



HP ePrint Enterprise

Installation Checklist

Release 4.2

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1 Overview

This document contains an installation checklist and accompanying prerequisite information, including network and environmental requirements, for the successful installation of the HP ePrint Enterprise solution and HP ePrint Enterprise Bridge.

It is important that all prerequisites are verified *prior* to HP personnel's arrival onsite for installation.

 **IMPORTANT:** By returning a statement of acknowledgement to HP, you agree that all statements below were checked and are true. Failure to do so could result in an unsuccessful installation and require HP to make an additional onsite visit to complete the deployment.

2 Installation checklist for HP ePrint Enterprise

2.1 Client connectivity scenarios

The following sections contain checklists for each of the client connectivity scenarios possible with HP ePrint Enterprise. Execute the checklist for all applicable scenarios.

2.1.1 Devices connecting to corporate network through a VPN

Item	Description	Specific detail	Check
1	One or more mobile devices supported by HP ePrint mobile application, with VPN connection to the company's corporate network.	Mobile device make and model:	
2	Mobile devices must be able to communicate with the corporate network using HTTP/HTTPS. For more information, see <i>Appendix A – Verifying HTTP/HTTPS connection</i> .		

2.1.2 Devices connecting to corporate network via Wi-Fi

Item	Description	Specific detail	Check
1	A Wi-Fi connection to the company's corporate network.		
2	One or more mobile devices supported by HP ePrint mobile application, with connection to the company's Wi-Fi corporate network.	Mobile device make and model:	
3	Mobile devices must be able to communicate with the corporate network using HTTP/HTTPS. For more information, see <i>Appendix A – Verifying HTTP/HTTPS connection</i> .		

2.1.3 Devices connecting to corporate network via MDM solutions

2.1.3.1 BlackBerry devices with BES (BlackBerry Enterprise Server) connectivity

Item	Description	Specific detail	Check
1	One or more BES 4.x or 5.x must be available and functional on the network and providing MDS communication.	BES IP Addresses:	
2	One or more BlackBerry devices must be available, connected to the designated BES, and running BlackBerry OS 4.5 or above.	BlackBerry model: BlackBerry OS version:	
3	BES server access is available (directly or indirectly) for custom policy setup.		

For more information, see *Appendix A – Setting custom IT policies* in the *HP ePrint Enterprise Client Installation Guide*.

- 4 BlackBerry smartphones must be able to communicate with the corporate network through the MDS channel provided by BES.
- For more information, see *Appendix A — Verifying HTTP/HTTPS connection*.
-

2.1.3.2 Devices with HP ePrint Enterprise for Good

Item	Description	Specific detail	Check
1	One or more mobile device supporting HP ePrint Enterprise for Good application, with connection to the company's corporate network.	Device model: iOS / Android version:	

2.1.3.3 Devices with HP ePrint Enterprise for MobileIron

Item	Description	Specific detail	Check
1	One or more mobile devices supporting HP ePrint Enterprise for MobileIron application, with connection to the company's corporate network.	Device model: iOS version:	

2.2 Hardware requirements

Item	Description	Specific detail	Check
1	<p>HP ePrint Enterprise host machine (real or virtual) must be available on the network with the following recommended hardware specifications:</p> <ul style="list-style-type: none">• 2.0 GHz or above dual core processor• 4 GB RAM• Minimum 80 GB hard drive space or network storage (160 GB recommended). <p>The minimum space is required to hold most of the typical software and dependencies, plus storage to hold the database and temporary files during rendering. Depending on traffic, more hard drive space may be required, or an external storage can be configured. An external MS SQL Server can also be used to defer storage and database processing to another host.</p>	HP ePrint Enterprise host IP address:	

