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TITLE: RPC - REMOTE PROCEDURE CALL

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//SERVER FILENAME: server.c

#include"rpc/rpc.h"

#include"square.h"

#include"stdio.h"

#include"stdlib.h"

#include"math.h"

square\_out \*squareproc\_1\_svc(square\_in \*inp,**struct** svc\_req \*rqstp)

{

**static** square\_out out;

out.res1= inp->arg1 \* inp->arg1;

**return**(&out);

}

// CLIENT FILENAME: client.c

#include"errno.h"

#include"rpc/rpc.h"

#include"square.h"

#include"stdio.h"

#include"stdlib.h"

#include"math.h"

**int** main(**int** argc,**char** \*\*argv)

{

CLIENT \*cl;

square\_in in;

square\_out \*outp;

f(argc!=3)

{

printf("\n\n error:insufficient arguments!!!");

exit(-1);

}

cl=clnt\_create(argv[1],SQUARE\_PROG,SQUARE\_VERS,"tcp");

in.arg1=atol(argv[2]);

**if**(cl==NULL)

{

printf("\nerror:%s",strerror(errno));

exit(-1);

}

**if**((outp=squareproc\_1(&in,cl))==NULL)

{

printf("\nerror :%s",clnt\_sperror(cl,argv[1]));

exit(-1);

}

printf("\n\n result is : %ld",outp->res1);

exit(0);

}

// .h FILENAME: square.h

**struct** square\_in

{

/\*input arg\*/

**long** arg1;

};

**struct** square\_out

{

/\*op result\*/

**long** res1;

};

program SQUARE\_PROG

{

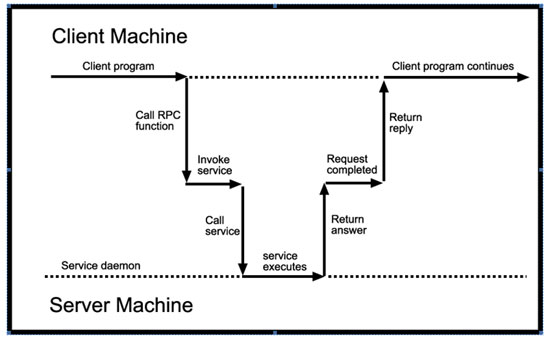
version SQUARE\_VERS

{

square\_out SQUAREPROC(square\_in)=1; /\*proc no=1\*/

}=1; /\*version no\*/

}=0x31230000;/\*prog no\*/

[](http://img.c4learn.com/2012/02/RPC-diagram.jpg)

**Output & Execution :**

[root@localhost~]#rpcgen -C square.x

[root@localhost~]#cc -c client.c -o client.o

[root@localhost~]#cc -c square\_clnt.c -o square\_clnt.o

[root@localhost~]#cc -c square\_xdr.c -o square.xdr.o

[root@localhost~]#cc -o client client.o square\_clnt.o square\_xdr.o

[root@localhost~]#cc -c client.c server.c square\_xdr.c

[root@localhost~]#cc -c server.c -o server.o

[root@localhost~]#cc -c square\_svc.c -o square\_svc.o

[root@localhost~]#cc -o server server.o square\_svc.o square\_xdr.o

[root@localhost~]#./server &

[1] 2264

[root@localhost~]#./client localhost 4

result is: 16