



# Five-Year Total Cost of Ownership

Cloud vs. Corporate Data Center VMS Deployments

# Total Cost of Ownership

## What is TCO?

**TCO analysis** uncovers **all the lifetime costs** that follow from owning certain kinds of assets.

TCO analysis attempts to uncover both the obvious costs and the “hidden” costs of ownership over time.

# Simple TCO Example

Costs to own and operate can equal or exceed the original purchase price.

Edmund's *True Cost to Own*<sup>®</sup> for a \$31,252 automobile: \$62,004

## Automobile Ownership



2014 Dodge Charter SRT8

Cost Factor	Year 1	Year 2	Year 3	Year 4	Year 5	5-Year Total
Depreciation	\$6,837	\$2,990	\$2,633	\$2,332	\$2,094	\$16,886
Taxes & Fees	\$2,620	\$211	\$191	\$174	\$159	\$3,355
Financing	\$1,694	\$1,362	\$1,009	\$631	\$229	\$4,925
Fuel	\$3,096	\$3,189	\$3,284	\$3,383	\$3,484	\$16,436
Insurance	\$1,812	\$1,866	\$1,922	\$1,980	\$2,039	\$9,619
Maintenance	\$2,411	\$665	\$1,207	\$493	\$3,120	\$7,896
Repairs	\$414	\$484	\$564	\$658	\$767	\$2,887
<b>True Cost to Own</b>	<b>\$18,884</b>	<b>\$10,767</b>	<b>\$10,810</b>	<b>\$9,651</b>	<b>\$11,892</b>	<b>\$62,004</b>

Driven 15,000 miles per year and properly maintained

# Security's 8 Cost Categories



- Field & Network Devices
- Servers / Server Software
- Installation Labor & PM
- Field Device Maintenance
- Servers Replacement
- Licenses or Subscription
- IT Management & Support
- Server Room, Power & HVAC

Calculating security system TCO is more complex and has more data-gathering challenges than most types of product comparisons.

# Why Bother with TCO?

- **Why track down all these costs?**
- Don't most equivalent products cost about the same?
- If IT runs our security servers in our data center, the IT costs are about the same, with only the software cost varying, right?
- Hasn't it been that way for many years?

Yes. But what is making a big difference now is **the Cloud.**

# Cloud Reduces Video System Server TCO

*And makes video systems cyber secure and continuously improving*

**Cloud-hosted** video management system software **is not a true cloud VMS**. It's simply client/server software being run on a data center server.

**A true cloud VMS** is engineered for the cloud from the ground up, to maximally utilize cloud computing capabilities for lowest cost, highest performance, fastest feature advancement, highest data security and reliable mobile access from anywhere.

**A true cloud VMS has:**

- Hot redundant databases and video storage
- Cross-geography data redundancy
- Hot redundant video processing and recording
- Strong cybersecurity controls with continuous penetration testing

These are not affordable in on-premises systems or on per-customer cloud-hosted servers.

# Cloud TCO Savings

**By paying attention to TCO, large enterprises can achieve savings between 20% and 50% on the controllable cost factors of security video surveillance systems.**

In addition to the financial savings, cloud-based video management systems gain the highest system uptime while eliminating customer and integrator hassles relating to IT infrastructure system elements (computing and networking). Plus there are other benefits.

# Typical Cloud VMS Benefits

- **Lower TCO.** Lower total cost of ownership.
- **Lower Up-Front Costs.** Lower up-front expenditure costs.
- **Full Hot Redundancy.** Data storage and video recording and processing are fully redundant.
- **Cybersecurity.** [Strong cybersecurity](#) including data encryption in transit and at rest.
- **Mobile Performance.** Better wide-area mobile device performance.
- **Automatic Updates.** [Automatic security and feature updates](#) with no action needed by the service provider.
- **Only Pay for What you Use.** Cloud customers can add and subtract video analytics and other system capabilities on demand, paying only for the period in which they use them.
- **Instantly Adjustable Video Retention.** Cloud customers can expand video retention and recording resolution and frame rate on a per-camera basis, without having to make any on-premises infrastructure changes.