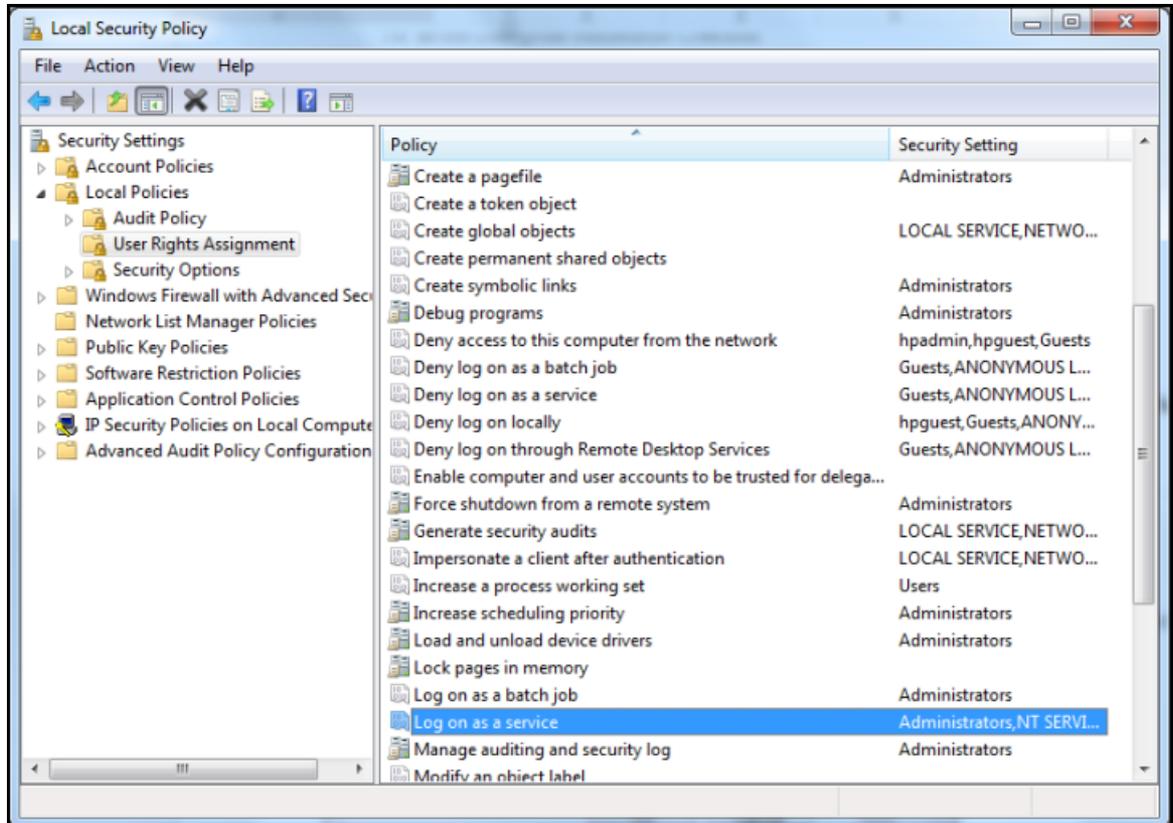
2.3 Server requirements

2.3.1 To add Log on as a service right to an account

Ideally, for proper HP ePrint Enterprise installation and operation, the administrator or any resource must have the correct permissions. You can determine which user account to be defined in the local security policy of workstations and servers.

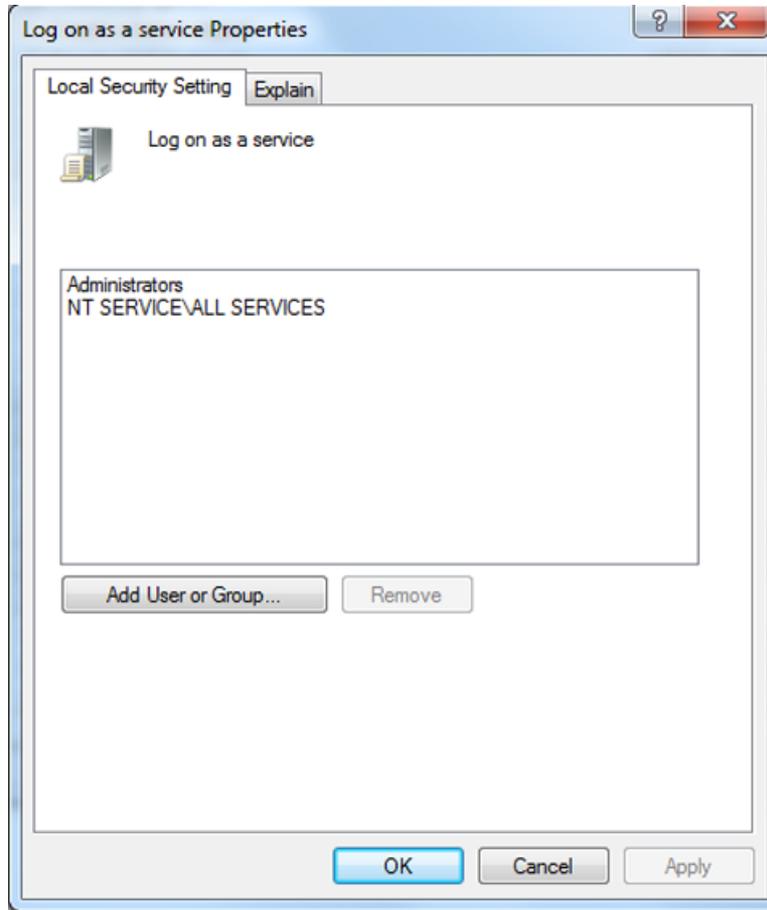
To add **Log on as a service** right on your system, complete the following steps:

1. Open **Local Security Policy**.
2. In the console tree, double-click **Local Policies**, and then click **User Rights Assignments**.
3. In the details pane, double-click **Log on as a service**.



