A Custom Technology
Adoption Profile
Commissioned By IBM

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Supporting The Zero Trust Model Of Information Security: The Important Role Of Today's Intrusion Prevention Systems

Introduction

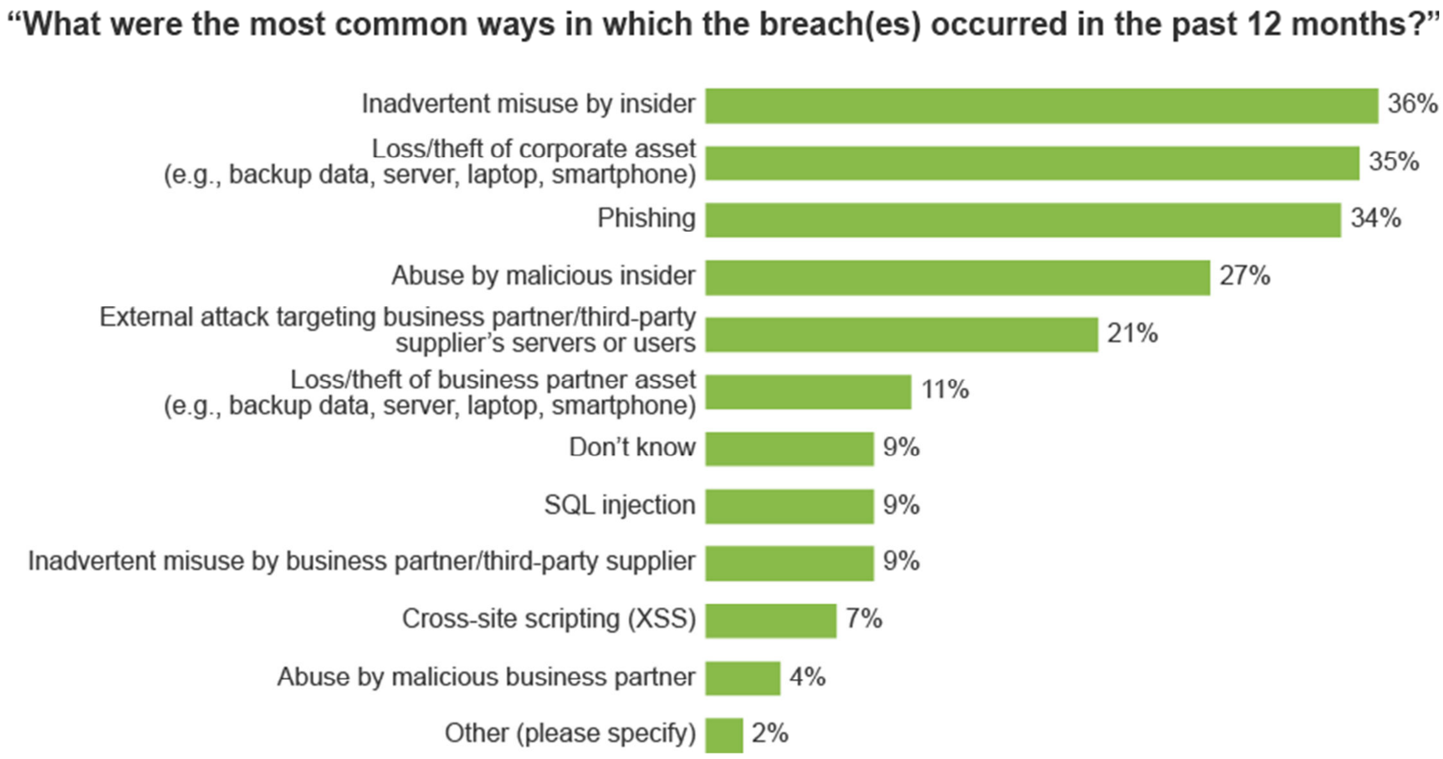
In today's new threat landscape, building a strong perimeter based on a hierarchical network design is no longer an effective approach to security. Notions of "trust but verify" are outdated and extremely vulnerable to a plethora of cyberattacks. Cybercriminals have found a multitude of ways to infiltrate the wall you have built, sometimes using malicious insiders in positions of trust in your network. According to the Forrsights Security Survey, Q2 2013, Forrester Research, Inc., inadvertent misuse by an insider is the most common cause of a security breach (36%), while abuse from a malicious insider accounts for 27% and external attacks on a business partner account for 21% of breaches (see Figure 1).

