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14. ABSTRACT This equipment award purpose was to support the acquisition of computing infrastructure in support of ongoing projects on secure cloud computing at Stony Brook University, an area of extreme interest to DOD in general and ARL in particular. The purchased equipment is itemized on the following page.					
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**Report Title**

Final Report: Cirrus: A Secure Cloud Computing Testbed

**ABSTRACT**

This equipment award purpose was to support the acquisition of computing infrastructure in support of ongoing projects on secure cloud computing at Stony Brook University, an area of extreme interest to DOD in general and ARL in particular. The purchased equipment is itemized on the following page.

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**Enter List of papers submitted or published that acknowledge ARO support from the start of the project to the date of this printing. List the papers, including journal references, in the following categories:**

**(a) Papers published in peer-reviewed journals (N/A for none)**

Received      Paper

**TOTAL:**

**Number of Papers published in peer-reviewed journals:**

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**(b) Papers published in non-peer-reviewed journals (N/A for none)**

Received      Paper

**TOTAL:**

**Number of Papers published in non peer-reviewed journals:**

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**(c) Presentations**

Number of Presentations: 0.00

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**Non Peer-Reviewed Conference Proceeding publications (other than abstracts):**

Received      Paper

**TOTAL:**

Number of Non Peer-Reviewed Conference Proceeding publications (other than abstracts):

---

**Peer-Reviewed Conference Proceeding publications (other than abstracts):**

Received      Paper

**TOTAL:**

Number of Peer-Reviewed Conference Proceeding publications (other than abstracts):

---

**(d) Manuscripts**

Received      Paper

**TOTAL:**

Number of Manuscripts:

---

**Books**

Received      Book

**TOTAL:**

Received

Book Chapter

**TOTAL:**

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**Patents Submitted**

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**Patents Awarded**

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**Awards**

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**Graduate Students**

<u>NAME</u>	<u>PERCENT SUPPORTED</u>
<b>FTE Equivalent:</b>	
<b>Total Number:</b>	

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**Names of Post Doctorates**

<u>NAME</u>	<u>PERCENT SUPPORTED</u>
<b>FTE Equivalent:</b>	
<b>Total Number:</b>	

---

**Names of Faculty Supported**

<u>NAME</u>	<u>PERCENT SUPPORTED</u>
<b>FTE Equivalent:</b>	
<b>Total Number:</b>	

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**Names of Under Graduate students supported**

<u>NAME</u>	<u>PERCENT SUPPORTED</u>
<b>FTE Equivalent:</b>	
<b>Total Number:</b>	

**Student Metrics**

This section only applies to graduating undergraduates supported by this agreement in this reporting period

The number of undergraduates funded by this agreement who graduated during this period: ..... 0.00

The number of undergraduates funded by this agreement who graduated during this period with a degree in science, mathematics, engineering, or technology fields:..... 0.00

The number of undergraduates funded by your agreement who graduated during this period and will continue to pursue a graduate or Ph.D. degree in science, mathematics, engineering, or technology fields:..... 0.00

Number of graduating undergraduates who achieved a 3.5 GPA to 4.0 (4.0 max scale):..... 0.00

Number of graduating undergraduates funded by a DoD funded Center of Excellence grant for Education, Research and Engineering:..... 0.00

The number of undergraduates funded by your agreement who graduated during this period and intend to work for the Department of Defense ..... 0.00

The number of undergraduates funded by your agreement who graduated during this period and will receive scholarships or fellowships for further studies in science, mathematics, engineering or technology fields:..... 0.00

**Names of Personnel receiving masters degrees**

NAME  
**Total Number:**

**Names of personnel receiving PHDs**

NAME  
**Total Number:**

**Names of other research staff**

NAME                      PERCENT SUPPORTED  
**FTE Equivalent:**  
**Total Number:**

**Sub Contractors (DD882)**

**Inventions (DD882)**

**Scientific Progress**

**Technology Transfer**

# **Proposal No. 61440-CS-RIP**

Cirrus: A Secure Cloud Computing Testbed

## **FINAL REPORT**

This equipment award purpose was to support the acquisition of computing infrastructure in support of ongoing projects on secure cloud computing at Stony Brook University, an area of extreme interest to DOD in general and ARL in particular. The purchased equipment is itemized on the following page.

16 October 2013

Item	Price	Qty	Total
PowerEdge M620 Blade Server	5,037.47	1	5,037.47
PowerEdge M610x	3,908.99	1	3,908.99
PowerEdge M620 Blade Server	4,442.97	2	8,885.94
Blade Server Enclosure, No Blades, M1000E, PowerEdge	6,642.99	1	6,642.99
Newegg 3TB + DRAM	5,569.37	1	5,569.37
Dell Precision T7600, MT, 1300W	4,528.26	6	27,169.56
Dell Rackable UPS	1,889.00	1	1,889.00
Dell Rack 42U	1,839.63	1	1,839.63
GPU Installation KIT	50.00	2	100.00
PowerEdge R720	2,194.00	2	4,388.00
SiCore SHIELD Crypto Co-Processor	8,250.00	2	16,500.00
1 APC Battery Pack + APC network Management Cards	1,297.43	1	1,297.43
SolarWinds Network Configuration Manager DL100	759.00	1	759.00
Solarsystem 4 T5120 Work Group Solution Servers	8,758.82	1	8,758.82
Smart Rackable UPS batteries + network management cards	5,312.34	1	5,312.34
Smart Rackable UPS batteries extended warranty	990.00	1	990.00
Rackable Heat/Fire Safety sensors	455.47	1	455.47
Dell PowerEdge R720 Rackable Servers	5,547.60	5	27,738.00
1APC Smart UPS RT 5000 VA 208V	4,049.00	1	4,049.00
19 Crucial 4GB PC2-5300 ECC DDR2 and 44 Kingston 4GB 1333MHZ DDR3L ECC Reg	1,893.79	1	1,893.79
1Avocent 32Pt 4DIG VM Path Dual PS	6,680.54	1	6,680.54
Kingston 8GB DDRS-667 CL5	274.67	9	2,472.00
PowerEdge M620 Blade Server	5,173.70	1	5,173.70
PDU, 20A, 120V, (24) 5-20R, Vertical, with L5-20P 3m attached input cord, CusKit	233.33	4	933.32
Partial charge for Can-Toi Cluster Upgrade Bundle \$19,211.00 per quote L440975	1,465.60	1	1,465.60
Kingston 4GB 1333HZ DDR3L ECC Reg	45.00	2	90.00
<b>TOTAL</b>		<b>149,999.96</b>	