4. Click **Add User or Group**, and then add the appropriate account to the list of accounts possessing the Logon as a service right.

5. Click **OK**.



2.3.2 To automatically start network services

You may verify, if the following Windows services are set to automatic and restarted in services Window.

To do this, complete the following steps:

1. Click **Start** button.
2. Select **Run**, type "services.msc" and check if the following services are enabled:
 - Computer browser
 - Function Discovery Resource Publication
 - SSDP Discovery
 - UPnP Device Host

To start the service and set it to automatic, complete the following steps:

1. Right-click one of the services listed above and click **Properties**.
2. Click the **General** tab, and then, next to Startup type, select **Automatic**.
3. Click **Apply**, and then click **Start**.

2.4 General requirements

Item	Description	Specific detail	Check
1	Mobile devices must be able to access email from the designated email server (MS Exchange, Lotus Domino, etc.)	Email server brand:	
2	<p>Emails can be forwarded from the corporate email server (MS Exchange, Lotus Domino, etc.) to the SMTP server residing on the HP ePrint Enterprise host.</p> <p>For more information, see <i>Appendix B – Verifying email transfer</i>.</p>		
3	HP ePrint Enterprise host machine access (administrator credentials) must be directly or indirectly provided during installation.		
4	<p>HP ePrint Enterprise host machine is running on the following operating systems:</p> <ul style="list-style-type: none"> • Microsoft Windows Server 2008 R2 • Microsoft Windows Server 2012 • Microsoft Windows Server 2012 R2 	<p>Installed OS version:</p> <p>64-bit:</p>	
HP ePrint Enterprise host machine must run all of the following software:			
5	<p>Microsoft Office supported versions need to be installed with all subcomponents. The supported versions are:</p> <ul style="list-style-type: none"> • Microsoft Office 2007 Ultimate/Enterprise/Professional which needs to include 2007 Office System Driver Data Connectivity components. <p>Download is available here:</p> <p>http://www.microsoft.com/en-us/download/details.aspx?id=23734</p> <ul style="list-style-type: none"> • Microsoft Office 2010 Standard/Professional Plus • Microsoft Office 2013 Standard/Professional/Professional Plus, including the .NET Programmability support under Outlook, which is part of the default install. <p>Recommended: 64 bit version of MS Office</p> <p>To add Office after HP ePrint Enterprise has already been installed, you will need to download and install Microsoft Office Primary Interop Assemblies (PIA) from:</p> <ul style="list-style-type: none"> • MS Office 2010 <p>http://www.microsoft.com/en-us/download/details.aspx?id=3508</p> <ul style="list-style-type: none"> • MS Office 2007 <p>http://www.microsoft.com/en-us/download/details.aspx?id=18346</p> <p>MS Office 2013: the PIA package is NOT required.</p> <p>If Office is installed before you run the HP ePrint Enterprise install, the PIA will be installed for you.</p> <p>NOTE: The installation will be successful even if Microsoft Office is not installed on the system. However, to print Microsoft Office documents from HP ePrint Enterprise, Microsoft Office and the corresponding Office Primary Interop Assemblies (PIA) must be manually installed.</p>		

