

# OPENENDR **NETWORK DETECTION & RESPONSE**

ts

### **ZEEK® LOGS**

FIELD	ΤΥΡΕ	DESCRIPTION	→conn	_stat
ts	time	Timestamp of first packet	A sumn	narized
uid	string	Unique identifier of connection	SO	Cor
id	record conn_id	Connection's 4-tuple of endpoints	S1	Cor
> id.orig_h	addr	IP address of system initiating connection	SF	Nor
> id.orig_p	port	Port from which the connection is initiated	REJ	Cor
> id.resp_h	addr	IP address of system responding to connection request	S2 S3	Esta Esta
> id.resp_p	port	Port on which connection response is sent	RSTO	Est
proto	enum	Transport layer protocol of connection	RSTR	Esta
service	string	Application protocol ID sent over connection	RSTOS0	Ori
duration	interval	How long connection lasted	RSTRH	Res
orig_bytes	count	Number of payload bytes originator sent	SH	Ori
resp_bytes	count	Number of payload bytes responder sent	SHR	Res
conn_state	string	Connection state (see <b>conn.log &gt; conn_state</b> )	ОТН	No
local_orig	bool	Value=T if connection originated locally		Par
local_resp	bool	Value=T if connection responded locally	histo	<b>K</b> ) (
missed_bytes	count	Number of bytes missed (packet loss)	→ histo	ry
history	string	Connection state history (see <b>conn.log &gt; history</b> )	Orig UP	PERCA A <b>s</b> yn
orig_pkts	count	Number of packets originator sent	н	A SYN-
orig_ip_bytes	count	Number of originator IP bytes (via IP total_length header field)	A	A pure
resp_pkts	count	Number of packets responder sent	D	Packet
resp_ip_bytes	count	Number of responder IP bytes (via IP total_length header field)	F R	Packet Packet
tunnel_parents	table	If tunneled, connection UID value of encapsulating parent(s)	C L	Packet Incons
orig_I2_addr	string	Link-layer address of originator	G	Conte
resp_l2_addr	string	Link-layer address of responder	Q	Multi-1
vlan	int	Outer VLAN for connection	т	Retrar
inner_vlan	int	Inner VLAN for connection	w	Packet
			~	Flippe

conn_state					
summariz	zed state for each connection				
0	Connection attempt seen, no reply				
1	Connection established, not terminated (0 byte counts)				
F	Normal establish & termination (>0 byte counts)				
EJ	Connection attempt rejected				
2	Established, Orig attempts close, no reply from Resp				
3	Established, Resp attempts close, no reply from Orig				
ѕто	Established, Orig aborted (RST)				
STR	Established, Resp aborted (RST)				
STOS0	Orig sent SYN then RST; no Resp SYN-ACK				
STRH	Resp sent SYN-ACK then RST; no Orig SYN				
н	Orig sent SYN then FIN; no Resp SYN-ACK ("half-open")				
HR	Resp sent SYN-ACK then FIN; no Orig SYN				
тн	No SYN, not closed. Midstream traffic. Partial connection.				
nistory Drig UPPER	CASE, Resp lowercase				

S OPPER	RCASE, Resp Towercase
А	<b>S</b> YN without the ACK bit set
А	SYN-ACK (" <b>h</b> andshake")
А	pure <b>A</b> CK
Pa	acket with payload (" <b>d</b> ata")
Pa	acket with <b>F</b> IN bit set
Pa	acket with <b>R</b> ST bit set
Pa	acket with a bad <b>c</b> hecksum
In	consistent packets (e.g., SYN & RST)
Co	ontent <b>G</b> ap
Μ	lulti-flag packet (SYN & FIN or SYN + RST)
Re	e <b>t</b> ransmitted packet
Pa	acket with zero <b>w</b> indow advertisement
FI	ipped connection

