

LOG CHEATSHEETS

Zeek logs

Don't defend alone. Nothing is faster than a community-based approach to security.

| FIELD | TYPE | DESCRIPTION |
|--------------|-------------------|---|
| ts | time | Timestamp of first packet |
| uid | string | Unique identifier of connection |
| id | record conn_id | Connection's 4-tuple of endpoint addresses |
| > id.orig_h | addr | IP address of system initiating connection |
| > id.orig_p | port | Port from which the connection is initiated |
| > id.resp_h | addr | IP address of system responding to connection request |
| > id.resp_p | port | Port on which connection response is sent |
| proto | enum | Transport layer protocol of connection |
| service | string | Application protocol ID sent over connection |
| duration | interval | How long connection lasted |
| orig_bytes | count | Number of payload bytes originator sent |
| resp_bytes | count | Number of payload bytes responder sent |
| conn_state | string | Connection state (see conn.log > conn_state) |
| local_orig | bool | Value=T if connection originated locally |
| local_resp | bool | Value=T if connection responded locally |
| missed bytes | count | Number of bytes missed (packet loss) |

Connection state history (see conn.log > history)

Number of originator IP bytes

(via IP total_length header field)

Number of responder IP bytes

(via IP total_length header field)

Link-layer address of originator

Inner VLAN for connection

conn state

| | | _Jtate |
|--------|--------|---|
| | A summ | arized state for each connection |
| | S0 | Connection attempt seen, no reply |
| ses | S1 | Connection established, not terminated (0 byte counts) |
| 1 | SF | Normal establish & termination (>0 byte counts) |
| d d | REJ | Connection attempt rejected |
| u | S2 | Established, Orig attempts close, no reply from Resp |
| | S3 | Established, Resp attempts close, no reply from Orig |
| nt | RSTO | Established, Orig aborted (RST) |
| | RSTR | Established, Resp aborted (RST) |
| on | RSTOS0 | Orig sent SYN then RST; no Resp SYN-ACK |
| | RSTRH | Resp sent SYN-ACK then RST; no Orig SYN |
| | SH | Orig sent SYN then FIN; no Resp SYN-ACK ("half-open", |
| t | SHR | Resp sent SYN-ACK then FIN; no Orig SYN |
| ite) - | отн | No SYN, not closed. Midstream traffic. Partial connection. |
| | | |

Orig UPPERCASE, Resp lowercase, compressed

A SYN without the ACK bit set

A SYN-ACK ("handshake")

Packet with payload ("**d**ata")

Packet with a bad checksum

Inconsistent packet (Both SYN & RST)

Multi-flag packet (SYN & FIN or SYN + RST)

Packet with zero window advertisement

Timestamp for when request happened

uid & id

in_reply_to

x_originating_ip

Packet with FIN bit set

Packet with RST bit set

| radius.log RADIUS authentication attempts | | | |
|---|----------|--|--|
| FIELD | TYPE | DESCRIPTION | |
| ts | time | Timestamp for when event happened | |
| uid & id | | Underlying connection info > See conn.log | |
| username | string | Username, if present | |
| mac | string | MAC address, if present | |
| framed_addr | addr | Address given to network access server, if present | |
| tunnel_client | string | Address (IPv4, IPv6, or FQDN) of initiator end of tunnel, if present | |
| connect_info | string | Connect info, if present | |
| reply_msg | string | Reply message from server challenge | |
| result | string | Successful or failed authentication | |
| ttl | interval | Duration between first request and either Access-Accept message or an error | |
| | | | |

SSI.log | SSL handshakes Time when SSL connection first detected uid & id Underlying connection info > See conn.log SSL/TLS version server chose version SSL/TLS cipher suite server chose cipher Elliptic curve server chose when using ECDH/ECDHE Value of Server Name Indicator SSL/TLS server_name resumed last_alert Last alert seen during connection next_protocol ayer next protocol extension, if present Flags if SSL session successfully established established Ordered vector of all certificate file unique cert_chain_fuids IDs for certificates offered by server Ordered vector of all certificate file unique client_cert_chain IDs for certificates offered by client Subject of X.509 cert offered by server subject Subject of signer of X.509 server cert client subject Subject of X.509 cert offered by client client_issuer Certificate validation result for this connection ocsp_status Number of different logs for which valid valid_ct_logs Number of different log operators for which valid_ct_operators count Response from the ICSI certificate notary

