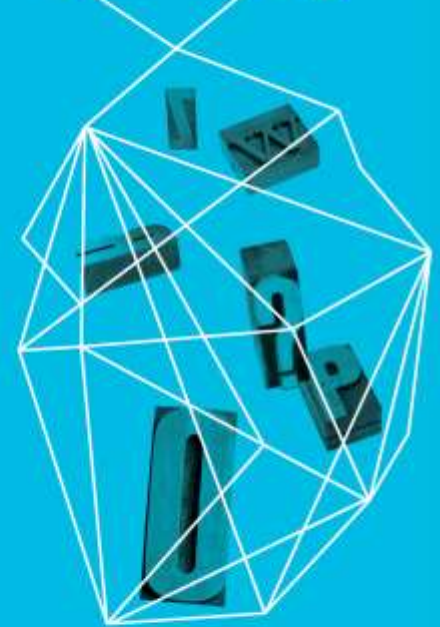


# APAC OF POSSIBILITIES: TIPS FOR INCREASING CLOUD SECURITY AND ADOPTION

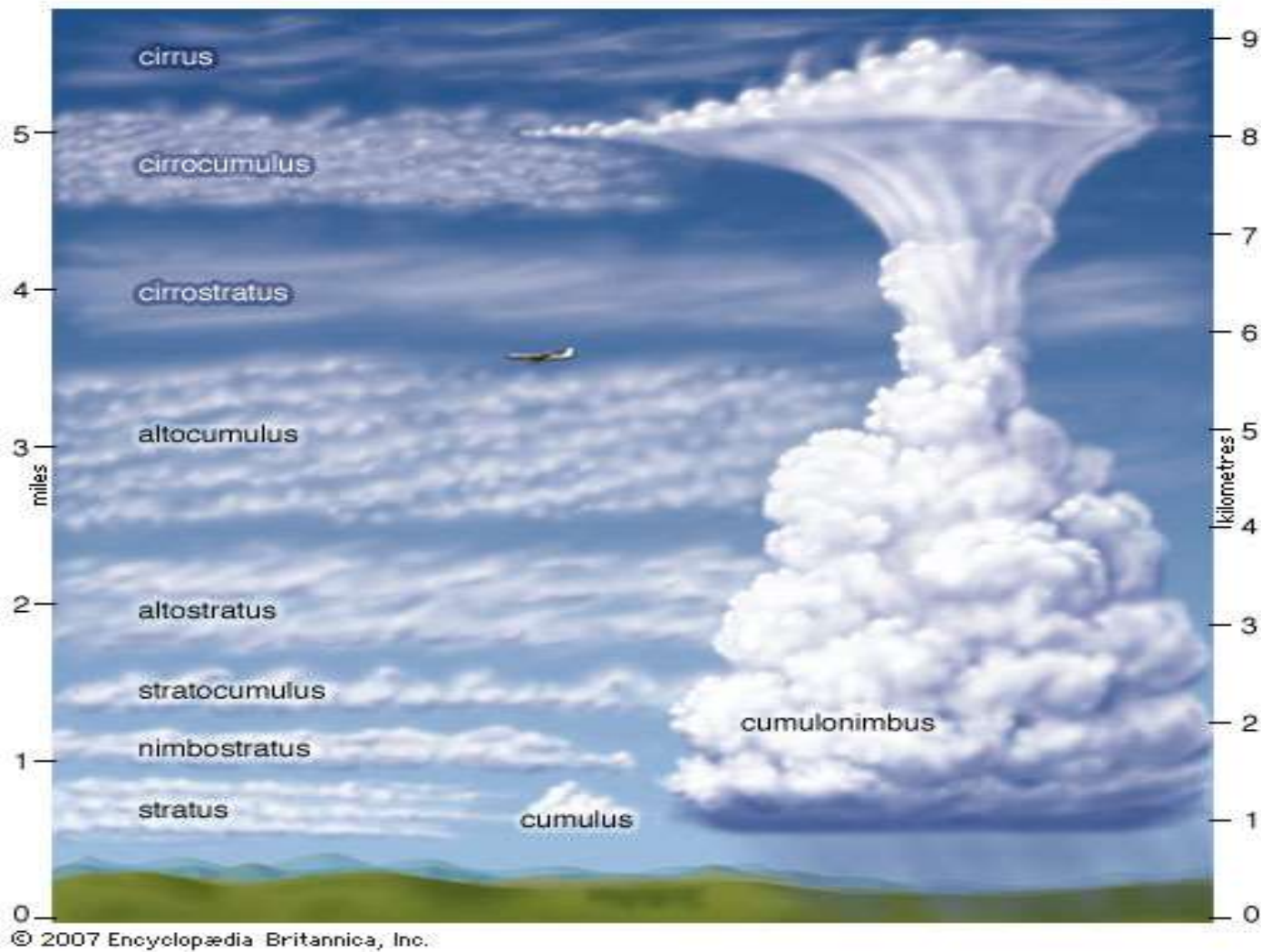
Ken Low

Director of Enterprise Security, Asia Pacific, Trend Micro  
Chairman, Asia Pacific Executive Council, Cloud Security Alliance

