打造由情报分析驱动的ISOC

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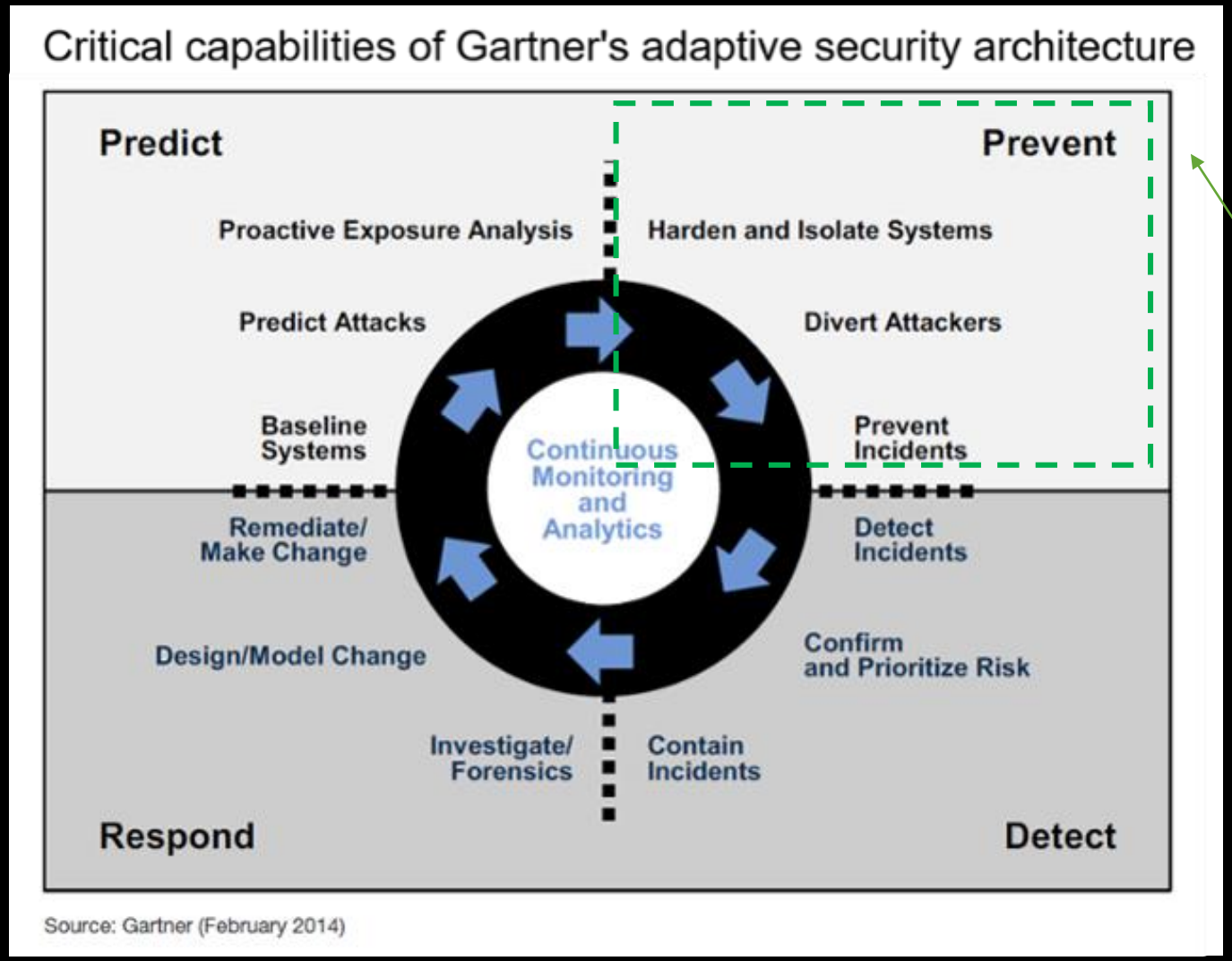
Splunk中国区高级架构师

何谓ISOC

- ISOC = Intelligence-Driven Security Operations Center，智能化安全运营中心

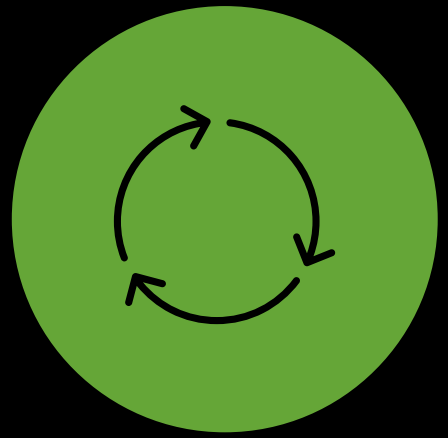
传统的”防御”手段不足以应对现今的高级威胁



安全仍然处于被动防御的形式

工具

仅仅是“告警”
而不是“洞察”



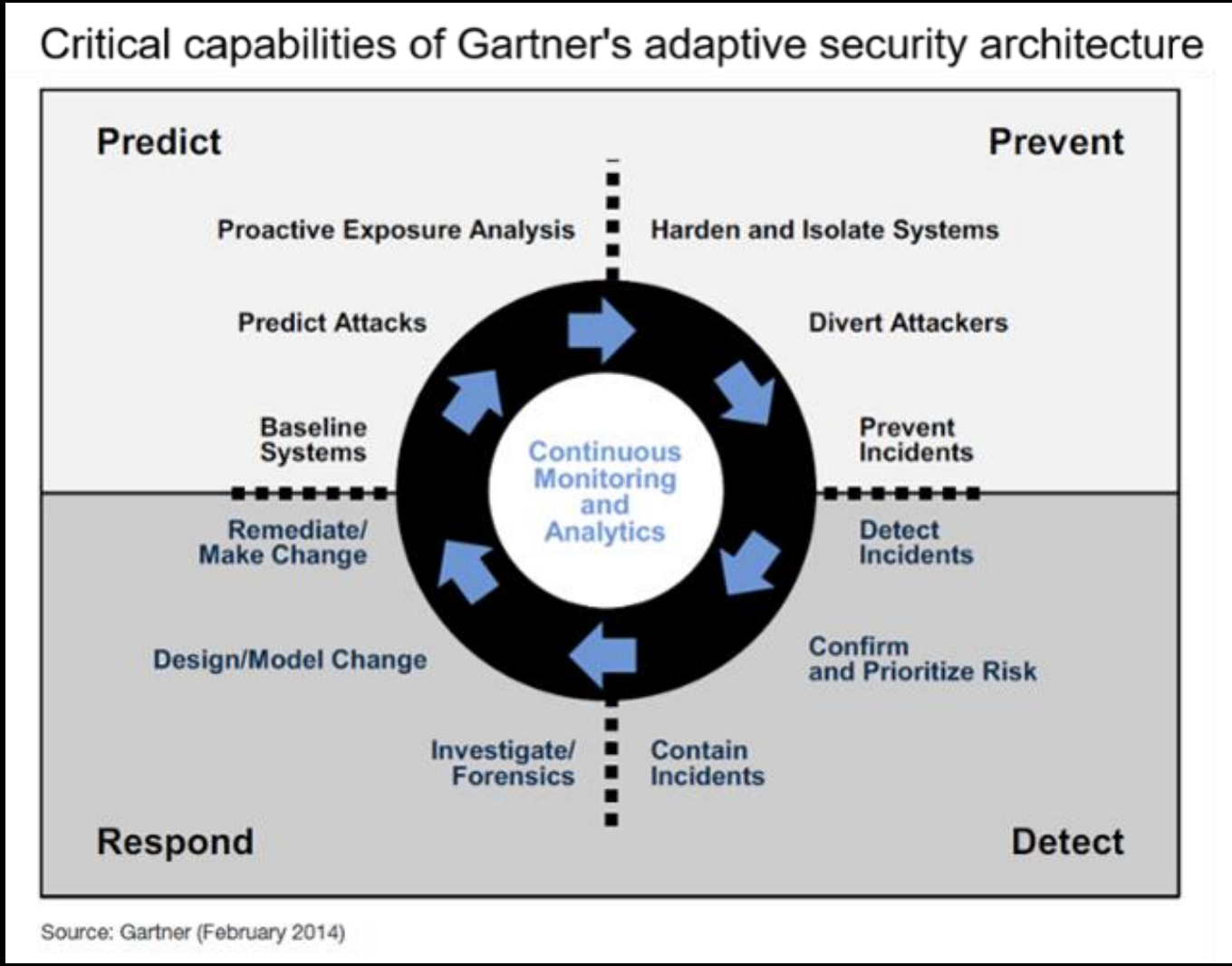
流程

调查过程
不够优化

人员

告警泛滥
疲于应对

如今我们需要利用情报与分析来提供智能驱动的安全 (检测, 响应和预测)



