

# SETUP GUIDE

This chapter shows the tasks needed to implement Credit Card/400. For a rough estimate, allow 1-2 weeks to accomplish these tasks. (Program development is not included in this estimate.)

## *Planning Guide*

The following steps are recommended to implement a Credit Card/400 processing system on your AS/400. Please note that many of these steps can be performed concurrently.

**Connect your AS/400 to the network.** Contact your gateway for detailed information. Contact IBM and telecomm providers to acquire the required equipment if needed.

**Install Credit Card/400 Software.** Refer to Chapter 2, “Installation” for more information.

**Install IBM Software.** Refer to the Prerequisites section in Chapter 2, “Installation” for prerequisite IBM software.

**Contact the Bank.** Set up a Merchant Account. Receive account numbers. (Bank number, merchant number, etc.). Receive Gateway contacts. See Appendix A for a list of recommended Bank/Gateways.

**Contact Gateway Support.** Locate their support documentation.

**Request/Buy/Install a Digital Certificate.** Build the Certificate Request on the AS/400. Contact Verisign, Thawte, or others. Gather company identification documentation. Receive and install the Certificate on the AS/400.

**Set up Merchants and Remote Hosts.** Use the information gathered from the Bank and Gateway. Refer to the Gateway and Credit Card/400 Documentation.

**Tailor Credit Card/400.** Define Tailoring Options. Set up Credit Card/400 Security. Refer to Chapter 6, “Tailoring Options” and Appendix B, “Securing Credit Card/400”.

**Write Application Programs.** Refer to BDS-provided sample programs. See Chapter 4, “Programming” for Program Documentation.

## *Setup Example*

The following steps provide an example of implementing Credit Card/400.

# CREDIT CARD/400™

**1) Connect your AS/400 to the network.** In this example we have an AS/400 connected to a local area network that is, through a router, connected via the Internet to the Gateway:

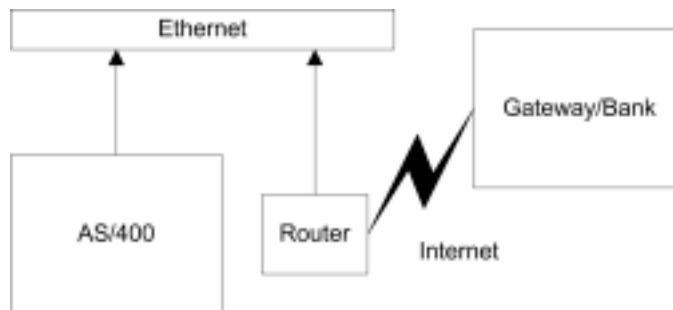


Figure 3-1. Example Network

In this example, our AS/400 is already configured to access the Internet. To see if your system is connected to the internet, from an AS/400 command line enter:

**PING broderickdata.com**

You should receive messages stating replies took xxx milliseconds. If not, first go to a PC and bring up the website:

***www.broderickdata.com***

If you can access the website but ping fails, your AS/400 is unable to connect to the Internet. It may be behind a firewall or not set up properly. In this case you must have the network administrator give the AS/400 access to the Internet.

**Note:** We have found many AS/400 administrators who are reluctant to connect their AS/400 to the Internet. We find this ironic because the AS/400 has arguably the best security features of any server on the market.

**2) Install Credit Card/400 Software.** Refer to Chapter 2, “Installation” for more information.

**3) Install IBM Software.** Refer to the Prerequisites in Chapter 2, “Installation” in this example we had TCP installed and ordered the following software from IBM:

Digital Certificate Manager (Product Option 34)  
IBM HTTP Server for AS/400 (5769-DG1)  
Cryptographic Access Provider for AS/400 (5769-AC3)

**Note:** There is no charge for these products.

To check to see if the prereqs are on your system, perform the following:

# SETUP GUIDE

a. On the AS/400 bring up the license product menu:

## **GO LICPGM**

b. Select option 10, Display installed licensed programs.

c. Press F11 twice to display Product Options. Verify the existence of Digital certificate Manager, 57xxSS1 option 34.