| FIELD | TYPE | DESCRIPTION Timestamp when data discovered | | | | |
|-----------------|----------------------------|---|---|----------------------|--|--|
| ts | time | Timestamp when data discovered | SURICA | IA | | |
| uid & id | | Underlying connection info > See conn.log | AVAILABLE WITH CORELIGHT | | | |
| seen | record Intel::- Seen | Where data was seen | | • • • • • • • | • | |
| matched | set [enum] | Which indicator types matched | Corelight's Suricata and Zeek logs ling and evidence to accelerate incident | | • | |
| sources | set [string] | Sources which supplied data that resulted in match | suricata | a_cor | elight.log | |
| fuid | string | If file was associated with this intelligence hit, this is uid for file | FIELD | TYPE | DESCRIPTION | |
| file_mime_type | string | Mime type if intelligence hit is related to file | ts | time | Timestamp of the Suricata alert | |
| file_desc | string | Files 'described' to give more context | uid & id | | Underlying connection info > See conn | |
| cif | record | CIF | alert.category | string | Type of attack being detected | |
| notice. | Intel::CIF | nteresting events and activity | alert.metadata | vector | All metadata keywords from signatur in "name:value" format. Conveys info such as modification time, deployme location, etc. | |
| FIELD | TYPE | DESCRIPTION | alert.rev | integer | Revision number of signature | |
| ts | time | Timestamp for when notice occurred | alert.severity | count | Seriousness of attack, with 1 being m | |
| uid & id | | Underlying connection info > See conn.log | alert.signature | string | severe Human-readable description of the | |
| fuid | string | File unique ID if notice related to a file | alert.signature | string | attack type | |
| file_mime_type | string | Mime type if notice related to a file | alert.signature_id | count | Numeric signature identifier | |
| file_desc | string | Files 'described' to give more context | give more context community_id | | The community ID generated by | |
| proto | enum | Transport protocol | | | Suricata, if community ID is configu | |
| note | enum | Notice::Type of notice | flow_id | count | The Suricata-assigned flow ID in which the alert occurred | |
| msg | string | Human readable message for notice | | | | |
| sub | string | Human readable sub-message | metadata | vector of strings | Application layer metadata, if any, associated with the alert (for exampl | |
| src | addr | Source address, if no conn_id | | | flowbits) | |
| dst | addr | Destination address | ncan ent | count | The PCAP record count, present whe | |
| р | port | Associated port, if no conn_id | pcap_cnt | count | the packet that generated the alert o | |
| n | count | Associated count or status code | | | nated from a PCAP field | |
| peer_descr | string | Text description for peer that raised notice, including name, host address and port | retries | count | The number of retries performed to write this log entry. Used in diagnost | |
| actions | set[e- num] | Actions applied to this notice | | | sessions. | |
| suppress_for | interval | Field indicates length of time that unique | service | string | The application protocol | |
| | | notice should be suppressed | suri_id | string | The unique ID for the log record | |
| remote_location | record | If GeoIP support is built in, notices have geographic information attached to them | tx_id | count | The Suricata-assigned transaction ID | |

dhen log I DHCP lease activity

resp_ip_bytes

tunnel_parents

| UTICP.109 DHCP lease activity | | | |
|---------------------------------|----------|--|--|
| FIELD | TYPE | DESCRIPTION | |
| ts | time | Earliest time DHCP message observed | |
| uids | table | Unique identifiers of DHCP connections | |
| client_addr | addr | IP address of client | |
| server_addr | addr | IP address of server handing out lease | |
| 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 | |
| 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 | |

| nttp.iog | HTTP request/reply details |
|----------|----------------------------|

