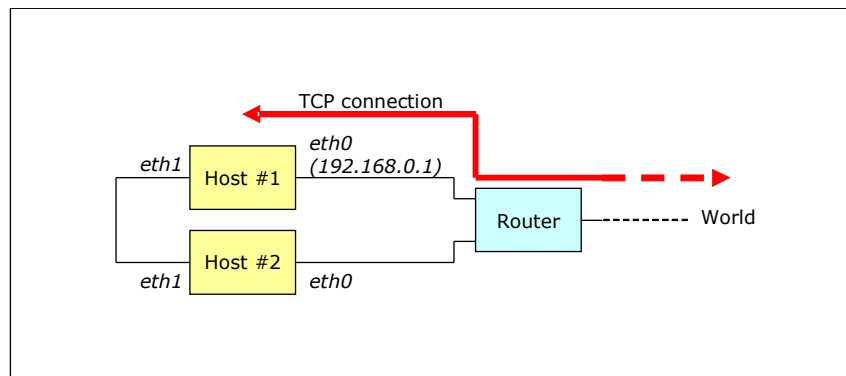


How to use TCPCP2

This documentation describes the sample procedures to take over the TCP sockets by TCPCP2.

Example 1: Take over the specific TCP socket.

A TCP connection is passed from Host #1 to Host #2.



1. Operation on Host #1

- 1) Stop the connected TCP socket from sending and receiving packets by calling the API **tcpcp_stop()**.
- 2) Retrieve the TCP socket information (TCP-SI) by calling the API **tcpcp_get_si()**.

e.g.

```
struct result_list *reslst1 = NULL;
struct result_list *reslst2 = NULL;
void *bufptr = NULL;
int si_size = 0;

/* 1) */
tcpcp_stop(fd, TCPCP_EXEC_ONE, &reslst1);

/* 2) */
tcpcp_get_si(fd, TCPCP_EXEC_ONE, &bufptr, &si_size, &reslst2);
```

- 3) Delete IP address *192.168.0.1* from the interface *eth0*.
- 4) Transfer the TCP-SI from Host #1 to Host #2 via the interface *eth1*.

2. Operation on Host #2

- 1) Add IP address *192.168.0.1* to the interface *eth0*, and send ARP REQUEST to the router.
- 2) Create a TCP socket by calling the system call **socket()**.
- 3) Set the TCP-SI in the TCP socket by calling the API **tcpcp_set_si()**.
- 4) Allow the TCP socket to resume sending and receiving packets by calling the API **tcpcp_start()**.

e.g.

```
int fd;
void *bufptr = NULL;
int si_size = 0;
struct result_list *reslst1 = NULL;
struct result_list *reslst2 = NULL;

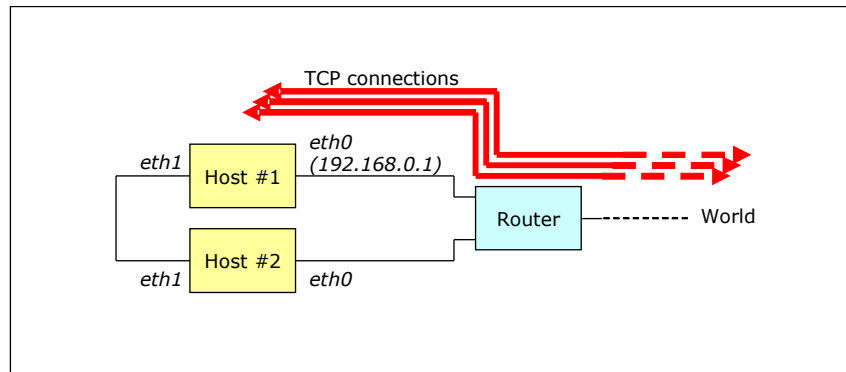
/* 2) */
fd = socket(PF_INET, SOCK_STREAM, 0);

/* 3) */
tcpcp_set_si(fd, TCPCP_EXEC_ONE, bufptr, si_size, &reslst1);

/* 4) */
tcpcp_start(fd, TCPCP_EXEC_ONE, &reslst2);
```

Example 2: Take over all connected TCP sockets.

All TCP connections are passed from Host #1 to Host #2.



1. Operation on Host #1

- 1) Create a dummy socket by calling **socket()**.
- 2) Stop all connected TCP sockets from sending and receiving packets by calling **tcpcp_stop()**.
- 3) Retrieve the TCP-SIs of all connected TCP sockets by calling **tcpcp_get_si()**.

e.g.

```
int dummy_fd;
struct result_list *reslst1 = NULL;
struct result_list *reslst2 = NULL;
void *bufptr = NULL;
int si_size = 0;

/* 1) */
dummy_fd = socket(PF_INET, SOCK_STREAM, 0);

/* 2) */
tcpcp_stop(dummy_fd, TCPCP_EXEC_ALL, &reslst1);

/* 3) */
tcpcp_get_si(dummy_fd, TCPCP_EXEC_ALL, &bufptr, &size, &reslst2)
```

- 4) Delete IP address `192.168.0.1` from the interface `eth0`.
- 5) Transfer the TCP-SIs from Host #1 to Host #2 via the interface `eth1`.

2. Operation on Host #2

- 1) Add IP address *192.168.0.1* to the interface *eth0*, and send ARP REQUEST to the router.
- 2) Create a dummy socket by calling **socket()**.
- 3) Create unconnected TCP sockets and set their TCP-SIs by calling **tcpcp_set_si()**.
- 4) Allow all TCP sockets to resume sending and receiving packets by calling **tcpcp_start()**.

e.g.

```
int dummy_fd;
void *bufptr = NULL;
int si_size = 0;
struct result_list *reslst1 = NULL;
struct result_list *reslst2 = NULL;

/* 2) */
dummy_fd = socket(PF_INET, SOCK_STREAM, 0);

/* 3) */
tcpcp_set_si(dummy_fd, TCPCP_EXEC_ALL, bufptr, si_size, &reslst1);

/* 4) */
tcpcp_start(dummy_fd, TCPCP_EXEC_ALL, &reslst2);
```

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