splunk> listen to your data

ISOC的五大特征

- 部署自适应安全架构
- 在战略和战术上运营威胁情报
- 通过高级分析将安全智能落地
- 极尽所能地实现自动化
- 捕猎和调查（侦查与猎取）

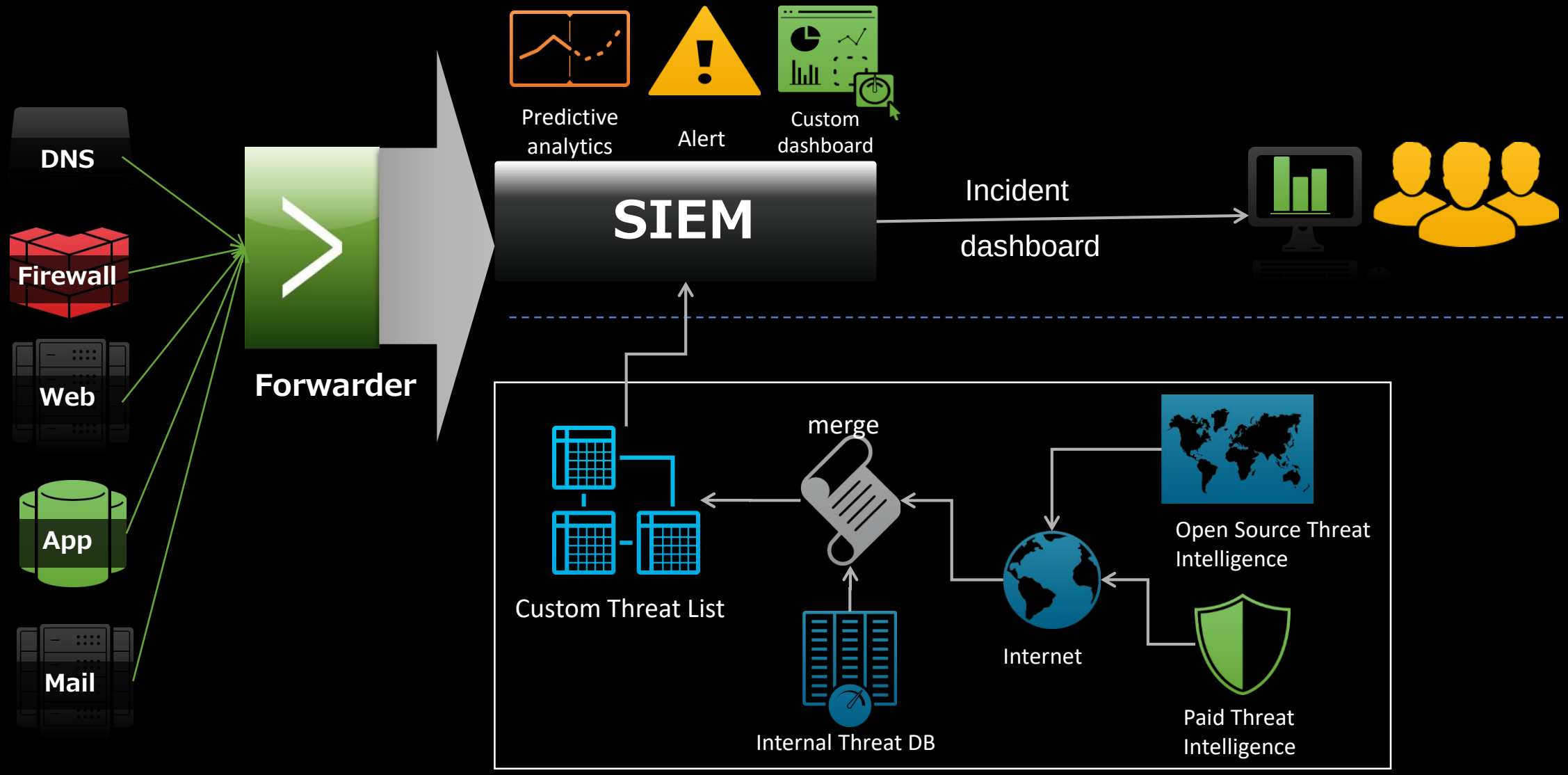
Hypothesis

IOC

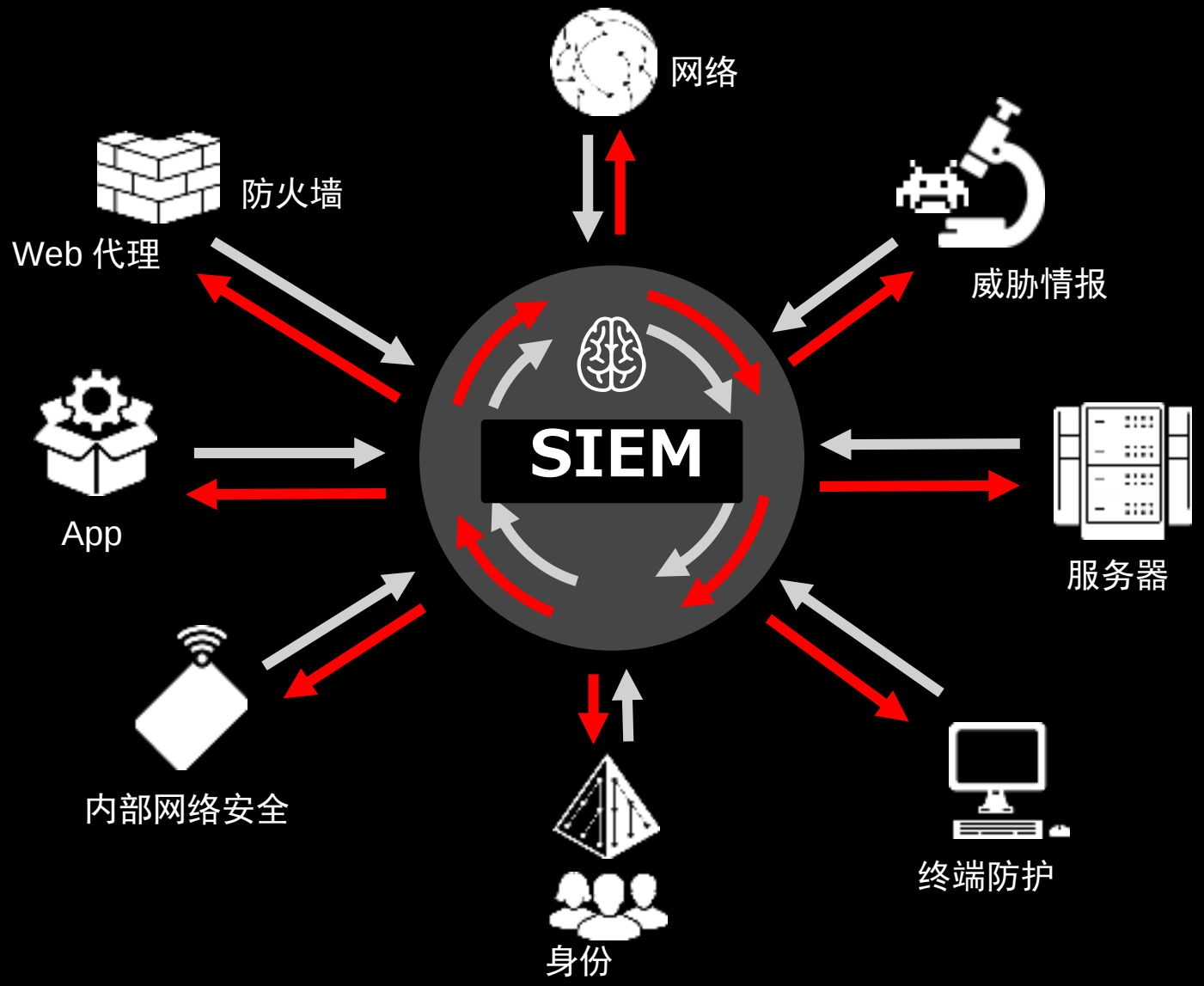
Analytics

Source : Gartner Nov2015, the five characteristics of an Intelligence-Driven Security Operations Center

ISOC典型框架模型



新一代SIEM – 安全分析的中枢神经



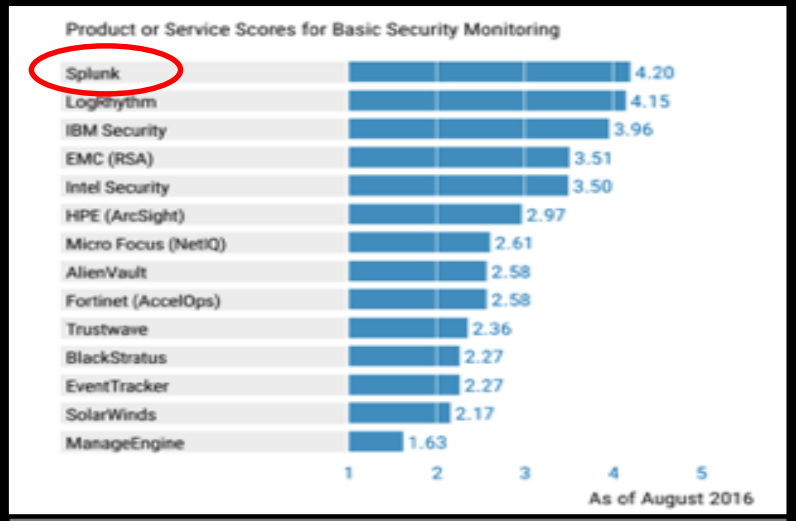
Gartner SIEM 魔力象限领导者

2016 领导者，技术前瞻性第一位
2015 领导者，唯一在技术前瞻性维度取得进步的SIEM厂商
2014 领导者，执行能力第三位
2013 领导者
2012 挑战者
2011 特定领域者（Niche Player）

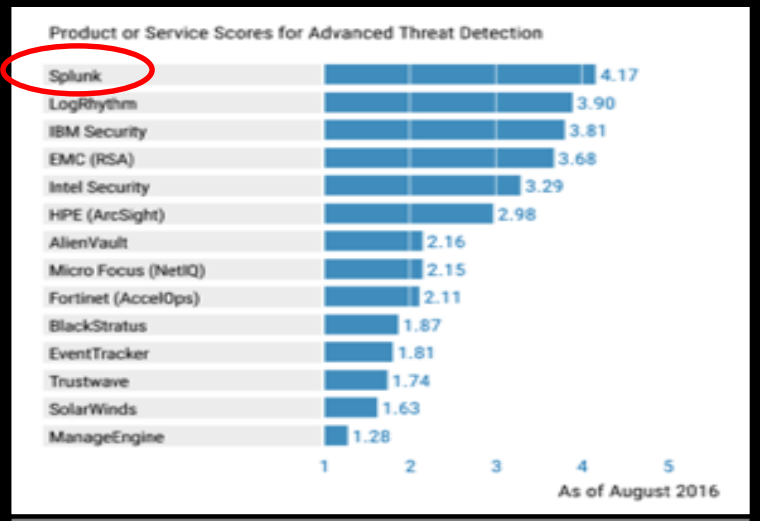
Splunk从2011年起进入Gartner SIEM领域，并迅速发展，2013年进入SIEM领导者象限，并连续四年不断取得进步，2016年技术前瞻性维度排名第一。