#### http.log | HTTP request/reply details

	<b>) '</b> ''''	r request reply details
FIELD	ΤΥΡΕ	DESCRIPTION
ts	time	Timestamp for when request happened
uid & id		Underlying connection info > See conn.log
trans_depth	count	Pipelined depth into connection
method	string	Verb used in HTTP request (GET, POST, etc.)
host	string	Value of HOST header
uri	string	URI used in request
referrer	string	Value of referer header
version	string	Value of version portion of request
user_agent	string	Value of User-Agent header from client
origin	string	Value of Origin header from client
request_body_len	count	Uncompressed data size from client
response_body _len	count	Uncompressed data size from server
status_code	count	Status code returned by server
status_msg	string	Status message returned by server
info_code	count	Last seen 1xx info reply code from server
info_msg	string	Last seen 1xx info reply message from server
tags	table	Indicators of various attributes discovered
username	string	Username if basic-auth performed for request
password	string	Password if basic-auth performed for request
proxied	table	All headers indicative of proxied request
orig_fuids	vector	Ordered vector of file unique IDs
orig_filenames	vector	Ordered vector of filenames from client
orig_mime_types	vector	Ordered vector of mime types
resp_fuids	vector	Ordered vector of file unique IDs
resp_filenames	vector	Ordered vector of filenames from server
resp_mime_types	vector	Ordered vector of mime types
client_header _names	vector	Vector of HTTP header names sent by client
server_header _names	vector	Vector of HTTP header names sent by server
cookie_vars	vector	Variable names extracted from all cookies
uri_vars	vector	Variable names from URI

#### radius.log | RADIUS authentication attempts SSI.log | SSL handshakes

IELD	ТҮРЕ	DESCRIPTION	FIELD
;	time	Timestamp for when event happened	ts
id & id		Underlying connection info > See conn.log	uid & id
sername	string	Username, if present	version
iac	string	MAC address, if present	cipher
amed_addr	addr	Address given to network access server, if present	curve
innel_client	string	Address (IPv4, IPv6, or FQDN) of initiator end of tunnel, if present	server_name
onnect_info	string	Connect info, if present	resumed
eply_msg	string	Reply message from server challenge	last_alert
esult	string	Successful or failed authentication	next_protocol
1	interval	Duration between first request and either	
		Access-Accept message or an error	established

#### sip.log | SIP analysis

ttl

ts

uid & id

trans\_de

mailfror

rcptto

date

from

reply\_to

msg\_id

in\_reply subject

x\_origina

first\_rec

second

last\_repl

path user\_age

tls

fuids

is\_webm

to сс

helo

FIELD	ΤΥΡΕ	DESCRIPTION	
ts	time	Timestamp when request happened	ssl_history
uid & id		Underlying connection info > See conn.log	<u> </u>
trans_depth	count	Pipelined depth into request/response transaction	<ul> <li>direction flipped</li> </ul>
method	string	Verb used in SIP request (INVITE, etc)	H hello_request
uri	string	URI used in request	<b>c</b> lient_hello
date	string	Contents of Date: header from client	s server_hello
request_from	string	Contents of request From: header <sup>1</sup>	<pre>v hello_verify_request</pre>
request_to	string	Contents of To: header	T NewSession <b>T</b> icket
response_from	string	Contents of response From: header <sup>1</sup>	X certificate
response_to	string	Contents of response To: header	K server_key_exchange
reply_to	string	Contents of Reply-To: header	R certificate_request
call_id	string	Contents of Call-ID: header from client	N server_hello_do <b>n</b> e
seq	string	Contents of CSeq: header from client	Y certificate_verif <b>y</b>
subject	string	Contents of Subject: header from client	G client_key_exchange
request_path	vector	Client message transmission path, extracted from headers	F finished W certificate url
response_path	vector	Server message transmission path, extracted from headers	W certificate_un
user_agent	string	Contents of User-Agent: header from client	cert_chain_fps vector
status_code	count	Status code returned by server	
status_msg	string	Status message returned by server	client_cert_chain_ vector fps
warning	string	Contents of Warning: header	subject string
request_body_len	count	Contents of Content-Length: header from	issuer string

#### MICROSOFT LOGS

#### **ALERT LOGS**

#### dce\_rpc.log | Details on DCE/RPC messages intel.log | Intelligence data matches

FIELD	ΤΥΡΕ	DESCRIPTION
S	time	Timestamp for when event happened
uid & id		Underlying connection info > See conn.log
rtt	interval	Round trip time from request to response
named_pipe	string	Remote pipe name
endpoint	string	Endpoint name looked up from uuid
operation	string	Operation seen in call

