VMware Carbon Black Company Overview

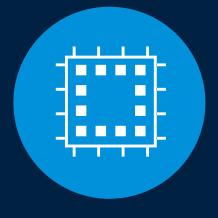
Fernando León Presales Engineer



Discussion



PEOPLE



TECHNOLOGY



ENVIRONMENT



The Situation



INEFFECTIVE PREVENTION

Traditional endpoint security doesn't stop modern attacks



ESCALATING COMPLEXITY

Adding capabilities leads to too many agents and tools to manage



DROWNING IN ALERTS

Security lacks clear data to prioritize and make confident decisions



LACK OF QUALIFIED STAFF

Skills shortage results in security staff being stretched thin



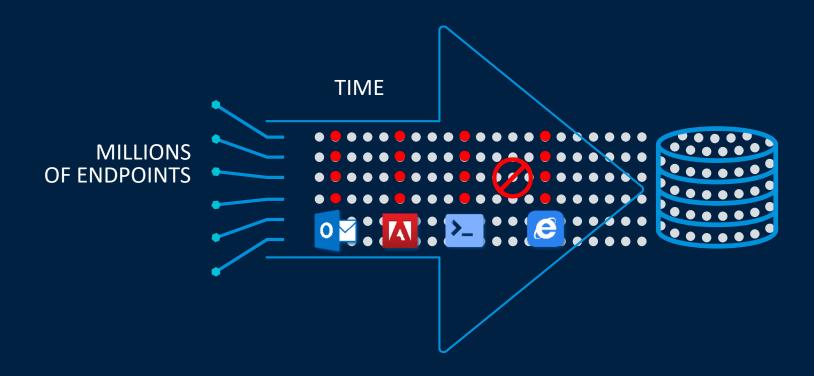
Cloud-Native Endpoint Protection Platform





Carbon Black's Unique Approach

Analyzing Endpoint Behavior





STOP NEVER SEEN BEFORE ATTACKS



STAY AHEAD OF EMERGING ATTACKS

More than 500TB of endpoint data and over 1 TRILLION events per day



What the Carbon Black Cloud Delivers

Reduce cost and complexity by consolidating multiple security solutions



SUPERIOR PROTECTION

Prevent known and new threats as they evolve



ACTIONABLE INSIGHTS

Real-time investigation and remediation



SIMPLIFIED OPERATIONS

Operate faster and more effectively



6,000+
Customers

1/3
Fortune 100

























vmWare Carbon Black



Appendix



VMware Carbon Black Cloud Endpoint Standard

Certified to replace and extend traditional antivirus



ADAPTIVE PREVENTION



- Stops malware & fileless attacks
- Unique behavioral approach uses EDR data to stop unknown attacks
- Strongest ransomware protection –
 100% efficacy in 3rd-party testing
- Online & offline protection
- Flexible policy configurations for advanced users

BEHAVIORAL EDR



- Clear, behavioral view of endpoint activity
- Visualize every stage of an attack and uncover root cause in minutes
- Easily search and investigate endpoints
- Live Response to fix issues in real time

GROWS WITH YOUR TEAM



- Out-of-box detection & prevention for less sophisticated teams
- Easily configured dashboard to reduce noise and complexity
- Real-time investigation for teams w/o dedicated IR practitioners



VMware Carbon Black Cloud Audit & Remediation

Ask questions and take action in real time



ON-DEMAND AUDIT



- Inspect endpoints on demand
- Remotely assess to understand current system state
- On-demand access to 1,500+ security artifacts
- Make quick decisions to reduce risk

REAL-TIME REMEDIATION



- Secure, remote shell into any protected endpoint
- Fix issues in real time
- Remotely perform full investigations and remediation
- Immediately resolve risky configurations and vulnerabilities

SIMPLIFIED OPERATIONS



- Built on a true security platform
- Single agent & single console
- Query results stored in the cloud
- Easy to manage
- No impact to users



VMware Carbon Black Cloud Enterprise EDR

Detect and respond to advanced attacks



COMPLETE VISIBILITY



- Capture all endpoint activity
- Visualize the attack
- Identify root cause
- Aggregate custom threat intel
- Minimize resource impact

SCALE THE HUNT



- Stop advanced threats
- Automate the hunt
- Reduce the attack surface
- Integrate defenses
- Leverage community experts