**Note:** xx=22 in Version 5, 69 in Version 4.

d. Scroll through the list, and verify the existence of the other prerequisites:

57xxAC3	Crypto Access Provider 128-bit for AS/400
57xxDG1	IBM HTTP Server for AS/400
57xxTC1	TCP/IP Connectivity Utilities for AS/400

If an item is not in the list, you will need to contact IBM to order it.

**3) Contact the Bank.** Set up a Merchant Account. Refer to Appendix A for contacts. Receive account numbers. (Bank number, merchant number, etc.). Receive Gateway contacts.

Be prepared to fill out much paperwork. In this example the bank is Paymentech, which requires the following:

- Financial Statements
- Cancelled Check, Bank name and Account/Type (where to deposit the money)
- Merchant Application
- Business Card
- American Express paperwork
- Discover Paperwork

Appendix A has a form that lists the information our software requires. Pass this form on to Paymentech personnel when you contact them.

**4) Contact Gateway Support.** The Bank or Gateway's documentation should include Support contacts. In this example, the Gateway support is through Vital. Their web site is:

***<http://www.vitalps.com>***

Click the "System Integrators" button. Click "Internet Specifications Page". Note the section "Visa External Interface Specifications". The manuals in this section are referred to extensively by our reference manual and should probably be printed out.

- EIS 1080 Authorization Record Formats (version 6.2)
- EIS 1081 Data Capture Record Formats (version 6.2)

# CREDIT CARD/400™

**5) Request/Buy/Install Certificate.** If you do not have a Digital Certificate you will need to buy one and install it on the AS/400. To do this, first you must build a Certificate Request on the AS/400:

a. Start the \*ADMIN HTTP server:

**STRTCPSVR SERVER(\*HTTP) HTTPSVR(\*ADMIN)**

**Note:** For security reasons the \*ADMIN server should be ended when it is not being used (i.e. lunch breaks or longer). Use the **ENDTCPSVR** command to end it.

b. From a web browser, enter the administrative server instance, port 2001:

c. From the AS/400 Tasks page, click “Digital Certificate Manager”. If “Digital Certificate Manager” is not an option, it is not installed on your AS/400. Sign on when prompted.

d. Click System Certificates. In this example we are placing our Certificate in the System Store. Enter the password and click OK.

e. Click Work with Certificates. Click Create. Click “VeriSign or other Internet Certificate Authority” and click OK.

f. In this example, we enter:

Key Label:	Thawte1
Server Name	www.broderickdata.com
Organization Name	Broderick Data Systems
State	Ohio
Locality or City	Lexington
Country	US

## Notes:

1) Decide exactly how you want the Server name to appear (notice the www.). You can use the same certificate to host a secure HTTP server from the AS/400. If so, the name you type in above will need to be the value the user types into the web browser’s URL window. For example if you do not put in the www, browsers will issue a warning to their users the name doesn’t match. However to use www it must be defined in the host table or an alias in the DNS record.

2) The Locality/City is not really optional. It must be specified.

Substitute your company Information. Check the spelling, click OK

**Note:** The screen may take a few minutes to come back. The process is CPU intensive.

g. The **System Certificate Request Created** screen should appear with your certificate request.

h. Save the request. In this example, we us Windows Notepad (Start-Program-Accessories-Notepad).

# SETUP GUIDE

Copy all (including the entire ---Begin and ---End lines) of the request and paste it into Notepad.. Feel free to place comments in the file. Save the Notepad file.

**6) Buy a Digital Certificate.** If you do not already own a Digital Certificate, you will need to buy one. The price differs, but ranges approximately 120 dollars per year. Two major providers are:

Thawte	<a href="http://thawte.com">http://thawte.com</a>
VeriSign	<a href="http://verisign.com/index.html">http://verisign.com/index.html</a>

In this example, we are using Thawte. We are in the United States so we purchase the “SSL Server Certificate”.

**a.** On the “Certificate Signing Request” screen, paste your Certificate Request you built in the previous step.

Note: We do not know how to back up the CSR request on the AS/400. We will back up the cert when it is installed.

For Server type, Select “Other”. Enter “IBM HTTP Server” in the box provided.

Enter your payment method.

Click Next

**b.** Look over the CSR information. Fill in the Background and Contact information and click Next.

**c.** Fill out the Payment Options screen and any other required.

**d.** Receive the Digital Certificate by e-mail. It may take a few days to receive. You may need to provide more information if requested.