#### ntlm.log | NT LAN Manager (NTLM)

	-	
IELD	ΤΥΡΕ	DESCRIPTION
;	time	Timestamp for when event happened
id & id		Underlying connection info > See conn.log
sername	string	Username given by client
ostname	string	Hostname given by client
omainname	string	Domainname given by client
erver_nb computer_name	string	NetBIOS name given by server in a CHALLENGE
erver_dns computer_name	string	DNS name given by server in a CHALLENGE
erver_tree_name	string	Tree name given by server in a CHALLENGE
Jccess	bool	Indicates whether or not authentication was successful

#### rdp.log | Remote Desktop Protocol (RDP)

1 0			note
FIELD	ΤΥΡΕ	DESCRIPTION	msg
ts	time	Timestamp for when event happened	sub
uid & id		Underlying connection info > See conn.log	src
cookie	string	Cookie value used by client machine	dst
result	string	Status result for connection	р
security_protocol	string	Security protocol chosen by server	n
client_channels	vector	Channels requested by the client	peer_c
keyboard_layout	string	Keyboard layout (language) of client machine	
client_build	string	RDP client version used by client machine	action
client_name	string	Name of client machine	omail
client_dig_product _id	string	Product ID of client machine	email_
desktop_width	count	Desktop width of client machine	suppr
desktop_height	count	Desktop height of client machine	remot
requested _color_depth	string	Color depth requested by client in high_color_depth field	
cert_type	string	If connection is encrypted with native RDP encryption, type of cert being used	dropp
cert_count	count	Number of certs seen	
cert_permanent	bool	Indicates if provided certificate or certificate chain is permanent or temporary	55
encryption_level	string	Encryption level of connection	
encryption _method	string	Encryption method of connection	SUR

#### FIELD TYPE DESCRIPTION Timestamp when data discovered time uid & id Underlying connection info > See conn.log record Where data was seen seen Intel::-Seen cot Which indicator types matched

matcheu	[enum]	which indicator types matched
sources	set [string]	Sources which supplied data that resulted in match
fuid	string	If file was associated with this intelligence hit, this is uid for file
file_mime_type	string	Mime type if intelligence hit is related to file
file_desc	string	Files 'described' to give more context
cif	record Intel::CIF	CIF

#### **NOTICE.IO** Interesting events and activity

FIELD	ТҮРЕ	DESCRIPTION
ts	time	Timestamp for when notice occurred
uid & id		Underlying connection info > See conn.log
fuid	string	File unique ID if notice related to a file
file_mime_type	string	Mime type if notice related to a file
file_desc	string	Files 'described' to give more context
proto	enum	Transport protocol
note	enum	Notice::Type of notice
msg	string	Human readable message for notice
sub	string	Human readable sub-message
src	addr	Source address, if no conn_id
dst	addr	Destination address
р	port	Associated port, if no conn_id
n	count	Associated count or status code
peer_descr	string	Text description for peer that raised notice, including name, host address and port
actions	set[e- num]	Actions applied to this notice
email_dest	set	The email address(es) where to send this notice
suppress_for	interval	Field indicates length of time that unique notice should be suppressed
remote_location	record geo_loca- tion	If GeoIP support is built in, notices have geographic information attached to them

client_addr	addr	IP address of client
server_addr	addr	IP address of server handing out lease
client_port	port	Client port at time of server handing out IP
server_port	port	Server port at time of server handing out IP
mac	string	Client's hardware address
host_name	string	Name given by client in Hostname option 12
client_fqdn	string	FQDN given by client in Client FQDN option 81
domain	string	Domain given by server in option 15
requested_addr	addr	IP address requested by client
assigned_addr	addr	IP address assigned by server
lease_time	interval	IP address lease interval
client_message	string	Message with DHCP_DECLINE so client can tell server why address was rejected
server_message	string	Message with DHCP_NAK to let client know why request was rejected
msg_types	vector	DHCP message types seen by transaction
duration	interval	Duration of DHCP session
client_chaddr	string	Hardware address reported by the client
msg_orig	vector	Address originated from msg_types field
client_software	string	Software reported by client in vendor_class
server_software	string	Software reported by server in vendor_class
circuit_id	string	DHCP relay agents that terminate circuits
agent_remote_id	string	Globally unique ID added by relay agents to identify remote host end of circuit
subscriber_id	string	Value independent of physical network connection that provides customer DHCP configuration regardless of physical location