RESPOND IMMEDIATELY

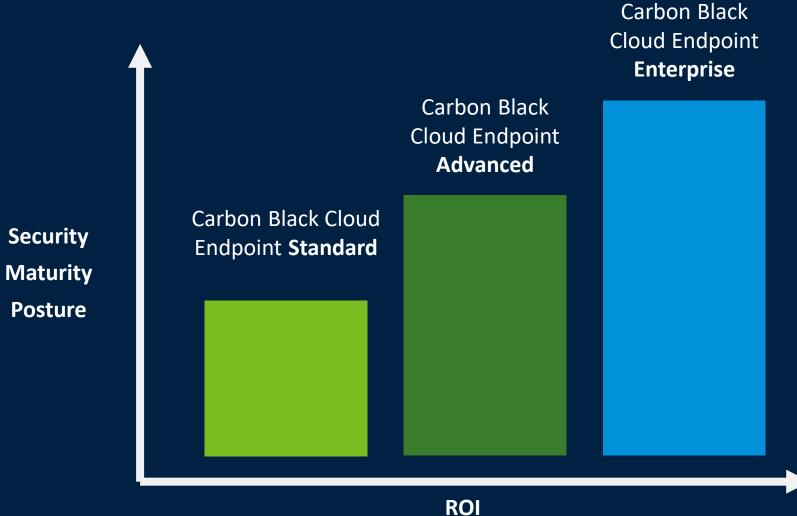


- Isolate infected systems
- Ban malicious files
- Collect forensic data
- Remotely remediate devices



Carbon Black Cloud Endpoint Packages

Security Posture vs ROI



CBC Endpoint Standard provides Next-Gen AV + EDR

CBC Endpoint Advanced comes with Endpoint Standard + Audit & Remediation

CBC Endpoint Enterprise comes with Endpoint Advanced + **Enterprise EDR**

VMware Workspace Security

Combines best-in-class behavior threat detection, NGAV, and digital workspace analytics & remediation solutions

NGAV + EDR



Detects endpoint malware and behavioral threats and send to Intelligence.

Allows IT Ops and SecOps to get more depth of data on a compliance or security issue

Comprehensive Digital Workspace Security



Deliver zero trust security with Workspace ONE Intelligence continuous verification of user and device risk.

Combines broad WS1 Intelligence compliance & risk view w/ Carbon Black real-time threat

Manage Entire
Device and App
Lifecycle



Entitle, provision, and deploy apps easily across devices and enable DLP

Integrated insights, App analytics and Automation

VMware Carbon Black Cloud Managed Detection

Prevent breaches with expert threat hunters at your side



Expert Threat Validation

Analyzes, validates, and prioritizes alerts so that nothing is missed

Early Warning System

Identifies trends and proactively sends advisories to ensure a confident response

Roadmap to Root Cause

Provides additional context to streamline investigations and root cause analysis



3. Armed with contextual data, your team can confidently take action directly from the CBC Endpoint Standard console



VMware Carbon Black App Control

Market-leading application control solution



LOCKDOWN SYSTEMS



- Strongest security possible
- Blocks malware, advanced attacks
- Prevents unwanted change
- Cross platform support

CONTINUOUS COMPLIANCE

- Enforce configuration integrity
- Monitor critical system activity
- Assess compliance risk
- Secure end-of-life systems

HIGH-PERFORMANCE & EASE OF MGMT



- Fast time to value
- Easy to manage
- Minimal impact to systems
- Low resource usage (<1 admin per 10,000 systems)



VMware Carbon Black EDR / Hosted EDR

Detect and respond to advanced attacks



COMPLETE VISIBILITY



- Capture all endpoint activity
- Visualize the attack
- Identify root cause
- Aggregate custom threat intel
- Minimize resource impact

PROACTIVE THREAT HUNTING



- Automate the hunt
- Stop the "headline" breach
- Make the next attack harder
- Integrate defenses
- Leverage community experts

RESPOND IMMEDIATELY



- Isolate infected systems
- Collect forensic data
- Remediate infected devices
- Prevent future attacks



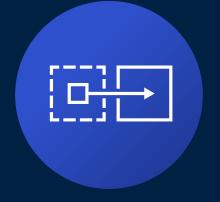
VMware Carbon Black Vision:

Transform the industry with a modern security platform built for any application, running on any cloud, on any device.

mWare Carbon Black



Our View: Security Must Be Transformed



Built-in

Bolted-on





Proactive

Reactive





Aligned

Siloed





Our Vision:

The essential, ubiquitous digital foundation

Any Device



























Any Application



Traditional



Cloud Native



SaaS



Any Cloud



Hybrid



Edge



Public





The Intrinsic Security Layer

Building security into key control points





Major Breaches Have Made Security #1 BOD Priority



JULY 2017 143M RECORDS



JULY 2017 14M RECORDS



MARCH 2018 880K RECORDS



APRIL 2016 5M RECORDS



DEC-JUNE 2018 \$1.1B CRYPTO



MAY 2016 117M RECORDS



AUG 2016 333K SITES



APR 2018 37M RECORDS



JUNE 2017 198M RECORDS *******myspace

MAY 2016 **360M RECORDS**



Critical Business Data is at Risk

15x

Increase in damages from ransomware since 2015

Cybersecurity Ventures research

68%

Of breaches took months or longer to discover

Verizon Data Breach Incident Report 2018

27%

Are confident that AV will protect them from ransomware

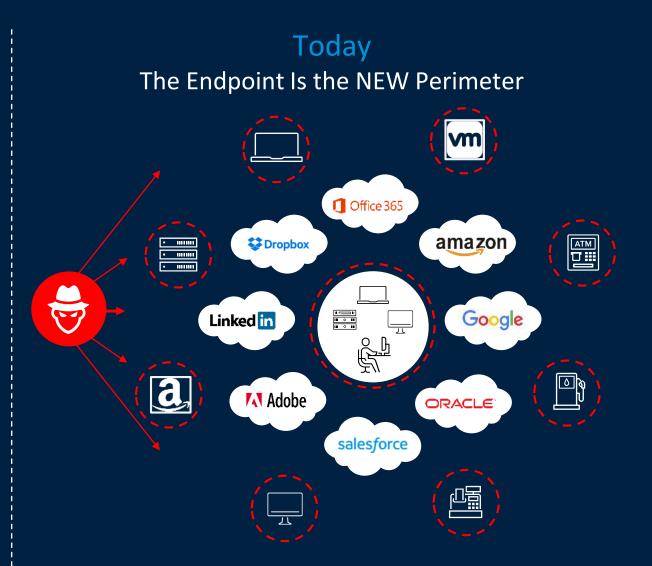
Ponemon Rise of Ransomware report



Mobility & Cloud Are Transforming Security

Before
The Network Was the Perimeter





Solving the Full Security Lifecycle with Data

Traditional Antivirus

Focuses on Prevention Only



Carbon Black
Provides Full Security Lifecycle