**7) Install the Digital Certificate.** The certificate will come by e-mail. You should save it to disk and transfer it to the AS/400’s IFS directories.

**a.** Open Notepad. Copy the certificate to notepad and save the file. In this example we will save as:

C:\td\thawte1.txt

**b.** Transfer the file containing the Certificate to the AS/400. In this example, the Windows 98 DOS shell’s FTP command is used and an AS/400 IFS directory (we created) of /certs is used:

Start-Programs-MSDOS programs

ftp your.as400.com

User: youruser

Password: yourpass

# CREDIT CARD/400™

```
bin
cd /certs
put C:\td\thawte1.txt
quit

exit
```

**Note:** PC files use backwards slashes, AS/400 files use forward slashes.

**c.** Enter Digital Certificate Manager. Select your System Store and enter the password.

**d.** Click “Receive a Certificate”. Enter the IFS path and file name from above:

/certs/thawte1.txt

Click OK

**e.** The Certificate should be received. Click “Work with Certificates” Your certificate should appear in the list.

**f.** In this example we will not use this Certificate as the Store’s default. You may if you are able.

**g.** To back up your certificate, click “Export”. Enter the following:

Export file name:	/certs/thawte1bk.txt
Password	anypass

Click your Target Release and click OK.

**Note:** Leave Digital Certificate Manager session open for now.

**8) Create/Assign an Application ID.** In this example, we are not making our Digital Certificate the System store’s default. Thus we need to create an Application ID and assign our certificate to it.

**a.** From an AS/400 command line enter the following:

## **BRODERICK/BCCSETUP**

From the “Setup Display” screen, press **F10** (ApplID)

**b.** The Application ID screen will appear. You may change the name if you need to. Otherwise, press **F6** (Create). Press **F6** to confirm. Exit (**F3**) back to the command line.

**c.** From the Digital Certificate Manager Display, click “Work with Secure Applications”. Click the button next to:

# SETUP GUIDE

## BDS\_BRODERICK\_CCRD40\_RHST

Click “Work with System Certificate”.

d. Certificate Thawte1 should appear in the list of certificates. Click its radio box and click “Assign New Certificate”. Click OK on the confirmation screen.

e. Again, Click the **BDS\_BRODERICK\_CCRD40\_RHST** radio button and click “Work with Certificate Authority”.

f. For each CA in the list that has “Thawte” in its name, click its radio button and then click “Trust”. The word “Yes” will appear in the Trusted column.

9) **Create a Remote Host and Merchant ID.** Perform the following;

a. From an AS/400 command line enter the CRDADM command to bring up the Administrator Menu. Select “Define Remote Hosts”. Press **ENTER** to show all and press F6 to add. This example Remote Host will be named R1. Press **ENTER**.

b. Locate information from your Bank. In this example the Bank provided us with the following:

<u>Field</u>	<u>Provided value</u>
Acquirer BIN	476197
Agent Bank Num	000000
Agent Chain Num	000000
Merchant Number	4200135885
Store Number	0001
Terminal Number	0001
Terminal ID Number (V-Number)	04579470
Merchant Location Num	1

**Note:** Contact Broderick Data Systems for test Merchant data to use while testing your application.

c. Enter the information. Refer to Appendix A, section “Vital™ Gateway Information” for Gateway information you will need. The following screen shows the above information and information from previous steps in this example:

# CREDIT CARD/400™

Credit Card/400 (TM)	ADD	8/15/01
Define Remote Hosts		16:29:16
Remote Host Name:	R1	
Host type:	VITALSSL	
Address Type:	HOSTNAME	(HOSTNAME, IPADDR)
Rmt IP Address:	000 000 000 000	
Rmt Host Name:	SSL.PGS.WCOM.NET	
Auth Port Num:	443	Set1 Port Num: 443
EBCDIC/ASCII CCSID:	0 0	(Zero=Default)
SSL Link:	Y	(Y/N)
System Store Name:	*SYSTEM	
System Store Password:	yourpass	
Application ID:	BDS_BRODERICK_CCRD40_RMTH	
		(Name, *NONE)
Auth Timeout (sec):	30	Handshake Timeout (sec): 30
Batch Timeout (sec):	4200	
Descriptive Text:	Paymentech/Vital SSL	
F3=Exit	F12=Cancel Current Operation	
(C) Copyright 2000, 2001 Broderick Data Systems		

