

NAME

`rpc_soc`, `auth_destroy`, `authnone_create`, `authunix_create`, `authunix_create_default`, `callrpc`, `clnt_broadcast`, `clnt_call`, `clnt_control`, `clnt_create`, `clnt_destroy`, `clnt_freeres`, `clnt_geterr`, `clnt_pcreateerror`, `clnt_perrno`, `clnt_perror`, `clnt_screateerror`, `clnt_sperrno`, `clnt_sperror`, `clntraw_create`, `clnttcp_create`, `clntudp_bufcreate`, `clntudp_create`, `clntunix_create`, `get_myaddress`, `pmap_getmaps`, `pmap_getport`, `pmap_rmtcall`, `pmap_set`, `pmap_unset`, `registerrpc`, `rpc_createerr`, `svc_destroy`, `svc_fds`, `svc_fdset`, `svc_getargs`, `svc_getcaller`, `svc_getreq`, `svc_getreqset`, `svc_register`, `svc_run`, `svc_sendreply`, `svc_unregister`, `svcerr_auth`, `svcerr_decode`, `svcerr_noproc`, `svcerr_noprog`, `svcerr_progvers`, `svcerr_systemerr`, `svcerr_weakauth`, `svcfid_create`, `svcunixfd_create`, `svccraw_create`, `svcunix_create`, `xdr_accepted_reply`, `xdr_authunix_parms`, `xdr_callhdr`, `xdr_callmsg`, `xdr_opaque_auth`, `xdr_pmap`, `xdr_pmaplist`, `xdr_rejected_reply`, `xdr_replymsg`, `xprt_register`, `xprt_unregister` — library routines for remote procedure calls

SYNOPSIS

```
#include <rpc/rpc.h>
```

See **DESCRIPTION** for function declarations.

DESCRIPTION

The `svc_*` and `clnt_*` functions described in this page are the old, TS-RPC interface to the XDR and RPC library, and exist for backward compatibility. The new interface is described in the pages referenced from `rpc(3)`.

These routines allow C programs to make procedure calls on other machines across the network. First, the client calls a procedure to send a data packet to the server. Upon receipt of the packet, the server calls a dispatch routine to perform the requested service, and then sends back a reply. Finally, the procedure call returns to the client.

Routines that are used for Secure RPC (DES authentication) are described in `rpc_secure(3)`. Secure RPC can be used only if DES encryption is available.

```
void
```

```
auth_destroy(AUTH *auth)
```

A macro that destroys the authentication information associated with *auth*. Destruction usually involves deallocation of private data structures. The use of *auth* is undefined after calling `auth_destroy()`.

```
AUTH *
```

```
authnone_create()
```

Create and return an RPC authentication handle that passes nonusable authentication information with each remote procedure call. This is the default authentication used by RPC.

```
AUTH *
```

```
authunix_create(char *host, int uid, int gid, int len, int *aup_gids)
```

Create and return an RPC authentication handle that contains UNIX authentication information. The *host* argument is the name of the machine on which the information was created; *uid* is the user's user ID; *gid* is the user's current group ID; *len* and *aup_gids* refer to a counted array of groups to which the user belongs. It is easy to impersonate a user.

*AUTH **

authunix_create_default()

Calls **authunix_create()** with the appropriate arguments.

int **callrpc**(*char *host, u_long prognum, u_long versnum, u_long procnum, xdrproc_t inproc, void *in, xdrproc_t outproc, void *out*)

Call the remote procedure associated with *prognum*, *versnum*, and *procnum* on the machine *host*. The *in* argument is the address of the procedure's argument(s), and *out* is the address of where to place the result(s); *inproc* is used to encode the procedure's arguments, and *outproc* is used to decode the procedure's results. This routine returns zero if it succeeds, or the value of *enum clnt_stat* cast to an integer if it fails. The routine **clnt_perrno()** is handy for translating failure statuses into messages.