# Typical Cloud VMS Benefits

- **Minimal Downtime.** True cloud systems remain fully operational during upgrades to server operating system software, application software, and computing and storage hardware. Downtime from security/bug-fix updates, software version updates and server hardware refreshes are eliminated.
- **Accelerated New Features.** True cloud system development utilizes *continuous delivery* software engineering, which provides incremental software improvements in intervals of weeks, rather than months or years. Incremental improvements eliminate the staff learning curves that often occur with typical client-server software update cycles. Additionally, all subscribers are always using the very latest set of features and capabilities.

Let's look at a real-world TCO comparison

# Corporate Data Center VMS Deployment

Corporate Data Center VMS: \$1,374,087

Cloud TCO Difference: \$497,441

Eagle Eye Cloud VMS: \$876,646

Cloud TCO Savings: 36%

Using Existing Internet Service

Using Existing Internet Service

Twenty-Six-Site, Eagle Eye Cloud VMS						
Capacity Assumption	Year 1	Year 2	Year 3	Year 4	Year 5	
Sites	26	26	26	26	26	
Cameras (1080p - Full HD - 15 FPS)	624	624	624	624	624	
Days of Video Storage	30	30	30	30	30	
Cost Summary	Year 1	Year 2	Year 3	Year 4	Year 5	Total
<b>1. Recurring System Fees</b>						
a. Eagle Eye Cloud VMS Subscription	\$172,224	\$172,224	\$172,224	\$172,224	\$172,224	\$861,120
b. Internet Access	(use existing)					
c. Virtual VMS Servers with O/S & DB	(included in Cloud VMS subscription)					
d. Video Data Storage	(included in Cloud VMS subscription)					
e. Data Center Cost Allocation	(included in Cloud VMS subscription)					
f. Server Technical Support	(included in Cloud VMS subscription)					
g. Video Storage Technical Support	(included in Cloud VMS subscription)					
h. Disaster Recovery Program Mgmt.	(included in Cloud VMS subscription)					
<b>2. Field Hardware Purchase &amp; Labor</b>						
a. VMS Camera Licenses	(included in Cloud VMS subscription)					
b. VMS Server Licenses	(included in Cloud VMS subscription)					
c. VMS Software Installation	(not applicable)					
d. Eagle Eye Bridge Appliance Cost	(included in Cloud VMS subscription)					
e. Eagle Eye Bridge Appliance Setup	\$9,353	\$0	\$0	\$0	\$0	\$9,353
<b>3. Upgrades and Updates</b>						
a. VMS Software Update Labor	(automatic - no labor)					
b. LAN Routers Update Labor	(automatic - no labor)					
<b>4. On-Premises Electricity Cost</b>						
a. Bridge Appliances (Routers built-in)	\$1,235	\$1,235	\$1,235	\$1,235	\$1,235	\$6,173
<b>5. Hot Redundant Computing &amp; Storage</b>						
a. Hot Redundancy Software Licenses	(included in Cloud VMS subscription)					
b. Hot Redundant Computing & Storage	(included in Cloud VMS subscription)					
c. Triple-Redundant Data & Video Backup	(included in Cloud VMS subscription)					
<b>6. Cybersecurity Protection - IT Cost Allocation</b>						
a. Very High Cybersecurity Measures	(included in Cloud VMS subscription)					
b. Information Security Audits	(included in Cloud VMS subscription)					
c. Routine Penetration Testing	(included in Cloud VMS subscription)					
<b>Total Cost of Ownership</b>	<b>\$182,812</b>	<b>\$173,459</b>	<b>\$173,459</b>	<b>\$173,459</b>	<b>\$173,459</b>	<b>\$876,646</b>