6	If remote SQL is to be used, a SQL Server 2008 or later is available on the network. The SQL Server name and database administrator credentials are available.	
7	HP ePrint Enterprise server has a fully-qualified host name associated (e.g. "server.mycompany.com").	
8	(only if using BES) TCP Port 80/443 (HTTP/HTTPS) is open from BES to the HP ePrint Enterprise host.	
9	(only if using BES) TCP Port 8080 (HTTP) is open from the HP ePrint Enterprise host to the BES.	
10	TCP Port 9100 is open from the HP ePrint Enterprise host to the printers.	
11	UDP Port 161 (SNMP) is open from the HP ePrint Enterprise host to the printers.	
12	TCP Port 8888 is open from the server hosting HP Print License Service incase using a centralized HP Print License Service deployment.	
13	TCP port 515 is open from HP ePrint Enterprise host to Secure Pull Print server for submitting print jobs using LPD/LPR protocol.	
14	TCP port 1433 and UDP port 1434 are opened from the remote SQL server to the server hosting ePrint Enterprise for accessing the SQL server.	
15	An Excel spreadsheet with printer details must be provided for all printers to be imported in the database, containing the following information: printer name, model name, network address, queue name (for print servers), printer language (PCL3, PCL5/6 or PS, when available), color (y/n), duplex (y/n), location details (city address, building, floor, section, room/cube, general description, etc.)	
16	Access to IT contacts responsible for BES and email servers.	BES admin: email: phone: Email server admin: email: phone:
17	Access to IT contacts responsible for HP ePrint Enterprise for Good server.	admin: email: phone:
18	Access to IT contacts responsible for HP ePrint Enterprise for MobileIron server.	admin: email: phone:

3 Installation checklist for HP ePrint Enterprise Bridge

3.1 Hardware requirements

Item	Description	Specific detail	Check
1	HP ePrint Enterprise host machine (real or virtual) must be available on the network with the following recommended hardware specifications: <ul style="list-style-type: none">• 2.0 GHz or above dual core processor• 4 GB RAM• Minimum 80 GB hard drive space or network storage (160 GB recommended)	HP ePrint Bridge host IP address:	

3.2 General requirements

Item	Description	Specific detail	Check
1	HP ePrint Enterprise Bridge host machine is running on the following operating systems: <ul style="list-style-type: none">• Microsoft Windows Server 2008 R2• Microsoft Windows Server 2012• Microsoft Windows Server 2012 R2		
2	Microsoft Internet Information Services (IIS) with ASP .NET feature.	IIS Version:	
3	Microsoft .NET Framework 3.5 SP1.		
4	Apple® Bonjour service (included with package)		
5	TCP port 80/443 (HTTP/HTTPS) is open.		
6	UDP port 5353 (mDNS) is open.		

4 Summary statements

The following statements summarize the items in the check list. By accepting the HP ePrint Enterprise deployment Statement of Work (SOW), you agree that these statements are true.

1. I certify that a Mobile device capable of running an HP ePrint mobile application is available, and that it can contact the HP ePrint Enterprise server in at least one of the scenarios described in section 1.1. If it is a BlackBerry device, I also certify that I can insert (or have someone in my company insert) a custom IT policy on the BES at the moment of the deployment, as per instructions in the Installation Guide provided by HP.
2. I certify that an email message was sent from a valid corporate email account (e.g., joe.doe@company.com) to the email address on the HP ePrint Enterprise SMTP server, as per instructions in the Installation Guide provided by HP.
3. I certify that a machine (real or virtual) is available on the network, running one of the supported Windows Server versions, and complying with the hardware specifications, as per instructions in the Installation Guide provided by HP.
4. I certify that all the software mentioned in items number 6 through 8 are correctly installed and running.
5. I certify that all network conditions mentioned in items number 10 through 14 are verified and that there are no firewall rules blocking the specified traffic.
6. I certify that printer information will be provided according to item 15 in the checklist.
7. I certify that credentials of administrator accounts for both the HP ePrint Enterprise host and SQL Server database will be provided (informed and entered) at the time of the installation.

5 Appendix A — Verifying HTTP/HTTPS connection

To print a message using HP ePrint Enterprise, the following two conditions must be fulfilled:

1. Emails must be able to arrive at the SMTP server coming from the corporate email server (MS Exchange, Lotus Domingo, etc.).
2. Mobile devices must be able to access internal servers through HTTP/HTTPS.

To verify the second condition, you must be able to access the server by entering its address in the mobile device browser. Make sure that IIS is enabled and running (even if there are no Web sites configured) on the server where you plan to install HP ePrint Enterprise.

To verify the http/https connection to the server from your mobile device browser, perform the following steps:

1. Open the Internet browser on your mobile device.



NOTE: For BlackBerry smartphones, use the BlackBerry Browser instead of the Internet Browser. (To change to BlackBerry Browser, go to Options > Advanced Options > Browser, under Default browser configuration, select BlackBerry Browser, and then exit and save).

2. Enter the server address in the browser address field.

If IIS is up and running, you should see either the default IIS “Under construction” page or some Web site that is already installed.

If you receive an “HTTP Error 400: Bad Request” or some other type of connection error, you cannot browse to that server, and the condition is not verified.