DESCRIPTION

IP address of client

Earliest time DHCP message observed

Unique identifiers of DHCP connections

dhcp.log | DHCP lease activity

TYPE

time

table

**FIELD** 

#### dns.log | DNS query/response details

FIELD	ΤΥΡΕ	DESCRIPTION
ts	time	Earliest timestamp of DNS protocol message
uid & id		Underlying connection info > See conn.log
proto	enum	Transport layer protocol of connection
trans_id	count	16-bit identifier assigned by program that generated DNS query
rtt	interval	Round trip time for query and response
query	string	Domain name subject of DNS query
qclass	count	QCLASS value specifying query class
qclass_name	string	Descriptive name query class
qtype	count	QTYPE value specifying query type
qtype_name	string	Descriptive name for query type
rcode	count	Response code value in DNS response
rcode_name	string	Descriptive name of response code value
AA	bool	Authoritative Answer bit: responding name server is authority for domain name
тс	bool	Truncation bit: message was truncated
RD	bool	Recursion Desired bit: client wants recursive service for query
RA	bool	Recursion Available bit: name server supports recursive queries
Z	count	Reserved field, usually zero in queries and responses
answers	vector	Set of resource descriptions in query answer
TTLs	vector	Caching intervals of RRs in answers field
rejected	bool	DNS query was rejected by server
auth	table	Authoritative responses for query
addl	table	Additional responses for query

#### dpd.log | Dynamic protocol detection failures

FIELD	IYPE	DESCRIPTION
ts	time	Timestamp when protocol analysis failed
uid & id		Underlying connection info > See conn.
proto	enum	Transport protocol for violation
analyzer	string	Analyzer that generated violation
failure_reason	string	Textual reason for analysis failure
packet_segment	string	Payload chunk that most likely resulted protocol violation

#### irc.log | IRC communication details

IELD	ΤΥΡΕ	DESCRIPTION
	time	Timestamp when command seen
d & id		Underlying connection info > See conn.log
ck	string	Nickname given for connection
ser	string	Username given for connection
ommand	string	Command given by client
alue	string	Value for command given by client
ldl	string	Any additional data for command
cc_file_name	string	DCC filename requested
cc_file_size	count	DCC transfer size as indicated by sender
cc_mime_type	string	Sniffed mime type of file
id	string	File unique ID

#### kerberos.log | Kerberos authentication

ts	time	Timestamp for when event happened
uid & id		Underlying connection info > See conn.log
request_type	string	Authentication Service (AS) or Ticket Granting Service (TGS)
client	string	Client
service	string	Service
success	bool	Request result
error_msg	string	Error message
from	time	Ticket valid from
till	time	Ticket valid until
cipher	string	Ticket encryption type
forwardable	bool	Forwardable ticket requested
renewable	bool	Renewable ticket requested
client_cert _subject	string	Subject of client certificate, if any
client_cert_fuid	string	File unique ID of client cert, if any
server_cert _subject	string	Subject of server certificate, if any
server_cert_fuid	string	File unique ID of server cert, if any
auth_ticket	string	Ticket hash authorizing request/transaction
new_ticket	string	Ticket hash returned by KDC

response_body _ len	count	Contents of Content-Length: header from server
content_type	string	Contents of Content-Type: header from server
<sup>1</sup> The tag= value usually appended to the sender is stripped off and not logged.		