Warning: calling remote procedures with this routine uses UDP/IP as a transport; see **clntudp_create()** for restrictions. You do not have control of timeouts or authentication using this routine.

enum clnt_stat

clnt_broadcast(*u_long prognum, u_long versnum, u_long procnum, xdrproc_t inproc, char *in, xdrproc_t outproc, char *out, bool_t (*eachresult)(caddr_t, struct sockaddr_in *)*)

Like **callrpc()**, except the call message is broadcast to all locally connected broadcast nets. Each time it receives a response, this routine calls **eachresult()**, whose form is:

bool_t **eachresult**(*caddr_t out, struct sockaddr_in *addr*)

where *out* is the same as *out* passed to **clnt_broadcast()**, except that the remote procedure's output is decoded there; *addr* points to the address of the machine that sent the results. If **eachresult()** returns zero, **clnt_broadcast()** waits for more replies; otherwise it returns with appropriate status.

Warning: broadcast sockets are limited in size to the maximum transfer unit of the data link. For ethernet, this value is 1500 bytes.

enum clnt_stat

clnt_call(*CLIENT *clnt, u_long procnum, xdrproc_t inproc, char *in, xdrproc_t outproc, char *out, struct timeval tout*)

A macro that calls the remote procedure *procnum* associated with the client handle, *clnt*, which is obtained with an RPC client creation routine such as **clnt_create()**. The *in* argument is the address of the procedure's argument(s), and *out* is the address of where to place the result(s); *inproc* is used to encode the procedure's arguments, and *outproc* is used to decode the procedure's results; *tout* is the time allowed for results to come back.

void **clnt_destroy**(*CLIENT *clnt*)

A macro that destroys the client's RPC handle. Destruction usually involves deallocation of private data structures, including *clnt* itself. Use of *clnt* is undefined after calling **clnt_destroy()**. If the RPC library opened the associated socket, it will close it also. Otherwise, the socket remains open.

*CLIENT **

clnt_create(*char *host, u_long prog, u_long vers, char *proto*)

Generic client creation routine. The *host* argument identifies the name of the remote host where the server is located. The *proto* argument indicates which kind of transport protocol to use. The

currently supported values for this field are "udp" and "tcp". Default timeouts are set, but can be modified using **clnt_control()**.

Warning: Using UDP has its shortcomings. Since UDP-based RPC messages can only hold up to 8 Kbytes of encoded data, this transport cannot be used for procedures that take large arguments or return huge results.

bool_t

clnt_control(*CLIENT *cl, u_int req, char *info*)

A macro used to change or retrieve various information about a client object. The *req* argument indicates the type of operation, and *info* is a pointer to the information. For both UDP and TCP, the supported values of *req* and their argument types and what they do are:

CLSET_TIMEOUT *struct timeval* set total timeout
CLGET_TIMEOUT *struct timeval* get total timeout

Note: if you set the timeout using **clnt_control()**, the timeout argument passed to **clnt_call()** will be ignored in all future calls.

CLGET_SERVER_ADDR *struct sockaddr_in* get server's address

The following operations are valid for UDP only:

CLSET_RETRY_TIMEOUT *struct timeval* set the retry timeout
CLGET_RETRY_TIMEOUT *struct timeval* get the retry timeout

The retry timeout is the time that UDP RPC waits for the server to reply before retransmitting the request.

bool_t **clnt_freeres**(*CLIENT *clnt, xdrproc_t outproc, char *out*)

A macro that frees any data allocated by the RPC/XDR system when it decoded the results of an RPC call. The *out* argument is the address of the results, and *outproc* is the XDR routine describing the results. This routine returns one if the results were successfully freed, and zero otherwise.

void

clnt_geterr(*CLIENT *clnt, struct rpc_err *errp*)

A macro that copies the error structure out of the client handle to the structure at address *errp*.

