Cisco UCS Chassis Expansion</b>				
UCS-SPL-5108-AC2	UCS SP Select 5108 AC2 Chassis w/2208 IO, 4x SFP cable 3m	2	5,764	11,528
CAB-C19-CBN	Cabinet Jumper Power Cord, 250 VAC 16A, C20-C19 Connectors	8	-	-
SFP-H10GB-CU3M	10GBASE-CU SFP+ Cable 3 Meter	8	-	-
N01-UAC1	Single phase AC power module for UCS 5108	2	-	-
N20-CAK	Accessory kit for UCS 5108 Blade Server Chassis	2	-	-
N20-CBLKB1	Blade slot blanking panel for UCS 5108/single slot	16	-	-
N20-FAN5	Fan module for UCS 5108	16	-	-
N20-FW012	UCS Blade Server Chassis FW Package 2.2	2	-	-
UCSB-5108-PKG-HW	UCS 5108 Packaging for chassis with half width blades.	2	-	-
UCSB-PSU-2500ACDV	2500W Platinum AC Hot Plug Power Supply - DV	8	-	-
UCS-IOM-2208XP	UCS 2208XP I/O Module (8 External, 32 Internal 10Gb Ports)	4	-	-
		<b>Sub-Total</b>	<b>11,528</b>	
<b>Cisco UCS Blade Servers for Oracle DB</b>				
UCS-SPM-B200M4-F1	UCS SPSelect B200M4 Hi-Freq1w/2xE52643v3,8x32GB,VIC1340 + C1	2	-	-
UCS-SP-B200M4-F1	UCS SPSelect B200M4 Hi-Frequency1w/2xE52643v3,8x32GB,VIC1340	2	9,235	18,470
UCS-CPU-E52643D	3.40 GHz E5-2643 v3/135W 6C/20MB Cache/DDR4 2133MHz	4	-	-
UCS-MR-1X322RU-A	32GB DDR4-2133-MHz RDIMM/PC4-17000/dual rank/x4/1.2v	16	-	-
UCS-SPM-M32-RUA	UCS SP 32GB DDR4-2133-MHz RDIMM/PC4-17000/dual rank/x4/1.2v	16	553	8,848
UCSB-MLOM-40G-03	Cisco UCS VIC 1340 modular LOM for blade servers	2	-	-
UCSB-LSTOR-BK	FlexStorage blanking panels w/o controller, w/o drive bays	4	-	-
UCSB-HS-EP-M4-F	CPU Heat Sink for UCS B200 M4/B420 M4 (Front)	2	-	-
UCSB-HS-EP-M4-R	CPU Heat Sink for UCS B200 M4/B420 M4 (Rear)	2	-	-
C1F2PUCSK9-UCS-SPM	UCS SP Cisco ONE Foundation Perpetual UCS 1-9	2	510	1,020
C1-UCC-1	Cisco ONE Foundation UCS Central per Server	2	-	-
C1-UCD-VM	Cisco ONE UCS Director Foundation Compute Per Server (50 VM)	2	-	-
C1-UPM-EE	Cisco ONE UCS Performance Manager Express Edition	2	-	-