#### smtp.log | SMTP transactions

	<b>6 3</b>	
	ТҮРЕ	DESCRIPTION
	time	Timestamp when message was first seen
		Underlying connection info > See conn.log
epth	count	Transaction depth if there are multiple msgs
	string	Contents of Helo header
n	string	Email addresses found in From header
	table	Email addresses found in Rcpt header
	string	Contents of Date header
	string	Contents of From header
	table	Contents of To header
	table	Contents of CC header
	string	Contents of ReplyTo header
	string	Contents of MsgID header
to	string	Contents of In-Reply-To header
	string	Contents of Subject header
ating_ip	addr	Contents of X-Originating-IP header
eived	string	Contents of first Received header
received	string	Contents of second Received header
y	string	Last message server sent to client
	vector	Message transmission path, from headers
ent	string	Value of User-Agent header from client
	bool	Indicates connection switched to using TLS
	vector	File unique IDs attached to message
nail	bool	If message sent via webmail

#### SNMP.log | SNMP messages

-	-	
FIELD	TYPE	DESCRIPTION
ts	time	Timestamp of first packet of SNMP session
uid & id		Underlying connection info > See conn.log
duration	interval	Amount of time between first packet belonging to SNMP session and latest seen
version	string	Version of SNMP being used
community	string	Community string of first SNMP packet associated with session
get_requests	count	Number of variable bindings in GetRequest/ GetNextRequest PDUs seen for session
get_bulk_requests	count	Number of variable bindings in GetBulkRequest PDUs seen for session
get_responses	count	Number of variable bindings in Get- Response/Response PDUs seen for session
set_requests	count	Number of variable bindings in SetRequest PDUs seen for session
display_string	string	System description of SNMP responder endpoint
up_since	time	Time at which SNMP responder endpoint claims it's been up since

#### SOCKS. Og | SOCKS proxy requests

		Jeros proxy requests
FIELD	TYPE	DESCRIPTION
ts	time	Time when proxy connection detected
uid & id		Underlying connection info > See conn.log
version	count	Protocol version of SOCKS
user	string	Username used to request a login to proxy
password	string	Password used to request a login to proxy
status	string	Server status for attempt at using proxy
request	record SOCKS:: Address	Client requested SOCKS address
request_p	port	Client requested port
bound	record SOCKS:: Address	Server bound address
bound_p	port	Server bound port
	_	

Subject	String	Subject of A.SOS cert offered by Server
issuer	string	Subject of signer of X.509 server cert
client_subject	string	Subject of X.509 cert offered by client
client_issuer	string	Subject of signer of client cert
sni_matches_cert	bool	Set to true if the hostname sent in the SNI matches the certificate, false if it does not. Unset if the client did not send an SNI.
request_client_ certificate_ authorities	vector	List of client certificate CAs accepted by the server
server_version	count	Numeric version of the server in the server hello
client_version	count	Numeric version of the client in the client hello
client_ciphers	vector	Ciphers that were offered by the client for the connection
ssl_client_exts	vector	SSL client extensions
ssl_server_exts	vector	SSL server extensions
ticket_lifetime_ hint	count	Suggested ticket lifetime sent in the session ticket handshake by the server
dh_param_size	count	The diffie helman parameter size, when using DH
point_formats	vector	Supported elliptic curve point formats
client_curves	vector	The curves supported by the client
orig_alpn	vector	Application layer protocol negotiation extension sent by the client
client_supported_ versions	vector	TLS 1.3 supported versions
server_ supported_ version	count	TLS 1.3 supported version
psk_key_ exchange_modes	vector	TLS 1.3 Pre-shared key exchange modes
client_key_share_ groups	vector	Key share groups from client hello
server_key_share_ group	count	Selected key share group from server hello
client_comp_ methods	vector	Client supported compression methods
sigalgs	vector	Client supported signature algorithms
hashalgs	vector	Client supported hash algorithms
validation_status	string	Certificate validation result for this connection

DESCRIPTION

ECDH/ECDHE

extension

U

B

D

L .

by the server

by the client

SSL/TLS version server chose

SSL/TLS cipher suite server chose

Last alert seen during connection

Elliptic curve server chose when using

Value of Server Name Indicator SSL/TLS

Flag that indicates session was resumed

Next protocol server chose using application

Flags if SSL session successfully established

SSL history showing which types of packets

were received in which order. Client-side letters are capitalized, server-side lowercase