Fraud Detection and Prevention was Transformed

By Leveraging the Cloud and Big Data Behavioral Analytics



Manual point-in-time analytics focused on fraud techniques

Automated real-time analytics focused on behavior of users/apps

Fraud Loss Dropped

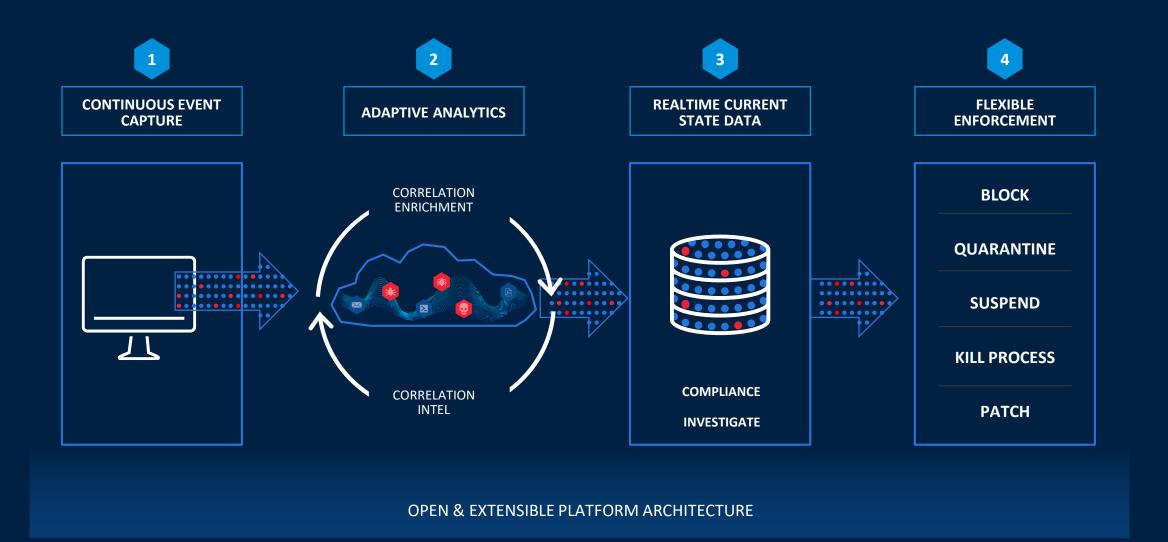
\$4B (20%) over 4 years

Stolen Credit Card Value Plummets

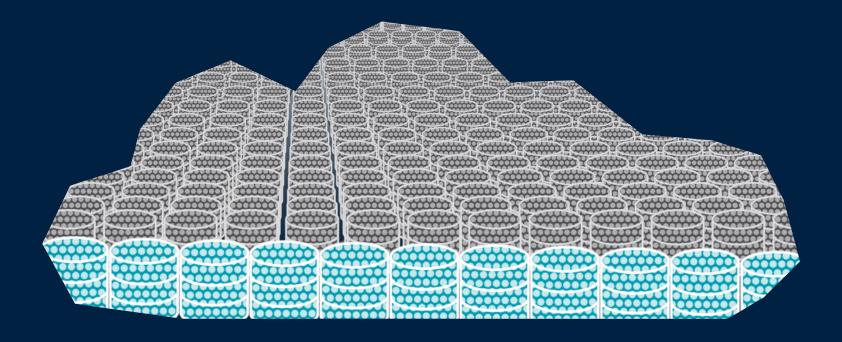
\$300 to \$5 per credit card number



The Best Data Provides the Best Security







>500TB

Endpoint Data Analyzed Per Day 1 Trillion

Security Events Per Day

The Scope and Scale of Our Analytics

By comparison, the number of events and quantity of data we analyze every day is....





Linux is Different



A lot of malware

Variety of assets with many different purposes

Standard, predictable release cycles









Not much malware

Highly controlled; uptime & performance are essential

New versions daily, compiled on custom kernels



How to Solve Unique Linux Challenges

Our Linux Design Principles



Do No Harm



Speed of Delivery Cadence



Breadth of Coverage Over Depth

Provide value to **both** the Security Operations Team and the Linux System Admin