US enterprise security professionals surveyed indicated that mobile device security and modern malware are the top perceived threats to the enterprise today. Insider abuse is also considered a dangerous threat, with a high number of respondents considering it to be the top threat that their organization faces today (see Figure 2).

Companies that are currently taking steps to shore-up their network security would benefit from adopting a model like Zero Trust and the next-generation tools for threat prevention that support it.

This IBM-commissioned profile of US enterprise IT security professionals evaluates the market's readiness for Zero Trust concepts and technologies, based on Forrester's own market data and a custom study of the same audience.

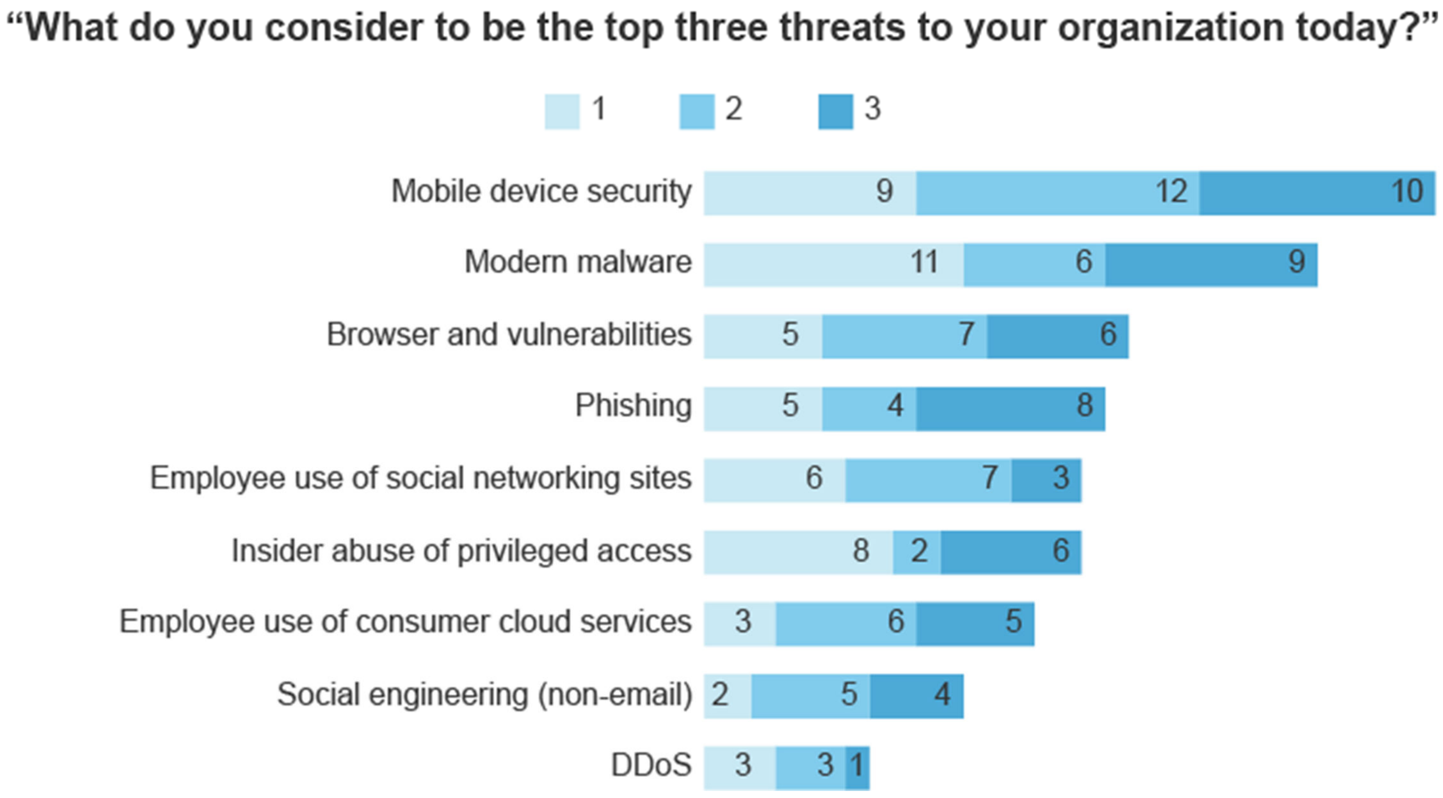
FIGURE 1
Security Breaches Can Occur In A Variety Of Ways



Base: 206 North American enterprise IT security decision-makers whohad a security breach in the past 12 months

Source: Forrsights Security Survey, Q2 2013, Forrester Research, Inc.