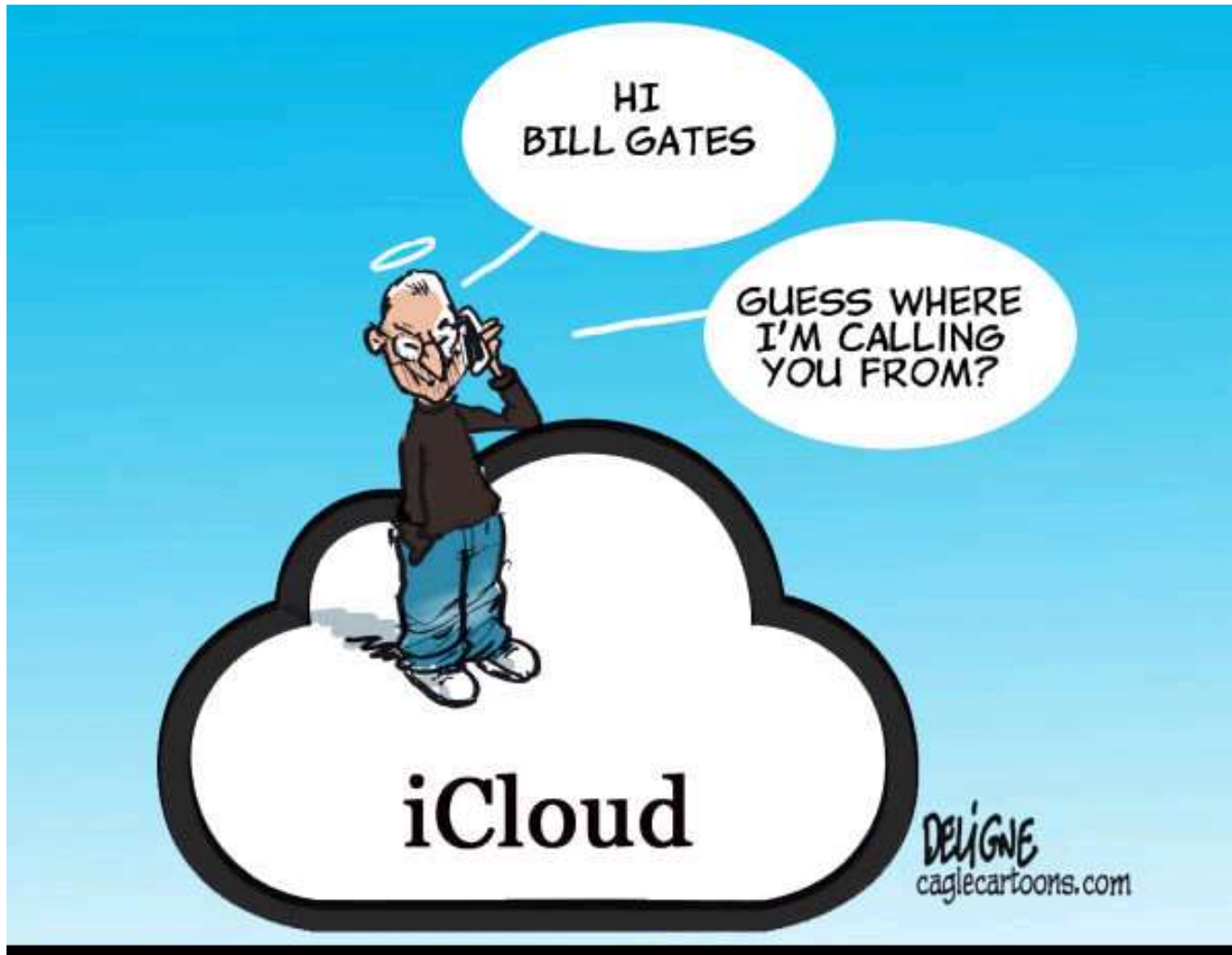
Security in  
knowledge



# Clouds Everywhere Above

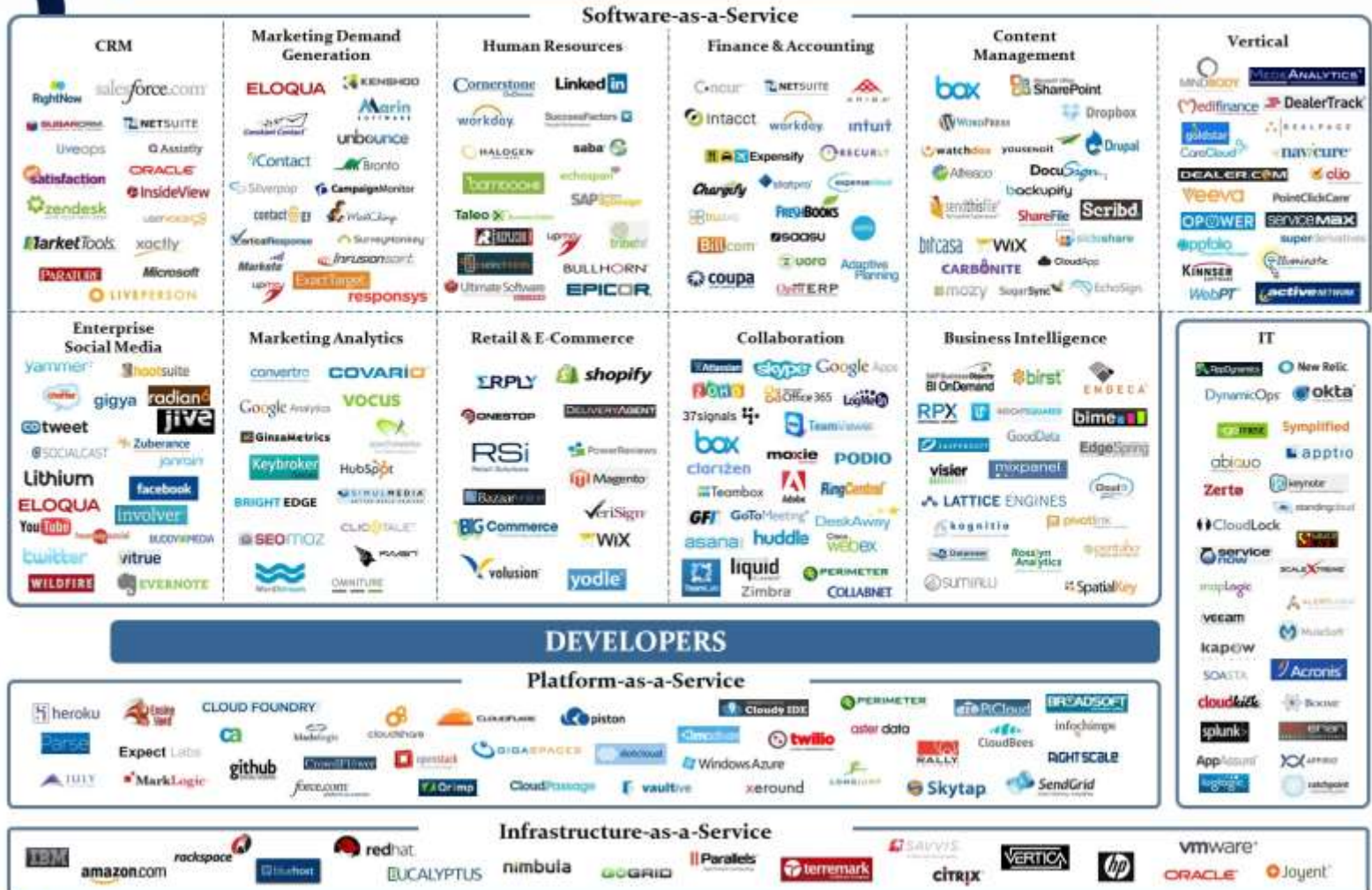


# One Cloud .....



# Bessemer Venture Partners Cloudscape

## END USER APPLICATIONS



© Bessemer Venture Partners 2011 v2.0

# Trend Micro Overview



Take advantage of the cloud



Largest pure-play security provider

Secures your journey to the cloud



Deliver top ranked security solutions



Market leader in Server, Virtualization, and Cloud security

Source: IDC (2011), Technavio (2011 & 2012)



# Global Alliances

## The World's First & Most Complete Agentless Security for VMware®

Now in its fourth generation of integration with vShield® Endpoint and other VMware APIs, Trend Micro Deep Security provides a security-hardened virtual machine that offers agentless anti-malware, web reputation, firewall, intrusion detection and prevention, virtual patching, web application protection and integrity monitoring for VMware virtual machines.