Security Controls





Mobile Security



Endpoint Security



Data Security



Block Chain



Security Operations & Incident Response



Threat Intelligence



Cloud Security



Risk and Compliance



WAF and Application Security



Identity & Access Management



Network & Infrastructure Security



Security Controls





Mobile Security



Endpoint Security



Data Security



Block Chain

Security Operations & Incident Response



Threat Intelligence



Cloud Security



Risk and Compliance



WAF and Application Security



Identity & Access Management

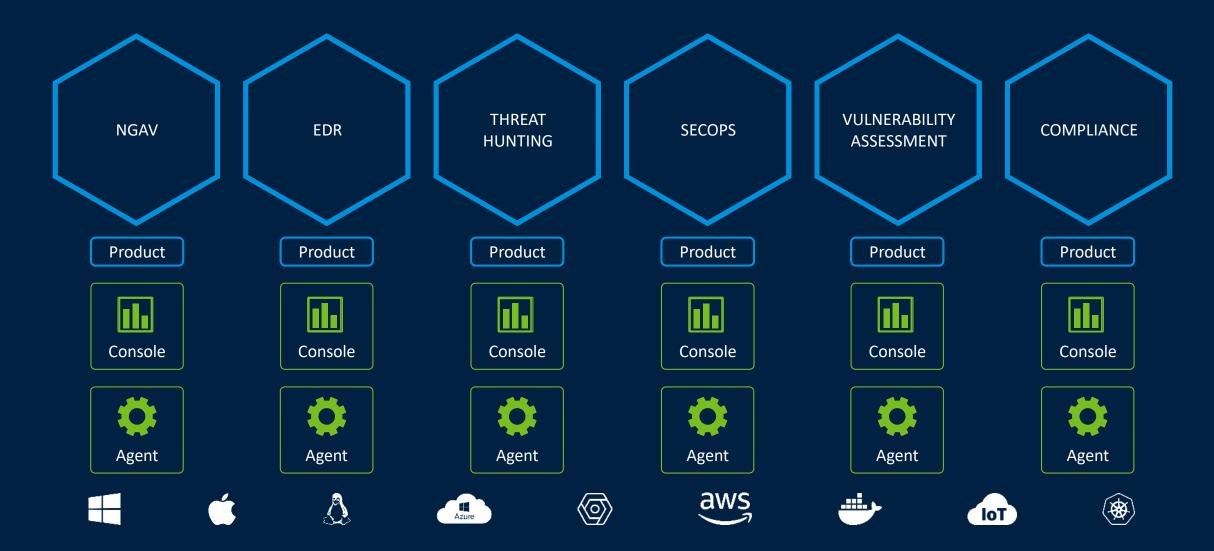


Network & Infrastructure Security



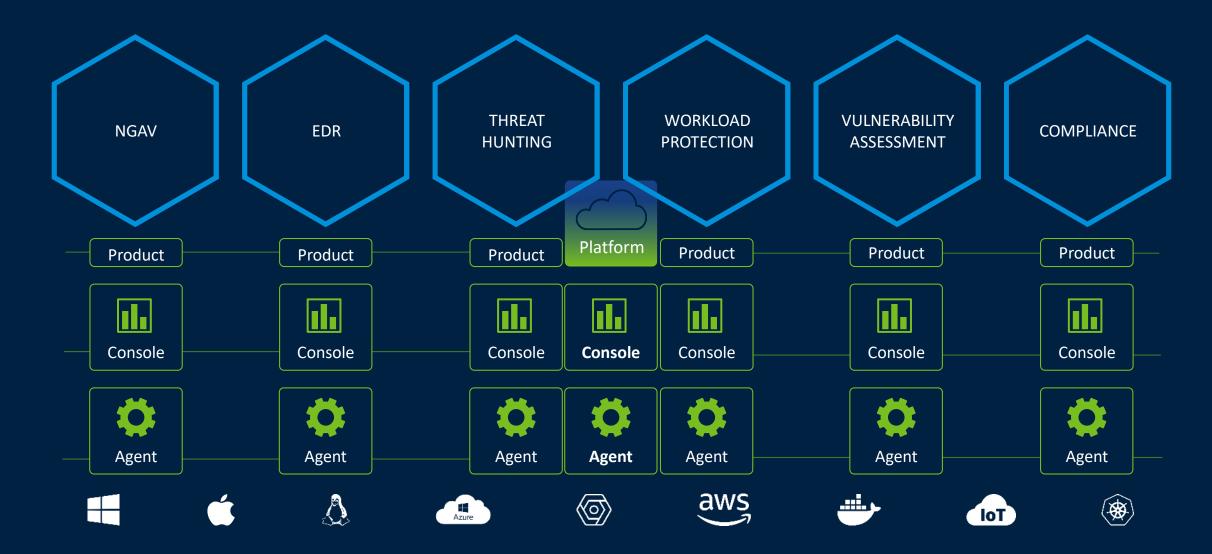


Multiple Products, Multiple Consoles, Multiple Agents





We Need a New Approach



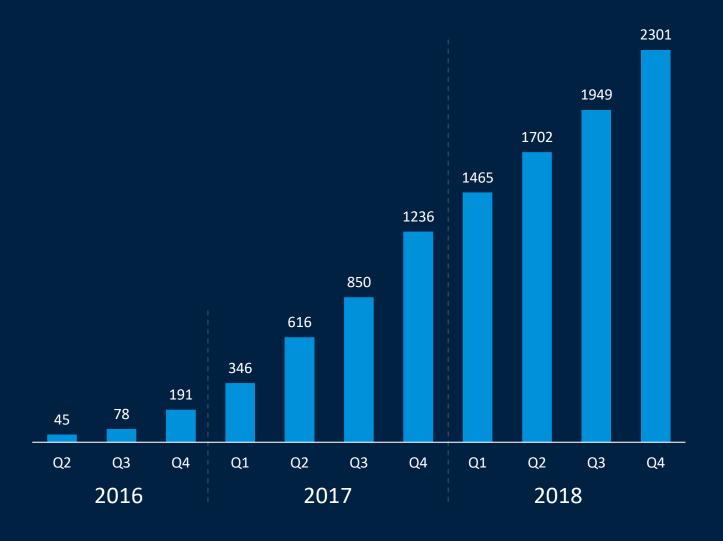


vmware Carbon Black

VISION

A World Safe from Cyber Attacks

Rapid Customer Adoption of the PSC



2,300+ PSC customers

68 PSC IR & MSSP partners

Largest PSC deployment to date: 350K+ endpoints

Multiple global PSC deployments exceeding **100K+** endpoints

Community of **20K+** security professionals sharing intel

Protecting Brand Leaders Across Industries

OIL & GAS



HEALTHCARE

RETAIL

TECHNOLOGY

MANUFACTURING











3
OF THE
TOP 5

2 OF THE TOP 11 6 OF THE TOP 11

7 OF THE TOP 10 5 OF THE TOP 10



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Proven Leadership Team



Patrick Morley
President and CEO



Michael Viscuso
Co-founder and Chief
Strategy Officer



Ryan Polk Chief Product Officer



Thomas Hansen
Chief Operating Officer



Sandra O'Sullivan Chief People Officer



Scott Lundgren
Chief Technology Officer



Brad Rinklin Chief Marketing Officer



Steve Webber Chief Financial Officer



Tom Barsi SVP, Corporate & Business Development



Eric Pyenson SVP, General Counsel

Carbon Black on the World Stage











Recognized By Leading Analysts & Publications

Leader



Worldwide Endpoint Specialized Threat Analysis and Protection, 2017

A Leader



O.EMA

Leader

2017 Next-Generation Endpoint Security Vendor Landscape and Five-Year Market Forecast, Q3 2017

MITRE ATT&CK

Highest Marks for Detecting Threats

MITRE ATT&CK Evaluation, November 2018



Recommended

Highest "Recommended" ranking in Advanced Endpoint Protection (AEP) Test, 2018



Best Solution

SC Magazine Awards Europe,



Vendor of the Year 2017

Asia-Pacific Emerging Cybersecurity Vendor of the Year, 2017