Twenty-Six-Site, Corporate Data Center exacqVision Enterprise VMS						
Capacity Assumption	Year 1	Year 2	Year 3	Year 4	Year 5	
Sites	26	26	26	26	26	
Cameras (1080p - Full HD - 15 FPS)	624	624	624	624	624	
Days of Video Storage	30	30	30	30	30	
Cost Summary	Year 1	Year 2	Year 3	Year 4	Year 5	Total
<b>1. Recurring System Fees</b>						
a. VMS Annual Software Support	\$0	\$14,514	\$14,514	\$14,514	\$14,514	\$58,054
b. Internet Access (Sites + HQ)	\$0	\$0	\$0	\$0	\$0	\$0
c. Virtual VMS Servers with O/S & DB	\$57,586	\$57,586	\$57,586	\$57,586	\$57,586	\$287,930
d. Video Data Storage - 110 TB	\$105,600	\$105,600	\$105,600	\$105,600	\$105,600	\$528,000
e. Data Center Cost Allocation	\$37,840	\$37,840	\$37,840	\$37,840	\$37,840	\$189,200
f. Server Technical Support	\$10,905	\$10,905	\$10,905	\$10,905	\$10,905	\$54,525
g. Video Storage Technical Support	\$6,394	\$6,394	\$6,394	\$6,394	\$6,394	\$31,970
h. BC/DR Program Cost Allocation	\$15,189	\$15,189	\$15,189	\$15,189	\$15,189	\$75,945
<b>Subtotal of Yearly Recurring Costs</b>	<b>\$233,514</b>	<b>\$248,028</b>	<b>\$248,028</b>	<b>\$248,028</b>	<b>\$248,028</b>	<b>\$1,225,624</b>
<b>2. Initial Purchase &amp; Labor</b>						
a. VMS Camera Licenses	\$101,731	\$0	\$0	\$0	\$0	\$101,731
b. VMS Server Licenses	\$4,232	\$0	\$0	\$0	\$0	\$4,232
c. VMS Software Installation	\$3,100	\$0	\$0	\$0	\$0	\$3,100
d. Site LAN Routers Cost	\$1,690	\$0	\$0	\$0	\$0	\$1,690
e. Site LAN Routers Setup	\$5,200	\$0	\$0	\$0	\$0	\$5,200
<b>3. Upgrades and Updates</b>						
a. VMS Software Update Labor	\$0	\$6,600	\$6,600	\$6,600	\$6,600	\$26,400
b. LAN Routers Update Labor	\$0	\$1,300	\$1,300	\$1,300	\$1,300	\$5,200
<b>4. On-Premises Electricity Cost</b>						
a. LAN Routers	\$182	\$182	\$182	\$182	\$182	\$910
<b>5. Hot Redundant Virtual Machines</b>						
a. Standby Server Failover Software	\$3,702	\$0	\$0	\$0	\$0	\$3,702
b. Hot Redundant Computing	(not available)					
c. Triple-Redundant Data & Video Backup	(not available)					
<b>6. Cybersecurity Protection - IT Cost Allocation</b>						
a. Commonly Applied Cybersecurity Measures	(included in data center services)					
a. Information Security Audits	(included in data center services)					
b. Routine Penetration Testing	(not cost feasible)					
<b>Total Cost of Ownership</b>	<b>\$349,649</b>	<b>\$256,110</b>	<b>\$256,110</b>	<b>\$256,110</b>	<b>\$256,110</b>	<b>\$1,374,087</b>

# Corporate Data Center VMS Deployment

Corporate Data Center VMS: \$1,780,587

Cloud TCO Difference: \$903,941

Eagle Eye Cloud VMS: \$876,646

Cloud TCO Savings: 51%

Using Existing Internet Service

Adding New Internet Service

Twenty-Six-Site, Eagle Eye Cloud VMS						
Capacity Assumption	Year 1	Year 2	Year 3	Year 4	Year 5	
Sites	26	26	26	26	26	
Cameras (1080p - Full HD - 15 FPS)	624	624	624	624	624	
Days of Video Storage	30	30	30	30	30	
Cost Summary	Year 1	Year 2	Year 3	Year 4	Year 5	Total
<b>1. Recurring System Fees</b>						
a. Eagle Eye Cloud VMS Subscription	\$172,224	\$172,224	\$172,224	\$172,224	\$172,224	<b>\$861,120</b>
b. Internet Access	(use existing)					
c. Virtual VMS Servers with O/S & DB	(included in Cloud VMS subscription)					
d. Video Data Storage	(included in Cloud VMS subscription)					
e. Data Center Cost Allocation	(included in Cloud VMS subscription)					
f. Server Technical Support	(included in Cloud VMS subscription)					
g. Video Storage Technical Support	(included in Cloud VMS subscription)					
h. Disaster Recovery Program Mgmt.	(included in Cloud VMS subscription)					
<b>2. Field Hardware Purchase &amp; Labor</b>						
a. VMS Camera Licenses	(included in Cloud VMS subscription)					
b. VMS Server Licenses	(included in Cloud VMS subscription)					
c. VMS Software Installation	(not applicable)					
d. Eagle Eye Bridge Appliance Cost	(included in Cloud VMS subscription)					
e. Eagle Eye Bridge Appliance Setup	\$9,353	\$0	\$0	\$0	\$0	<b>\$9,353</b>
<b>3. Upgrades and Updates</b>						
a. VMS Software Update Labor	(automatic - no labor)					
b. LAN Routers Update Labor	(automatic - no labor)					
<b>4. On-Premises Electricity Cost</b>						
a. Bridge Appliances (Routers built-in)	\$1,235	\$1,235	\$1,235	\$1,235	\$1,235	<b>\$6,173</b>
<b>5. Hot Redundant Computing &amp; Storage</b>						
a. Hot Redundancy Software Licenses	(included in Cloud VMS subscription)					
b. Hot Redundant Computing & Storage	(included in Cloud VMS subscription)					
c. Triple-Redundant Data & Video Backup	(included in Cloud VMS subscription)					
<b>6. Cybersecurity Protection - IT Cost Allocation</b>						
a. Very High Cybersecurity Measures	(included in Cloud VMS subscription)					
b. Information Security Audits	(included in Cloud VMS subscription)					
c. Routine Penetration Testing	(included in Cloud VMS subscription)					
<b>Total Cost of Ownership</b>	<b>\$182,812</b>	<b>\$173,459</b>	<b>\$173,459</b>	<b>\$173,459</b>	<b>\$173,459</b>	<b>\$876,646</b>