For more information on Remote Host definitions, refer to Chapter 7, Define Remote Hosts.

d. Return to the menu. Select “Define Merchant IDs”. Press **ENTER** to select all and press F6 to add. This example Merchant ID will be M1.

e. Enter the information. The following screen shows the above information and information from previous steps in this example:



# SETUP GUIDE

Credit Card/400 (TM)	ADD	8/15/01
Define Merchant IDs		16:41:10
Merchant ID: M1		
Acquirer BIN: 476197	Agent Bank Num: 000000	
Agent Chain Num: 000000	Merchant Num: 421218135885	
Store Num: 0001	Terminal Num: 0001	
Terminal ID Num: 04579470	Device Code: C	
Industry Code: D	Currency Code: 840	
Country Code: 840	Language ID: 00	
Time Zone Diff: 705	City Code: 44906	
Crdhdr Svc PhNum: 419 884-1844	Merchant Cat Code: 5999	
Request ACI: Y	Auth Tran/Retry Code: 56 59	
Cardholder ID Code: N	Reversal Tran/Retry Code: 66 69	
Merch Data Provd: Y	Merchant Name: Broderick Data Systems	
Merch Loc/City/Phn: 419 884-1844	Merchant State: OH	
Acct Data Source: @	CVV2 Data Provided: N	
Merchant Loc Num: 00001	Consider CVV2 Resp: N	
MOTO/ECI Data Prov: Y	MOTO/ECI Ind: 7	
Text: Main Merchant ID		
F3=Exit F12=Cancel Current Operation		
(C) Copyright 2000, 2001 Broderick Data Systems		

**Note:** In our example we are using Vital as our Gateway Processor, which requires us to specify the Visa/MasterCard Merchant ID, even for American Express and Discover cards. The Vital system knows the Merchant ID's American Express and Discover assigned to us and will automatically substitute them. Thus we only need to create 1 Merchant ID for all cards. If your Gateway will not do this, you will need to create multiple Merchant ID's and your application must use the proper one when sending transactions to the Gateway. Also note that in general, you cannot mix Merchant IDs in a settlement batch, you will need to settle each merchant separately.

For more information on Merchant ID definitions, refer to Chapter 8, Define Merchant IDs.

**9) Write Application Programs.** Refer to the Credit Card/400 Reference manual. Contact the gateway support staff. Many offer test kits, complete with PC installable software or test Gateway environments. In our example, we ordered a test kit and received their test data back in step 4.

In our example, we copied all of the members in source file BRODERICK/BCCSRC into our application source file. We then renamed the members BCCBD\* instead of BCCVS\*. We then edited each member, changing all occurrences of BDSVS to BDSBD. Rename the CRDUSR member CARDUSR.

**Note:** It is strongly recommended you rename all members after copying them to your application. This

# CREDIT CARD/400™

will keep you from inadvertently calling/using BDS supplied objects.

## 10) Tailor Credit Card/400.

- a. Enter the **BCCSETUP** command or select “Tailoring Options” from the Administrator menu. Enter a temporary password. Call BDS to get one if you do not have it. Verify the EBCDIC and ASCII CCSIDs.
- b. Set up Credit Card/400 security. Refer to Appendix B, “Securing Credit Card/400”. For this example, the Moderate level of security will be implemented with the following users:

QUSER	Process credit card transactions (user)
QSYSOPR	Start/Stop Remote Hosts (operator)
QPGMR	Administrator

**11) Schedule a Certification Test.** Credit Card/400 has been certified by the supported Gateways. However this certification is for the product using the example programs; it does not include the application programs you develop. Also, it is a good idea to have your applications certified. You will find the certification people to be very helpful in performing final testing of your credit card applications.

Certification test personnel generally need 3-4 workdays advance notice, depending on their schedule. Normally the first test session finds problems that need to be fixed and another test session to be scheduled. Plan for 1-2 weeks for certification testing.