

## RE: How to enable 2-way SSL encryption

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Hi Yuh-Ming,

>From your description, I understand that you would like to know something about SSL encryption and connection between two machines.

Based on my knowledge, authentication is provided through the use of a digital signature. This digital signature takes the form of a certificate which is administered from a Certificate Authority. For more information, there is a good blurb in article q205698, "Submit a certificate request to this CA using a form." Another good article is q245152, "How Secure Sockets Layer Works."

SQL server 2000 implements SSL. There are two main setup procedures to implement SSL:

Enable SSL on the SQL Server – following this procedure results in all client

connections to SQL Server implementing SSL. This requires two steps:

1. Create a valid certificate from a Certificate Authority on the SQL Server
2. Enable Force protocol encryption in the SQL Server Network Utility.

Enable SSL on individual clients – following this procedure results in implementing secure connections between SQL Server and only those clients configured for secure connections. Example – you have approx 100 clients that connect to SQL 2000 server, but you only require two connections be secure. This is a good example of where client configured secure sockets may be arguably a better, more efficient implementation. To set up client SSL to SQL Server:

1. Create a valid certificate from a Certificate Authority on the SQL Server
2. Set up client with Trusted Root CA certificate – basically certificate so that client trusts the CA that gave SQL Server its certificate.
3. On the client, enable "Force protocol encryption in the SQL Server Client Network Utility.

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NOTICE that force protocol encryption may have some performance impact on your SQL Server in some cases.

Moreover, you could have a look at

INF: How SQL Server Uses a Certificate When the Force Protocol Encryption Option is Set On

<http://support.microsoft.com/?id=318605>

HOW TO: Enable SSL Encryption for SQL Server 2000 with Certificate Server

<http://support.microsoft.com/?id=276553>

HOW TO: Enable SSL Encryption for SQL Server 2000 with Microsoft Management Console

<http://support.microsoft.com/?id=316898>

In addition, if you are unfamiliar with PKI, I would like to recommend the documents below

An Introduction to the Windows 2000 Public-Key Infrastructure

<http://www.microsoft.com/technet/archive/windows2000serv/evaluate/featfunc/pkiintro.msp>

which will give you a brief introduction for Windows 2000 PKI

Hope this helps and if you have any questions or concerns, don't hesitate to let me know. We are here to be of assistance!

Sincerely yours,

Michael Cheng  
Microsoft Online Support

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