Twenty-Six-Site, Corporate Data Center exacqVision Enterprise VMS						
Capacity Assumption	Year 1	Year 2	Year 3	Year 4	Year 5	
Sites	26	26	26	26	26	
Cameras (1080p - Full HD - 15 FPS)	624	624	624	624	624	
Days of Video Storage	30	30	30	30	30	
Cost Summary	Year 1	Year 2	Year 3	Year 4	Year 5	Total
<b>1. Recurring System Fees</b>						
a. VMS Annual Software Support	\$0	\$14,514	\$14,514	\$14,514	\$14,514	<b>\$58,054</b>
b. Internet Access (Sites + HQ)	\$81,300	\$81,300	\$81,300	\$81,300	\$81,300	<b>\$406,500</b>
c. Virtual VMS Servers with O/S & DB	\$57,586	\$57,586	\$57,586	\$57,586	\$57,586	<b>\$287,930</b>
d. Video Data Storage - 110 TB	\$105,600	\$105,600	\$105,600	\$105,600	\$105,600	<b>\$528,000</b>
e. Data Center Cost Allocation	\$37,840	\$37,840	\$37,840	\$37,840	\$37,840	<b>\$189,200</b>
f. Server Technical Support	\$10,905	\$10,905	\$10,905	\$10,905	\$10,905	<b>\$54,525</b>
g. Video Storage Technical Support	\$6,394	\$6,394	\$6,394	\$6,394	\$6,394	<b>\$31,970</b>
h. BC/DR Program Cost Allocation	\$15,189	\$15,189	\$15,189	\$15,189	\$15,189	<b>\$75,945</b>
<b>Subtotal of Yearly Recurring Costs</b>	<b>\$314,814</b>	<b>\$329,328</b>	<b>\$329,328</b>	<b>\$329,328</b>	<b>\$329,328</b>	<b>\$1,632,124</b>
<b>2. Initial Purchase &amp; Labor</b>						
a. VMS Camera Licenses	\$101,731	\$0	\$0	\$0	\$0	<b>\$101,731</b>
b. VMS Server Licenses	\$4,232	\$0	\$0	\$0	\$0	<b>\$4,232</b>
c. VMS Software Installation	\$3,100	\$0	\$0	\$0	\$0	<b>\$3,100</b>
d. Site LAN Routers Cost	\$1,690	\$0	\$0	\$0	\$0	<b>\$1,690</b>
e. Site LAN Routers Setup	\$5,200	\$0	\$0	\$0	\$0	<b>\$5,200</b>
<b>3. Upgrades and Updates</b>						
a. VMS Software Update Labor	\$0	\$6,600	\$6,600	\$6,600	\$6,600	<b>\$26,400</b>
b. LAN Routers Update Labor	\$0	\$1,300	\$1,300	\$1,300	\$1,300	<b>\$5,200</b>
<b>4. On-Premises Electricity Cost</b>						
a. LAN Routers	\$182	\$182	\$182	\$182	\$182	<b>\$910</b>
<b>5. Hot Redundant Virtual Machines</b>						
a. Standby Server Failover Software	\$3,702	\$0	\$0	\$0	\$0	<b>\$3,702</b>
-b. Hot Redundant Computing	(not available)					
-c. Triple-Redundant Data & Video Backup	(not available)					
<b>6. Cybersecurity Protection - IT Cost Allocation</b>						
a. Commonly Applied Cybersecurity Measures	(included in data center services)					
a. Information Security Audits	(included in data center services)					
-b. Routine Penetration Testing	(not cost feasible)					
<b>Total Cost of Ownership</b>	<b>\$430,949</b>	<b>\$337,410</b>	<b>\$337,410</b>	<b>\$337,410</b>	<b>\$337,410</b>	<b>\$1,780,587</b>

