



BCOM EP

Installation & Migration Guide

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Introduction

This document will guide you through the following procedures:

- Installation of the BCOM EP software
- Execution of the test scripts provided by ETI-NET

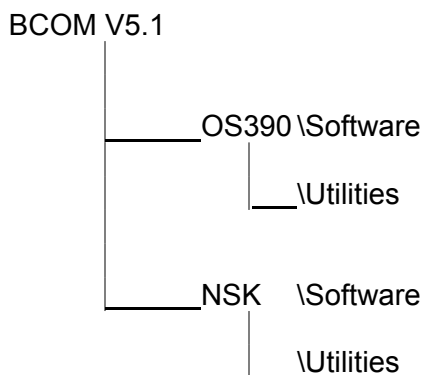
Once this version has been installed, current BCOM V4 users will be able to migrate their V4 environment into the new BCOM V 5.1 EP environment.

Packing list

The BCOM EP package that you have received should contain the following items:

- A cover letter
- A printed copy of the "BCOM EP: Installation and Migration Guide" document, which is also on the documentation CD
- Two software CD's, each containing the latest BCOM V5.1 release
- A documentation CD, containing the latest ETIdoc documentation

The two software CDs have the following tree structure:



Hardware/Software Requirements

On OS/390

- OS/390 V2R7 or Higher
- TCP/IP - OS/390 Communication Server V2.7 or higher or Computer Associates NetworkIT TCPAccess Version 5.3
- C Language Environment Library (SCEERUN)
- Approximately 4 MB of disk space are needed to install the load modules and source macros for the BCOM EP OS/390 version.
- Additional space will also be needed for the log files, request and queue files

***NOTE:** You can estimate 4k bytes per unique request definition and 100 bytes per concurrent queued request, up to MXRRQST.*

***NOTE:** If you queue more than the MXRRQST, the additional queue commands will not execute immediately but they will still need to be stored, so extra space will still need to be provided for them.*

- Region Size 32M needed
- Minimum of two VTAM Application ID's Are required:
 - One VTAM Application ID for the BCOM MONITOR
 - One VTAM Application ID for the BCOM INTERFACE
 - Additional VTAM Application ID will be required if you setup the "Report distribution" feature from OS/390 to NSK.
- TCPIP required that BCOM address space have a RACF OMVS segment defined.
- BCOM OS/390 must run from an APF library when to following feature are used:
 - "Report Distribution" feature is used from OS/390 to NSK via a BCOM EP client.
 - BCOM security is activated (security level 10) on BCOM OS/390.

On Tandem / NSK

- Operating system release D45 or G06.06 or higher
- Approximately 60M of disk space are needed.

Installation on OS/390

This chapter provides instructions to install BCOM V51 for OS/390 from either distribution tape or electronic distribution package.

The BCOM V51 for OS/390 is available on distribution tape (3480 cartridge or 4mm DAT tape) or in electronic distribution format available on ETI-NET FTP Site, ETI-NET CD-ROM or via e-mail.

If you install from *Distribution Tape*, then start at the section "Installing from Distribution Tape".

BCOM distributed through either CD or FTP is called the *Electronic Distribution Package*. If you install the software from the *Electronic Distribution Package* then start at the section "Installing from Electronic distribution package".

Installing from Distribution Tape

The installation consists of running different JCL's restored from the Distribution Tape. These JCL's need to be customized by the customer before being submitted.

The OS/390 cartridge contains 15 datasets.

Content of Distribution Tape

Label	Dataset Name	Description
1	ETI010.FS62LOAD	BCOM load modules library
2	ETI010.FS62SRC	BCOM sources library (include sample configuration file and JCL's)
3	ETI010.REQUEST	Sample Request file
4	ETI010.QUEUE	Sample Queue file
5	ETI010.LOG1	Sample Log 1 file
6	ETI010.LOG2	Sample Log 2 file
7	ETI010.BINT.LOAD	BCOM Interface load modules library
8	ETI010.BINT.MSGS	ISPF messages for BCOM Interface
9	ETI010.BINT.PANELS	ISPF panels for BCOM Interface
10	ETI010.SECT.LOAD	Security table manager load modules library
11	ETI010.SECT.MSGS	ISPF messages for Security table manager
12	ETI010.SECT.PANELS	ISPF panels for Security table manager
13	ETI010.BCR00	BCOM EP English message file
14	ETI010.BCX00	BCOM EP English message file Index
15	ETI010.FS62INST	Sample JCL to restore distribution Tape.