Forrester^{*}

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Best in Class Protection



100%

Prevention Rate Against Known and Unknown Ransomware Samples

Product of Choice for IR Professionals



The Race to Detection:
A Look at Rapidly Changing IR Practices

68%

IR professionals **prefer Carbon Black** for incident response and forensics



Commitment To Excellence

Carbon Black works with reputable organizations to put the PSC through extensive reviews and testing



99.27% in real world attack blocking, 100% on commodity malware



"Recommended" status with perfect scores for HTTP malware, email malware, doc & script attacks with 0.58% false positive rate



100% efficacy against 42 different ransomware families



99.79% efficacy 0 false positives



"High degree of intelligence and analytics"



"Enables customers to not only meet PCI-DSS requirement 5, but to go beyond compliance"



"One of the most efficient user interfaces we've seen"



"A compelling option for any EPP project"



Extensive Channel Partnerships

We work with the industry's most trusted advisors globally

VARs & DISTRIBUTORS (100s)





WDVV



MSSPs & IRs



STRATEGIC PARTNERS





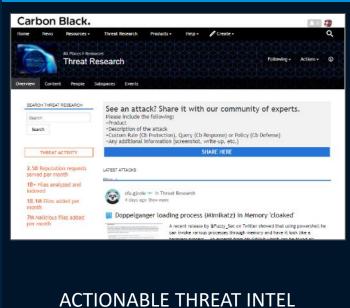
Powerful Security Community

CONNECT WITH THOUSANDS OF SECURITY EXPERTS



20,000+ COMMUNITY MEMBERS
GLOBAL FOOTPRINT

GATHER REAL-TIME THREAT INTELLIGENCE



ACTIONABLE THREAT INTEL IOCs, WATCHLISTS & MORE

DIRECT ACCESS TO CB'S THREAT ANALYSIS UNIT



ANALYSIS OF ADVANCED THREATS
THREAT ADVISORY ALERTS

What the Carbon Black Cloud Means for CB Response

1

WE ARE EXTENDING OUR OFFERINGS TO THE PSC

2

WE ARE COMMITTED TO CB RESPONSE ON-PREM

3

WHEN YOU ARE READY, YOU WILL BE ABLE TO MOVE TO PSC

4

CB RESPONSE ON-PREM WILL BENEFIT FROM PSC

Best place for analytics, operational excellence & rapid innovation

Thousands of customers and dozens of partners

Migration is optional, can be done at a time of your choosing, and will be eased by us

Threat analysis in cloud will power PSC & CB Response threat feeds



Blue Cross Blue Shield of Florida

VMware Carbon Black Cloud **Endpoint Standard**

13,000 Endpoints

INDUSTRY – Healthcare USE CASE – Replace AV

- Needed endpoint protection from advanced threats
- Dramatically reduced overhead by replacing AV with **CBC Endpoint Standard**
- CB integration with SIEM via Splunk allows team to move faster & stay organized