> certificate status supplemental\_d**a**ta

change\_cipher\_spec

application **d**ata

end\_of\_early\_data

key\_u**p**date

alert

message\_hash

hello\_retry\_request

unknown content type

All fingerprints for the certificates offered

All fingerprints for the certificates offered

Subject of X.509 cert offered by server

encrypted extensions

heart**b**eat

unassigned\_handshake\_type

ayer next protocol extension, if present

Time when SSL connection first detected

Underlying connection info > See conn.log

TYPE

time

string

string

string

string

bool string

string

bool

ssl\_history

FIEL ts

uid & i

proto

facility

severi

messa

host\_cert

client\_cert

ocsp\_status

valid\_ct\_logs

valid\_ct\_operators count

string

#### Syslog.log | Syslog messages

count

D	TYPE	DESCRIPTION
	time	Timestamp when syslog message was seen
id		Underlying connection info > See conn.log
	enum	Protocol over which message was seen
у	string	Syslog facility for message
ity	string	Syslog severity for message
age	string	Plain text message

OCSP validation result for this connection

Number of different log operators for which

Number of different logs for which valid

valid SCTs encountered in connection

SCTs encountered in connection

#### tunnel.log | Details of encapsulating tunnels

FIELD	TYPE	DESCRIPTION
ts	time	Time at which tunnel activity occurred
uid & id		Underlying connection info > See conn.log
tunnel_type	enum	Tunnel type
action	enum	Type of activity that occurred

#### weird.log | Unexpected network/protocol activity

	•	
FIELD	TYPE	DESCRIPTION
ts	time	Time when weird occurred
uid & id		Underlying connection info > See conn.log
name	string	Name of weird that occurred
addl	string	Additional information accompanying

#### smb\_files.log | Details on SMB files

bool

FIELD	TYPE	DESCRIPTION
ts	time	Time when file was first discovered
uid & id		Underlying connection info > See conn.log
fuid	string	Unique ID of file
action	enum	Action this log record represents
path	string	Path pulled from tree that file was transferred to or from
name	string	Filename if one was seen
size	count	Total size of file
prev_name	string	lf rename action was seen, this will be file's previous name
times	record SMB::	Last time file was modified
	MAC-	
	Times	

Flag connection if seen over SSL

#### smb\_mapping.log | SMB mappings

IELD	TYPE	DESCRIPTION
	time	Time when tree was mapped
d & id		Underlying connection info > See conn.log
ath	string	Name of tree path
ervice	string	Type of resource of tree (disk share, printer share, named pipe, etc)
ative_file_system	string	File system of tree
nare_type	string	If this is SMB2, share type will be included

bed	bool	Indicate if \$src IP address was dropped and
		denied network access

#### **SURICATA**

Corelight's Suricata<sup>®</sup> and Zeek logs link alerts and evidence to accelerate incident response

#### suricata\_corelight.log

FIELD	ТҮРЕ	DESCRIPTION
ts	time	Timestamp of the Suricata alert
uid & id		Underlying connection info > See conn.log
alert.category	string	Type of attack being detected
alert.metadata	vector	All metadata keywords from signature in "name:value" format. Conveys info such as modification time, deployment location, etc.
alert.rev	integer	Revision number of signature
alert.severity	count	Seriousness of attack, with 1 being most severe
alert.signature	string	Human-readable description of the attack type
alert.signature_id	count	Numeric signature identifier
community_id	string	The community ID generated by Suricata, if community ID is configured
flow_id	count	The Suricata-assigned flow ID in which the alert occurred
metadata	vector of strings	Application layer metadata, if any, associated with the alert (for example, flowbits)
pcap_cnt	count	The PCAP record count, present when the packet that generated the alert origi- nated from a PCAP field
retries	count	The number of retries performed to write this log entry. Used in diagnostic sessions.
service	string	The application protocol
suri_id	string	The unique ID for the log record
tx_id	count	The Suricata-assigned transaction ID in which the alert occurred