void

clnt_pcreateerror(*char *s*)

prints a message to standard error indicating why a client RPC handle could not be created. The message is prepended with string *s* and a colon. A newline is appended at the end of the message. Used when **acclnt_create()**, **clnttcp_create()**, **clntudp_create()** call fails.

void

clnt_perrno(*enum clnt_stat stat*)

Print a message to standard error corresponding to the condition indicated by *stat*. A newline is appended at the end of the message. Used after **callrpc()**.

void **clnt_perror**(*CLIENT *clnt, char *s*)

Print a message to standard error indicating why an RPC call failed; *clnt* is the handle used to do the call. The message is prepended with string *s* and a colon. A newline is appended at the end of the message. Used after **clnt_call()**.

*char **

clnt_spcreateerror(*char *s*)

Like **clnt_pcreateerror**(), except that it returns a string instead of printing to the standard error.

Bugs: returns pointer to static data that is overwritten on each call.

*char **

clnt_sperrno(*enum clnt_stat stat*)

Take the same arguments as **clnt_perrno**(), but instead of sending a message to the standard error indicating why an RPC call failed, return a pointer to a string which contains the message.

The **clnt_sperrno**() function is used instead of **clnt_perrno**() if the program does not have a standard error (as a program running as a server quite likely does not), or if the programmer does not want the message to be output with **printf**(), or if a message format different from that supported by **clnt_perrno**() is to be used.

Note: unlike **clnt_sperror**() and **clnt_spcreateerror**(), **clnt_sperrno**() returns pointer to static data, but the result will not get overwritten on each call.

*char **

clnt_sperror(*CLIENT *rpch, char *s*)

Like **clnt_perror**(), except that (like **clnt_sperrno**()) it returns a string instead of printing to standard error.

Bugs: returns pointer to static data that is overwritten on each call.

*CLIENT **

clntraw_create(*u_long prognum, u_long versnum*)

This routine creates a toy RPC client for the remote program *prognum*, version *versnum*. The transport used to pass messages to the service is actually a buffer within the process's address space, so the corresponding RPC server should live in the same address space; see **svcrw_create**(). This allows simulation of RPC and acquisition of RPC overheads, such as round trip times, without any kernel interference. This routine returns NULL if it fails.

*CLIENT **

clnttcp_create(*struct sockaddr_in *addr, u_long prognum, u_long versnum, int *sockp, u_int sendsz, u_int recvsz*)

This routine creates an RPC client for the remote program *prognum*, version *versnum*; the client uses TCP/IP as a transport. The remote program is located at Internet address *addr*. If *addr->sin_port* is zero, then it is set to the actual port that the remote program is listening on (the remote **rpcbind**(8) service is consulted for this information). The *sockp* argument is a socket; if it is **RPC_ANYSOCK**, then this routine opens a new one and sets *sockp*. Since TCP-based RPC uses buffered I/O, the user may specify the size of the send and receive buffers with the *sendsz* and *recvsz* arguments; values of zero choose suitable defaults. This routine returns NULL if it fails.

*CLIENT **

clntudp_create(*struct sockaddr_in *addr, u_long prognum, u_long versnum, struct timeval wait, int *sockp*)

This routine creates an RPC client for the remote program *prognum*, version *versnum*; the client uses UDP/IP as a transport. The remote program is located at Internet address *addr*. If *addr->sin_port* is zero, then it is set to actual port that the remote program is listening on (the

remote `rpcbind(8)` service is consulted for this information). The *sockp* argument is a socket; if it is `RPC_ANYSOCK`, then this routine opens a new one and sets *sockp*. The UDP transport re-sends the call message in intervals of *wait* time until a response is received or until the call times out. The total time for the call to time out is specified by `clnt_call()`.

Warning: since UDP-based RPC messages can only hold up to 8 Kbytes of encoded data, this transport cannot be used for procedures that take large arguments or return huge results.