**City of Aurora**  
**Cisco UCS Hardware**



Cisco Hardware and Software for CAD/RMS				
Part Number	Description	Qty	Unit Price	Ext Price
C1-EGW-DC-K9	Cisco ONE Energy Mgmt Perpetual Lic - 1 DC End Point	2	-	-
C1-N1K-ESSTL	Nexus 1000V Essential Edition, Qty=2	2	-	-
C1-PSC-F-1-K9	Cisco ONE Prime Service Catalog Foundation Per Server	2	-	-
C1F2SICFBK9	Cisco ONE Foundation Subsr Intercloud Fabric For Business	2	-	-
C1-ICFB2-4-LIC-K9	Cisco ONE Intercloud Fabric For Business General cloud lic	2	-	-
<b>Sub-Total</b>			<b>28,338</b>	
<b>Cisco UCS Blade Servers for VMware</b>				
UCS-SPM-B200M4-C1	UCS SPSelect B200M4 Hi-Core1w/2xE52698v3,8x32GB,VIC1340 + C1	10	-	-
UCS-SP-B200M4-C1	UCS SPSelect B200M4 Hi-Core1w/2xE52698v3,8x32GB,VIC1340	10	12,855	<b>128,550</b>
UCS-CPU-E52698D	2.30 GHz E5-2698 v3/135W 16C/40MB Cache/DDR4 2133MHz	20	-	-
UCS-MR-1X322RU-A	32GB DDR4-2133-MHz RDIMM/PC4-17000/dual rank/x4/1.2v	80	-	-
UCSB-MLOM-40G-03	Cisco UCS VIC 1340 modular LOM for blade servers	10	-	-
UCSB-LSTOR-BK	FlexStorage blanking panels w/o controller, w/o drive bays	20	-	-
UCSB-HS-EP-M4-F	CPU Heat Sink for UCS B200 M4/B420 M4 (Front)	10	-	-
UCSB-HS-EP-M4-R	CPU Heat Sink for UCS B200 M4/B420 M4 (Rear)	10	-	-
C1F2PUCSK9-UCS-SPM	UCS SP Cisco ONE Foundation Perpetual UCS 1-9	10	510	<b>5,100</b>
C1-UCC-1	Cisco ONE Foundation UCS Central per Server	10	-	-
C1-UCD-VM	Cisco ONE UCS Director Foundation Compute Per Server (50 VM)	10	-	-
C1-UPM-EE	Cisco ONE UCS Performance Manager Express Edition	10	-	-
C1-EGW-DC-K9	Cisco ONE Energy Mgmt Perpetual Lic - 1 DC End Point	10	-	-
C1-N1K-ESSTL	Nexus 1000V Essential Edition, Qty=2	10	-	-
C1-PSC-F-1-K9	Cisco ONE Prime Service Catalog Foundation Per Server	10	-	-
C1F2SICFBK9	Cisco ONE Foundation Subsr Intercloud Fabric For Business	10	-	-
C1-ICFB2-4-LIC-K9	Cisco ONE Intercloud Fabric For Business General cloud lic	10	-	-
<b>Sub-Total</b>			<b>133,650</b>	
<b>Cisco UCS Performance Manager</b>				
UCS-PM-IE=	UCS Performance Manager	1	398	<b>398</b>
<b>Sub-Total</b>			<b>398</b>	
<b>Hardware and Software Components Total</b>			<b>\$187,546.00</b>	

**City of Aurora  
Maintenance and Support**



<b>Hardware Maintenance</b>					
<b>Part Number</b>	<b>Description</b>	<b>Qty</b>	<b>Special Notes</b>	<b>Unit</b>	<b>Ext. Price</b>
<b>Hardware Maintenance</b>					
CON-OSP-SL6508A2	SNTC-24X7X4OS , UCS B 5108 SP AC2 Chassis	2	<i>60 Months Duration</i>	1,086	<b>2,172</b>
CON-OSP-SMB200F1	SNTC-24X7X4OS UCS SPSelect B200M4 Hi-Frequency1w/2xE52643v3,	2	<i>60 Months Duration</i>	1,536	<b>3,072</b>
CON-OSP-SMB200C1	SNTC-24X7X4OS UCS SPSelect B200M4 Hi-Core1w/2xE52698v3,8x32G	10	<i>60 Months Duration</i>	1,536	<b>15,360</b>
<b>Maintenance Sub-Total</b>					<b>20,604</b>

<b>Software Support &amp; Subscription</b>					
<b>Part Number</b>	<b>Description</b>	<b>Qty</b>	<b>Special Notes</b>	<b>Unit</b>	<b>Ext. Price</b>
<b>Software Maintenance</b>					
CON-ECMU-C1F2PUCS	SWSS UPGRADES C1 Foundation Perpetual UCS	2	<i>60 Months Duration</i>	1,337	<b>2,674</b>
CON-ECMU-C1F2SICF	SWSS UPGRADES Cisco ONE Foundation	2	<i>60 Months Duration</i>	-	-
C1F21ICFB004K9	Cisco ONE Foundation ICFB General cloud 1YR 4 Hybrid Port	2	<i>12 Months Duration</i>	-	-
CON-ECMU-C1F2PUCS	SWSS UPGRADES C1 Foundation Perpetual UCS	10	<i>60 Months Duration</i>	1,337	<b>13,370</b>
CON-ECMU-C1F2SICF	SWSS UPGRADES Cisco ONE Foundation	10	<i>60 Months Duration</i>	-	-
C1F21ICFB004K9	Cisco ONE Foundation ICFB General cloud 1YR 4 Hybrid Port	10	<i>12 Months Duration</i>	-	-
CON-SAU-UCSPMIE	SW APP SUPP + UPGR UCS Performance Manager	1	<i>60 Months Duration</i>	796	<b>796</b>
<b>Maintenance Sub-Total</b>					<b>16,840</b>

## General Proposal Assumptions

### Product Lead Times

Depending on the technologies quoted, orders may be direct or through distribution. Lead times should be expected to be 8 weeks but can exceed 8 weeks. Should expedited equipment requirements arise, there could be an additional charge to source through a warehousing distribution partner.