Three other empty datasets will be created during the installation process:

Dataset Name	Description
<prefix>.BINT.TABLES	ISPF tables for BCOM Interface
<prefix>.SECT.TABLES	ISPF tables for Security table manager
<prefix>.BMCONFIG	BCOM EP Binary configuration file

Installation Steps

Step 1: Restore the installation JCL

Step 2: Restore the tape content

Step 3: Continue installation from section "Configuring BCOM on OS/390".

Step 1: Restore Installation JCL

A JCL (ETIINST) is available on the distribution tape to restore all the BCOM datasets from the distribution tape. To restore the ETIINST installation JCL from the tape, the user types an IEBCOPY JCL or use one that already exists in the CNTL library. This IEBCOPY JCL will restore the installation JCL to a CNTL library.

Attention to existing BCOM User:

With version 5.1 the BCOM distribution tape has changed. The installation JCL is now located under label 15 (in previous BCOM releases it was located at label 13). So make sure you use the following JCL to restore the installation JCL.

Here is a sample of that IEBCOPY JCL:

```
//JOBNAME JOB ACCT,PROG,CLASS,MSGCLASS,NOTIFY=
//*****
//* RETRIEVE INSTALLATION JCL FROM TAPE *
//*-----*
//*
//* HOW TO USE THIS JCL
//*
//* - INSERT A JOB CARD
//* - CHANGE <TAPEUNIT> FOR A VALID TAPE UNIT AT YOUR SITE
//* - CHANGE <BCOMTAPE> FOR THE BCOM DISTRIBUTION TAPE SERIAL
//* NUMBER
//* - CHANGE <YOUR.CNTL.LIB> TO THE LIBRARY WHERE THE
//* INSTALLATION JCL MEMBER ETIINST WILL BE RESTORED
//*****
//PREINST EXEC PGM=IEBCOPY
//SYSPRINT DD SYSOUT=*
//SYSUT3 DD UNIT=VIO,SPACE=(CYL,(20,10))
//SYSUT4 DD UNIT=VIO,SPACE=(CYL,(20,10))
//INDD1 DD DSN=ETI010.FS62INST,
// DISP=OLD,
// LABEL=(15,SL),
// UNIT=<TAPEUNIT>,
// VOL=SER=<BCOMTAPE>
//OUTDD1 DD DSN=<YOUR.CNTL.LIB>,
// DISP=SHR
//SYSIN DD *
COPY OUTDD=OUTDD1,INDD=((INDD1,R))
//
```