*CLIENT **

```
clntudp_bufcreate(struct sockaddr_in *addr, u_long prognum, u_long versnum,
                  struct timeval wait,      int *sockp,      unsigned int sendsize,
                  unsigned int recosize)
```

This routine creates an RPC client for the remote program *prognum*, on *versnum*; the client uses UDP/IP as a transport. The remote program is located at Internet address *addr*. If *addr->sin_port* is zero, then it is set to actual port that the remote program is listening on (the remote `rpcbind(8)` service is consulted for this information). The *sockp* argument is a socket; if it is `RPC_ANYSOCK`, then this routine opens a new one and sets *sockp*. The UDP transport re-sends the call message in intervals of *wait* time until a response is received or until the call times out. The total time for the call to time out is specified by `clnt_call()`.

This allows the user to specify the maximum packet size for sending and receiving UDP-based RPC messages.

*CLIENT **

```
clntunix_create(struct sockaddr_un *raddr, u_long prognum, u_long versnum,
                int *sockp, u_int sendsz, u_int recvsz)
```

This routine creates an RPC client for the local program *prognum*, version *versnum*; the client uses UNIX-domain sockets as a transport. The local program is located at the **raddr*. The *sockp* argument is a socket; if it is `RPC_ANYSOCK`, then this routine opens a new one and sets *sockp*. Since UNIX-based RPC uses buffered I/O, the user may specify the size of the send and receive buffers with the *sendsz* and *recvsz* arguments; values of zero choose suitable defaults. This routine returns NULL if it fails.

int

```
get_myaddress(struct sockaddr_in *addr)
```

Stuff the machine's IP address into *addr*, without consulting the library routines that deal with `/etc/hosts`. The port number is always set to `htons(PMAPPORT)`. Returns zero on success, non-zero on failure.

*struct pmaplist **

```
pmap_getmaps(struct sockaddr_in *addr)
```

A user interface to the `rpcbind(8)` service, which returns a list of the current RPC program-to-port mappings on the host located at IP address *addr*. This routine can return NULL. The command "`rpcinfo -p`" uses this routine.

u_short

```
pmap_getport(struct sockaddr_in *addr,    u_long prognum,    u_long versnum,
              u_long protocol)
```

A user interface to the `rpcbind(8)` service, which returns the port number on which waits a service that supports program number *prognum*, version *versnum*, and speaks the transport protocol associated with *protocol*. The value of *protocol* is most likely `IPPROTO_UDP` or `IPPROTO_TCP`. A return value of zero means that the mapping does not exist or that the RPC system failed to contact the remote `rpcbind(8)` service. In the latter case, the global variable

rpc_createerr contains the RPC status.

enum clnt_stat

pmap_rmtcall(*struct sockaddr_in *addr, u_long prognum, u_long versnum, u_long procnum, xdrproc_t inproc, char *in, xdrproc_t outproc, char *out, struct timeval tout, u_long *portp*)

A user interface to the *rpcbind*(8) service, which instructs *rpcbind*(8) on the host at IP address *addr* to make an RPC call on your behalf to a procedure on that host. The *portp* argument will be modified to the program's port number if the procedure succeeds. The definitions of other arguments are discussed in **callrpc**() and **clnt_call**(). This procedure should be used for a "ping" and nothing else. See also **clnt_broadcast**().

bool_t **pmap_set**(*u_long prognum, u_long versnum, u_long protocol, u_short port*)

A user interface to the *rpcbind*(8) service, which establishes a mapping between the triple (*prognum, versnum, protocol*) and *port* on the machine's *rpcbind*(8) service. The value of *protocol* is most likely *IPPROTO_UDP* or *IPPROTO_TCP*. This routine returns one if it succeeds, zero otherwise. Automatically done by **svc_register**().

bool_t **pmap_unset**(*u_long prognum, u_long versnum*)

A user interface to the *rpcbind*(8) service, which destroys all mapping between the triple (*prognum, versnum, **) and *ports* on the machine's *rpcbind*(8) service. This routine returns one if it succeeds, zero otherwise.

bool_t **registerrpc**(*u_long prognum, u_long versnum, u_long procnum, char *(*procname)(void), xdrproc_t inproc, xdrproc_t outproc*)

Register procedure *procname* with the RPC service package. If a request arrives for program *prognum*, version *versnum*, and procedure *procnum*, *procname* is called with a pointer to its argument(s); *procname* should return a pointer to its static result(s); *inproc* is used to decode the arguments while *outproc* is used to encode the results. This routine returns zero if the registration succeeded, -1 otherwise.