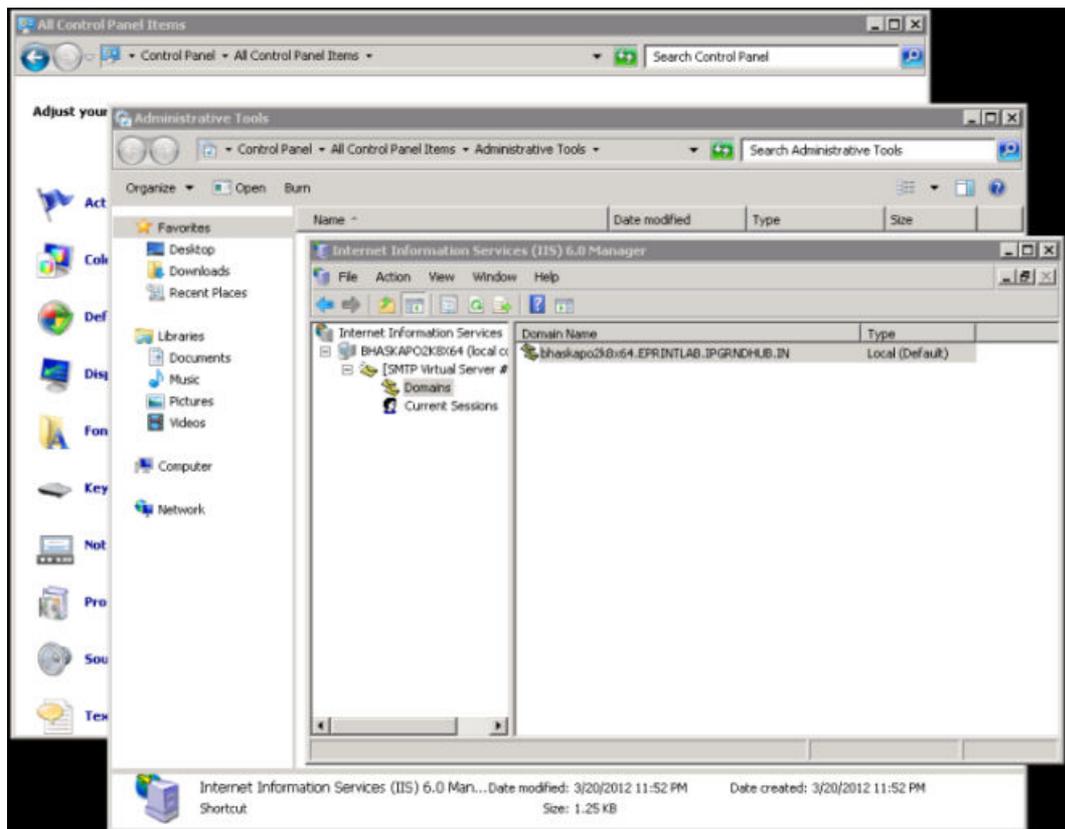
6 Appendix B — Verifying email transfer

To print a message using HP ePrint Enterprise, the following two conditions must be met:

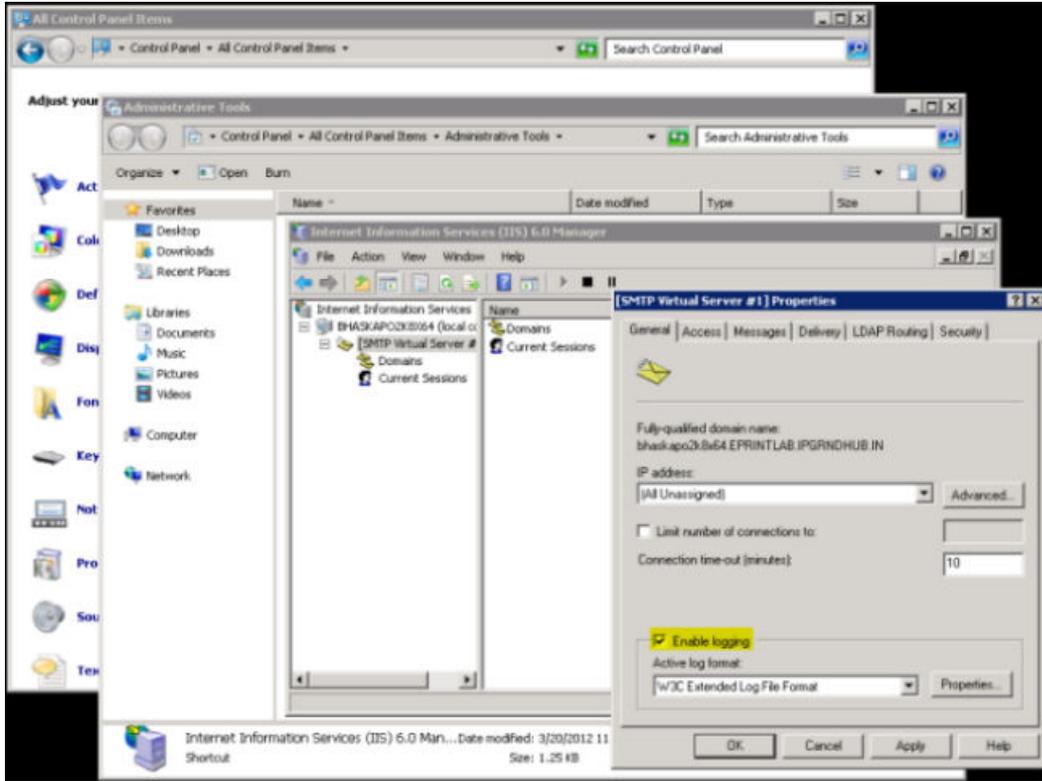
1. Emails must be able to arrive at the SMTP server coming from the corporate email server (MS Exchange, Lotus Domino, etc.).
2. Mobile devices must be able to access internal servers using HTTP/HTTPS.