Mercy Medical Center

VMware Carbon Black Cloud Endpoint Standard

4,000 Endpoints

INDUSTRY – Healthcare
USE CASE – Next-Gen AV

- Needed to upgrade traditional AV with a proactive security solution
- CBC Endpoint Standard allowed team to reclaim some of their resources for other security work
- Behavior monitoring capabilities provided increased visibility that prior solution did not





NASDAQ

Carbon Black EDR & Carbon Black App Control

15,000 Endpoints

INDUSTRY – Finance
USE CASE – Incident Response, Threat Hunting

- Experiencing lack of visibility, needed prevention across wide range of endpoints
- CB EDR gave visibility across Nasdaq's entire environment
- Considers CB App Control the "gold standard" for prevention



D.A. Davidson

VMware Carbon Black Cloud Endpoint Standard

1,750 Endpoints

INDUSTRY – Finance
USE CASE – Next-Gen AV, Replace AV, Prevention

- Looking for solution with ability to block ransomware attacks that traditional AV couldn't
- CBC Endpoint Standard was able to prevent malicious activity vs. signature-based activity
- Deployed CBC Endpoint Standard within minutes from cloud & found product invisible to end users



Peoples Bank

VMware Carbon Black Cloud Endpoint Standard

400 Endpoints

INDUSTRY – Finance
USE CASE – Replace AV, Replace McAfee

- Traditional AV was not preventing all types of attacks
- CBC Endpoint Standard chosen after intensive testing due to robust preventative capabilities
- Team is able to conduct further analysis & investigate attacks





Medibank

Carbon Black EDR & Carbon Black App Control

5,500 Endpoints

INDUSTRY – Insurance
USE CASE – Prevention, Visibility, Incident Response

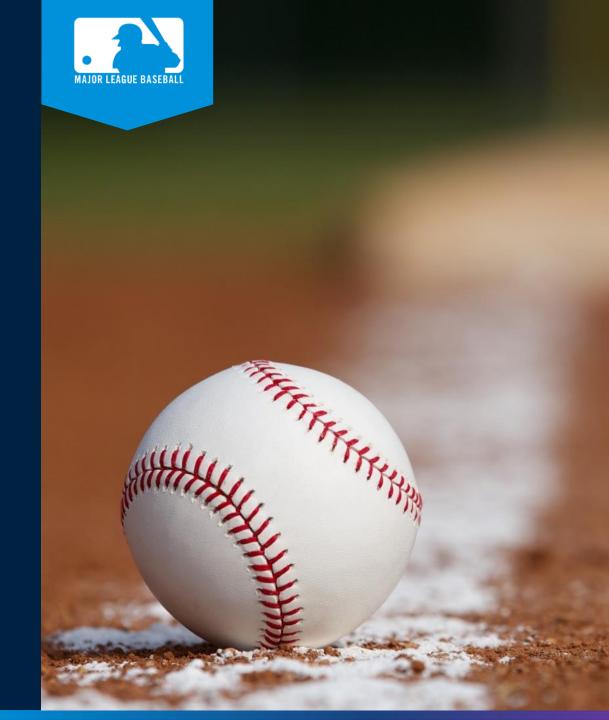
- Targeted by 2-3 ransomware attacks/quarter
- Carbon Black helped prevent 100% ransomware attack attempts
- Additional visibility creates better understanding of how desktop is being used



MLB

VMware Carbon Black Cloud Endpoint Standard & Carbon Black EDR 24,000 Endpoints

- Legacy AV not effective against new threat types, including ransomware
- Chose Carbon Black due to better effectiveness,
 ease of management, and efficient use of endpoint resources
- Efficacy against ransomware dramatically improved





Motors Management Corp.

VMware Carbon Black Cloud Endpoint Standard

INDUSTRY – Automotive
USE CASE – Next-Gen AV

- Needed to replace AV with better prevention
- Evaluated a number of endpoint solution
- Chose CBC Endpoint Standard for efficacy

Other Brands We Protect:











Philips Lighting

Carbon Black EDR Cloud 74,000 Endpoints

- Enable high-speed security operations center (SOC) team
- CB EDR only cloud solution able to support increasingly mobile user base
- Reduced response times to "a fraction" of what they were





Adobe

VMware Carbon Black Cloud Endpoint Standard 20,000 Endpoints

INDUSTRY – Technology USE CASE – Next-Gen AV

- Needed next-gen antivirus & EDR
- Looking to replace current AV solution
- Chose CBC Endpoint Standard for single agent vision