Warning: remote procedures registered in this form are accessed using the UDP/IP transport; see **svcudp_create**() for restrictions.

struct rpc_createerr *rpc_createerr*;

A global variable whose value is set by any RPC client creation routine that does not succeed. Use the routine **clnt_pcreateerror**() to print the reason why.

bool_t **svc_destroy**(*SVCXPRT * xpirt*)

A macro that destroys the RPC service transport handle, *xpirt*. Destruction usually involves deallocation of private data structures, including *xpirt* itself. Use of *xpirt* is undefined after calling this routine.

fd_set *svc_fdset*;

A global variable reflecting the RPC service side's read file descriptor bit mask; it is suitable as a template argument to the *select*(2) system call. This is only of interest if a service implementor does not call **svc_run**(), but rather does his own asynchronous event processing. This variable is read-only (do not pass its address to *select*(2)!), yet it may change after calls to **svc_getreqset**() or any creation routines. As well, note that if the process has descriptor limits which are extended beyond *FD_SETSIZE*, this variable will only be usable for the first *FD_SETSIZE* descriptors.

int **svc_fds**;

Similar to *svc_fdset*, but limited to 32 descriptors. This interface is obsoleted by *svc_fdset*.

bool_t **svc_freeargs**(*SVCXPRT *xp*rt, *xdrproc_t in*proc, *char *in*)

A macro that frees any data allocated by the RPC/XDR system when it decoded the arguments to a service procedure using **svc_getargs**(). This routine returns 1 if the results were successfully freed, and zero otherwise.

bool_t **svc_getargs**(*SVCXPRT *xp*rt, *xdrproc_t in*proc, *char *in*)

A macro that decodes the arguments of an RPC request associated with the RPC service transport handle, *xprt*. The *in* argument is the address where the arguments will be placed; *inproc* is the XDR routine used to decode the arguments. This routine returns one if decoding succeeds, and zero otherwise.

*struct sockaddr_in **

svc_getcaller(*SVCXPRT *xp*rt)

The approved way of getting the network address of the caller of a procedure associated with the RPC service transport handle, *xprt*.

void **svc_getreqset**(*fd_set *rdfs*)

This routine is only of interest if a service implementor does not call **svc_run**(), but instead implements custom asynchronous event processing. It is called when the *select*(2) system call has determined that an RPC request has arrived on some RPC socket(s); *rdfs* is the resultant read file descriptor bit mask. The routine returns when all sockets associated with the value of *rdfs* have been serviced.

void **svc_getreq**(*int rdfs*)

Similar to **svc_getreqset**(), but limited to 32 descriptors. This interface is obsoleted by **svc_getreqset**().

bool_t **svc_register**(*SVCXPRT *xp*rt, *u_long prognum*, *u_long versnum*, *void (*dispatch)(struct svc_req *, SVCXPRT *)*, *int protocol*)

Associates *prognum* and *versnum* with the service dispatch procedure, **dispatch**(). If *protocol* is zero, the service is not registered with the *rpcbind*(8) service. If *protocol* is non-zero, then a mapping of the triple (*prognum*, *versnum*, *protocol*) to *xprt->xp_port* is established with the local *rpcbind*(8) service (generally *protocol* is zero, *IPPROTO_UDP* or *IPPROTO_TCP*). The procedure **dispatch**() has the following form:

bool_t **dispatch**(*struct svc_req *request*, *SVCXPRT *xp*rt)