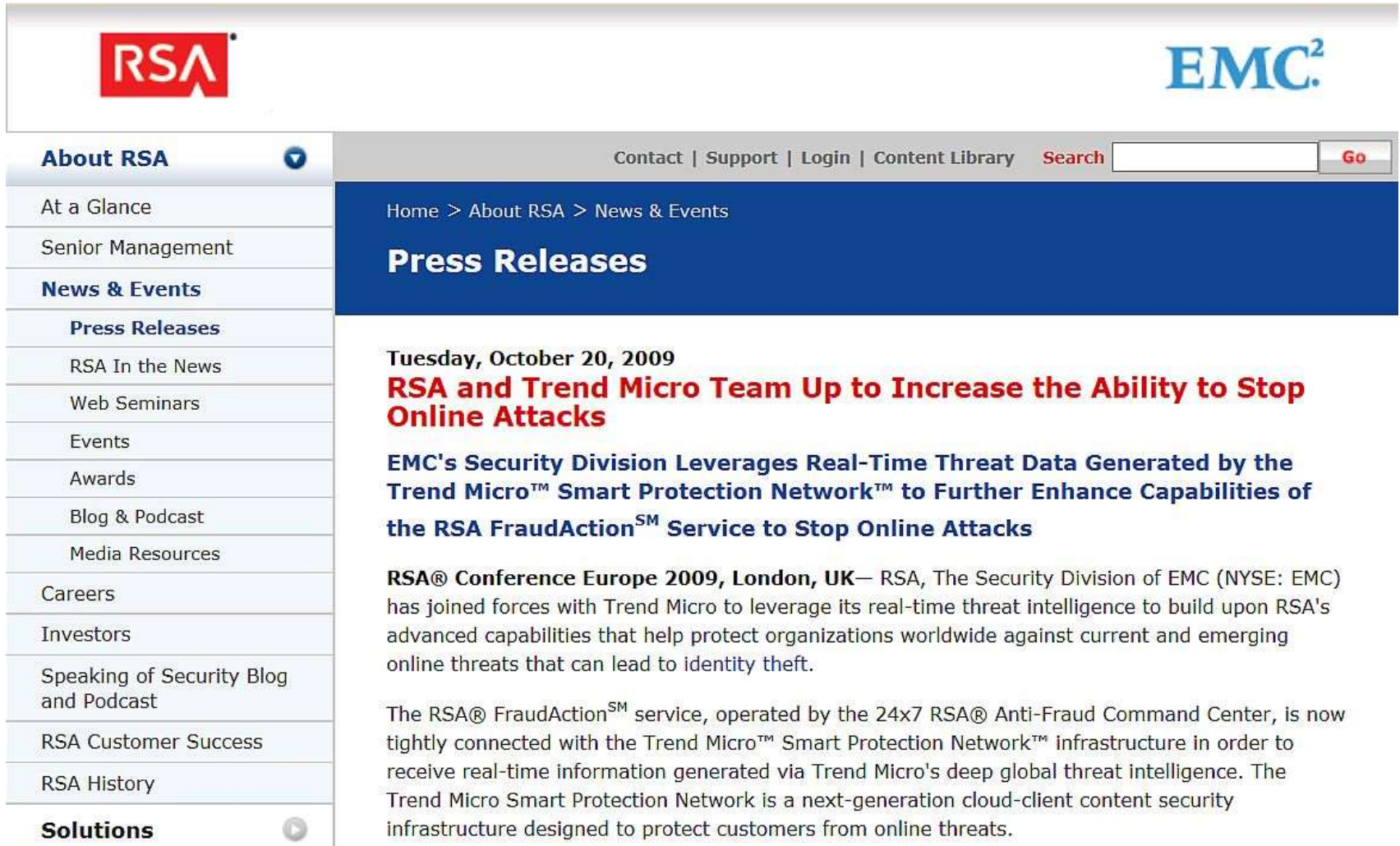
< 1 2 3 4 >

vmware®

“We're very happy to see Trend Micro continuing to work closely with VMware to bring customers the benefits of advanced security for virtual and cloud environments. Trend Micro developed Deep Security 9 with VMware in mind by including integrations with VMware vCenter™, vSphere Endpoint™ and vCloud Director®, and providing improved manageability of security in VMware environments.”

**Parag Patel, Vice President** Global Strategic Alliances, VMware.

# Global Alliances



The screenshot shows the RSA website's navigation menu on the left, with 'About RSA' expanded to show 'Press Releases' selected. The main content area features a breadcrumb trail 'Home > About RSA > News & Events' and a 'Press Releases' section. The featured press release is dated 'Tuesday, October 20, 2009' and has the headline 'RSA and Trend Micro Team Up to Increase the Ability to Stop Online Attacks'. The sub-headline reads 'EMC's Security Division Leverages Real-Time Threat Data Generated by the Trend Micro™ Smart Protection Network™ to Further Enhance Capabilities of the RSA FraudAction<sup>SM</sup> Service to Stop Online Attacks'. The text describes the partnership between RSA and Trend Micro to combat online threats.

**RSA** **EMC<sup>2</sup>**

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Careers

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Speaking of Security Blog and Podcast

RSA Customer Success

RSA History

**Solutions** ▶

Home > About RSA > News & Events

## Press Releases

**Tuesday, October 20, 2009**

### **RSA and Trend Micro Team Up to Increase the Ability to Stop Online Attacks**

#### **EMC's Security Division Leverages Real-Time Threat Data Generated by the Trend Micro™ Smart Protection Network™ to Further Enhance Capabilities of the RSA FraudAction<sup>SM</sup> Service to Stop Online Attacks**

**RSA® Conference Europe 2009, London, UK**— RSA, The Security Division of EMC (NYSE: EMC) has joined forces with Trend Micro to leverage its real-time threat intelligence to build upon RSA's advanced capabilities that help protect organizations worldwide against current and emerging online threats that can lead to identity theft.

The RSA® FraudAction<sup>SM</sup> service, operated by the 24x7 RSA® Anti-Fraud Command Center, is now tightly connected with the Trend Micro™ Smart Protection Network™ infrastructure in order to receive real-time information generated via Trend Micro's deep global threat intelligence. The Trend Micro Smart Protection Network is a next-generation cloud-client content security infrastructure designed to protect customers from online threats.

# Global Alliances



The screenshot shows the Cloud Security Alliance (CSA) website. The main navigation menu includes: HOME, ABOUT, MEMBERSHIP, EDUCATION, CERTIFICATION, CHAPTERS, RESEARCH, EVENTS, PRESS, BLOG, CONTACT. The page features a large banner for the "Cloud Security Alliance Announces Asia Pacific Expansion Initiative; Announces Partnership with Trend Micro as Founding Sponsor". The banner includes a map of Asia and the Pacific region. Below the banner, there are sections for "LATEST NEWS" and "LATEST IN RESEARCH". The "LATEST NEWS" section includes two articles: "Cloud Security Alliance Appoints Cyber Security Industry Veteran from Trend Micro as First Asia Pacific Executive Council Chairman" (dated April 09, 2012) and "CSA Seeking Speakers for Congress 2012 in Orlando" (dated April 04, 2012). The "LATEST IN RESEARCH" section includes two articles: "Mobile Working Group Kick-Off (Call 2)" (dated March 20, 2012) and "Health Information Management Working Group Kick-off Call" (dated March 20, 2012). A "MISSION STATEMENT" section is also visible, stating the organization's goal to promote best practices for security assurance within cloud computing. A "Welcome New Members" section lists several founding members: CipherCloud, Box, SRA International, Booz Allen Hamilton, and Raytheon.