### Site Readiness and Site Survey Requirement:

Every effort has been made to ensure that proper power cords and patch cables have been included to match your environment's infrastructure. The notes section of the Bill of Materials (BOM) explicitly states the quantity and type of cords quoted.

Customer waives the opportunity to complete a site/closet checklist, has reviewed the BOM and agrees to quantity, type and length of the power and patch cables provided. Financial obligation for labor and materials for changes identified post order will be Customer's responsibility.

### Fiber

It is assumed that Customer's existing fiber will support proposed transmission speeds (i.e. 1GB, 10GB, 40GB, etc.). Customer must ensure that the fiber optic cabling is within manufacturer tolerances for distance and loss in order to support the required transport speeds. In some cases specialized equipment such as attenuators and mode conditioning cables may be required to properly support these speeds. This equipment will be at the expense of Customer.

### Optics (SFP, SFP+, GBIC, etc.)

Every effort was made in the pre-sales process through white board sessions, BOM reviews and diagrams to identify any and all optics required. **OPTICS AS QUOTED AND SOLD ASSUME A STAND ALONE SYSTEM UNLESS OTHERWISE NOTED.** Migration items and integration items to existing equipment, if not noted, are not included nor is time for the interconnection, planning or design of same. Should any question exist as to the total number, types and use of the optics, Sentinel can set up a design review and white board session prior to the order upon request.

It may be determined during the blueprint process that additional connections are required or recommended. These will require an additional purchase cost to Customer. Sentinel makes a best effort to avoid any foreseeable additional purchases, but in most cases the final connectivity varies slightly either for a technical reason or due to a physical requirement and this is beyond the fixed price solution design.

### Power, Racks and Cooling

Like the optics, Sentinel has made a best effort to match any power requirements and answer any requests of Customer related to equipment specifications, power cables included or other physical requirements. Any adjustments to fit in racks, connect to specific power terminal types, or secure electrician services to run a new service are beyond the fixed bid project price. Sentinel will respond to any inquiry and provide product literature. Any sizing charts provided are done so as a convenience to the client and DO NOT represent a commitment by Sentinel that, as sold, the equipment is ready for Customer site. Sentinel offers Technology Area Design (TAD) consulting services should Customer prefer a more formal and accurate solution.

### **Patch Cables/Cable Lengths**

In most cases the BOM includes any note(s) on cable lengths included. Without the design validation of a formal TAD engagement, only a best effort is made to match the site requirements. Any changes to the cord lengths, connectors or other site readiness items will be in addition to the solution once the order is placed with the manufacturer(s). Many of the vendors offer the ability to select the appropriate items prior to order, but will charge for any replacements needed after the order and this offer will be extended to Customer through the Sentinel Project Change Request (PCR) process. Unless specified, Sentinel assumes Customer will provide all patch cables needed and can provide the product literature on any devices upon request.

### **Labor Union Requirements**

Sentinel has **NOT** included any parameters for Union workers. Any requirement would require a subcontract arrangement to be determined up front and would increase the cost of deployment.

### **Permits & Access**

Unless otherwise agreed, all permits, variances, access to facilities, roof access, building warranty concerns or other site specific information and procedures are the responsibility of Customer. Sentinel can assist as needed, but will need to be informed of any requirements prior to the site survey to consider these within the validation process.

### **Remote Support**

Sentinel's service estimate assumes remote access support through IP VPN or IP PPP connection. Without this access, additional services may be incurred for optimization and tuning required pre and post installation.

### **Project Changes Request**

Sentinel assumes, unless noted here, that Customer will patch in all equipment to the cabling plant within the facility. Sentinel can perform this connection service at an additional charge with an approved PCR.

## **Cisco Data Center – UCS & MDS**

### **Cisco UCS**

Cisco UCS sizing has been estimated to the best of Sentinel's ability. Without a complete data center assessment of the current virtual and non-virtual servers as well as planned projections of requirements, the UCS system has been included as a best effort only and changes are subject to financial investment through the project change process.

### **Unified Fabric**

Sentinel has made a best effort to confirm optics and cables required. Patch cables required between the FlexPod and the networks are the responsibility of Customer.

## **Pricing**

Pricing is valid for 30 days from date of quote delivery unless otherwise noted.

Pricing assumes payment via company check or electronic funds transfer. Alternate payment methods may incur an additional charge.