The **svc_register**() routine returns one if it succeeds, and zero otherwise.

svc_run()

This routine never returns. It waits for RPC requests to arrive, and calls the appropriate service procedure using **svc_getreq**() when one arrives. This procedure is usually waiting for a *select*(2) system call to return.

bool_t **svc_sendreply**(*SVCXPRT *xp*rt, *xdrproc_t out*proc, *char *out*)

Called by an RPC service's dispatch routine to send the results of a remote procedure call. The *xprt* argument is the request's associated transport handle; *outproc* is the XDR routine which is used to encode the results; and *out* is the address of the results. This routine returns one if it succeeds, zero otherwise.

void

svc_unregister(*u_long prognum, u_long versnum*)

Remove all mapping of the double (*prognum, versnum*) to dispatch routines, and of the triple (*prognum, versnum, **) to port number.

void

svcerr_auth(*SVCXPRT *xpirt, enum auth_stat why*)

Called by a service dispatch routine that refuses to perform a remote procedure call due to an authentication error.

void

svcerr_decode(*SVCXPRT *xpirt*)

Called by a service dispatch routine that cannot successfully decode its arguments. See also **svc_getargs**().

void

svcerr_noproc(*SVCXPRT *xpirt*)

Called by a service dispatch routine that does not implement the procedure number that the caller requests.

void

svcerr_noprog(*SVCXPRT *xpirt*)

Called when the desired program is not registered with the RPC package. Service implementors usually do not need this routine.

void

svcerr_progvers(*SVCXPRT *xpirt, u_long low_vers, u_long high_vers*)

Called when the desired version of a program is not registered with the RPC package. Service implementors usually do not need this routine.

void

svcerr_systemerr(*SVCXPRT *xpirt*)

Called by a service dispatch routine when it detects a system error not covered by any particular protocol. For example, if a service can no longer allocate storage, it may call this routine.

void

svcerr_weakauth(*SVCXPRT *xpirt*)

Called by a service dispatch routine that refuses to perform a remote procedure call due to insufficient authentication arguments. The routine calls **svcerr_auth**(*xpirt, AUTH_TOOWEAK*).

*SVCXPRT **

svccraw_create(*void*)

This routine creates a toy RPC service transport, to which it returns a pointer. The transport is really a buffer within the process's address space, so the corresponding RPC client should live in the same address space; see **clntraw_create**(). This routine allows simulation of RPC and acquisition of RPC overheads (such as round trip times), without any kernel interference. This routine returns NULL if it fails.

*SVCXPRT **

svctcp_create(*int sock, u_int send_buf_size, u_int recv_buf_size*)

This routine creates a TCP/IP-based RPC service transport, to which it returns a pointer. The transport is associated with the socket *sock*, which may be `RPC_ANYSOCK`, in which case a new socket is created. If the socket is not bound to a local TCP port, then this routine binds it to an arbitrary port. Upon completion, *xprt->xp_fd* is the transport's socket descriptor, and *xprt->xp_port* is the transport's port number. This routine returns `NULL` if it fails. Since TCP-based RPC uses buffered I/O, users may specify the size of buffers; values of zero choose suitable defaults.

*SVCXPRT **

svcunix_create(*int sock, u_int send_buf_size, u_int recv_buf_size, char *path*)

This routine creates a UNIX-based RPC service transport, to which it returns a pointer. The transport is associated with the socket *sock*, which may be `RPC_ANYSOCK`, in which case a new socket is created. The **path* argument is a variable-length file system pathname of at most 104 characters. This file *is not* removed when the socket is closed. The `unlink(2)` system call must be used to remove the file. Upon completion, *xprt->xp_fd* is the transport's socket descriptor. This routine returns `NULL` if it fails. Since UNIX-based RPC uses buffered I/O, users may specify the size of buffers; values of zero choose suitable defaults.