**Cloud Security Alliance**  
**Announces Asia Pacific Expansion Initiative; Announces Partnership with Trend Micro as Founding Sponsor**

The Cloud Security Alliance (CSA) and Trend Micro announced at RSA the establishment of the CSA Asia Pacific headquarters.

**MISSION STATEMENT**  
To promote the use of best practices for providing security assurance within Cloud Computing, and provide education on the uses of Cloud Computing to help secure all other forms of computing.

**LATEST NEWS**

April 09, 2012  
**Cloud Security Alliance Appoints Cyber Security Industry Veteran from Trend Micro as First Asia Pacific Executive Council Chairman**  
CSA and Trend Micro today announced the appointment of Ken Low as the first Chairman of the Asia Pacific Executive Council for CSA.

April 04, 2012  
**CSA Seeking Speakers for Congress 2012 in Orlando**  
Cloud Security Alliance and the MIS Training Institute are looking for seasoned speakers to present at the Cloud

**LATEST IN RESEARCH**

March 20, 2012  
**Mobile Working Group Kick-Off (Call 2)**  
To accommodate all time zones, CSA will now be launching a Mobile Working Group kick-off (call 2) after our call 1 was held on March 15th.

March 20, 2012  
**Health Information Management Working Group Kick-off Call**  
Cloud Security Alliance is launching a kick-off call for the Health Information Management Working Group on March 22nd, 12:00pm PST (GMT-7).

**Welcome New Members**

The CSA is a member-driven organization, chartered with promoting the use of best practices for providing security assurance within Cloud Computing. We would like to welcome our newest members:

- ↳ CipherCloud
- ↳ Box
- ↳ SRA International
- ↳ Booz Allen Hamilton
- ↳ Raytheon



# Cloud Security in Asia Pacific



## 2013 BSA Global Cloud Computing Scorecard

Several countries have made marked improvements in the policy environment for cloud computing in the past year. These findings are based on the BSA Scorecard's one-of-a-kind examination and ranking of 24 countries that account for 80 percent of the global ICT market.

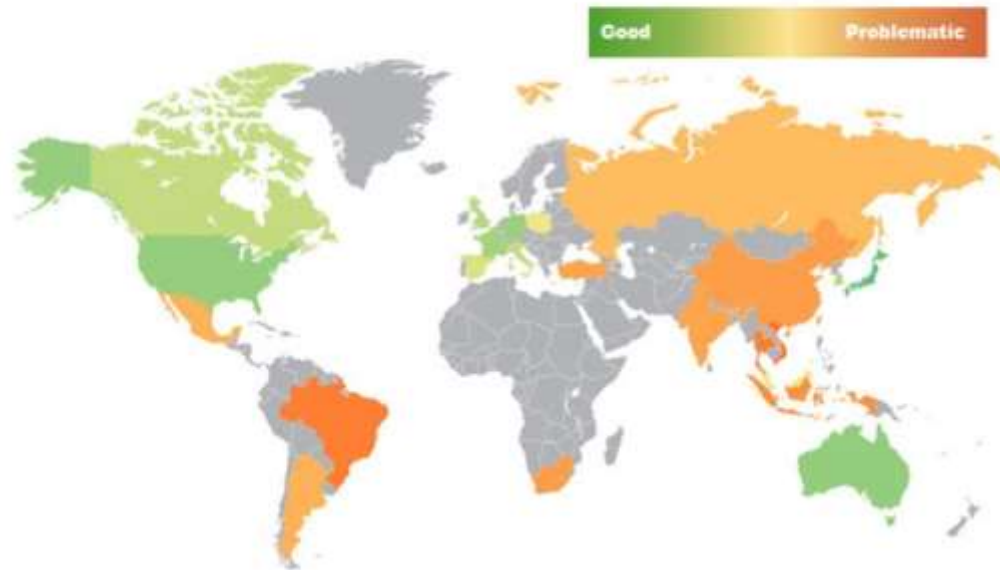


Source: 2013 BSA Global Cloud Computing Scorecard

# Country Ranking

The first-ever report to track year-over-year change in the international policy landscape for cloud computing shows that cloud readiness is improving, if unevenly.

Cloud Computing Policy Environment



Theme	Weight	Value
Data Privacy	10%	10
Security	10%	10
Cybercrime	10%	10
Intellectual Property Rights	20%	20
Standards/Int'l Harmonization of Rules	10%	10
Promoting Free Trade	10%	10
ICT Readiness, Broadband Deployment	30%	30

1	Japan	84.1	+
2	Australia	79.9	+
3	US	79.7	+
4	Germany	79.1	+
5	Singapore	78.5	+
6	France	78.3	+
7	United Kingdom	76.9	+
8	Korea	76.2	+
9	Canada	75.8	+
10	Italy	75.5	+
11	Spain	73.7	+
12	Poland	72.0	+
13	Malaysia	69.5	+
14	Russia	59.1	+
15	Mexico	56.9	+
16	Argentina	56.5	+
17	India	53.1	+
18	Turkey	52.4	+
19	China	51.5	+
20	South Africa	51.3	+
21	Indonesia	48.4	+
22	Brazil	44.1	+
23	Thailand	44.0	+
24	Vietnam	40.1	+

Source: 2013 BSA Global Cloud Computing Scorecard

# The Cloud Readiness Index

	Data Privacy	International Connectivity	Data Sovereignty	Broadband Quality	Government online services and ICT Prioritization	Power Grid and Green Policy	Intellectual Property Protection	Business Sophistication	Data Center Risk	Freedom of Information Access	Cloud Readiness Index	Rank	Change since 2011
Japan	9.0	10.0	5.6	7.6	7.9	7.8	7.6	8.4	6.0	8.9	78.8	1	▲
Korea	9.0	8.0	6.2	9.0	9.1	7.1	5.9	6.9	7.4	7.7	76.3	2	▲
Hong Kong	7.5	7.4	7.6	7.6	8.4	5.7	7.9	7.1	8.0	8.7	75.9	3	▲
Singapore	4.5	9.2	8.1	6.3	9.5	5.7	8.7	7.3	6.4	7.1	72.8	4	▲
Taiwan	7.0	7.5	5.9	6.1	8.8	7.1	7.1	7.5	6.5	8.9	72.4	5	▲
New Zealand	9.0	1.3	8.1	5.4	7.8	8.3	8.3	6.6	7.1	8.9	70.8	6	▲
Australia	7.5	2.7	7.3	6.0	8.2	7.5	7.6	6.7	5.6	8.6	67.7	7	▲
Malaysia	7.5	4.6	5.6	3.7	8.2	6.2	7.0	7.1	6.2	6.9	63.0	8	▲
India	6.0	8.4	4.7	2.4	6.3	3.3	5.0	6.1	3.1	7.6	52.7	9	▲
China	4.0	5.0	3.5	3.5	6.6	4.5	5.7	6.2	5.1	7.1	51.2	10	▲
Indonesia	6.0	4.8	2.1	2.2	5.7	4.9	5.1	6.0	3.1	7.2	47.1	11	▲
Philippines	2.5	4.6	4.3	2.3	5.5	5.8	4.0	5.9	3.6	7.5	46.0	12	▲
Thailand	3.0	2.8	1.5	5.9	5.5	4.8	4.4	6.0	3.6	7.4	44.9	13	▲
Vietnam	5.0	3.2	3.9	2.2	5.9	3.8	3.6	5.3	5.4	6.6	44.9	13	▲

Source: Cloud Readiness Index 2012, Asia Cloud Computing Association

# Cloud-related job growth in Asia Pacific

Predicted national cloud-related job growth figures from 2012-2015:

- ▶ Japan 155%
- ▶ Australia: 129%
- ▶ Singapore: 109%
- ▶ Malaysia: 107%
- ▶ Indonesia: 103%
- ▶ India: 99%

Source: IDC

# National differences in cloud security

Trend Micro's annual survey of 1400 IT decision makers from the U.S., UK, Germany, India, Canada, Japan and Brazil found significant regional differences in cloud security.