Gartner2016年SIEM解决方案关键能力报告

基础安全监控



高级威胁检测



取证&事件响应

Splunk强大的安全智能平台

近500个
安全应用

安全厂商　　社群　　开源

Cisco WSA, ESA, ISE, SF
Palo Alto Networks
OSSEC
Symantec
FireEye
DShield
Norse
Threat Stream
DNS

SPLUNK FOR ENTERPRISE SECURITY

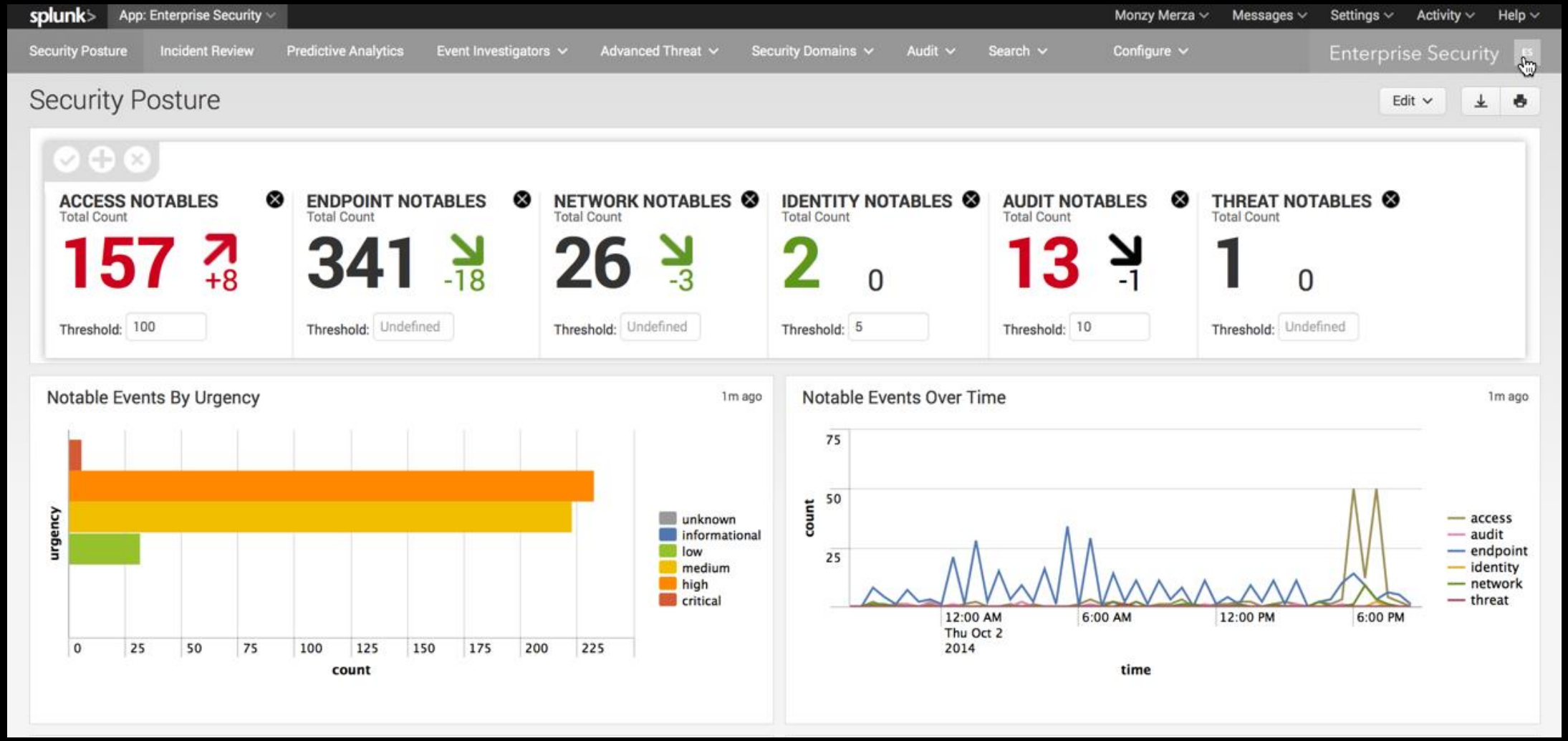
SPLUNK所打造的应用

- STM — Wire (NFT) 数据
- INF — Windows (host/inf) 数据
- *nix — Unix与 Linux数据
- RDBMS (所有)数据
- EX — Exchange (email, inf)数据
- CEF — SIEM数据
- > — 还有更多…

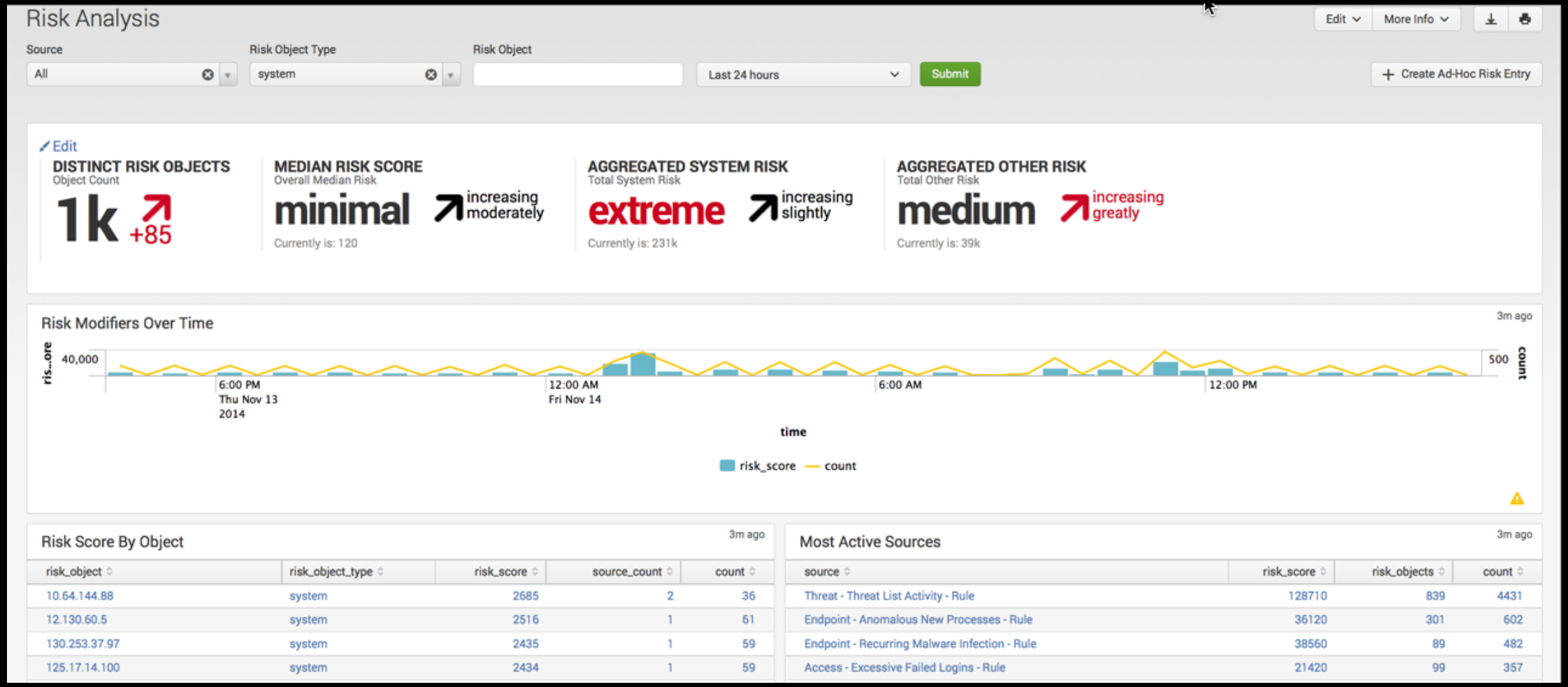
SPLUNK ENTERPRISE (核心)