To verify the first condition, set a test email account on the HP ePrint Enterprise host machine, and then send an email from any valid corporate account to this address. Some companies may have email routing issues when a new email server is added to the network.

1. On the HP ePrint Enterprise server, make sure the machine hostname is listed in the Domains pane inside the Internet Information Services (IIS) Manager (For Windows Server 2008 and Windows Server 2012, use Internet Information Services (IIS) 6.0 Manager). If it is not, it can be added as an Alias.



2. Activate the logs for SMTP. *The logging should be turned off after the test.*



3. Send an email from your mobile device to `eprint@eprint_hostname` (i.e. `eprint@eprint.hp.com`). No subject or content is needed in the email message.
 - If you don't get an error when sending the email, go to `C:\WINDOWS\System32\LogFiles`. If there is a log file in this folder, a successful connection attempt was made from your email server — it can address this server, and email forwarding is working.
 - If you get an error, or can't find a log file in the `C:\WINDOWS\System32\LogFiles` folder, no connection was made with the HP ePrint Enterprise host SMTP service. You will need to configure your email server to properly address the HP ePrint Enterprise host.

The log file content should look something like this:

```
#Software: Microsoft Internet Information Services 6.0
#Version: 1.0
#Date: 2010-07-07 19:39:32
#Fields: time c-ip cs-method cs-uri-stem sc-status

19:40:48 192.168.0.1 HELO - 250
19:40:58 192.168.0.1 MAIL - 250
19:41:05 192.168.0.1 RCPT - 250
19:41:09 192.168.0.1 DATA - 250
19:41:09 192.168.0.2 - - 0
19:41:09 192.168.0.2 EHLO - 0
19:41:09 192.168.0.2 - - 0
19:41:09 192.168.0.2 MAIL - 0
19:41:10 192.168.0.2 - - 0
19:41:10 192.168.0.2 RCPT - 0
19:41:10 192.168.0.2 - - 0
19:41:10 192.168.0.2 RSET - 0
19:41:10 192.168.0.2 - - 0
19:41:10 192.168.0.2 QUIT - 0
19:41:10 192.168.0.2 - - 0
19:41:10 192.168.0.1 QUIT - 240
```

7 Appendix C — Enabling remote connection to SQL Server

To connect to a remote SQL Server, make sure that TCP/IP is enabled as a valid connection protocol to that server. This may not always be true if SQL Server Express is running directly on a master server.

To verify connection, complete the following steps:

1. On the SQL server, navigate to Control Panel, Administrative Tools, Computer Management.
2. Expand **Services and Applications, SQL Server Configuration Management, SQL Server Network Configuration**.
3. Select **Protocols for SQLEXPRESS**. A list of protocols should display.
4. Select the TCP/IP protocol, right-click and choose **Enable**. You will have to restart the SQL Server.
5. Select the Named Pipes protocol, right-click and choose **Enable**. You will have to restart the SQL Server.
6. While still in the Computer Management application, select the **Services** option from the navigation tree to display a list of all services.
7. Select the SQL Server Browser service, right-click and select **Restart**. Make sure the service is running again.