- ▶ India had the highest incidence (67 percent) of data security lapse or issue, a full 12% higher than the next highest country, Brazil (55 percent.)
- ▶ India also had the highest – 12 percent -- increase of security lapse or issue from 2011
- ▶ Japan had a 7 percent increase in security lapse or issue, about the same as Canada at 6 percent
- ▶ Japan is less likely to adopt cloud computing than all the other countries surveyed.
- ▶ Japan also has the lowest usage level for VDI, public cloud and private cloud.

Source: Trend Micro

# Tips for increasing cloud security and adoption

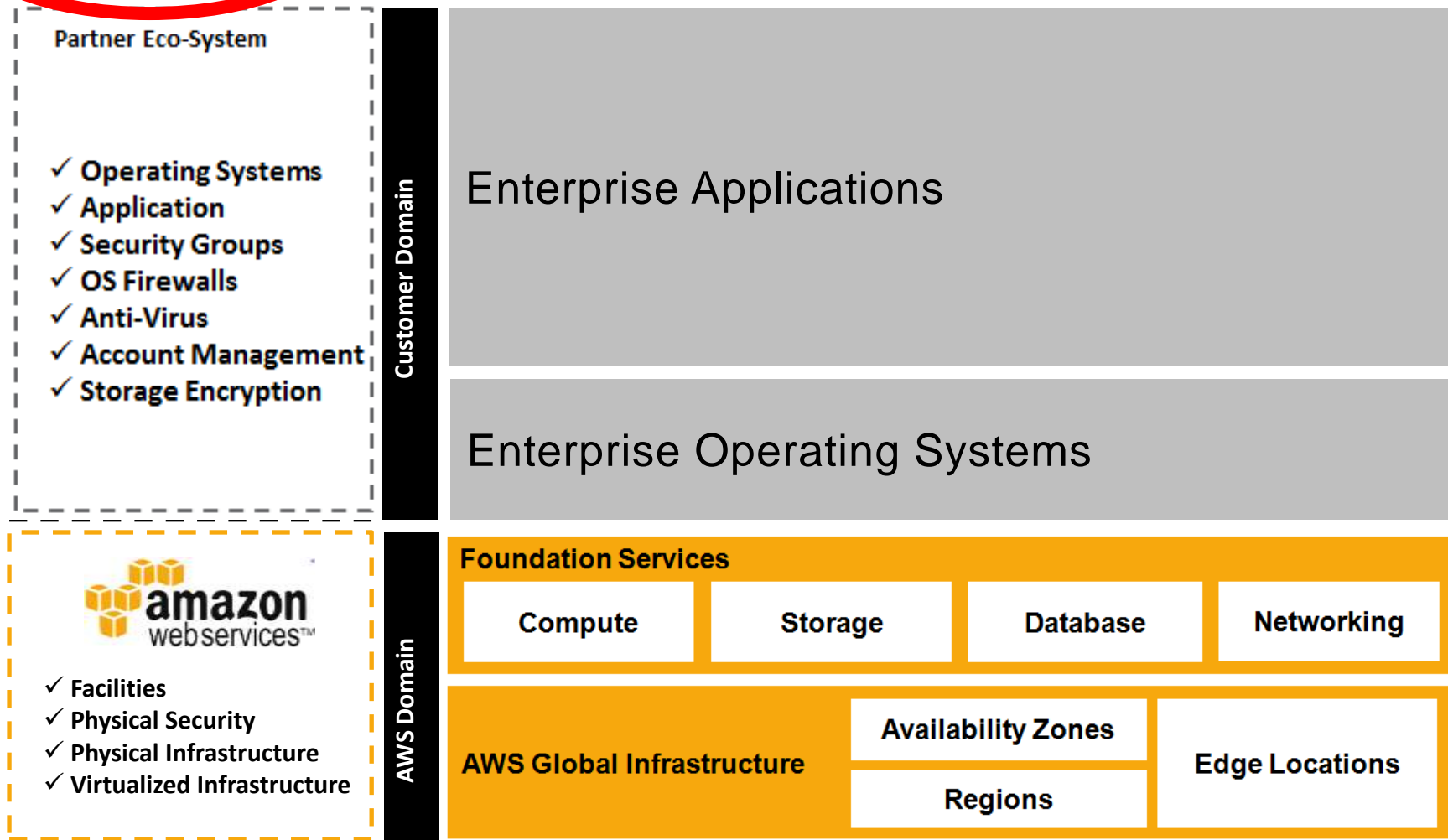


# Cloud Marketing Fairytales: Who Owns Security





# **YOU** The AWS Shared Responsibility Model



# PCI DSS Cloud Computing Guidelines

CSP is responsible for the compliance of what they manage  
Customer is responsible for what is not addressed by CSP  
Customer is responsible for monitoring CSP's compliance



# Security and availability are inseparable

What's holding back cloud adoption? (Trend Micro survey)