splunk>

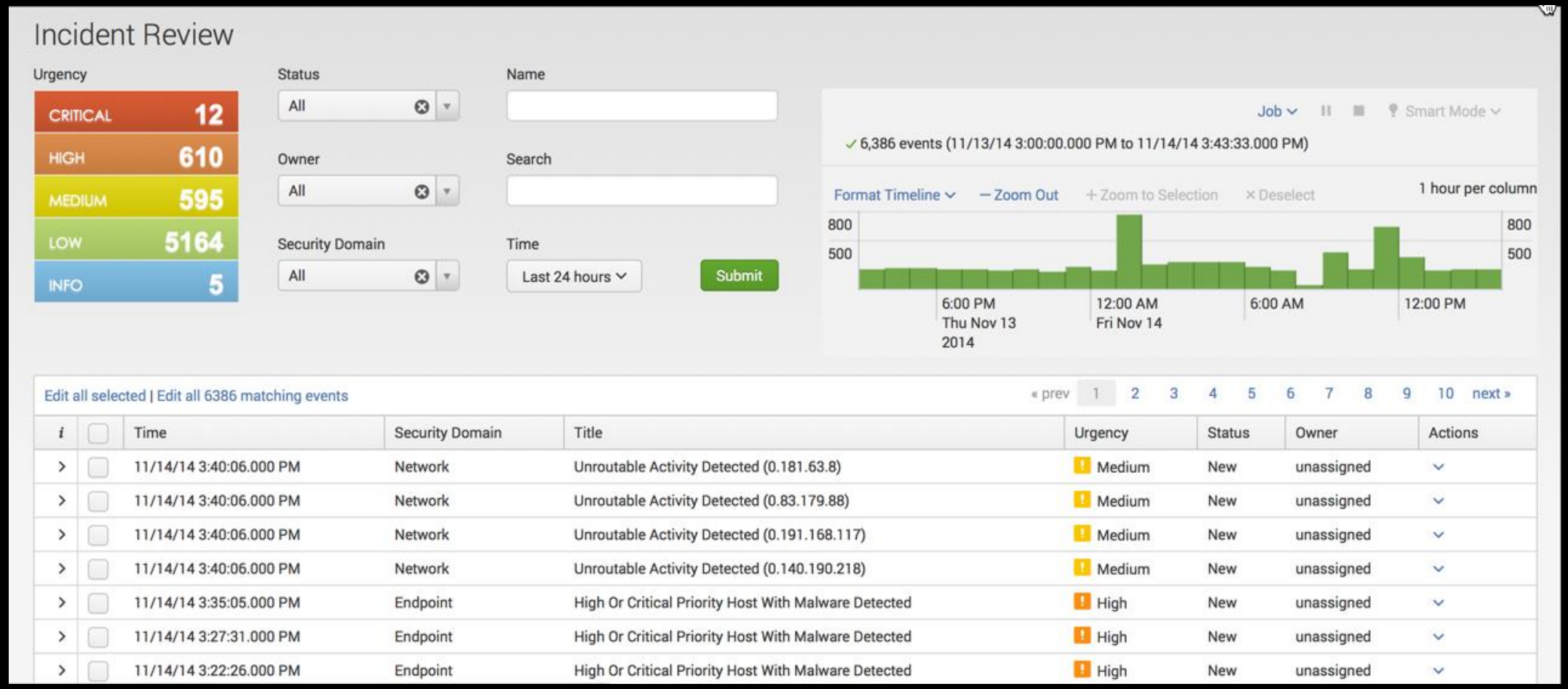
安全态势实时监控



基于风险的分析评估

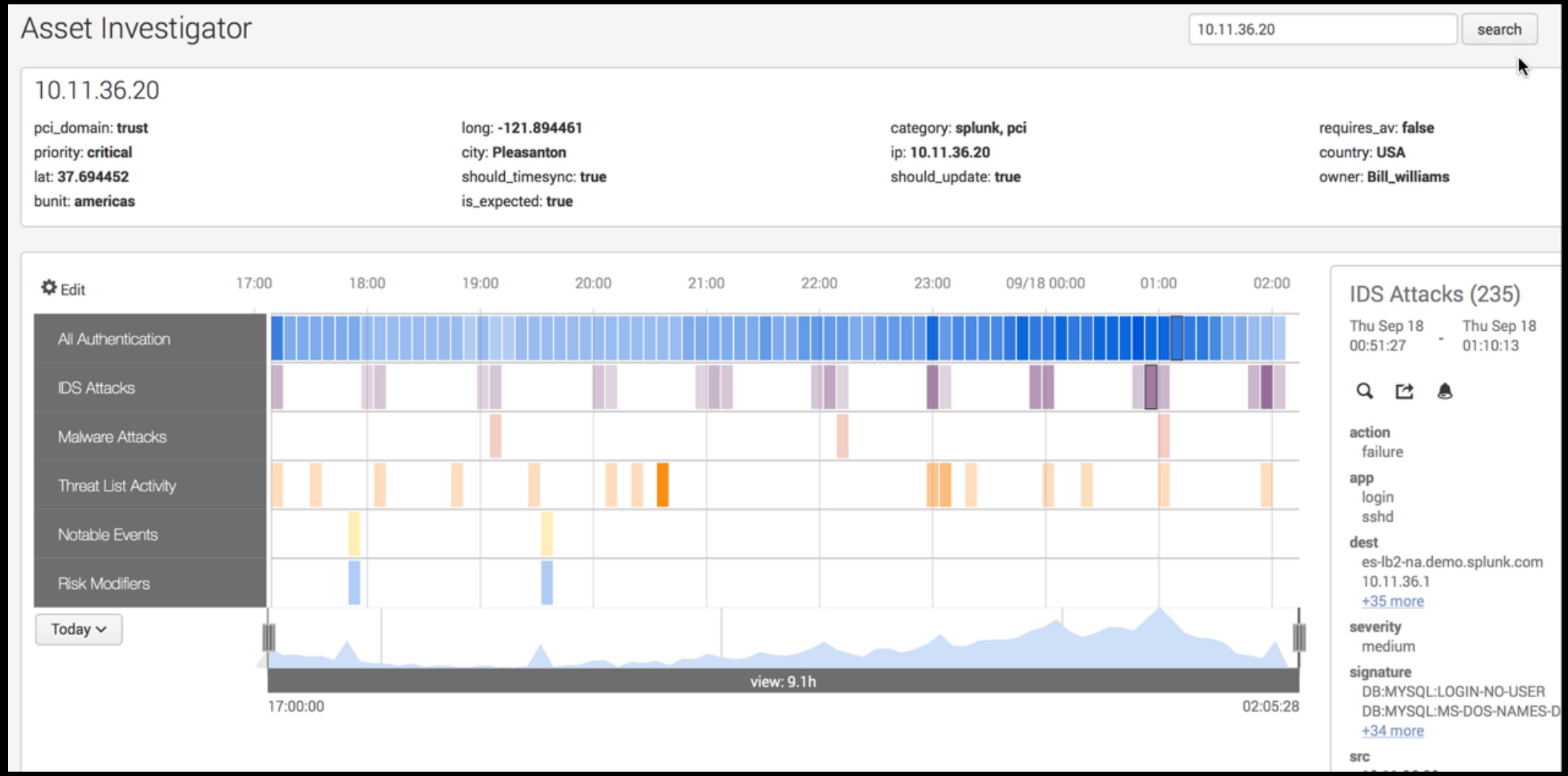


快速的事件审查及调查

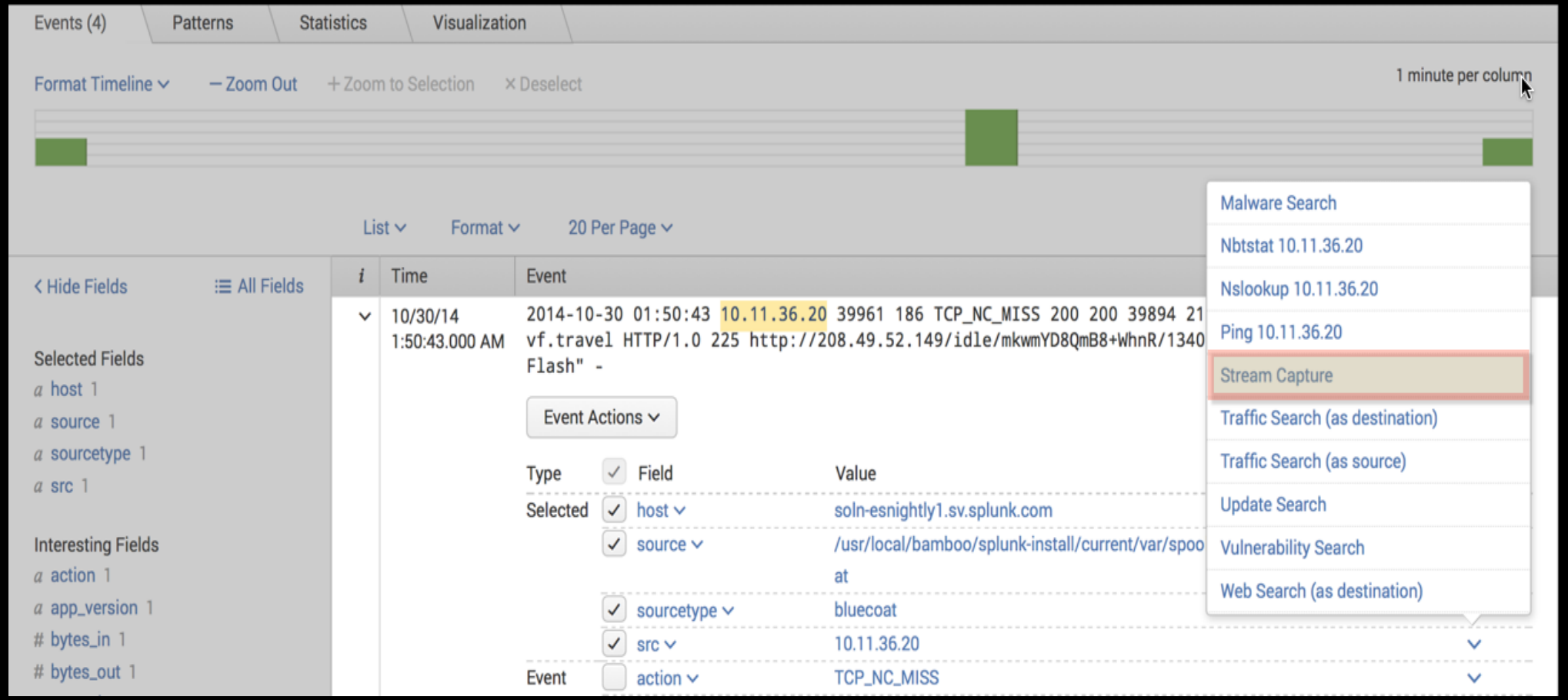


i	Time	Security Domain	Title	Urgency	Status	Owner	Actions
>	11/14/14 3:40:06.000 PM	Network	Unroutable Activity Detected (0.181.63.8)	Medium	New	unassigned	
>	11/14/14 3:40:06.000 PM	Network	Unroutable Activity Detected (0.83.179.88)	Medium	New	unassigned	
>	11/14/14 3:40:06.000 PM	Network	Unroutable Activity Detected (0.191.168.117)	Medium	New	unassigned	
>	11/14/14 3:40:06.000 PM	Network	Unroutable Activity Detected (0.140.190.218)	Medium	New	unassigned	
>	11/14/14 3:35:05.000 PM	Endpoint	High Or Critical Priority Host With Malware Detected	High	New	unassigned	
>	11/14/14 3:27:31.000 PM	Endpoint	High Or Critical Priority Host With Malware Detected	High	New	unassigned	
>	11/14/14 3:22:26.000 PM	Endpoint	High Or Critical Priority Host With Malware Detected	High	New	unassigned	