Flipped connection

| 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 vare | vector | Variable names from LIDI |

| result | string | Successful or failed authentication | next_protocol | string | layer next protocol extension, if present |
|--|--|--|-----------------------------|------------------|---|
| ttl | interval | Duration between first request and either Access-Accept message or an error | established | bool | Flags if SSL session successfully established |
| cin log | | | cert_chain_fuids | vector | Ordered vector of all certificate file unique IDs for certificates offered by server |
| sip.log | | | client_cert_chain _fuids | vector | Ordered vector of all certificate file unique IDs for certificates offered by client |
| FIELD | TYPE | DESCRIPTION | subject | string | Subject of X.509 cert offered by server |
| ts | time | Timestamp when request happened | issuer | string | Subject of signer of X.509 server cert |
| uid & id | | Underlying connection info > See conn.log | client_subject | string | Subject of X.509 cert offered by client |
| trans_depth | count | Pipelined depth into request/response transaction | client_issuer | string | Subject of signer of client cert |
| method | string | Verb used in SIP request (INVITE, etc) | validation_status | string | Certificate validation result for this connection |
| uri | string | URI used in request | ocsp_status | string | OCSP validation result for this connection |
| date | string | Contents of Date: header from client | valid_ct_logs | count | Number of different logs for which valid SCTs encountered in connection |
| request_from | string | Contents of request From: header ¹ | valid_ct_operators | count | Number of different log operators for which |
| request_to | string | Contents of To: header | Tana_cc_operators | count | valid SCTs encountered in connection |
| response_from | string | Contents of response From: header ¹ | notary | record | Response from the ICSI certificate notary |
| response_to | string | Contents of response To: header | | Cert Notary:: | |
| reply_to | string | Contents of Reply-To: header | | Response | |
| call_id | string | Contents of Call-ID: header from client | | | |
| seq | string | Contents of CSeq: header from client | syslog l | OU_{LS} | slog messages |
| subject | string | Contents of Subject: header from client | 3,3.09 | 9 13 | ysiog messages |
| request_path | vector | Client message transmission path, extracted from headers | FIELD ts | TYPE time | DESCRIPTION Timestamp when syslog message was seen |
| response_path | vector | Server message transmission path, extracted from headers | uid & id | | Underlying connection info > See conn.log |
| user_agent | string | Contents of User-Agent: header from client | proto | enum | Protocol over which message was seen |
| status_code | count | Status code returned by server | facility | string | Syslog facility for message |
| status_msg | string | Status message returned by server | severity | string | Syslog severity for message |
| | String | Status message returned by server | | | |
| warning | string | Contents of Warning: header | message | string | Plain text message |
| request_body_len | | , | | J | · · |
| | string | Contents of Warning: header Contents of Content-Length: header from | tunnel.l | og⊤⊳ | etails of encapsulating tunnels |
| request_body_len response_body | string | Contents of Warning: header Contents of Content-Length: header from client Contents of Content-Length: header from server Contents of Content-Type: header from | | J | · · |
| request_body_len response_body _len content_type | string count count string | Contents of Warning: header Contents of Content-Length: header from client Contents of Content-Length: header from server Contents of Content-Type: header from server | tunnel.l | 09 D | etails of encapsulating tunnels DESCRIPTION Time at which tunnel activity occurred |
| request_body_len response_body _len content_type | string count count string | Contents of Warning: header Contents of Content-Length: header from client Contents of Content-Length: header from server Contents of Content-Type: header from | tunnel.l | 09 D | etails of encapsulating tunnels DESCRIPTION |
| request_body_len response_body _ len content_type † The tag= value usu | string count count string ally appende | Contents of Warning: header Contents of Content-Length: header from client Contents of Content-Length: header from server Contents of Content-Type: header from server | tunnel.l | OGID TYPE | etails of encapsulating tunnels DESCRIPTION Time at which tunnel activity occurred Underlying connection info > See conn.log |

Timestamp when message was first seen Underlying connection info > See conn.log

Transaction depth if there are multiple msgs

Email addresses found in Rcpt header

Contents of To header

Contents of CC header

Contents of ReplyTo header Contents of MsgID header

Contents of In-Reply-To header

Contents of X-Originating-IP header

Contents of first Received header

Contents of second Received header

Value of User-Agent header from client

| uid & id | | Underlying connection info > See conn.log |
|-------------|--------|---|
| tunnel_type | enum | Tunnel type |
| action | enum | Type of activity that occurred |
| weird.l | og I u | nexpected network/protocol activity |
| FIELD | TYPE | DESCRIPTION |
| to | timo | Time when weird accurred |

| 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 weird, if any | | |
| notice | bool | If weird was turned into a notice | | |
| peer | string | Peer that originated weird | | |
| x509.log x.509 certificate info | | | | |
| FIELD | TYPE | DESCRIPTION | | |
| ts | time | Current timestamp | | |

