

## NAME

**netsck** – network utility tool

## DESCRIPTION

**netsck** is a network utility tool which enables to prototype or test network things. It provides a shell inside which runs a javascript engine. This manual will present the *netsck\_Javascript\_API* inside the shell.

Note that, shell supports multiline input with trailing escape '\ ' character.

## ENGINE

Uses *QJSEngine* class to evaluate javascript codes so anything which QJSEngine supports available to the user.

## METHODS

**help( topic : string = base-api )**

Opens the man page according to the topic. If topic isn't given then opens this man page.

**run( file\_path : string )**

Executes the lines inside the file.

**dump( object : any )**

Prints the content of any object to the stdout.

**sleep( duration : int )**

Sleeps current thread for specified duration. Unit is milliseconds.

**wait\_key( timeout : int )**

Waits for user to input a key and returns the value. Key value is the value returned from **std::getchar()**. If timeout expires function returns -1. Unit of timeout is milliseconds. Note that if timeout is -1 it works like there is no timeout.

## CLASSES

Detailed class documentations can be found through **help()** with their class names.

For example, **help( "udp\_socket" )**.

- PascalCase naming means the class is **singleton**.
- snake\_case naming means the class is **instantiable**.

### **socket**

Base class which provides an abstract base for socket classes.

### **udp\_socket**

Socket class which enables to send or receive udp datagrams.

### **Hex**

Singleton hexadecimal utility class which prints QByteArray as hexadecimal or creates a QByteArray from hexadecimal string.

**EXAMPLE**

```
// Create a 'send.js' and write some js code in it to make it worked
run( "send.js" );

var an_object = { \
  user : "Ozan" , \
  repo : "netsck" \
};
dump( an_object )
```

**SEE ALSO**

**help("socket") , help("udp\_socket") , help("Hex")**

**NAME**

**Hex** : singleton class

**DESCRIPTION**

**Hex** is a **singleton** class. Prints **QByteArray** as hexadecimal in table format. Also constructs a **QByteArray** from hexadecimal string.

**EXAMPLE**

```
Hex.print( Hex.from( "ab 01 23 11 14 78 64 77 34 24 12 09 08" ) )
Hex.print( Hex.from( "ab012311147864773424120908" ) )
Hex.print( "This is a test string." )
```

**METHODS**

**print( data : QByteArray )**

Prints the data as hexadecimal in table format.

**from( hex\_data : QByteArray ) -> QByteArray**

Constructs a **QByteArray** from hex string. It is equivalent to **QByteArray::fromHex**.

## NAME

**socket** : abstract class

## DESCRIPTION

**socket** is an **abstract class which udp\_socket** inherits. Common socket methods are contained in this class. It is binding of **QAbstractSocket** class. It is not instantiable.

## METHODS

**stdout\_enabled() -> bool**

Returns a value which indicates whether info messages are enabled.

**enable\_stdout( value : bool = true )**

Enables/Disables info messages according to the 'value' parameter.  
Default value is true.

**addr() -> string**

Returns host address of local socket. It is equivalent to **QAbstractSocket::localAddress**.

**port() -> int**

Returns the host port numberr of the local socket. It is equivalent to **QAbstractSocket::localPort**.

**close()** Closes the socket. It is equivalent to **QAbstractSocket::close**

**bind( addr : string , port : int = 0 , mode : enum ) -> bool**

Binds sockets according to the parameters. It is equivalent to **AbstractSocket::bind**.  
If port is '0' so the socket selects an arbitrary empty port.  
Returns true if an operation is successful, otherwise false.

**flush( timeout : int = -1 ) -> bool**

Flushes write buffer. It is equivalent to **QAbstractSocket::waitForBytesWritten**. Returns true if bytes have been written, otherwise false

**bind( port : int = 0 , mode : enum ) -> bool**

Dispatchs to **bind('0.0.0.0',port,mode)** and returns its result.

**wait( duration : int = -1 ) -> bool**

Waits for the datagrams by duration. Unit of duration is milliseconds. It is equivalent to **QAbstractSocket::waitForReadyRead**.  
If duration is '-1' so it waits until some datagram is received.  
Returns true if new data has arrived, otherwise false.

**wait\_a\_bit( duration : int = 0 ) -> bool**

If some datagrams waits on the OS buffer, it just fetches so waits\_a\_bit. It is equivalent to **QAbstractSocket::waitForReadyRead**.  
Returns true if new data has arrived, otherwise false.

**error() -> enum**

Returns the last error. It is equivalent to **QAbstractSocket::error**.

## NAME

**udp\_socket** : class

## DESCRIPTION

**udp\_socket** is a concrete class which inherits **socket**. It is binding of QUdpSocket class. All methods of **socket** class is usable.

## EXAMPLE

```
var echo_srv = new udp_socket()
var client = new udp_socket()

echo_srv.bind( "127.0.0.1" , 12000 )
// Send 'echo' to echo_srv

client.send( "echo" , "127.0.0.1" , 12000 )

echo_srv.wait()

var dgram = echo_srv.read_datagram()
dump( dgram )
echo_srv.send( dgram.data , dgram.sender_addr , dgram.sender_port )

client.wait()
dump( client.read_datagram() )
```

## OBJECTS

**datagram** : object

```
{
  sender_addr : string ,
  sender_port : int ,
  dest_addr   : string ,
  dest_port   : int ,
  data        : QByteArray ,
  data_utf8   : string ,
  hop_limit   : int ,
  iface_idx   : int
}
```

It is returned from **read\_datagram()** method.

## METHODS

**has\_datagram()** -> bool

Returns true if has pending datagram, otherwise false. It is equivalent to **QUdpSocket::hasPendingDatagrams()**.

**read\_datagram()** -> datagram

Returns the pending datagram. If there is not datagram returns an 'undefined'. It is equivalent to **QUdpSocket::receiveDatagram**.

**clear()** Discards all pending datagrams.

**send( data : QByteArray , addr : string , port : int )** -> qint64

Sends 'data' to 'addr:port' as udp packet. Returns how many bytes have been written. It is equivalent to **QUdpSocket::writeDatagram**

**SIGNALS****datagram()**

Emitted when a new datagram has come. It is equivalent to **QUdpSocket::readyRead**.