#### **CORELIGHT COLLECTIONS**

Corelight delivers a comprehensive suite of network security analytics that help organizations identify more than 75 adversarial TTPs across the MITRE ATT&CK<sup>®</sup> spectrum. These detections reveal known and unknown threats via hundreds of unique insights and alerts using machine learning, behavioral analysis, and signature-based approaches. The following Corelight Collections focus on our behavioral and statistical analyses and are organized by focus areas:

#### **Entity Collection**



PACKAGE	DESCRIPTION
Known Entities	Extract, aggregate, summarize and log individual network entities, including hosts, devices, names, users, and domains
Local Subnets	Identify local IPv4/v6 space subnets, both public and private
Application Identification	Identify over 150 applications, including BitTorrent, DropBox, Facebook, TeamViewer, WhatsApp, and many more

#### files.log | File analysis results

FIELD	ΤΥΡΕ	DESCRIPTION
ts	time	Time when file first seen
fuid	string	Identifier associated with single file
uid & id		Underlying connection info > See conn.log
source	string	Identification of file data source
depth	count	Value to represent depth of file in relation to source
analyzers	table	Set of analysis types done during file analysis
mime_type	string	Mime type, as determined by Zeek's signatures
filename	string	Filename, if available from file source
duration	interval	Duration file was analyzed for
local_orig	bool	Indicates if data originated from local network
is_orig	bool	If file sent by connection originator or responder
seen_bytes	count	Number of bytes provided to file analysis engine
total_bytes	count	Total number of bytes that should comprise full file
missing_bytes	count	Number of bytes in file stream missed
overflow_bytes	count	Number of bytes in file stream not delivered to stream file analyzers
timedout	bool	If file analysis timed out at least once
parent_fuid	string	Container file ID was extracted from
md5	string	MD5 digest of file contents
sha1	string	SHA1 digest of file contents
sha256	string	SHA256 digest of file contents
extracted	string	Local filename of extracted file
extracted_cutoff	bool	Set to true if file being extracted was cut off so whole file was not logged
extracted_size	count	Number of bytes extracted to disk
entropy	double	Information density of file contents

#### ftp.log | FTP request/reply details

FIELD	TYPE	DESCRIPTION
ts	time	Timestamp when command sent
uid & id		Underlying connection info > See conn.
user	string	Username for current FTP session
password	string	Password for current FTP session
command	string	Command given by client
arg	string	Argument for command, if given
mime_type	string	Sniffed mime type of file
file_size	count	Size of file
reply_code	count	Reply code from server in response to command
reply_msg	string	Reply message from server in response to command
data_channel	record FTP:: Expected Data Channel	Expected FTP data channel
fuid	string	File unique ID

## mysql.log | MySQL

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FIELD	LIPE	DESCRIPTION
ts	time	Timestamp for when event happened
uid & id		Underlying connection info > See conn.log
cmd	string	Command that was issued
arg	string	Argument issued to command
success	bool	Server replied command succeeded
rows	count	Number of affected rows, if any
response	string	Server message, if any

#### pe.log | Portable executable

LD	TYPE	DESCRIPTION	ssh
	time	Timestamp for when event happened	
	string	File id of this portable executable file	FIELD
hine	string	Target machine file was compiled for	ts
pile_ts	time	Time file was created	uid & ic
	string	Required operating system	version
system	string	Subsystem required to run this file	auth_su
(e	bool	Is file an executable, or just an object file?	auth at
1bit	bool	ls file a 64-bit executable?	auth_at
aslr	bool	Does file support Address Space Layout Randomization?	client
_dep	bool	Does file support Data Execution Prevention?	server
_code	bool	Does file enforce code integrity checks?	cipher_
egrity			mac_al
_seh	bool	Does file use structured exception handing?	compre
import_table	bool	Does file have import table?	kex_alg
export_table	bool	Does file have export table?	host_ke
cert_table	bool	Does file have attribute certificate table?	host_ke
debug_data	bool	Does file have debug table?	remote
ion_names	vector of	Names of sections, in order	

