



# Tech Info Library

## ABS Tech Note: SNA•ps12 APPC Samples (10/92)

Revised: 9/7/93  
Security: Everyone

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TOPIC -----

This tech note contains information regarding the SNA•ps APPC Developers Kit sample applications. Information on the following subjects is presented (examples are specific to the AS/400):

- Security issues
- Improvements to APDA samples
- General performance tips

DISCUSSION -----

Security issues - AS/400 Example

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The APDA APPC sample applications can easily be modified to pass userID/password security. Change the MC Allocate request setting security = kProgSec and fill in the userID and password parameters. This may be necessary if you are having problems passing userID/password security on the Allocate conversation request. Prior to OS/400 v1r3, the default user for programs invoked via APPC was QUSER (a low privilege user) and the APPC sample application programs worked successfully. Starting with OS/400 v1r3, the security was tightened so that AS/400 APPC transaction programs cannot be started without a valid userID/password combination. A symptom of the problem is a "Program Start Request rejected" message on the QSYSOPR message queue of the AS/400.

Improvements to The Sample Applications

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The APPC sample applications as they are currently distributed contain a slight mismatch. The AS/400 thinks it is dealing with a record size of 4096 bytes, but the Macintosh is really sending 4092 bytes. This is due to the way mapped conversations work. The Mac does a MC Send Data with length set to 4096 bytes, but the first 4 bytes are reserved, so the AS/400 receives only 4092 bytes of data. This can be corrected by changing the AS/400

source code and ICF file to do reads/writes of 4092 bytes and changing the record length of the AS/400 physical file to 4092. Alternatively, changing the Macintosh TP to perform a MC Send Data with the length parameter set to 4100 will correct the mismatch.

#### Performance

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Substantially improved performance (reduces the time by 50%) can be obtained by specifying "binary" in the AS/400 open statement:

```
fopen(as400name, "rb type=record")
```

Further improvements can be obtained in the case where multiple file transfers occur. If the AS/400 application is re-written to remain active (that is handling multiple file transfer requests) until the Mac application deallocates, the overhead of allocating a conversation for each file transfer is eliminated.

#### Prestart Jobs - AS/400

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Performance improvements can be obtained by prestarting the job on the AS/400. This increases performance since there is no startup time when the program is invoked. Creating a new subsystem or modifying the job's priority can also yield increased performance. Use the following commands to set-up the prestart option:

```
End Subsystem: ENDSBS QCMN
Create a class for QCMN (QSYS/QCMN)
Work With Class: WRKCLS - change the job run priority from 50 to 30
Add Prestart Job Entry: ADDPJE - add Prestart job entry for example
    MYLIB/FILECSVR (it is possible to designate a class to give your
    application a different priority than other prestart jobs in the
    same subsystem).
Start Subsystem: STRSBS QCMN
```

#### SNA•ps Tuning

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Modify the I-frame size in the SNA•ps line description, the maximum RU size in the SNA•ps mode, and the buffer size used by the APPC sample application TP. A combination of I-frame size=4105, max RU=4096, and application record size=4092 has been found to work fine.

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