# TCO Comparison Cost Basis

The following 13 pages present the basis for the costs in the TCO comparison charts.

First, the VMS configuration is provided, including the camera and video recording requirements and the server computing and storage requirements, on the following two pages.

In the remaining pages the individual costs are explained, summarized, and then listed per their line items in the charts, as shown below.

Item	Annual Cost
1c. Virtual VMS Servers with O/S & DB	\$57,586
1d. Video Data Storage - 110 TB	\$105,600
1e. Data Center Cost Allocation	\$37,840
1f. Server Technical Support	\$10,905
1g. Video Storage Technical Support	\$6,394
1h. BC/DR Program Cost Allocation	\$15,189

# Corporate Data Center VMS Deployment Details (1 of 13)

Locations: 26 • Cameras: 624 • Days of Video Storage: 30

## VMS Configuration

- **74 Cameras at HQ Building:** 24 outdoors and 50 indoors
- **22 Cameras per Remote Site:** 10 outdoors and 12 indoors (550 cameras)
- **Video Management System Software:** exacqVision Enterprise
- **Video Retention:** 30 days
- **Video Resolution:** 1080p
- **Video Frames per Second:** 15
- **Daily Recording Hours (motion-based):** 6
- **Max Camera Total Data Rate into HQ data center:** 2006.16 Mbps
- **Estimated Video Storage Required:** 110 TB
- **Indoor Cameras:** Axis M3015
- **Outdoor Cameras:** Axis M3025-VE
- **exacqVision calculator data saved at:** <https://exacq.com/config/index.php?config=7KG500HCJ7>

# Corporate Data Center VMS Deployment Details (2 of 13)

## exacqVision Enterprise Server Requirements

- **Processor:** Intel® i3-4100 or better
- **RAM:** 8 GB Minimum
- **Storage:** 100 GB SSD
- **Network:** 25Kbps per video server, plus 512Kbps per simultaneous client connection
- **Operating Systems:**
  - Windows 7, 8, 10, Windows Server 2008 r2, 2012, 2016,
  - Ubuntu 12.04 (32/64 bit), 14.04 (32/64 bit), 16.04 (64 bit), 18.04 (64 bit)
- **Database:** Microsoft SQL v 2012, 2014, 2016 or PostGres v.9+ (customer provided and installed)

## Performance Upgrade from ExacqVision Minimum Server Requirements

- **Processor:** 8 vCPUs
- **RAM:** 24 GB
- **Storage:** 160 GB SSD

# Corporate Data Center VMS Deployment Details (3 of 13)

## IT Data Center Services Costs

- The monthly IT data center costs are taken from online sources, such as the Louisiana State University, and corporate IT services price lists from sources who wish to remain unnamed.
- All service costs were averaged, except for the data storage costs. The corporate IT services lowest storage pricing was used because it was significantly lower than most of the university and other available online IT data center services pricing.

Item	Annual Cost
1c. Virtual VMS Servers with O/S & DB	\$57,586
1d. Video Data Storage - 110 TB	\$105,600
1e. Data Center Cost Allocation	\$37,840
1f. Server Technical Support	\$10,905
1g. Video Storage Technical Support	\$6,394
1h. BC/DR Program Cost Allocation	\$15,189

# Corporate Data Center VMS Deployment Details (4 of 13)

## Eagle Eye Cloud VMS Pricing

Item numbers refer to the numbered items in the comparison chart.