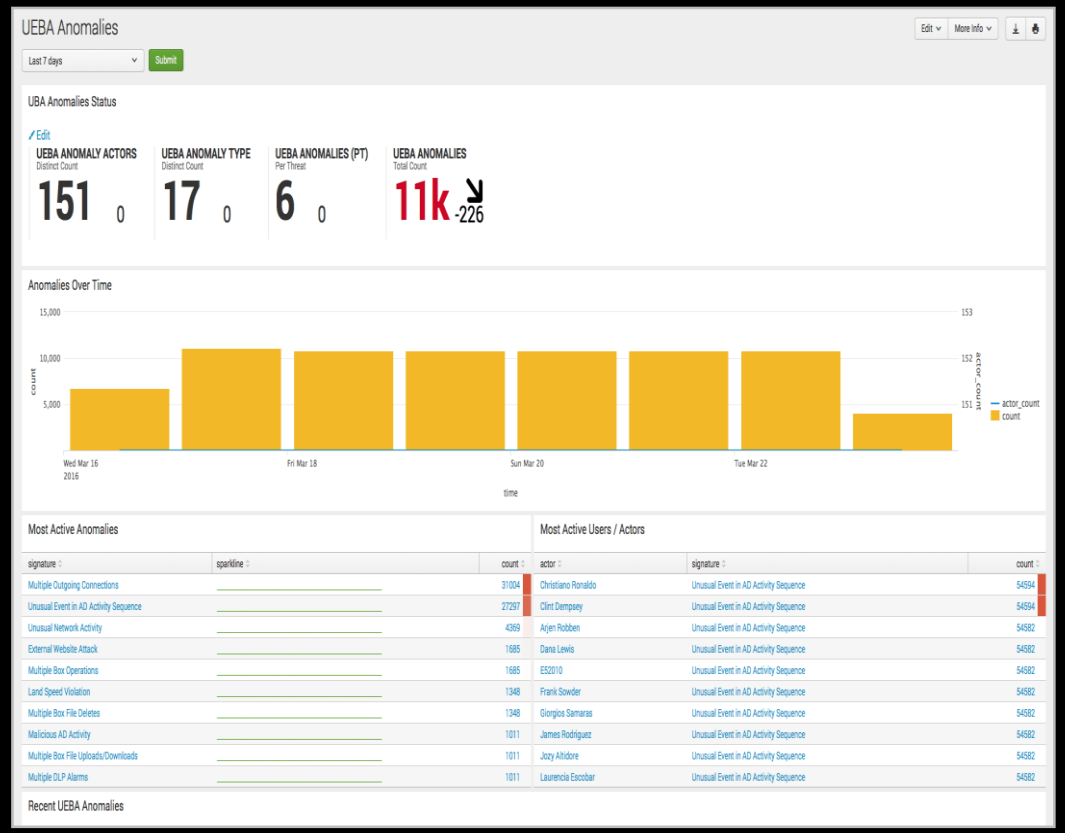
直观的可视化事件调查

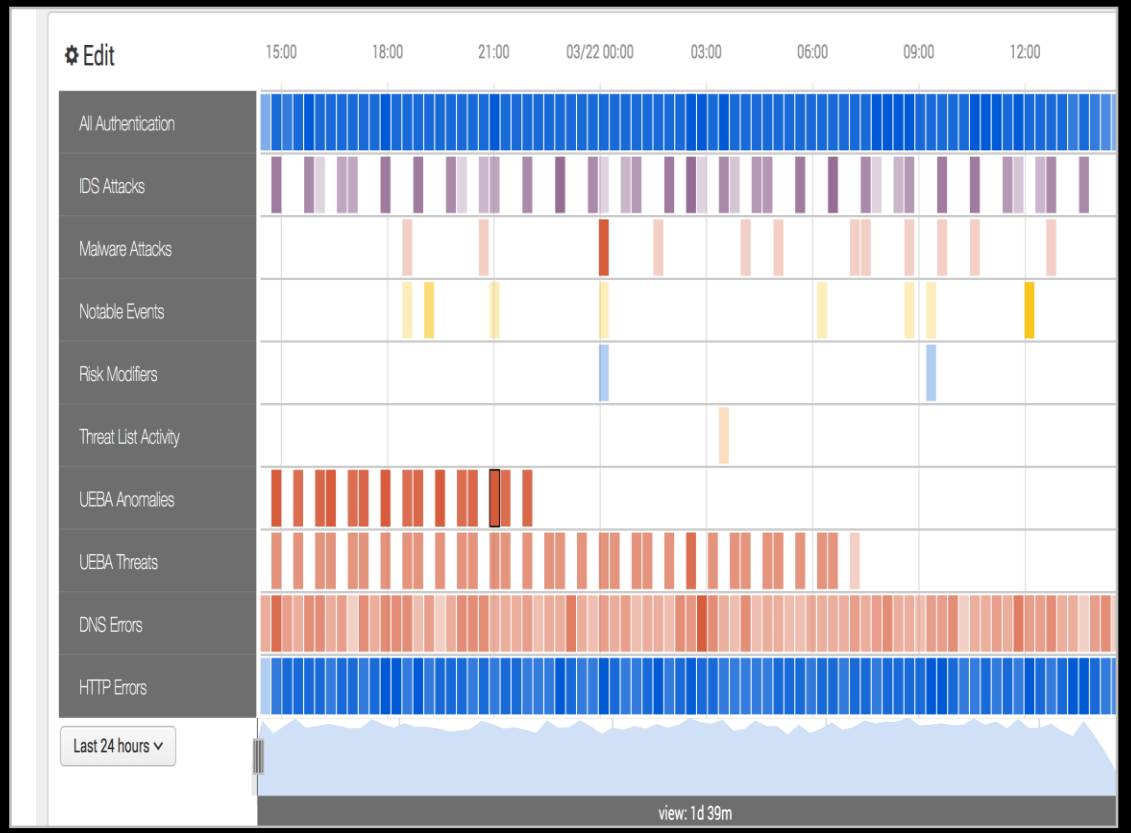


快速灵活地响应操作

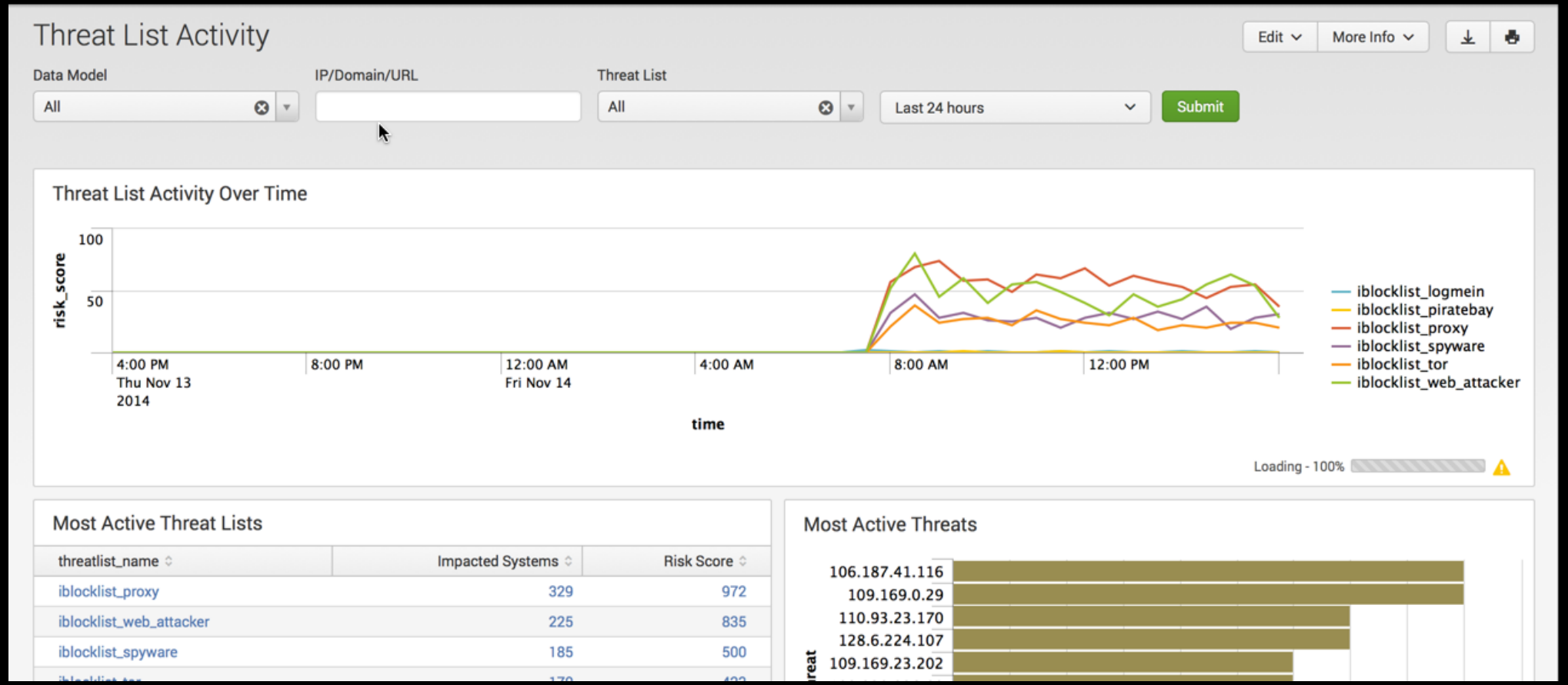


集成UEBA异常检测功能

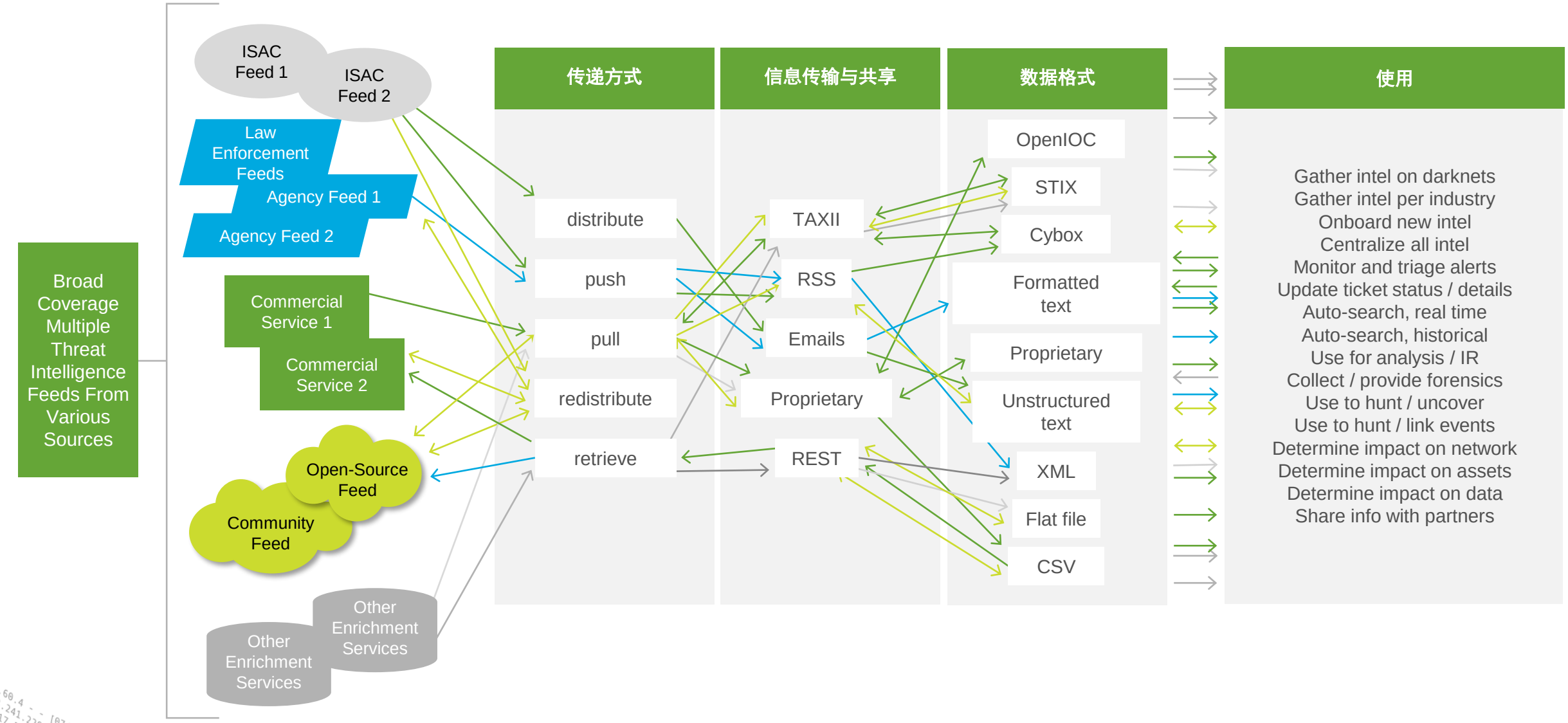




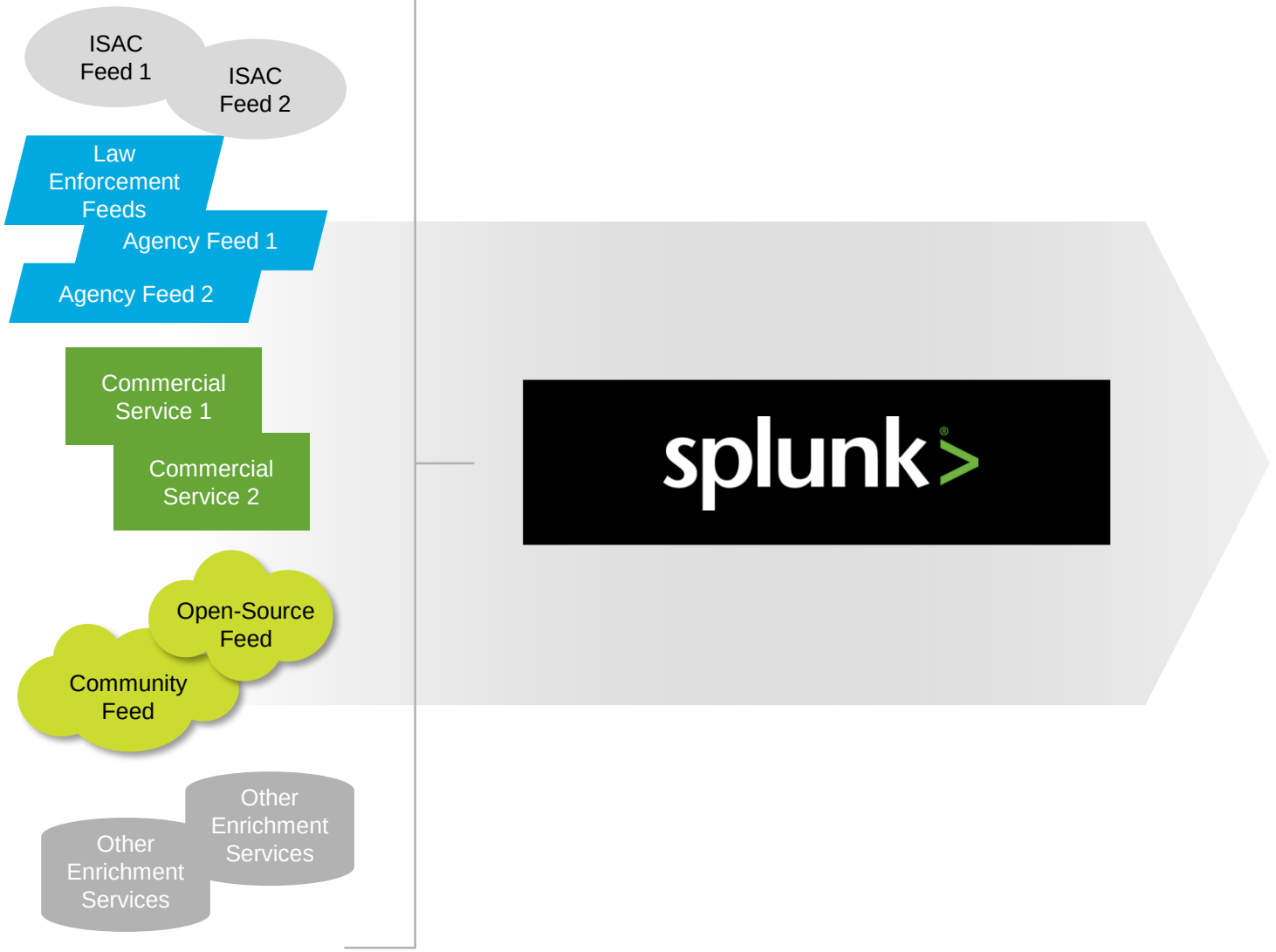
集成威胁情报的管理和使用



让威胁情报的管理和使用不再复杂



让威胁情报的管理和使用不再复杂



Splunk内置威胁情报框架

使用全面匹配的威胁情报来找到隐藏的 IOC

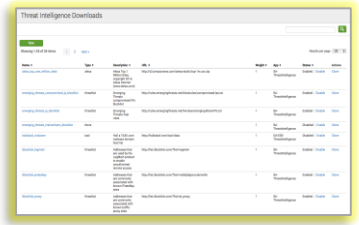
情报来源

- 多个来源
- 多种传输类型
- 多种传输手段
- 多种数据格式

收集管理

管理 / 审计
威胁情报源

- 列表状态
- 列表管理
- 列表位置



数据管理

分类

索引, 提取, 分类

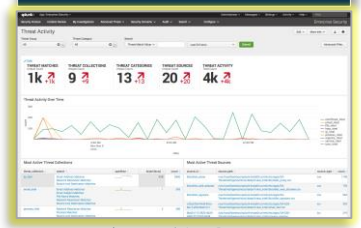
1. IP
2. Emails
3. URLs
4. Files names/hashes
5. Processes names
6. Services
7. Registry entries
8. X509 Certificates
9. Users