#### software.log | Software observed on network

ELD	ΤΥΡΕ	DESCRIPTION
	time	Time at which software was detected
ost	addr	IP address detected running the software
ost_p	port	Port on which software is running
ftware_type	enum	Type of software detected (e.g., HTTP::SERVER)
ame	string	Name of software (e.g., Apache)
rsion	record Software:: Version	Software version
nparsed_version	string	Full, unparsed version string found
1	string	Root URL where software was discovered

#### SSh.log | SSH handshakes

FIELD	TYPE	DESCRIPTION
ts	time	Time when SSH connection began
uid & id		Underlying connection info > See conn.log
version	count	SSH major version (1 or 2)
auth_success	bool	Authentication result (T=success, F=failure, unset=unknown)
auth_attempts	count	Number of authentication attempts observed
direction	enum	Direction of connection
client	string	Client's version string
server	string	Server's version string
cipher_alg	string	Encryption algorithm in use
mac_alg	string	Signing (MAC) algorithm in use
compression_alg	string	Compression algorithm in use
kex_alg	string	Key exchange algorithm in use
host_key_alg	string	Server host key's algorithm
host_key	string	Server's key fingerprint
remote_location	record geo_ location	Add geographic data related to remote host of connection

#### FREE THREAT HUNTING GUIDE

Get Corelight's Threat Hunting Guide, based on the MITRE ATT&CK<sup>®</sup> Framework. Learn how to find dozens of adversary tactics and techniques using Corelight network evidence. Visit corelight.com or email info@corelight.com.

		weird, if any
notice	bool	If weird was turned into a notice
peer	string	Peer that originated weird
source	string	The source of the weird, often an analyzer

#### x509.log | X.509 certificate info

FIELD	ТҮРЕ	DESCRIPTION
ts	time	Current timestamp
fingerprint	string	Fingerprint of the certificate
certificate	record X509:: Certificate	Basic information about certificate
san	record X509:: Subject Alternative Name	Subject alternative name extension of certificate
basic_constraints	record X509::	Basic constraints extension of certifica





#### C2 Collection

Identify command and control activity with over 50 unique insights and detections.

PACKAGE	DESCRIPTION
HTTP C2	Detect known families of malware that conduct C2 communications over HTTP, such as Empire, Metasploit, and Cobalt Strike
DNS tunneling	Detect DNS tunneling behavior as well as the presence of specific tunneling tools such as lodine
ICMP tunneling	Detect ICMP tunneling behavior as well as the presence of specific tunneling tools such as ICMP Shell
Domain generation algorithms (DGAs)	Detect C2 traffic based on DNS activity from malware using domain generation algorithms
Meterpreter	Detect C2 activity from Metasploit's Meterpreter shell across HTTP and generic TCP/UDP traffic



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#### **Encrypted Traffic Collection**

Combining observable elements like timestamps and packet sizes with known behavior of protocols, our encrypted traffic analytics offer a practical approach to visibility that lets you see and act on what matters.

PACKAGE	DESCRIPTION
Cert Hygiene	ldentify risk indicators in your TLS traffic, such as newly minted certificates, expiring certificates, and the use of weak encryption keys
Encrypted DNS Server Detection	Detect DNS-over-HTTPS traffic
Encryption Detection	Track and log information related to unknown or unusual encryption methods
RDP Inference	Capture information and inferences about encrypted and unencrypted RDP connections through client, authentication, and behavioral inferences
SSH Inference	Generate inferences about SSH connections, such as keystrokes, file transfers, or authentication attempts
SSH Stepping Stones	Detect a series of intermediary hosts connected via SSH
VPN Insights	Identify and log VPN traffic, including over 300 unique protocols, and providers

For more info on Corelight's analytics and detections, visit corelight.com/products/analytics.

#### **COMMUNITY ID**

When processing flow data from a variety of monitoring applications (such as Zeek and Suricata), it's often desirable to pivot quickly from one dataset to another. While the required flow tuple information is usually present in the datasets, the details of such "joins" can be tedious, particularly in corner cases. The "Community ID" spec for flow hashing standardizes the production of a string identifier representing a given network flow to reduce pivots to simple string comparisons. Learn more at github.com/corelight/community-id-spec.

## **DISRUPT ATTACKS WITH NETWORK EVIDENCE**