



Cisco 2016 Annual Security Report

Executive Summary

Security professionals must rethink their defense strategies.

Adversaries and defenders are both developing technologies and tactics that are growing in sophistication. For their part, bad actors are building strong back-end infrastructures with which to launch and support their campaigns. Online criminals are refining their techniques for extracting money from victims and for evading detection even as they continue to steal data and intellectual property.

The Cisco 2016 Annual Security Report—which presents research, insights, and perspectives from Cisco Security Research—highlights the challenges that defenders face in detecting and blocking attackers who employ a rich and ever-changing arsenal of tools. The report also includes research from external experts, such as Level 3 Threat Research Labs, to help shed more light on current threat trends.

We take a close look at data compiled by Cisco researchers to show changes over time, provide insights on what this data means, and explain how security professionals should respond to threats.

In this report, we present and discuss:

THREAT INTELLIGENCE

This section examines some of the most compelling trends in cybersecurity as identified by our researchers as well as updates on web attack vectors, web attack methods, and vulnerabilities. It also includes a more extensive look into growing threats such as ransomware. To produce its analysis of observed trends in 2015, Cisco Security Research used a global set of telemetry data.

INDUSTRY INSIGHTS

This section examines security trends affecting enterprises, including the growing use of encryption and the potential security risks it presents. We look at the weaknesses in how small and midsize businesses (SMBs) are protecting their networks. And we present research on enterprises relying on outdated, unsupported, or end-of-life software to support their IT infrastructure.

SECURITY CAPABILITIES BENCHMARK STUDY

This section covers the results of Cisco's second Security Capabilities Benchmark study, which focused on security professionals' perceptions of the state of security in their organizations. In comparing 2015 survey results with those of 2014, Cisco found that chief security officers (CSOs) and security operations (SecOps) managers are less confident that their security infrastructure is up to date, or that they are able to thwart attacks. However, the survey also indicates that enterprises are stepping up training and other security processes in a bid to strengthen their networks. The study's findings are exclusive to the Cisco 2016 Annual Security Report.

A LOOK FORWARD

This section offers a view of the geopolitical landscape affecting security. We discuss findings from two Cisco studies—one examining executives' concerns about cybersecurity, and the other focusing on IT decision-makers' perceptions about security risk and trustworthiness. We also give an update on our progress in reducing time to detection (TTD), and underscore the value of moving to an integrated threat defense architecture as a way to combat threats.

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Annual Security Report
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Published January 2016

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