关联

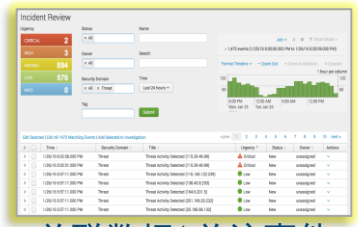
在现有日志数据中匹配所有的IOC

有任何的匹配都会产生告警

安全指标(KSI)和安全趋势



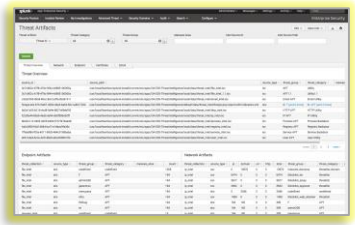
安全仪表板



关联数据/ 关注事件

搜索

Ad-hoc 搜索, 分析, 调查, 优先级排序



数据搜索

多个威胁情报来源管理

Threat Lists

Data inputs » Threat Lists

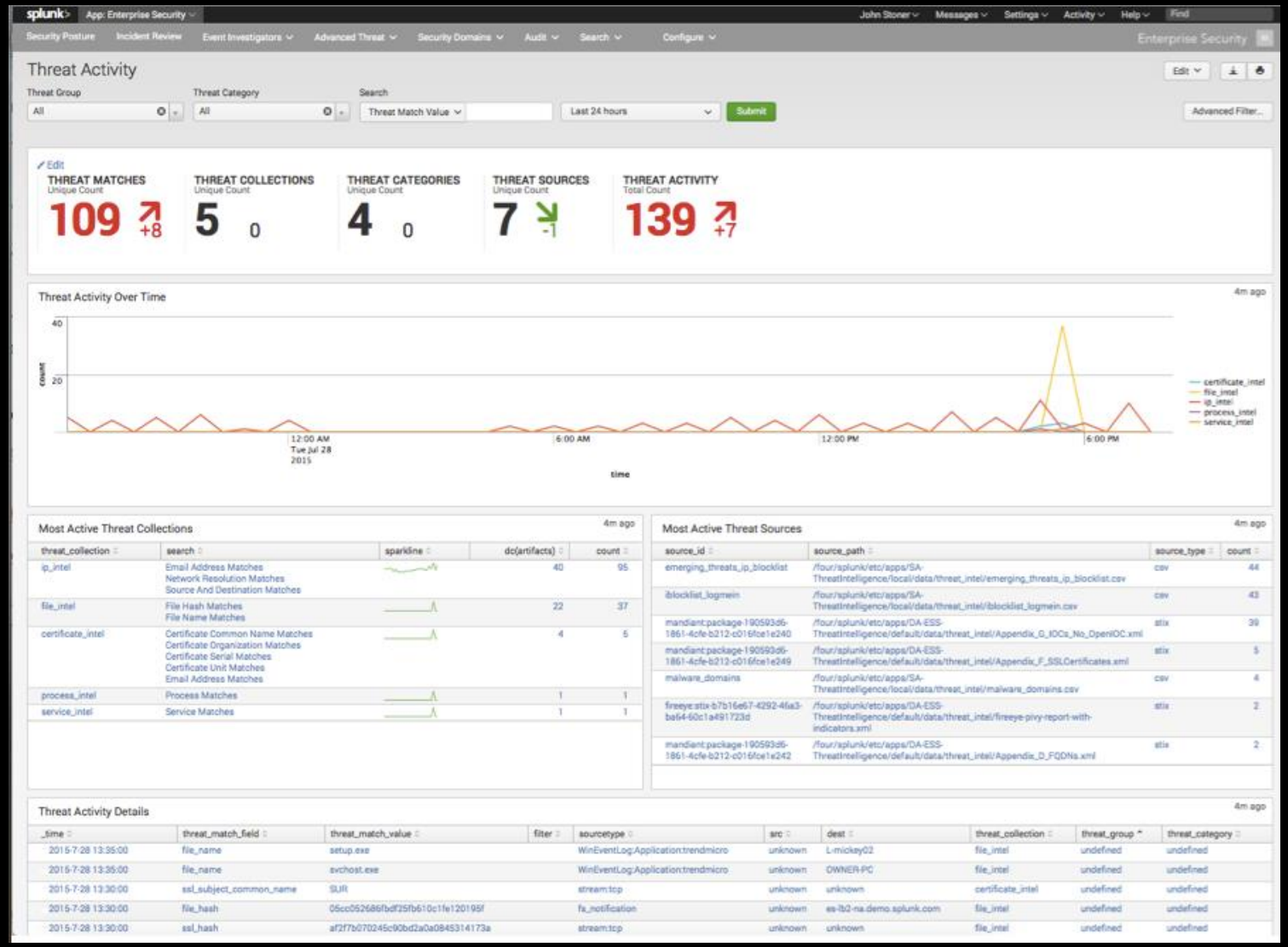
New

Showing 1-17 of 17 items

Results per page 25

Name	Type	Description	URL	Interval	Status	Actions
emerging_threats_compromised_ip_blocklist	malicious	Emerging Threats compromised IPs blocklist	http://rules.emergingthreats.net/blockrules/compromised-ips.txt	43200	Disabled | Enable	Clone
emerging_threats_ip_blocklist	malicious	Emerging Threats fwip rules	http://rules.emergingthreats.net/fwrules/emerging-Block-IPs.txt	43200	Disabled | Enable	Clone
emerging_threats_malvertisers_blocklist	malicious	Emerging Threats Malvertisers blocklist	http://rules.emergingthreats.net/blockrules/rbn-malvertisers-ips.txt	43200	Disabled | Enable	Clone
iblocklist_logmein	networks	Addresses that are used by the LogMeIn product to enable unauthorized remote access	http://list.iblocklist.com/?list=logmein	43200	Enabled | Disable	Clone
iblocklist_piratebay	networks	Addresses that are commonly associated with known PirateBay sites	http://list.iblocklist.com/?list=nzldzlpkgrcncdomnttb	43200	Enabled | Disable	Clone
iblocklist_proxy	proxy	Addresses that are commonly associated with known traffic-proxy sites	http://list.iblocklist.com/?list=bt_proxy	43200	Enabled | Disable	Clone
iblocklist_rapidshare	networks	Addresses that are commonly associated with known RapidShare sites	http://list.iblocklist.com/?list=zfucwtjkfwkalytktyiw	43200	Enabled | Disable	Clone
iblocklist_spyware	spyware	Addresses that are commonly associated with known spyware sites	http://list.iblocklist.com/?list=bt_spyware	43200	Enabled | Disable	Clone
iblocklist_tor	networks	Addresses that are commonly associated with known Tor sites	http://list.iblocklist.com/?list=tor	43200	Enabled | Disable	Clone
iblocklist_web_attacker	malicious	Addresses that are commonly associated with known malicious attacker sites	http://list.iblocklist.com/?list=ghlzqtqxnzctvvajwwag	43200	Enabled | Disable	Clone
local_threatlist	malicious	Custom list of threat IP addresses	lookup://local_threatlist	43200	Enabled | Disable	Clone
norse_darklist	malware	Norse Darklist full download	http://labs.ipviking.com/slice/	43200	Disabled | Enable	Clone
palevo_ip_blocklist	malicious	abuse.ch Palevo C&C IP Blocklist	https://palevotracker.abuse.ch /blocklists.php?download=ipblocklist	43200	Disabled | Enable	Clone
sans	malicious	SANS blocklist	http://isc.sans.edu/block.txt	43200	Enabled | Disable	Clone
spyeye_ip_blocklist	malicious	abuse.ch SpyEye IP blocklist	https://spyeyetracker.abuse.ch /blocklist.php?download=ipblocklist	43200	Disabled | Enable	Clone
zeus_bad_ip_blocklist	malicious	abuse.ch ZeuS blocklist (bad IPs only)	https://zeustracker.abuse.ch/blocklist.php?download=badips	43200	Disabled | Enable	Clone
zeus_standard_ip_blocklist	malicious	abuse.ch ZeuS blocklist (standard)	https://zeustracker.abuse.ch/blocklist.php?download=ipblocklist	43200	Disabled | Enable	Clone

威胁情报活跃度



支持STIX/TAXII、OpenIOCs

Security Posture | Incident Review | Event Investigators | Advanced Threat | Security Domains | Audit | Search | Configure | Enterprise Security

Threat Artifacts

Edit | More Info

Threat Artifact: Threat ID | Threat Category: All | Threat Group: All | Malware Alias: | Intel Source ID: | Intel Source Path: /Users/bluger/Desktop/blog_post/spl | Submit

Threat Overview | Network | Endpoint | Certificate | Email

Threat Overview

5m ago

source_id	source_path	source_type	threat_group	threat_category	malware_alias	count
fireeye:stix-b7b16e67-4292-46a3-ba64-60c1a491723d	/Users/bluger/Desktop/blog_post/splunk/etc/apps/DA-ESS-ThreatIntelligence/default/data/threat_intel/fireeye-pivy-report-with-indicators.xml	stix	F (and 6 more)	APT (and 2 more)		503

Endpoint Artifacts

5m ago

threat_collection	source_type	threat_group	threat_category	malware_alias	count
file_intel	stix	F	APT		194
file_intel	stix	admin338	APT		194
file_intel	stix	japanorus	APT		194
file_intel	stix	menupass	APT		194
file_intel	stix	nitro	APT		194
file_intel	stix	th3bug	APT		194
file_intel	stix	wl	APT		194

Network Artifacts

5m ago

threat_collection	source_type	ip	domain	url	http	total	threat_group	threat_category	malware_alias
ip_intel	stix	52	49	0	0	101	F	APT	
ip_intel	stix	52	49	0	0	101	admin338	APT	
ip_intel	stix	52	49	0	0	101	japanorus	APT	
ip_intel	stix	52	49	0	0	101	menupass	APT	
ip_intel	stix	52	49	0	0	101	nitro	APT	
ip_intel	stix	52	49	0	0	101	th3bug	APT	
ip_intel	stix	52	49	0	0	101	wl	APT	

