



EXTRAHOP **PROTOCOL FLUENCY**

**FLUENT IN THE APPLICATION PROTOCOLS
THAT YOUR BUSINESS RUNS ON**

ExtraHop Reveal(x) speaks the same language as the applications that run your business. Reveal(x) can understand the content of communications as they occur in real time, and use that understanding to detect threats, identify critical assets, quantify risk, and enable the SOC to execute rapid, effective investigations all the way down to forensic-level data inside application transactions and decrypted packets.

PROTOCOLS SUPPORTED

2TP
AAA: Diameter
AAA: RADIUS
ActiveMQ
AJP
ARP
BitTorrent
CIFS
Citrix ICA*
Cryptocurrency mining protocols
Database: DB2
Database: Informix
Database: Microsoft SQL
Database: MongoDB
Database: MySQL
Database: Oracle
Database: Postgres
Database: Redis
Database: Riak
Database: Sybase
Database: Sybase IQ
DHCP
DICOM*
DNS
DSCP
FIX
FTP
GRE

HL7 (including FHIR and ICD-9/10)*
HTTP-AMF
HTTP/S
IBM MQ
ICMP
ICMP6
IEEE 802.1X
IKE
IMAP
IPSEC
IPX
IRC
ISAKMP
iSCSI
Kerberos
LACP
LDAP
LLDP
Memcache
Modbus
MPLS
MS-RPC
MSMQ
NFS
NTP
OpenVPN
PCoIP

POP3
RDP
RFB (VNC)
Skinny (SCCP)
SMPP*
SMTP
SNMP
SSH
SSL
STP
Syslog
TCP
Telnet
VNC
VoIP: RTP*
VoIP: RTP XR*
VoIP: RTP*
VoIP: SIP*
WebSocket

*Available as add-ons

Reveal(x)

What Protocol Fluency Means for You

Reveal(x) collects application layer metadata, via decoding and full payload analysis of more than 50 Layer 7 protocols, to derive 4,600+ features for user, application, and device activity. Our machine learning and detection models index this metadata for feature extraction as well as anomaly and other behavioral detections. The richness of this application-layer metadata enables Reveal(x) to detect malicious activities at each stage of the attack lifecycle that other products – which rely on flow-level information – cannot.

Of particular interest to SecOps analysts, Reveal(x) analyzes application-layer metadata for databases, Active Directory, DNS, web, SSL, and storage systems:

DATABASE: RDBMSs: Oracle, Microsoft SQL Server, MySQL, PostgreSQL, Informix, Sybase, and DB2. NoSQL databases: MongoDB, Memcached, Redis, Riak. Metadata extracted include transaction timing, table/user access patterns, query errors, SQL queries and responses, and system-level commands.

IDENTITY AND ACCESS MANAGEMENT: Active Directory visibility (includes LDAP, Kerberos, and DNS) for monitoring of privileged identities and service accounts to improve detection and facilitate audits. Reveal(x) extracts metadata including user/computer account activity, invalid or expired passwords, new privileged access, privileged access errors, DNS SRV lookups, plain-text LDAP binds, plain-text HTTP authentications, Unknown SPNs, and Golden Ticket detection.

WEB TRANSACTIONS: Full HTTP payload analysis of user activity, SOAP/XML, JSON, Javascript, APIs, etc. Extracted metadata includes URI, query parameters, host headers, and user agent, among others.

STORAGE: Metadata extraction for all NAS and SAN transactions (iSCSI, NFS, and CIFS) enables machine learning detections based on actual file details and equips security analysts to track file access patterns and detect ransomware activity by examining file extensions and WRITE operations.