FIGURE 2
Top Perceived Threats To Organizations Today Revolve Around Mobile And Malware



Base: 52 US enterprise IT security professionals directly involved in purchasing, implementing, or managing intrusion prevention systems

Source: A commissioned study conducted by Forrester Consulting on behalf of IBM, July 2013

Introducing Forrester's Zero Trust Model Of Information Security

Forrester's Zero Trust Model of information security is a new approach to security that is needed today. The Zero Trust Model eliminates the idea of a trusted network (usually the internal network) and an untrusted network (external networks) to address both internal as well as external threats. In Zero Trust, networks are designed from the inside out in a modular, scalable way. This allows for the creation of pockets of protection throughout the organization. There are three main concepts to the Zero Trust Model:

1. **All resources are securely accessed regardless of location.** All traffic is treated as threat traffic until it is verified that the traffic is authorized, inspected, and secured.

2. **Strict least-privilege access control is mandatory.** Properly implement and enforce access control to eliminate human temptation to access restricted resources. Look no further than the news to see the detrimental effects of poor access control in public data breaches perpetrated by individuals such as private first classBradley Manning or CIA contractor Edward Snowden.

3. **All network traffic is inspected and logged.** Log and inspect all network traffic to gain network traffic visibility and verify that users are indeed doing the right thing, instead of simply trusting that they are doing the right thing.

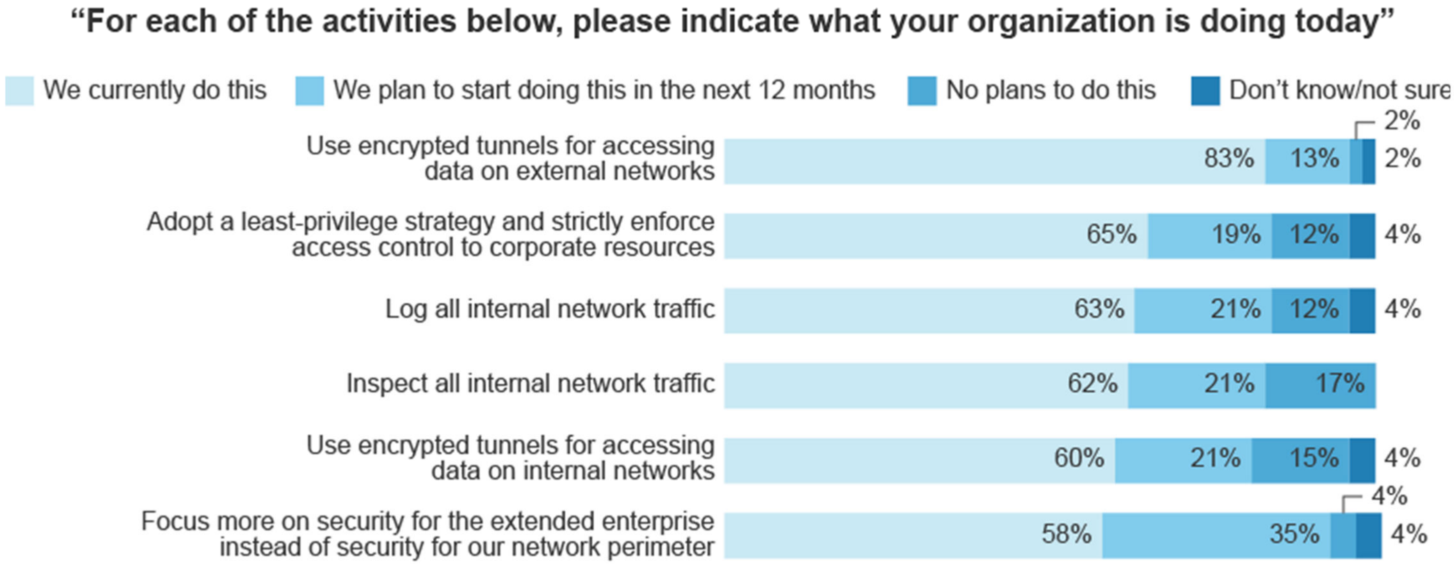
Many Firms Today Are Already On The Path To Support Zero Trust

Respondents in our survey indicate that many have already adopted key Zero Trust concepts today, whether they are aware of Zero Trust or not. This is encouraging.