Item	Unit	Total	Product part numbers and notes
1a. Eagle Eye Cloud VMS subscription at Dealer List Price	\$276	\$172,224	EN-HD2-D30-12 – per-camera yearly price
1b. Uses 5Mbits of Existing 25 Mbits or greater service	\$0		No additional Internet service needed
2e. HQ and 25 Sites total	—	\$9,353	Calculation of three setup fee items below
--- HQ Bridge Setup Fee - four bridges required	\$329		EN-SU304-0 – 4 Bridges
--- Site Bridge Setup Fee - two bridges required per site	\$329		EN-SU304-0 – 50 Bridges
--- Install Labor at 1.5 Hours per Bridge per site	\$65		Each Bridge has the capacity for 15 cameras
4a. Electricity for 304 Bridge - Annual cost	\$23	\$1,235	25 Watts at \$0.1044 per kWh for 54 Bridges



# Corporate Data Center VMS Deployment Details (5 of 13)

## VMS Software Installation Steps (13 Servers Total)

10 Recording Servers • 2 Failover Recording Servers • 1 Management Server

- One Management Server – Install, configure, test: 3 hours
- One Recording Server – Install, configure, test: 3 hours
- Make VM image of Recording Server, verify: 1 hour
- Install and verify Recording Server VM image on 11 more virtual servers: 4 hours
- Configure 9 Recording Servers and 2 Failover Recording Servers: 4 hours
- Configure and test automatic and manual failover and failback for 10 Recording Servers: 4 hours
- Document automatic and manual failover configuration, performance results and manual failover steps: 4 hours
- Configure 13 servers for backup, perform backup and restore, verify results: 8 hours
- Total labor for installation steps, 31 hours at \$100 per hour: \$3,100

Item	Annual Cost
2c. VMS software installation	\$3,100

# Corporate Data Center VMS Deployment Details (6 of 13)

## **VMS Software Update/Upgrade Steps (1 of 4)**

10 Recording Servers • 2 Failover Recording Servers • 1 Management Server

### **Preparation (1 hour):**

- Read and understand vendors instructions; check compatibility of VMS version with camera firmware versions and video analytics versions: 1 hour

*Cost at \$100 per hour: \$100*

### **For Ten Recording Servers (2.5 hours):**

- Manually fail over and verify video recording: 1/2 hour
- Install the software update or upgrade: 1/2 hour
- Manually fail back and verify recording: 1 hour
- Back up servers: 1/2 hour

*Cost for Ten Recording Servers at \$100 per hour: \$2,500*

(continued on the following page)

# Corporate Data Center VMS Deployment Details (7 of 13)

## VMS Software Update/Upgrade Steps (2 of 4)

### For Two Failover Recording Servers (2 hours each):

- Install the software update or upgrade: 1/2 hour
- Manually fail over one recording server: 1/4 hour
- Verify secondary recording functions correctly: 1/4 hour
- Manually fail back recording server: 1/4 hour
- Verify primary recording functions correctly: 1/4 hour
- Back up servers: 1/2 hour

*Cost for Two Failover Recording Servers at \$100 per hour: \$400*

(continued on the following page)

# Corporate Data Center VMS Deployment Details (8 of 13)

## VMS Software Update/Upgrade Steps (3 of 4)

### For One Management Server (2 hours):

- Install the software update or upgrade: 1/2 hour
- Verify all management server operations: 1 hour
- Back up servers: 1/2 hour

*Cost for One Management Server at \$100 per hour: \$200*

### Service Documentation (1 hour):

*Cost to Document All Service Actions: \$100*

(continued on the following page)

# Corporate Data Center VMS Deployment Details (9 of 13)

## VMS Software Update/Upgrade Steps (continued) (4 of 4)

### Cost for Performing One VMS Software Update/Upgrade:

- Preparation: \$100
- Update/Upgrade Ten Recording Servers: \$2,500
- Update/Upgrade Two Failover Recording Servers: \$400
- Update/Upgrade One Management Server: \$200
- Document all service actions: \$100

*Cost for one update/upgrade: \$3,300*

### Cost for VMS Software Annual Twice-Yearly Updates/Upgrades:

*Cost for two updates/upgrades: \$6,600*

Item	Annual Cost
3a. VMS software update labor	\$6,600

# Corporate Data Center VMS Deployment Details (10 of 13)

## VMS Software Costs

<b>PRODUCT PURCHASE AND INSTALLATION LABOR COSTS</b>	<b>Cost</b>	<b>Product</b>
1a. VMS Annual Software Support (total of the two items below)	\$16,602	
--- exacqVision Enterprise annual software update support \$83.50 per server, per year.	\$1,002	SSA-EVES-01
--- exacqVision Enterprise annual software updates support for IP cameras, \$25 per camera, per year	\$15,600	SSA-EVIP-01
2a. exacqVision Enterprise IP Camera Licenses, including 1 year of software updates, for 576 cameras	\$97,500	EVENIP-01
2b. exacqVision Enterprise VMS purchase, 1 year of software updates, 4 IP Camera Licenses, for 12 Servers	\$4,232	EVES-01
2c. VMS Software Installation Costs (see Details page 3 of 13)	\$3,100	
5a. Standby Server Failover Software (exacqVision Enterprise System Manager)	\$3,702	EVESM