54% - security of data or cloud infrastructure

50% - performance / availability of cloud



# Where Does Cloud Security Come From?

Domain

Few years ago

Now

Technical Operations

You

Cloud Service Provider

Security Tools

Hardware & Software

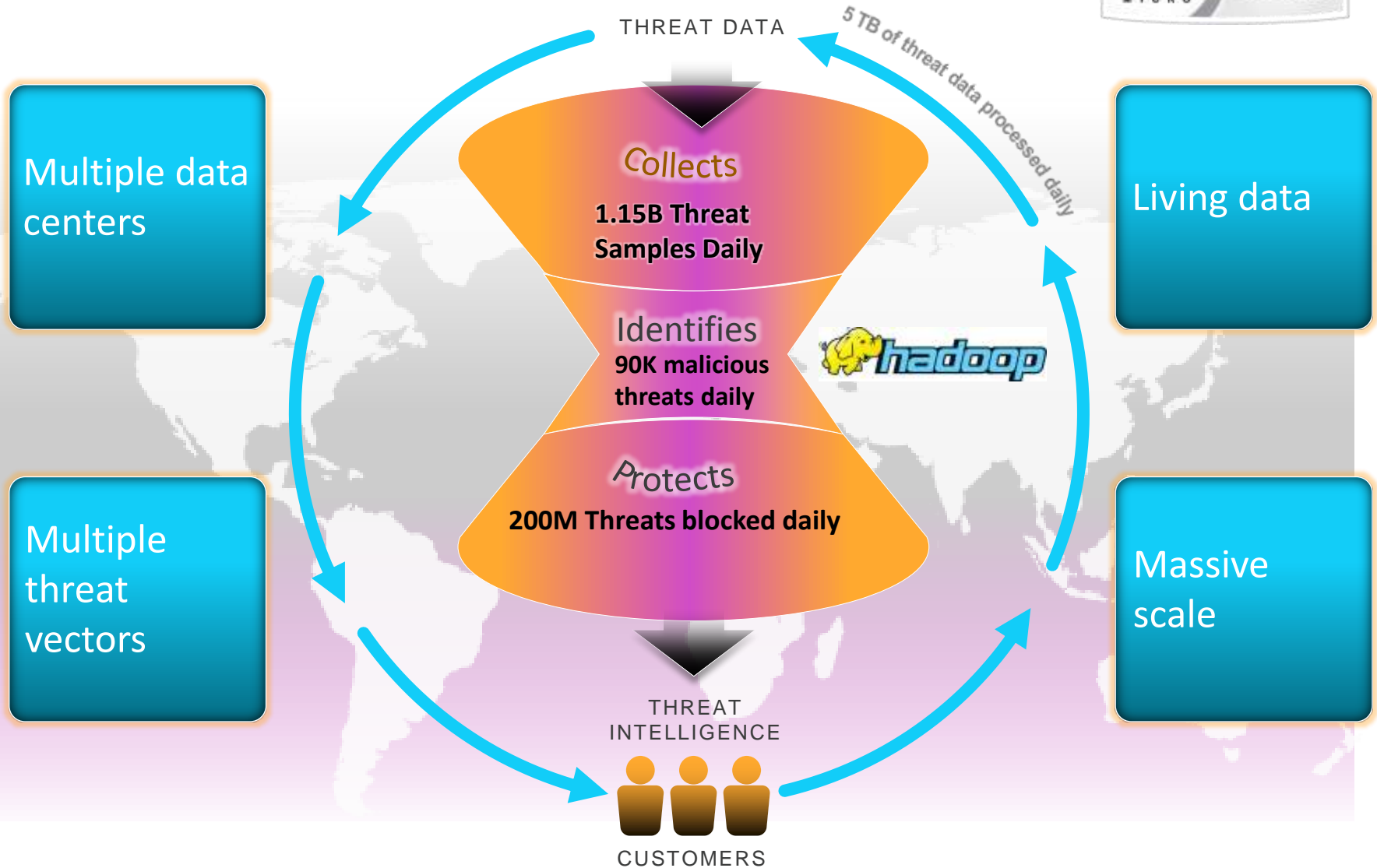
Software & Cloud

Security Knowledge

Threat Research

**NOT CLOUD**  
Big Data & Research

# Using The Cloud For Security Knowledge



# Industry Implications

- ▶ Cloud providers need non-cloud security data
- ▶ Security companies need really good clouds
- ▶ Cloud providers better choose security partners carefully
- ▶ Security providers better choose cloud partners carefully

# Where Does Cloud Security Come From?

Domain

Few years ago

Now

Operations

You

Cloud Service  
Provider

Tools

Hardware  
& Software

~~NOT  
CLOUD~~  
Software  
& Cloud

Knowledge

Threat Research

~~NOT  
CLOUD~~  
Big Data  
& Research

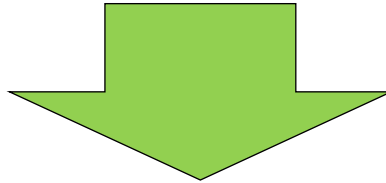
# Industry Implications

- ▶ Foundational cloud components are pluggable
- ▶ Security is not (mostly)
- ▶ Security industry software and VM model is not CSP ready
- ▶ CSPs want carrier-grade security tools, not server-grade



# Why Software and VMs Won't Satisfy CSPs

- ▶ Cloud security tools need native multitenancy
- ▶ Software release cycle mismatch: software vs cloud
- ▶ Security performance hit costs CSPs real margin



- ▶ Time to rethink cloud security so it works better with CSPs
- ▶ Time to move security consoles to the cloud

# Upgrade Your Cloud Security in 3 Easy Steps!

- ▶ Performance
- ▶ Multi-tenancy
- ▶ Management

# — Upgrading Cloud Security Performance

- ▶ Agentless for virtual, private, and public cloud environments
- ▶ Integrated single agent available when required
- ▶ SaaS based console and management for agility

# — Upgrading Cloud Security Multitenancy

- ▶ Multitenant architecture
  - ▶ Delegation and self-service for cloud tenants
  - ▶ Automated deployments of components for elastic scaling
- ▶ Common cloud API integration (AWS, vCloud, etc.)
- ▶ Shared security profiles across all deployments

# Upgrading Cloud Security Management

- ▶ Shared security profiles across all deployments
- ▶ Common cloud API integration (AWS, vCloud, etc.)
- ▶ Single management pane-of-glass for private, VPC, public
- ▶ Hierarchical policy management
- ▶ Cloud-resident, SaaS-based security consoles