File ID of certificate

Subject alternative nar

record X509:: Basic information abo

Certificate

record X509::

Alternative

| notice | Encrypted DNS | Flags known servers that use encrypted DNS traffic |
|------------------|-----------------------------|---|
| d | Encryption Detection | Tracks and logs information regarding the visibility of transport flows |
| | SSH Inference | Makes inferences about the purpose of SSH connections, such as interactivity or file transfer |
| | SSH Stepping Stones | Detects a series of intermediary hosts connected via SSH |
| | | |
| out certificate | | |
| ame extension of | Notices | |
| | Corelight's Encrypt | ted Traffic collection generates notice logs that highlight both |

Packages

Cert Hygiene

Encrypted Traffic collection

Tracks risk indicators in TLS traffic, such as newly-minted certificates, expiring certificates, and weak encryption keys

Indicate if \$src IP address was dropped and

misconfigurations and potential attacker behavior, without needing a decrypted packet feed

▲ Alert logs

dns.log | DNS query/response details

| FIELD | TYPE | 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 |

| dered vector of filenames from client |
|--|
| dered vector of mime types |
| dered vector of file unique IDs |
| dered vector of filenames from server |
| dered vector of mime types |
| ctor of HTTP header names sent by clien |
| ctor of HTTP header names sent server |
| iable names extracted from all cookies |
| iable names from URI |
| |

| | como la |
|------------------------------|---------|
| 1 LIDC communication details | snmp.lo |

| irc Ioa i | IRC con | nmunication details | 2111 |
|---------------|---------|---|--------|
| ii ciiog | inc con | indification details | FIELD |
| FIELD | TYPE | DESCRIPTION | ts |
| ts | time | Timestamp when command seen | uid & |
| uid & id | | Underlying connection info > See conn.log | durati |
| nick | string | Nickname given for connection | |
| user | string | Username given for connection | versio |
| command | string | Command given by client | comm |
| value | string | Value for command given by client | |
| addl | string | Any additional data for command | get_re |
| dcc_file_name | string | DCC filename requested | get_bu |
| dcc_file_size | count | DCC transfer size as indicated by sender | |
| dcc_mime_type | string | Sniffed mime type of file | get_re |
| fuid | string | File unique ID | set re |
| | _ | | 300_10 |
| kerberd | os.lo | G Kerberos authentication | displa |

Timestamp for when event happened

Authentication Service (AS) or Ticket Granting Service (TGS)

Renewable ticket requested

Subject of client certificate, if any

File unique ID of client cert, if any Subject of server certificate, if any

Ticket hash authorizing request/transaction

Request result

Ticket valid from

uid & id

success

client_cert

subject client_cert_fuid

server cert subject

auth ticket

server_cert_fuid

mysql.log | MysqL

| ius | vector | rile unique ibs attached to message |
|---------|----------------|---|
| webmail | bool | If message sent via webmail |
| nmp.lc | 9 I SNN | ЛР messages |
| ELD | TYPE | DESCRIPTION |
| | time | Timestamp of first packet of SNMP session |

| 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 |

| M | icro | oso | ft | logs | |
|---|------|-----|----|------|--|

| dce_rpc.log Details on DCE/RPC messages | | | |
|---|----------|---|--|
| FIELD | TYPE | DESCRIPTION | |
| ts | 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 | |
| | | | |

| NOTICE | DESCRIPTION |
|--------------------------------------|--|
| SSL::Certificate_Expired | Generated for certificates with an expiration date in the past |
| SSL::Certificate_Expires_Soon | Generated for certificates set to expire within X days (configurable in the UI) |
| SSL::Certificate_Not_ Val- id_Yet | Generated for certificates whose validity date is in the future |
| SSL::Certificate_Is_New | Generated for newly minted certificates Y days or younger (configurable in the UI) |
| SSL::Invalid_Server_Cert | Generated when any part of the certificate validation chain fails |
| SSL::Weak_Key | Generated for certificates whose keys are under 2048 bits |
| SSL::Old_Version | Generated if SSL version 2 or 3 is detected |
| SSL::Weak_Cipher | Generated if a deprecated cipher suite is used |
| Viz::UnencryptedService | A service was detected in plaintext on a port normally reserved for encrypted traffic |
| Viz::CustomCrypto | Encrypted traffic was detected without a certificate exchange or handshake, implying the use of a custom cryptographic setup |