Evernote

VMware Carbon Black Cloud Endpoint Standard

1,000 Endpoints

INDUSTRY – Technology USE CASE – Replace AV

- Needed a solution that would allow both flexibility & prevention
- CBC Endpoint Standard provided endpoint detection, prevention & IR
- Eliminated constant care that AV products require now able to discard false positives



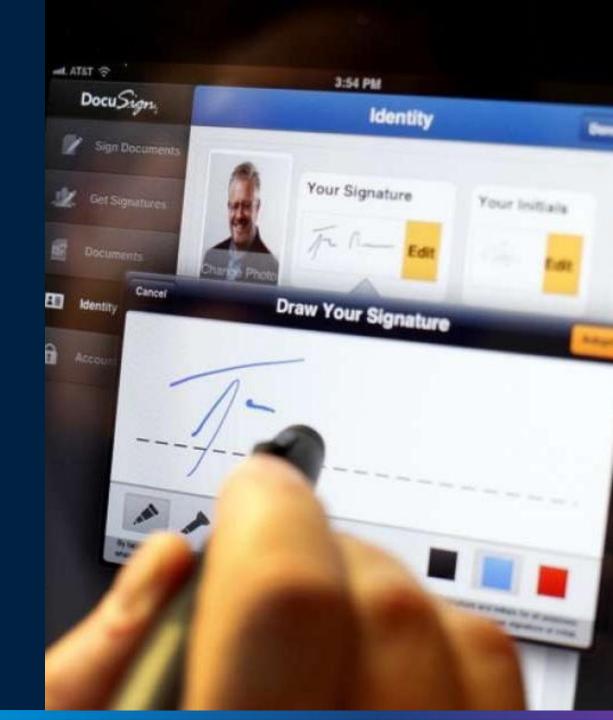
DocuSign

Carbon Black Hosted EDR

2,500 Endpoints

INDUSTRY – Business Services
USE CASE – Incident Response, Threat Hunting

- Needed a tool that would allow visibility across multiple machines
- Chose CB EDR Cloud for improved visibility & ability to immediately respond when necessary
- Carbon Black is an essential part in their security strategy



Cox Communications

Carbon Black App Control

35,000 Endpoints

INDUSTRY – Technology
USE CASE – Prevention, Open APIs

- Experiencing lack of visibility into files & needed better insight into their endpoints
- CB App Control improved security posture dramatically with a simple rule set
- Integration with Palo Alto provides added visibility into files



Lithium

VMware Carbon Black Cloud **Endpoint Standard**

600 Endpoints

INDUSTRY – Technology USE CASE – Replace AV

- Legacy AV was bogging down endpoints
- Chose CBC Endpoint Standard because it reports on everything & not just on detected malware
- Team can focus on protecting endpoints instead of resolving agent issues



DraftKings

VMware Carbon Black Cloud Endpoint Standard

600 Endpoints

INDUSTRY – Technology
USE CASE – Replace AV, Cloud-based Console

- Current solution was taking up valuable system resources
- Vetted dozens of different products over 6-8 months
- CBC Endpoint Standard was clear winner providing increased visibility & prevention



Motorola

Carbon Black EDR & Carbon Black App Control

25,000 Endpoints each

INDUSTRY – Telecommunications
USE CASE – Incident Response, Threat Hunting

- Needed solution that would allow team to streamline detection & response processes
- Carbon Black was only solution that provided complete visibility into every endpoint across enterprise
- Monitoring & alert capabilities have saved significant time during investigations



Samsung RA

VMware Carbon Black Cloud Endpoint Standard

2,500 Endpoints

INDUSTRY – Telecommunications
USE CASE – Replace AV

- Looking to replace AV, performed extensive evaluation of endpoint vendors
- Tested products against real-world attacks, CBC Endpoint
 Standard was the only vendor to stop all of them
- CBC Endpoint Standard has been integral to security strategy & protection against ransomware



Kordia

Carbon Black App Control

850 Endpoints

INDUSTRY – Telecommunications USE CASE – Visibility

- Desktop lockdown was not working
- CB was only solution able to keep environment secure while giving users flexibility
- Minimal effort required, CB App Control has them covered



Stonewall Kitchen

VMware Carbon Black Cloud Endpoint Standard & Carbon Black App Control 750 Endpoints

INDUSTRY – Retail
USE CASE – Next-Gen AV, Prevention, Visibility

- Symantec AV was producing more false positives than blocking anything malicious
- Chose CB due to its ability to keep up with latest threats
- CBC Endpoint Standard consolidated multiple systems into one – eliminated 3+ servers



Thank You

