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THE FUTURE OF CYBER SECURITY

Architecting 21st Century Networks, Infrastructure & Applications



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Architecting 21st Century Networks, Infrastructure & Applications
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Keynote Speakers

Art Coviello, Jr.
Executive Chairman, RSA
and EVP, EMC²

Ira A. (Gus) Hunt
CTO, CIA

David DeWalt
President & CEO, McAfee

Panel Moderators

Nasrin Rezai
Sr. Director of Global
Information Security, Cisco

Joe Pasqua
VP of Research, Symantec
Research Labs

Paul Borrill
Founder and CTO, Replicus

Panel Speakers

Hugh Njemanze
VP & CTO of Security
Solutions, Hewlett-Packard

Dave Cullinane
VP & Chief Information
Security Officer, eBay

Don Adams
VP, Chief Security Officer
& CTO WW Govt, TIBCO
Software

Simon Richard
Principal Network
Architecture, McKesson

Brad Arkin
Sr. Director of Product
Security & Privacy, Adobe
Systems

Vipin Samar
VP of Database Security
Products Development,
Oracle

David Nælon
Lead Security Architect,
Wells Fargo

Markus Jakobsson
Principal Scientist of
Consumer Security, PayPal
Founder of security startups
RavenWhite and Fatskunk

Sherry Ryan
Chief Information Security
Officer, Blue Shield of CA

Kevin Mandia
CEO, Mandiant

Hamid Ahmadi
VP of Strategy and
Technology, Huawei



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Networks now underpin all aspects of modern life, from aviation to communication, from healthcare to education, from finance to national security. Petty criminals, organized criminals, nation-states, and “hacktivists” exploit this fact of 21st-century life for financial gain, social action, and even outright warfare.


The IT community has been diligent in its efforts to stem the tide of cybercrime that today inconveniences or harms individuals, businesses, governments, and entire societies. But despite expensive efforts to secure networks, servers, and client devices, vulnerabilities persist. And the proliferation of mobile devices is introducing a new category of threats.

Cybercriminals currently have the advantage, introducing a torrent of new threats daily. To prevail, the IT industry must counter cybercriminals’ innovation with our own. We need agile, adaptive approaches to protect the confidentiality, integrity, and availability of information. The effort must be a joint one by the private and public sectors, and span standards, education, processes, and technology. And the stakes are high, affecting quality of life, the economy, and national security.

In April 2011, the CTO Forum came together to examine the challenges and the pros and cons of various solutions. During keynote sessions, panels, and deep-dive sessions, we tackled questions such as, what are the architectural limitations of current security models? Where fundamental breakthroughs are needed? What can we do now? Participants included Chief Technology Officers, Chief Information Officers, Chief Operating Officers, Chief Enterprise Architects, academicians, and computer scientists from Fortune 500 firms.

This white paper summarizes the forum proceedings. We invite you to use the ideas in the paper to strengthen your organization’s security posture, and as a springboard for innovation to secure the networks that have become the bedrock for social interaction, interaction, commerce, and government.

Sincerely,



Basheer Janjua
Founding Chair and President,
CTO Forum



Conclusion

Security challenges are growing exponentially, tracking the growth in number of devices and ingenuity of attackers. Stopping security breaches requires aggressive response by responsible people. While it's easy to question the people who are being attacked, it's almost impossible to question the people that are doing the attacking. Typically they experience little or no consequences for their behavior.

Security has become a high-priority issue in nearly every boardroom. The more that we can do to educate employees and consumers of risks, the better able they will be to make informed decisions. Informed people are the first line of defense. Backing them up requires technology, and policy at a national level. The combination will put us on a fair playing field with bad guys.

IT leaders will play a central role in realizing the vision of these technologies, both by providing the tools and guiding the cultural transformation. Ultimately, transformation is as much about selling the value of IT as a Service into the organization as it is about technology.



2011 Event Calendar

May	Jun 15–18 (Wed-Sat) CTO Institute	Jul	Aug 11 (Thurs) Energy Council
Sept	Oct 13 (Thurs) CIO Council	Nov	Dec 8 (Thurs) CTO Forum

2012 Event Calendar

Jan	Feb 9 (Thurs) CIO Council	Mar	Apr 12 (Thurs) CTO Forum
May	Jun 13–16 (Wed-Sat) CTO Institute	Jul	Aug 9 (Thurs) Energy Council
Sept	Oct 11 (Thurs) CIO Council	Nov	Dec 8 (Thurs) CTO Forum

This calendar repeats annually, with events falling on the second Thursday of the month (the CTO Institute excepted).

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membership@thectoforum.net

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CIO, Salesforce.com



**CTO
FORUM**

thectoforum.net

408.806.9595

3945 Freedom Circle, Suite 400
Santa Clara, CA 95054