Implementation of the Zero Trust Model then becomes less of a stretch for companies and more of an extension of the activities currently in place. Today, anywhere from 58% to 83% of respondents are already behaving in ways that support Zero Trust concepts, depending on activity (e.g., logging and inspecting all network traffic) (see Figure 3).

FIGURE 3

Many Respondents Are Already Performing ZeroTrust Activities Today



Base: 52 US enterprise IT security professionals directly involved in purchasing, implementing, or managing intrusion prevention systems (percentages may not total 100 because of rounding)

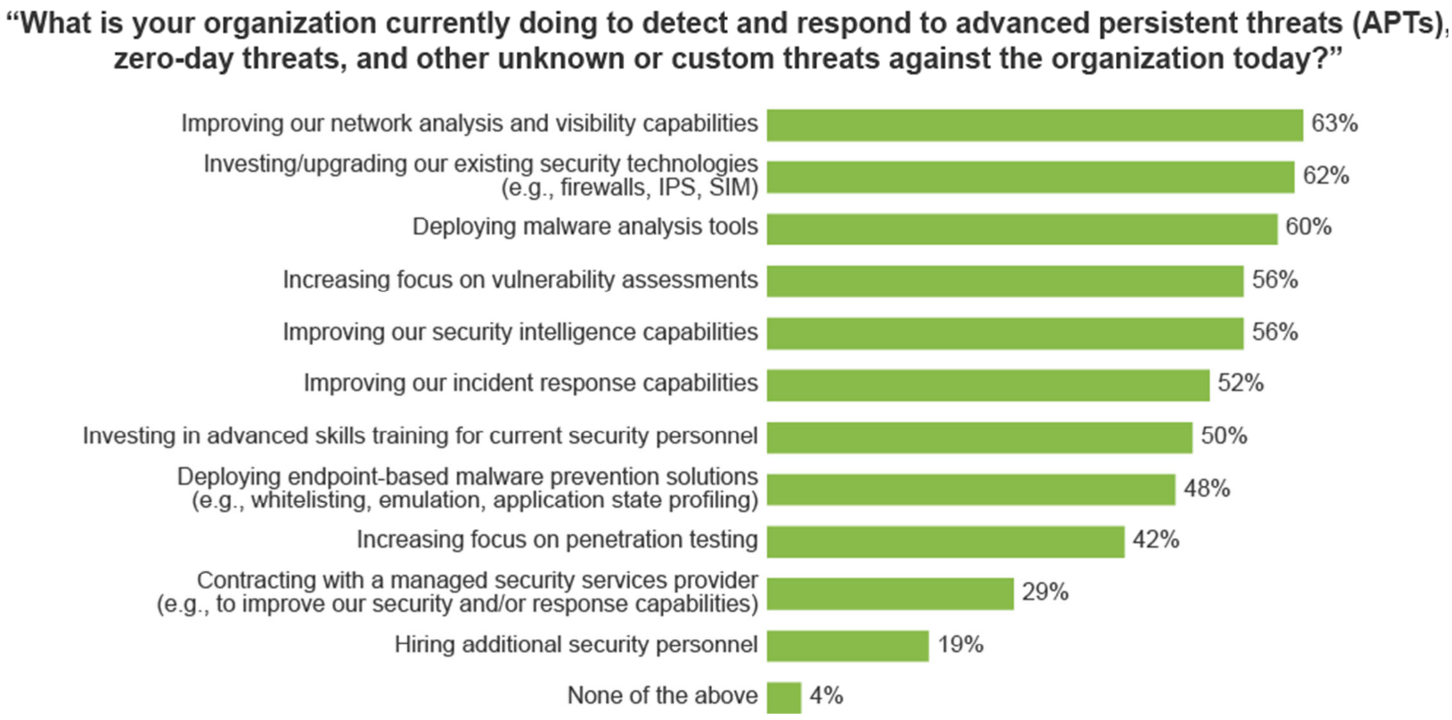
Source: A commissioned study conducted by Forrester Consulting on behalf of IBM, July 2013

Organizations Are Beefing Up Technology Tools In Response To Critical Threats

When it comes to dealing with critical threats like advanced persistent threats (APTs), zero-day threats, and other unknown or custom threats, the top things that organizations are doing in response include investing in and upgrading their existing security technologies like firewall and intrusion prevention systems (IPS), improving network analysis and visibility (NAV) capabilities, and deploying malware analysis tools (see Figure 4). There is a greatly reduced focus on hiring more security professionals as a response to these types of malicious threats (19%) versus the focus on more technology-focused solutions. That's not to say that skilled staff is not important, but rather that these types of threats necessitate the capabilities provided via such tools.