# Future of Cloud Security: Shared Dependency

Domain

Now

Future

Operations

Cloud Service  
Provider

Cloud Service  
Provider

Security tools

**NOT  
CLOUD**  
Software  
& Cloud

Cloud resident  
Cloud aware  
Cloud managed  
Cloud release cycles

Knowledge

**NOT  
CLOUD**  
Big Data  
& Research

Realtime data  
Cloud & non-cloud  
Research

# Securing Your Journey To The Cloud





Employees



Partners



Customers



Finance



HR



Productivity



CRM



Supply Chain



Commerce



Customer Support



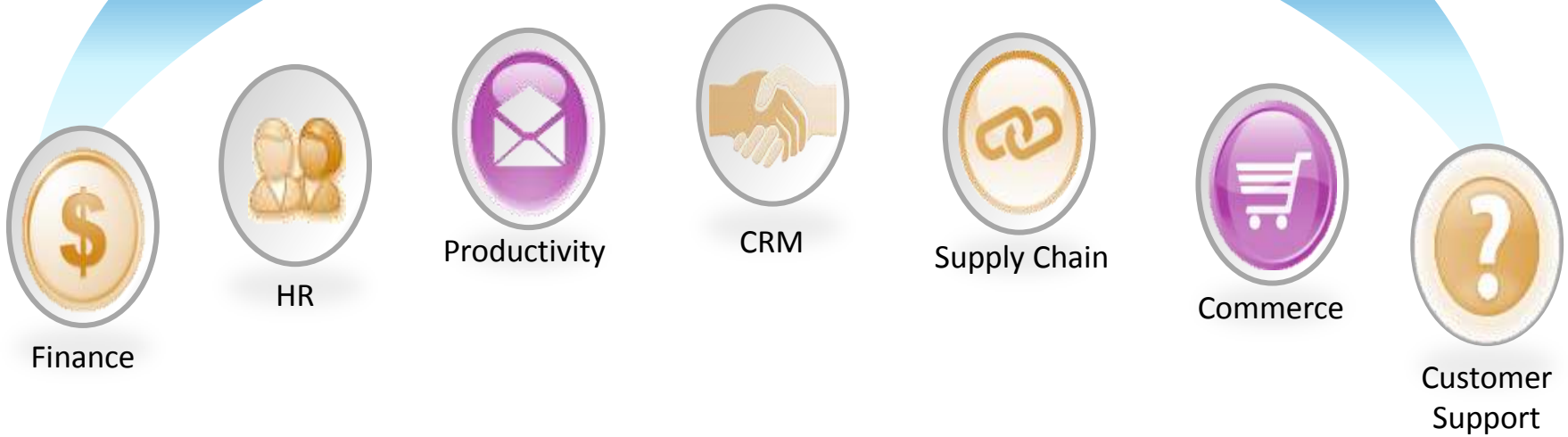
Business App Owners



Data Center Ops

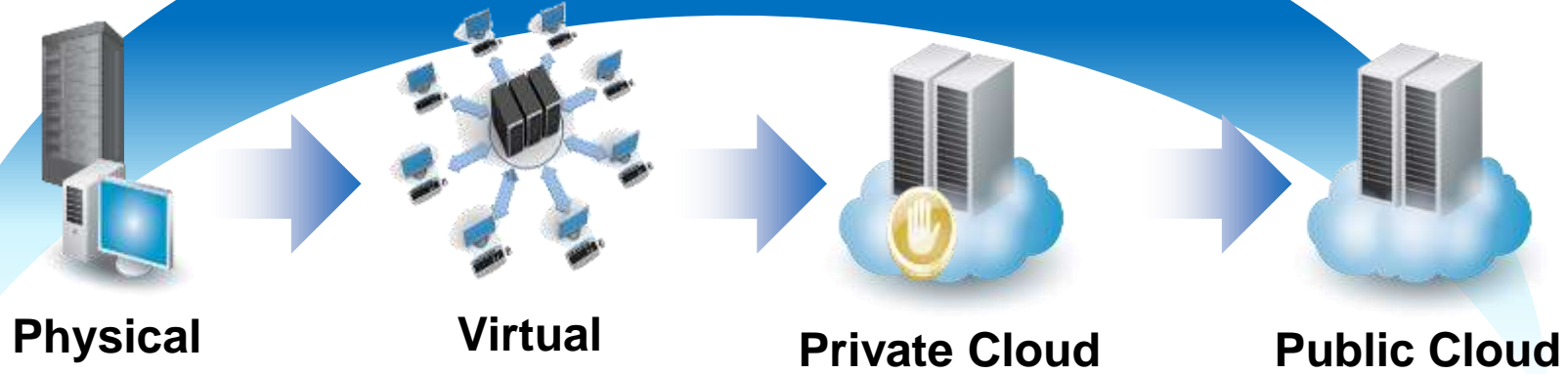


# Data Center



**Data Center Ops**

# Data Center

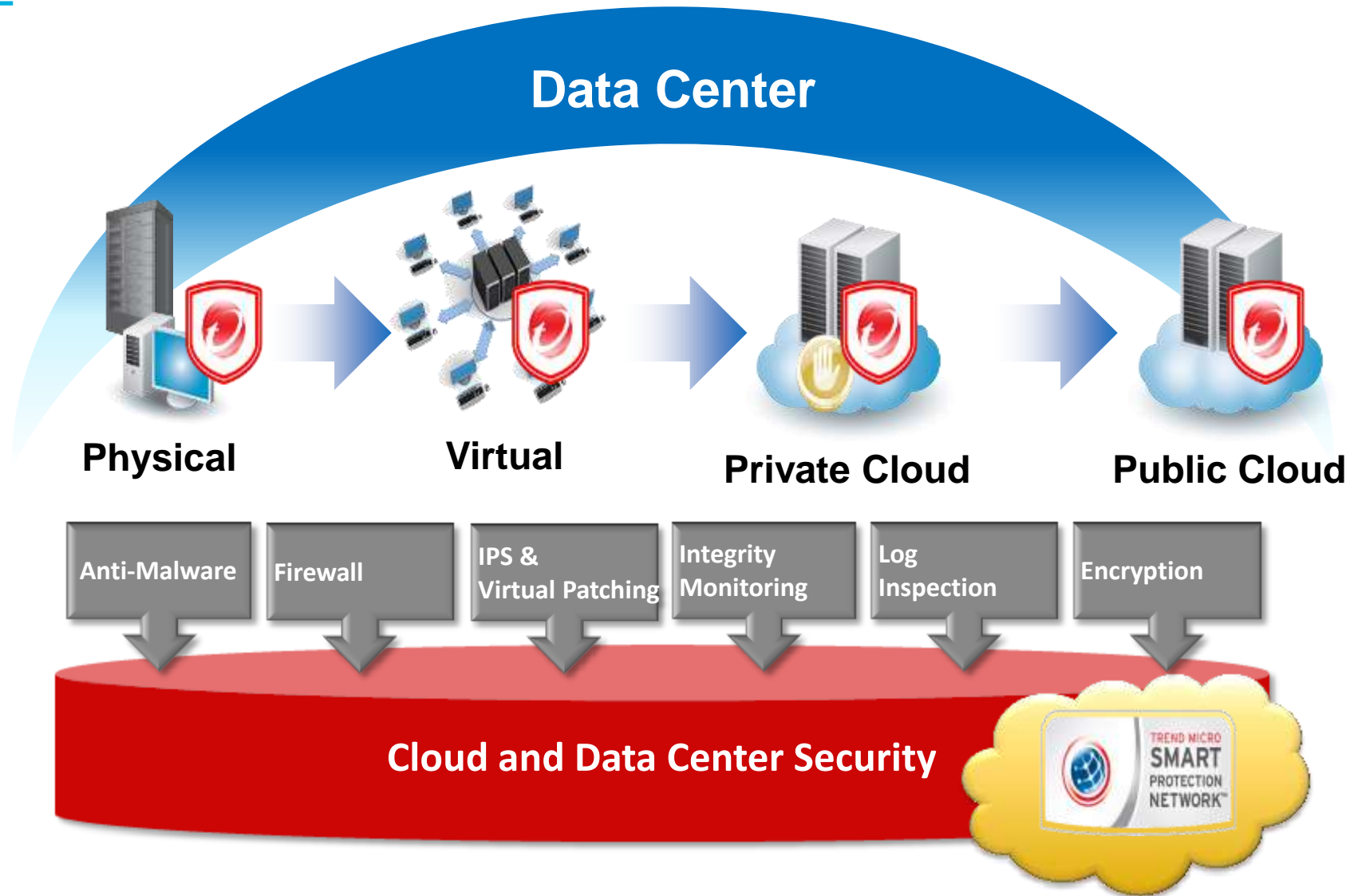


Security

Data Center Ops

- Server and VM integrity
- Appropriate policy enforcement
- Data protection, especially in the cloud
- Performance and manageability