Email Artifacts

5m ago

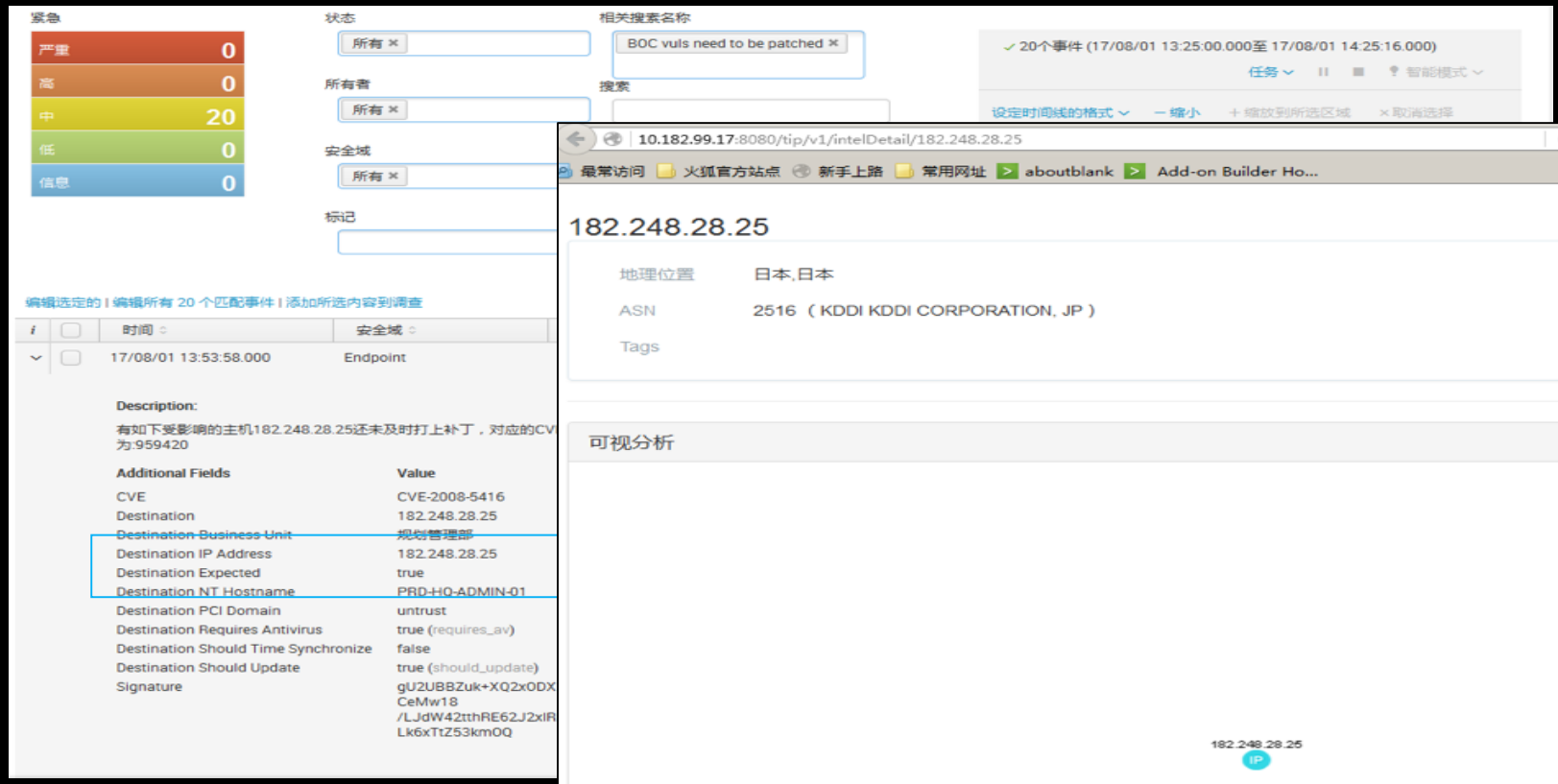
Certificate Artifacts

5m ago

与国内威胁情报源集成

client_ip	count	hit.detected	hit.expired	hit.info{}	intelligences{}.confidence	intelligences{}.find_time	intelligences{}.intel_types{}	intelligences{}.source	ip.carrier	ip.ip	ip.location.
104 110	7752	true	false	idc	90	2016-07-08 23:18:13	IDC服务器	ThreatBook Labs		1 0	洛杉矶
				compromised	70	2016-05-17 20:17:47	IDC服务器	ThreatBook Labs			
				spam	85	2016-04-19 08:00:53	垃圾邮件	ThreatBook Labs			
					75	2016-04-19 07:04:04	垃圾邮件	ThreatBook Labs			
					75	2016-04-16 14:53:53	垃圾邮件	ThreatBook Labs			
					75	2016-02-19 12:16:51	垃圾邮件	ThreatBook Labs			
49 8	7752	false	false	dynamic_ip	80	2016-05-17 12:06:53	动态IP	ThreatBook Labs	电信	4 8	南通
104 241	7726	true	false	idc	90	2016-07-08 23:18:13	IDC服务器	ThreatBook Labs		1 .241	洛杉矶
				compromised	70	2016-05-17 20:16:19	IDC服务器	ThreatBook Labs			
				spam	75	2016-02-19 12:16:51	垃圾邮件	ThreatBook Labs			
47. 5	6694	true	false	idc	90	2016-05-11 17:21:01	IDC服务器	ThreatBook Labs	阿里云/电信/联通/移动/铁通/教育网	4 15	深圳
					90	2016-05-11 17:21:01	IDC服务器	ThreatBook Labs			
198. 24	6299	true	false	idc	90	2016-07-08 23:18:06	IDC服务器	ThreatBook Labs		1 3.24	洛杉矶
				compromised	75	2016-06-21 10:26:41	扫描	开源情报			
				spam	70	2016-05-17 20:15:45	IDC服务器	ThreatBook Labs			
					75	2016-02-19 12:16:51	垃圾邮件	ThreatBook Labs			
198. 8	5352	true	false	idc	90	2016-07-08 23:18:06	IDC服务器	ThreatBook Labs		19 .68	洛杉矶
				compromised	75	2016-06-21 10:26:41	扫描	开源情报			
				spam	70	2016-05-17 20:15:45	IDC服务器	ThreatBook Labs			
					75	2016-02-19 12:16:51	垃圾邮件	ThreatBook Labs			
63 226	4092	true	false	zombie	85	2017-03-02 09:00:49	垃圾邮件	ThreatBook Labs	datashack.net	6 26	堪萨斯城
				idc	65	2017-03-01 16:53:36	可疑	开源情报			
				compromised	80	2017-03-01 02:17:57	恶意软件	开源情报			
				spam	25	2017-02-27 20:34:17	漏洞利用	开源情报			
					55	2017-02-24 03:38:16	恶意软件	开源情报			
					85	2017-02-16 04:53:53	漏洞利用	ThreatBook Labs			

与国内威胁情报源集成



与国内威胁情报源集成

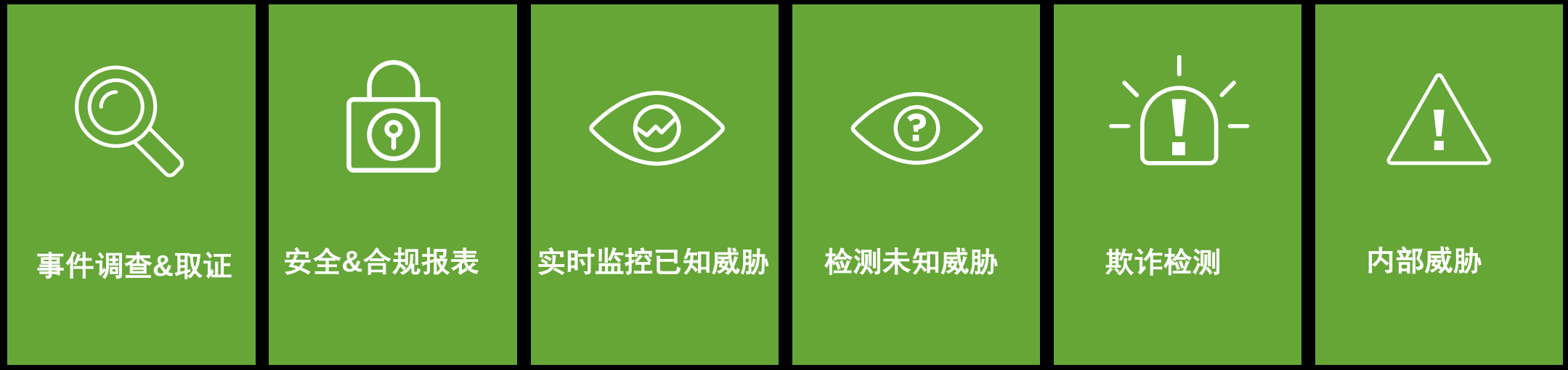
2017-06-27 17:55:13		次要告警	已关闭	211. 193[中国四川电信(IDC服务器)]正在对 进行漏洞扫描 总计207次 (200响应0次 404响应207次 500响应0次 其它响应0次)
120.	164[中国广东湛江移动]正在对			发送验证码页面进行异常访问13次
120.2	.164[中国广东湛江移动]正在对			发送验证码页面进行异常访问12次
120.2	.164[中国广东湛江移动]正在对			送验证码页面进行异常访问39次
120.2	.164[中国广东湛江移动]正在对			发送验证码页面进行异常访问13次
112.2	.182[中国山东临沂联通(垃圾邮件、僵尸网络、动态IP)]正在对			送验证码页面进行异常访问11次
117.62	8[中国江苏苏州电信(垃圾邮件、僵尸网络、动态IP)]正在对			送验证码页面进行异常访问11次
112.23	.182[中国山东临沂联通(垃圾邮件、僵尸网络、动态IP)]正在对			送验证码页面进行异常访问23次
114.24	215[中国北京北京联通]正在对			发送验证码页面进行异常访问21次
115.15	46[中国江西上饶电信(动态IP)]正在对			发送验证码页面进行异常访问14次
117.62	3[中国江苏苏州电信(垃圾邮件、僵尸网络、动态IP)]正在对			发送验证码页面进行异常访问18次
117.90	30[中国江苏镇江电信(僵尸网络、垃圾邮件、动态IP)]正在对			发送验证码页面进行异常访问13次

alert
113. 40[中国广东茂名电信(垃圾邮件、IDC服务器)]扫描 207次，已被阻断。（30分钟后解封，仅保持持续关注）
188 29[法国北部－加来海峡大区鲁贝ovh.com(僵尸网络、垃圾邮件、扫描、IDC服务器)]扫描 207次，已被阻断。（30分钟后解封，仅保持持续关注）
47 5[中国广东深圳阿里云/电信/联通/移动/铁通/教育网(IDC服务器)]扫描 ,344次，已被阻断。（30分钟后解封，仅保持持续关注）

总结：Splunk帮助您将威胁情报使用落地

- 从广泛的数据源自动化收集、整合威胁情报数据并进行去重处理
- 支持STIX/TAXII、OpenIOC等标准
- 快速上手开箱即用的威胁情报管理器和仪表板
- 通过威胁情报来丰富数据、提供上下文情境，从而为威胁分析、快速响应提供帮助

利用情报+分析打造智能驱动的ISOC




谢谢！