dpd.log | Dynamic protocol detection failures

| FIELD | TYPE | DESCRIPTION |
|----------------|--------|---|
| ts | time | Timestamp when protocol analysis failed |
| uid & id | | Underlying connection info > See conn.log |
| 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 in protocol violation |
| | | |

| SOCKS. | iog i sc | OCKS proxy requests |
|----------|------------------------------|--|
| FIELD | TYPE | DESCRIPTION |
| ts | time | Time when proxy connection detected |
| uid & id | | Underlying connection info > See conn.lo |
| ersion/ | count | Protocol version of SOCKS |
| ser | string | Username used to request a login to pro |
| password | string | Password used to request a login to prox |
| tatus | string | Server status for attempt at using proxy |
| equest | record SOCKS:: Address | Client requested SOCKS address |
| equest_p | port | Client requested port |
| ound | record SOCKS:: Address | Server bound address |
| ound_p | port | Server bound port |
| c. | | |

ntlm.log | NT LAN Manager (NTLM)

uid & id

cookie

client_build client_name

desktop_width desktop_height

requested _color_depth

cert_type

cert_count

cert_permanent

encryption_level

encryption

uid & id

name

size

prev_name

client_dig_product string

| | FIELD | TYPE | DESCRIPTION |
|------|------------------------------|--------|--|
| | ts | time | Timestamp for when event happened |
| | uid & id | | Underlying connection info > See conn.log |
| | username | string | Username given by client |
| | hostname | string | Hostname given by client |
| .log | domainname | string | Domainname given by client |
| | server_nb _computer_name | string | NetBIOS name given by server in a CHALLENGE |
| oxy | server_dns _computer_name | string | DNS name given by server in a CHALLENGE |
| у | server_tree_name | string | Tree name given by server in a CHALLENGE |
| | success | bool | Indicates whether or not authentication was successful |
| | rdp.log | Remote | Desktop Protocol (RDP) |

Timestamp for when event happened

Cookie value used by client machine

Security protocol chosen by serve

Product ID of client machine

Desktop height of client machine

encryption, type of cert being used

Encryption method of connection

Time when file was first discovered

Action this log record represents Path pulled from tree that file was

If rename action was seen, this will be file's

Filename if one was seen

previous name

Indicates if provided certificate or certificate

n high_color_depth field

Underlying connection info > See conn.log

Keyboard layout (language) of client machine RDP client version used by client machine

| SSH inferences |
|---|
| The value of the inference field is a code that describes the SSH traffic |

| CODE | NAME | |
|------|--|--|
| ABP | Client Authentication Bypass | A client wasn't adhering to expectations of SSH either through server exploit or by the client and server switching to a protocol other than SSH after encryption begins |
| AFR | SSH Agent Forwarding Requested | Agent forwarding is requested by the Client |
| APWA | Automated Password Authentication | The client authenticated with an automated password tool (like sshpass) |
| AUTO | Automated Interaction | The client is a script or automated utility and not driven by a user |
| BAN | Server Banner | The server sent the client a pre-authentication banner, likely for legal reasons |
| BF | Client Brute Force Guessing | A client made a number of authentication attempts that exceeded some configured, per-connection threshold |
| BFS | Client Brute Force Success | A client made a number of authentication attempts that exceeded some configured, per-connection threshold |
| стѕ | Client Trusted Server | The client already has an entry in its known_hosts file for this server |
| cus | Client Untrusted Server | The client did not have an entry in its known_hosts file for this server |
| IPWA | Interactive Password Authentication | The client interactively typed their password to authenticate |
| KS | Keystrokes | An interactive session occurred in which the client set user-driven keystrokes to the server |
| LFD | Large Client File Download | A file transfer occurred in which the server sent a sequence of bytes to the client |
| LFU | Large Client File Upload | A file transfer occurred in which the client sent a sequence of bytes to the server. Large files are identified dynamically based on trains of MTU-sized packets |
| MFA | Multifactor Authentication | The server required a second form of authentication (a code) after a password or public key was accepted, and the client successfully provided it |
| NA | None Authentication | The client successfully authenticated using the None method |
| NRC | No Remote Command | The -N flag was used in the SSH session |
| РКА | Public Key Authentication | The client automatically authenticated using pubkey authentication |
| RSI | Reverse SSH Initiated | The Reverse session is initiated from the server back to the Client |
| RSIA | Reverse SSH Initiation Automated | The initiation of the Reverse session happened very early in the packet stream, indicating automation |
| RSK | Reverse SSH Keystrokes | Keystrokes are detected within the Reverse tunnel |
| RSL | Reverse SSH Logged In | The Reverse tunnel login has succeeded |
| RSP | Reverse SSH Provisioned | The client connected with a -R flag, which provisions the ports to be used for a Reverse Session set up at any future time |
| SA | Authentication Scanning | The client scanned authentication methods with the server and then disconnected |
| sc | Capabilities Scanning | A client exchanged capabilities with the server and then disconnected |
| SFD | Small Client File Download | A file transfer occurred in which the server sent a sequence of bytes to the client |
| SFU | Small Client File Upload | A file transfer occurred in which the client sent a sequence of bytes to the server |
| SP | Other Scanning | A client and server didn't exchange encrypted packets but the client wasn't a version or capabilities scanner |
| sv | Version Scanning | A client exchanged version strings with the server and then disconnected |