FIGURE 4

Top Responses To APTs, Zero-Day Threats, And Unknown/Custom Threats



Base: 52 US enterprise IT security professionals directly involved in purchasing, implementing, or managing intrusion prevention systems (multiple responses accepted)

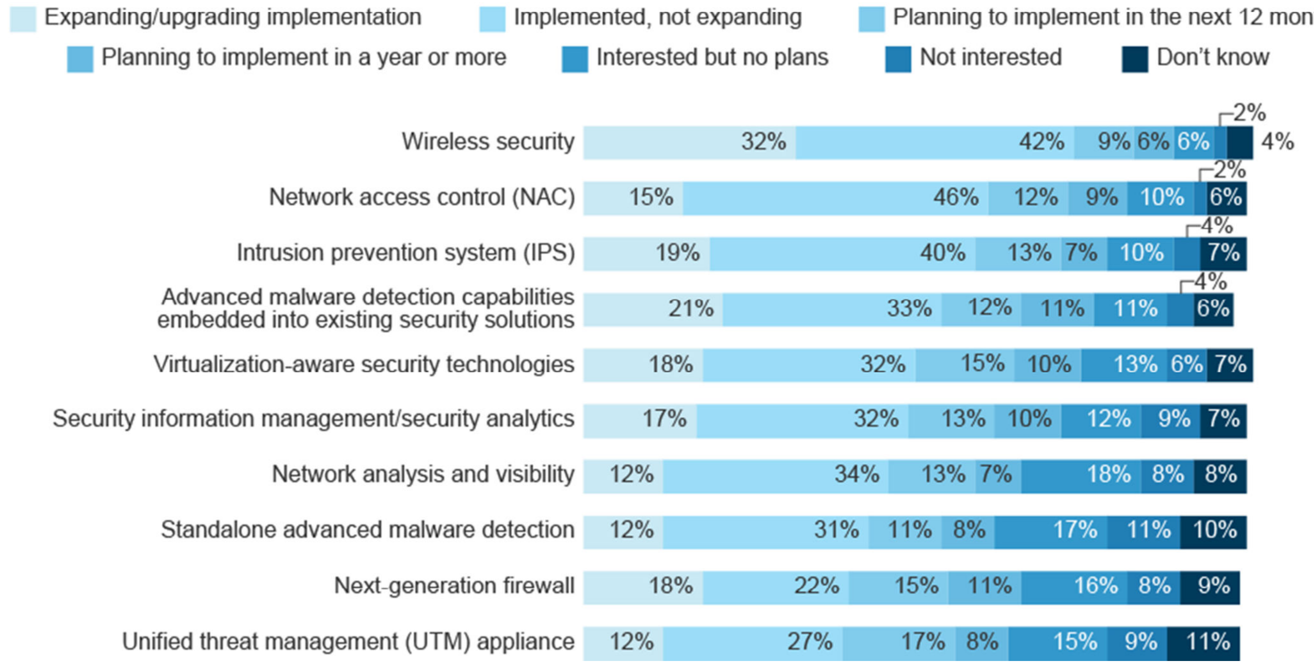
Source: A commissioned study conducted by Forrester Consulting on behalf of IBM, July 2013

Today's Intrusion Prevention Systems Support Zero Trust

It's time to take a second look at updated requirements for key security technologies to effectively address today's threats. IPS is an example of an existing technology that has evolved to address a wider spectrum of security concerns— like providing visibility into what users are doing on the network—a best practice that supports Zero Trust concepts. IPS is a mature security technology today, with 59% of North American enterprises having already implemented or expanding their current IPS implementation today. Furthermore, an additional 20% have plans to implement IPS (see Figure 5).

FIGURE 5
IPS Technology Adoption, 2013 To 2014

"What are your firm's plans to adopt the following network security and security operations technologies?"