*SVCXPRT **

svcunixfd_create(*int fd, u_int sendsize, u_int recvsiz*)

Create a service on top of any open descriptor. The *sendsize* and *recvsiz* arguments indicate sizes for the send and receive buffers. If they are zero, a reasonable default is chosen.

*SVCXPRT **

svcfid_create(*int fd, u_int sendsize, u_int recvsiz*)

Create a service on top of any open descriptor. Typically, this descriptor is a connected socket for a stream protocol such as TCP. The *sendsize* and *recvsiz* arguments indicate sizes for the send and receive buffers. If they are zero, a reasonable default is chosen.

*SVCXPRT **

svcudp_bufcreate(*int sock, u_int sendsize, u_int recvsiz*)

This routine creates a UDP/IP-based RPC service transport, to which it returns a pointer. The transport is associated with the socket *sock*, which may be `RPC_ANYSOCK`, in which case a new socket is created. If the socket is not bound to a local UDP port, then this routine binds it to an arbitrary port. Upon completion, *xprt->xp_fd* is the transport's socket descriptor, and *xprt->xp_port* is the transport's port number. This routine returns `NULL` if it fails.

This allows the user to specify the maximum packet size for sending and receiving UDP-based RPC messages.

bool_t **xdr_accepted_reply**(*XDR *xdrs, struct accepted_reply *ar*)

Used for encoding RPC reply messages. This routine is useful for users who wish to generate RPC-style messages without using the RPC package.

bool_t **xdr_authunix_parms**(*XDR *xdrs, struct authunix_parms *aupp*)

Used for describing UNIX credentials. This routine is useful for users who wish to generate these credentials without using the RPC authentication package.

void

bool_t **xdr_callhdr**(XDR *xdrs, struct rpc_msg *chdr)

Used for describing RPC call header messages. This routine is useful for users who wish to generate RPC-style messages without using the RPC package.

bool_t **xdr_callmsg**(XDR *xdrs, struct rpc_msg *cmmsg)

Used for describing RPC call messages. This routine is useful for users who wish to generate RPC-style messages without using the RPC package.

bool_t **xdr_opaque_auth**(XDR *xdrs, struct opaque_auth *ap)

Used for describing RPC authentication information messages. This routine is useful for users who wish to generate RPC-style messages without using the RPC package.

struct pmap;

bool_t **xdr_pmap**(XDR *xdrs, struct pmap *regs)

Used for describing arguments to various `rpcbind(8)` procedures, externally. This routine is useful for users who wish to generate these arguments without using the `pmap_*`() interface.

bool_t **xdr_pmaplist**(XDR *xdrs, struct pmaplist **rp)

Used for describing a list of port mappings, externally. This routine is useful for users who wish to generate these arguments without using the `pmap_*`() interface.

bool_t **xdr_rejected_reply**(XDR *xdrs, struct rejected_reply *rr)

Used for describing RPC reply messages. This routine is useful for users who wish to generate RPC-style messages without using the RPC package.

bool_t **xdr_replymsg**(XDR *xdrs, struct rpc_msg *rmsg)

Used for describing RPC reply messages. This routine is useful for users who wish to generate RPC style messages without using the RPC package.

void

xprt_register(SVCXPRT *xprt)

After RPC service transport handles are created, they should register themselves with the RPC service package. This routine modifies the global variable `svc_fds`. Service implementors usually do not need this routine.

void

xprt_unregister(SVCXPRT *xprt)

Before an RPC service transport handle is destroyed, it should unregister itself with the RPC service package. This routine modifies the global variable `svc_fds`. Service implementors usually do not need this routine.

AVAILABILITY

These functions are part of `libtirpc`.

SEE ALSO

`rpc_secure(3)`, `xdr(3)`

Remote Procedure Calls: Protocol Specification.

Remote Procedure Call Programming Guide.

rpcgen Programming Guide.

RPC: Remote Procedure Call Protocol Specification, Sun Microsystems, Inc., USC-ISI, RFC1050.