# Corporate Data Center VMS Deployment Details (12 of 13)

If New Internet Service is Needed for Data Center Deployment (1 of 2)

## Site Internet Bandwidth Requirements – Data Center Deployment

Reason for Bandwidth Requirement	Number of Sites	Number of Cameras	Camera Resolution	Maximum Camera Data Rate	Maximum Outbound Bandwidth Needed in Mbits	Maximum Inbound Bandwidth Needed in Mbits	New Internet Service Needed
Site streams video to HQ data center	25	22	1080p	3.44	75.68	—	100 Mbits
HQ receives all site video streams	1	550	1080p	3.44	—	1,892	2000 Mbits

Bandwidth requirements are based on the exacqVision calculator. See the link below for the saved exacqVision estimation data.

<https://exacq.com/config/index.php?config=7KG500HCJ7>

## No Additional Bandwidth Requirements for Eagle Eye Cloud VMS Deployment

Eagle Eye Cloud VMS deployment requires no additional Internet service. The existing Internet bandwidth can be used.

See the Eagle Eye camera bandwidth considerations: <https://www.een.com/bandwidth-usage-recommendations/>

# Corporate Data Center VMS Deployment Details (11 of 13)

If New Internet Service is Needed for Data Center Deployment (2 of 2)

## Internet Service Upgrade Costs

Cox Cable		
Business Internet Subscriptions (2018)		
Capacity	Monthly Cost	Yearly Cost
25 Mbits	\$95	\$1,140
50 Mbits	\$145	\$1,740
100 Mbits	\$195	\$2,340
1000 Mbits	\$950	\$11,400
2000 Mbits	\$1,900	\$22,800

## HQ Data Center and Remote Site Internet Service Additions

Sites	Monthly	Yearly
25 Remote Sites add 100 Mbits	\$4,875	\$58,500
HQ with data center adds 2000 Mbits (2 Gbits)	\$1,900	\$22,800
<b>Totals for Upgraded Internet Service</b>	<b>\$5,825</b>	<b>\$81,300</b>

Item	Annual Cost
1b. Internet Access (Sites & HQ)	\$81,300



# Corporate Data Center VMS Deployment Details (13 of 13)

## Site LAN Routers

Item	
2e. Hourly Labor (\$100) to install & test Cisco RVS 4-Port Gigabit Security Router - VPN - for 2 hours average per site (26 sites)	\$5,200
3c. Hourly Labor (\$100) to install and test (w/VPN connection) LAN router firmware patches/upgrades for 1/2 hour per site	\$1,300

Item	Unit	Total	Notes
2d. Cisco RV320 Dual Gigabit WAN VPN Router	\$65	\$1,690	Cost for 26 routers
4a. LAN Routers – On-Premises Annual Electricity Cost	\$7	\$182	7.5 Watts at \$0.1044 per kWh for 26 Routers

# Cloud TCO Savings

**As already mentioned, by paying attention to TCO, large enterprises can achieve savings between 20% and 50% on the controllable cost factors of security video surveillance systems.**

In addition to the financial savings, cloud-based video management systems gain the highest system uptime while eliminating customer and integrator hassles relating to IT infrastructure system elements (computing and networking). Plus there are other benefits.

## About Eagle Eye Networks

Eagle Eye Networks ([www.een.com](http://www.een.com)) delivers the first on-demand cloud-based security video management system providing both cloud and on-premise recording. Its flagship product is *Eagle Eye Cloud Security Camera VMS* (Video Management System), which is the basis for the TCO comparisons in this presentation.

The Cloud Security Camera VMS works with a broad range of analogue and IP video cameras, providing secure encrypted access to cloud storage via an onsite bridge appliance, with on-premise video storage also available. Eagle Eye also provides a cloud video API for integrations and application development.