Base: 427 North American enterprise IT security decision-makers
(percentages may not total 100 because of rounding)

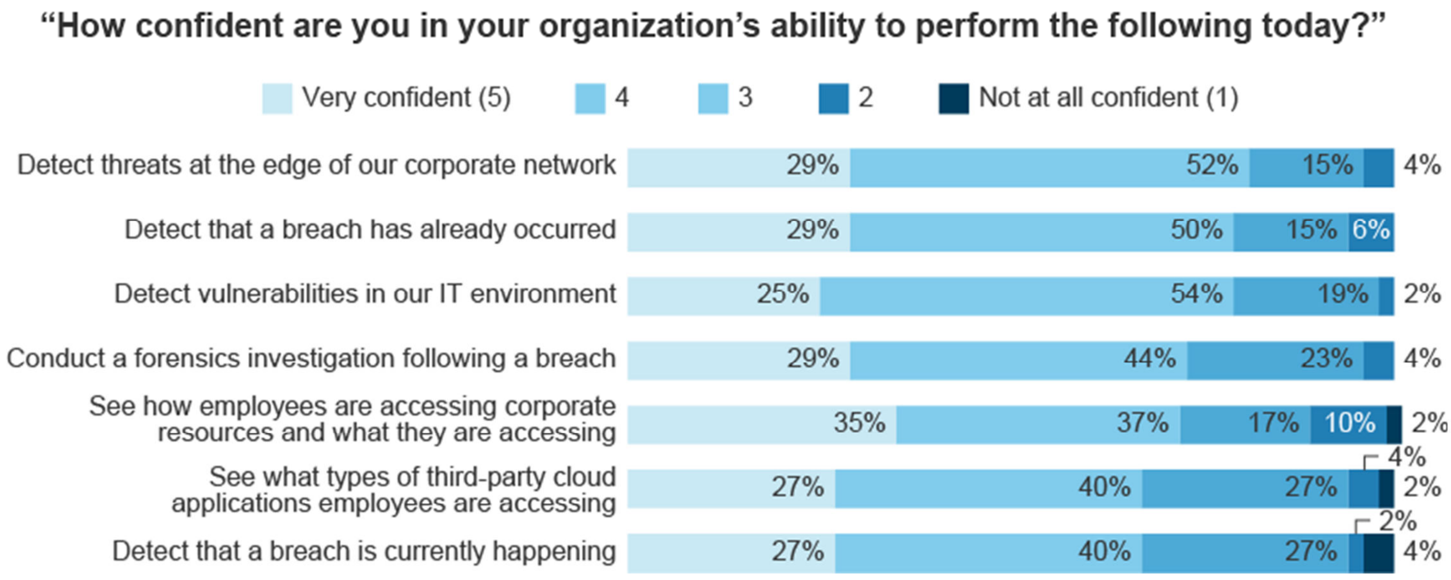
Source: Forrsights Security Survey, Q2 2013, Forrester Research, Inc.

Today's IPS becomes an increasingly important tool for Zero Trust because of its visibility and alerting capabilities. Forrester's survey of 52 US enterprise IT security professionals directly involved in IPS decision-making shows that while most organizations are fairly confident in their ability to perform most common security activities today, they are least confident in the ability to detect a breach that is currently happening (see Figure 6). Knowing when you are in a breach state or about to enter one allows for timely and more proactive incident response. In addition, the ability to see how employees are accessing corporate resources and what they are accessing provides the necessary visibility for verifying access and behavior.

It is clear that legacy ways of protecting networks and the data flowing across them have proven to be ineffective. By adopting a Zero Trust approach to network security, companies can get the visibility they need to help prevent data breaches before they become newsworthy. The proper deployment of modern IPS controls can look deeply at traffic and the data it carries in order to help stop data breaches at their outset. Using IPS devices in a Zero Trust manner provides the traffic inspection necessary to properly enforce Zero Trust concepts and improve your overall security posture.

FIGURE 6

Many Organizations Feel Confident In Their Detection And Response Abilities



Base: 52 US enterprise IT security professionals directly involved in purchasing, implementing, or managing intrusion prevention systems (percentages may not total 100 because of rounding)

Source: A commissioned study conducted by Forrester Consulting on behalf of IBM, July 2013

Methodology

This Technology Adoption Profile was commissioned by IBM. To create this profile, Forrester leveraged its Forrsights Security Survey, Q2 2013. Forrester Consulting supplemented this data with custom survey questions asked of US enterprise IT security professionals directly involved in purchasing, implementing, or managing IPS in their organization. The auxiliary custom survey was conducted in July 2013. For more information on Forrester's data panel and Tech Industry Consulting services, visit www.forrester.com.

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