The authentication method is not determined or is unknown

files.log | File analysis results

| FIELD | TYPE | DESCRIPTION |
|------------------|----------|--|
| ts | time | Time when file first seen |
| fuid | string | Identifier associated with single file |
| tx_hosts | table | Host or hosts data sourced from |
| rx_hosts | table | Host or hosts data traveled to |
| conn_uids | table | Connection UID(s) over which file transferred |
| 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 |
| | | |

Information density of file contents

Timestamp when command sent

Reply code from server in response

Underlying connection info > See conn.log

ftp.log | FTP request/reply details

record

Expected

Channel

mime_type file_size

reply_code

data_channel

| | FIELD | 11176 | 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 |
| | | | |
| ne log I Portable executable | | | |

Pe.109 | Portable executable

| FIELD | TYPE | DESCRIPTION |
|-------------------------|------------------|---|
| ts | time | Timestamp for when event happened |
| id | string | File id of this portable executable file |
| machine | string | Target machine file was compiled for |
| compile_ts | time | Time file was created |
| os | string | Required operating system |
| subsystem | string | Subsystem required to run this file |
| is_exe | bool | Is file an executable, or just an object file? |
| is_64bit | bool | Is file a 64-bit executable? |
| uses_aslr | bool | Does file support Address Space Layout Randomization? |
| uses_dep | bool | Does file support Data Execution Prevention? |
| uses_code _integrity | bool | Does file enforce code integrity checks? |
| uses_seh | bool | Does file use structured exception handing? |
| has_import_table | bool | Does file have import table? |
| has_export_table | bool | Does file have export table? |
| has_cert_table | bool | Does file have attribute certificate table? |
| has_debug_data | bool | Does file have debug table? |
| section_names | vector of string | Names of sections, in order |

SOftware.loq | Software observed on network

| | | , |
|------------------|---------------------------------|--|
| FIELD | TYPE | DESCRIPTION |
| ts | time | Time at which software was detected |
| host | addr | IP address detected running the software |
| host_p | port | Port on which software is running |
| software_type | enum | Type of software detected (e.g., HTTP::SERVER) |
| name | string | Name of software (e.g., Apache) |
| version | record Software:: Version | Software version |
| unparsed_version | string | Full, unparsed version string found |
| url | string | Root URL where software was discovered |
| | | |

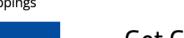
ssh.log | SSH handshakes

| 3311.109 SSH nandsnakes | | |
|---------------------------|----------------------------|---|
| 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 |

smb_mapping.log | SMB mappings

smb_files.log | Details on SMB files

| | | - |
|--------------------|--------|---|
| FIELD | TYPE | DESCRIPTION |
| ts | time | Time when tree was mapped |
| uid & id | | Underlying connection info > See conn.log |
| path | string | Name of tree path |
| service | string | Type of resource of tree (disk share, printer share, named pipe, etc) |
| native_file_system | string | File system of tree |
| share_type | string | If this is SMB2, share type will be included |
| | | |



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Unknown Authentication

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Based on Zeek version 3.0