

Understanding Content Engine Transaction Log Analysis

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[Introduction](#)

This document explains the codes that you see after issuing the **show transaction-log entries 255** command on the Cisco Content Engine. These log codes are written in Squid Log Format, and each log can be parsed with any log file parsing tool used on Squid caching logs.

[Before You Begin](#)

[Conventions](#)

For more information on document conventions, see the [Cisco Technical Tips Conventions](#).

[Prerequisites](#)

Readers of this document should be knowledgeable of Squid Log Format. Unlike the common log format, Squid's native log format was designed with Content Engine statistics in mind. This format can be generated not only by Squid, but also by commercial Content Engines, such as ContentFlow, InfoLibria, and NetContent. For more information, refer to [Squid Web Proxy Content](#).

[Components Used](#)

The information in this document is based on the software and hardware versions below.

- all releases of Cisco Content Engine Software (formerly Cache Engine Software)
- all versions of Cisco Content Engine (formerly Cache Engine Software)

[Standard Log Codes](#)

This section explains the standard log codes.

[TCP_HIT](#)

A valid copy of the requested object was in the Content Engine.

[TCP_MISS](#)

The requested object was not in the Content Engine.

TCP_REFRESH_HIT

The object was in the Content Engine, but it was stale (old). An `If-Modified-Since` request was made, and a `304 Not Modified` reply was received.

TCP_REF_FAIL_HIT

The object was in the Content Engine, but it was stale. The request to validate the object failed, so the stale object was returned.

TCP_REFRESH_MISS

The object was in the Content Engine, but it was stale. An `If-Modified-Since` request was made, and the reply contained new content.

TCP_CLIENT_REFRESH

The client issued a request with the no-cache pragma.

TCP_IMS_HIT

The client issued an `If-Modified-Since` request, and the object was in the Content Engine and still fresh.

TCP_IMS_MISS

The client issued an `If-Modified-Since` request for a stale object.

TCP_SWAPFAIL

The object was believed to be in the Content Engine, but it could not be accessed.

TCP_DENIED

Access was denied for this request.

UDP

This code refers to requests on the Internet Control Protocol (ICP) port (3130).

UDP_HIT

A valid copy of the requested object was in the Content Engine.

UDP_HIT_OBJ

A valid copy of the requested object was in the Content Engine, but the object data was small enough to be sent in the User Datagram Protocol (UDP) reply packet. It saves the Transmission Control Protocol (TCP) request.

[UDP_MISS](#)

The requested object was not in the Content Engine.

[UDP_DENIED](#)

Access was denied for this request.

[UDP_INVALID](#)

An invalid request was received.

[UDP_RELOADING](#)

The ICP request was refused because the Content Engine is busy reloading its metadata.

[ERR](#)

This code refers to various types of errors for HTTP requests.

[Hierarchy Data Codes](#)

This section explains the hierarchy data codes.

[DIRECT](#)

The object has been requested from the origin server.

[FIREWALL_IP_DIRECT](#)

The object has been requested from the origin server because the origin host IP address is inside your firewall.

[FIRST_PARENT_MISS](#)

The object has been requested from the parent Content Engine with the fastest weighted round-trip time.

[FIRST_UP_PARENT](#)

The object has been requested from the first available parent in your list.

[LOCAL_IP_DIRECT](#)

The object has been requested from the origin server because the origin host IP address matched your `local_ip` list.

[SIBLING_HIT](#)

The object was requested from a sibling Content Engine, which replied with a `UDP_HIT`.

[NO_DIRECT_FAIL](#)

The object could not be requested because of firewall restrictions, and no parent Content Engines were available.

[NO_PARENT_DIRECT](#)

The object was requested from the origin server because no parent Content Engines exist for the URL.

[PARENT_HIT](#)

The object was requested from a parent Content Engine, which replied with a `UDP_HIT`.

[SINGLE_PARENT](#)

The object was requested from the only parent Content Engine appropriate for this URL.

[SOURCE_FASTEST](#)

The object was requested from the origin server because the `source_ping` reply arrived first.

[PARENT_UDP_HIT_OBJ](#)

The object was received in a `UDP_HIT_OBJ` reply from a parent Content Engine.

[SIBLING_UDP_HIT_OBJ](#)

The object was received in a `UDP_HIT_OBJ` reply from a sibling Content Engine.

[PASSTHROUGH_PARENT](#)

The neighbor or proxy defined in the `passthrough_proxy` config option was used.

[SSL_PARENT_MISS](#)

The neighbor or proxy defined in the `ssl_proxy` config option was used.

[DEFAULT_PARENT](#)

No ICP queries were sent to any parent Content Engines. This parent was chosen because it was marked as default in the config file.

[ROUNDROBIN_PARENT](#)

No ICP queries were received from any parent Content Engines. This parent was chosen because it was marked as default in the config file, and it had the lowest Round Robin use count.

[CLOSEST_PARENT_MISS](#)

This parent was selected because it included the lowest Round-Trip Time (RTT) measurement to the origin server. This only appears with a `query_icmp` option set in the config file.

[CLOSEST_DIRECT](#)

The object was fetched directly from the origin server because this Content Engine measured a lower RTT than any of the parent Content Engines.

[Related Information](#)

- [Content Engine Frequently Asked Questions](#)
- [Cisco 500 Series Content Engine Support Page](#)
- [Optimizing the Content Engine](#)
- [Content Networking Software Center](#) ([registered](#) customers only)
- [Content Networking Devices Hardware Support](#)
- [Technical Support - Cisco Systems](#)