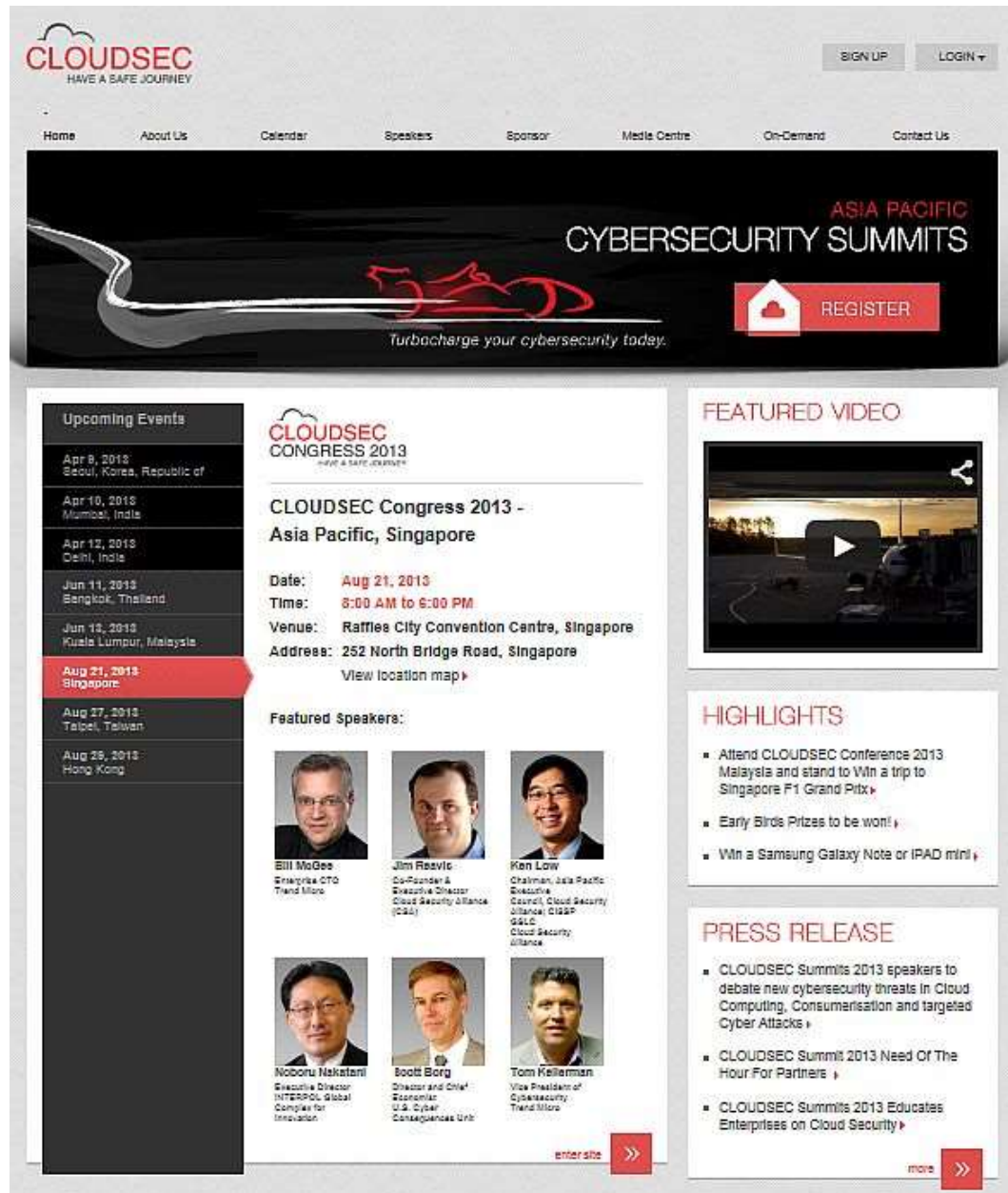
# Integrated Cloud Security



# Cloud Security Tips for Now

- ▶ Help cloud providers address the top barrier to cloud adoption – **security**.
- ▶ Cloud providers in APAC need to **clarify their offerings**, policies, technology, service-level agreements and how they manage cloud security, privacy and security incidents.
- ▶ The **Cloud Security Alliance** offers free cloud security self-reporting frameworks for cloud providers to address enterprise concerns about security in the cloud.
- ▶ **Partner with virtualization aware security vendors** to create compelling secure cloud service offerings for enterprises e.g. agentless virtualisation security like Trend Micro's Deep Security.
- ▶ **Creating safe clouds in APAC** will help regional economies grow quickly, powered by the growth of the cloud.

- 20-21 August 2013,  
8am – 6pm
- Raffles City  
Convention Centre,  
Singapore
- Register:  
[www.cloudsec.co/sg](http://www.cloudsec.co/sg)



The screenshot shows the Cloudsec Congress 2013 website. At the top, there is a navigation bar with links for Home, About Us, Calendar, Speakers, Sponsor, Media Centre, On-Demand, and Contact Us. The main header features the Cloudsec logo and the text "HAVE A SAFE JOURNEY". Below this, there is a large banner for "ASIA PACIFIC CYBERSECURITY SUMMITS" with a "REGISTER" button and the tagline "Turbocharge your cybersecurity today.".

The main content area is divided into several sections:

- Upcoming Events:** A list of events with dates and locations. The event for August 21, 2013, in Singapore is highlighted in red.
- Cloudsec Congress 2013 - Asia Pacific, Singapore:** Details for the event, including the date (Aug 21, 2013), time (8:00 AM to 6:00 PM), venue (Raffles City Convention Centre, Singapore), and address (252 North Bridge Road, Singapore). A "View location map" link is provided.
- Featured Speakers:** A grid of speaker portraits with their names and titles:
  - Bill McGee, Enterprise CTO, Trend Micro
  - Jim Resvic, Co-Founder & Executive Director, Cloud Security Alliance (CSA)
  - Ken Low, Chairman, Asia Pacific Executive Council, Cloud Security Alliance (CSA), GSEC, Cloud Security Alliance
  - Noboru Nakatani, Executive Director, WFP's Global Complex for Innovation
  - Scott Borg, Director and Chief Economist, U.S. Cyber Consequences Unit
  - Tom Kelleman, Vice President of Cybersecurity, Trend Micro
- Featured Video:** A video player showing a scene from the event.
- Highlights:** A list of key points:
  - Attend CLOUDSEC Conference 2013 Malaysia and stand to Win a trip to Singapore F1 Grand Prix
  - Early Birds Prizes to be won!
  - Win a Samsung Galaxy Note or IPAD mini!
- Press Release:** A list of press releases:
  - CLOUDSEC Summits 2013 speakers to debate new cybersecurity threats in Cloud Computing, Consumerisation and targeted Cyber Attacks
  - CLOUDSEC Summit 2013 Need Of The Hour For Partners
  - CLOUDSEC Summits 2013 Educates Enterprises on Cloud Security

# Thank You

**Ken Low**

Director of Enterprise Security, Asia Pacific, Trend Micro  
Chairman, Asia Pacific Executive Council, Cloud Security Alliance

**Linked in** <http://sg.linkedin.com/in/kenlow>