Step 2: Restore tape content

The following JCL (ETIINST) is restored in the previous step. Edit ETIINST from your CNTL library as indicated into the JCL and submit it:

```
//<JOB CARD>
//*****
//*
//* HOW TO USE THIS JCL:
//*
//* 1. SUPPLY A VALID JOB CARD FOR YOUR INSTALLATION.
//* 2. CHANGE 'BCOM.FS62' DATASET PREFIX FOR A VALID
//* DATASET PREFIX FOR YOUR SYSTEM SITE.
//* 3. CHANGE 'PSVOL' TO THE VOLUME SERIAL NUMBER OF THE
//* VOLUME WHERE THE DATASETS WILL BE CREATED.
//* 4. CHANGE 'PSUNT' TO THE UNIT NAME OF THE VOLUME
//* WHERE THE DATASETS WILL BE CREATED.
//* 5. CHANGE 'TPEVOL' TO THE VOLUME SERIAL NUMBER OF
//* THE ETINET DISTRIBUTION TAPE.
//* 6. CHANGE 'TPEUNT' TO THE UNIT NAME OF THE TAPE
//* DRIVE THAT WILL BE USED TO READ THE ETINET
//* DISTRIBUTION TAPE.
//* 7. IF THE WORK UNIT NAME OF 'VIO' IS VALID AT YOUR
//* SITE, LEAVE IT AS IS.
//* IF NOT, CHANGE 'VIO' TO A VALID WORK UNIT FOR
//* YOUR SITE.
//*
//*****
//ETIINST PROC PREFIX='BCOM.FS62',
//      DVLS=PSVOL,
//      DUNT=PSUNT,
//      TVLS=TPEVOL,
//      TUNT=TPEUNT,
//      MAXBLK=32760,
//      WUNT=VIO
//*
//STEP01 EXEC PGM=IEFBR14
//OUTDD2 DD DSN=&PREFIX..LOAD,DISP=(NEW,CATLG,DELETE),
//      UNIT=&DUNT,SPACE=(TRK,(25,5,10)),VOL=SER=&DVLS,
//      DCB=(RECFM=U,BLKSIZE=&MAXBLK,DSORG=PO)
//OUTDD3 DD DSN=&PREFIX..SOURCE,DISP=(NEW,CATLG,DELETE),
//      UNIT=&DUNT,SPACE=(TRK,(25,5,20)),VOL=SER=&DVLS,
//      DCB=(RECFM=FB,LRECL=80,BLKSIZE=3120,DSORG=PO)
//OUTDD4 DD DSN=&PREFIX..BINT.LOAD,DISP=(NEW,CATLG,DELETE),
//      UNIT=&DUNT,SPACE=(TRK,(15,5,10),RLSE),VOL=SER=&DVLS,
//      DCB=(RECFM=U,BLKSIZE=&MAXBLK,DSORG=PO)
//OUTDD5 DD DSN=&PREFIX..BINT.MSGS,DISP=(NEW,CATLG,DELETE),
//      UNIT=&DUNT,SPACE=(TRK,(4,2,10),RLSE),VOL=SER=&DVLS,
//      DCB=(RECFM=FB,LRECL=80,BLKSIZE=3120,DSORG=PO)
//OUTDD6 DD DSN=&PREFIX..BINT.PANELS,DISP=(NEW,CATLG,DELETE),
//      UNIT=&DUNT,SPACE=(TRK,(10,5,25),RLSE),VOL=SER=&DVLS,
//      DCB=(RECFM=FB,LRECL=80,BLKSIZE=3120,DSORG=PO)
//OUTTB1 DD DSN=&PREFIX..BINT.TABLES,DISP=(NEW,CATLG,DELETE),
//      UNIT=&DUNT,SPACE=(TRK,(10,0,10)),VOL=SER=&DVLS,
//      DCB=(RECFM=FB,LRECL=80,BLKSIZE=3120,DSORG=PO)
//OUTDD7 DD DSN=&PREFIX..SECT.LOAD,DISP=(NEW,CATLG,DELETE),
//      UNIT=&DUNT,SPACE=(TRK,(20,1,10),RLSE),VOL=SER=&DVLS,
```

```

//          DCB=(RECFM=U, BLKSIZE=&MAXBLK, DSORG=PO)
//OUTDD8   DD  DSN=&PREFIX..SECT.MSGS, DISP=(NEW, CATLG, DELETE),
//          UNIT=&DUNT, SPACE=(TRK, (4, 1, 10), RLSE), VOL=SER=&DVLS,
//          DCB=(RECFM=FB, LRECL=80, BLKSIZE=3120, DSORG=PO)
//OUTDD9   DD  DSN=&PREFIX..SECT.PANELS, DISP=(NEW, CATLG, DELETE),
//          UNIT=&DUNT, SPACE=(TRK, (10, 5, 15), RLSE), VOL=SER=&DVLS,
//          DCB=(RECFM=FB, LRECL=80, BLKSIZE=3120, DSORG=PO)
//OUTTB2   DD  DSN=&PREFIX..SECT.TABLES, DISP=(NEW, CATLG, DELETE),
//          UNIT=&DUNT, SPACE=(TRK, (10, 0, 5), RLSE), VOL=SER=&DVLS,
//          DCB=(RECFM=FB, LRECL=80, BLKSIZE=3120, DSORG=PO)
//OUTTC1   DD  DSN=&PREFIX..BCR00, DISP=(NEW, CATLG, DELETE),
//          UNIT=&DUNT, SPACE=(TRK, (20, 0), RLSE), VOL=SER=&DVLS,
//          DCB=(RECFM=FB, LRECL=80, BLKSIZE=3120, DSORG=PS)
//OUTTC2   DD  DSN=&PREFIX..BCX00, DISP=(NEW, CATLG, DELETE),
//          UNIT=&DUNT, SPACE=(TRK, (10, 0), RLSE), VOL=SER=&DVLS,
//          DCB=(RECFM=FB, LRECL=80, BLKSIZE=3120, DSORG=PS)
//OUTTC3   DD  DSN=&PREFIX..BMCONFIG, DISP=(NEW, CATLG, DELETE),
//          UNIT=&DUNT, SPACE=(TRK, (3, 0), RLSE), VOL=SER=&DVLS,
//          DCB=(RECFM=FB, LRECL=80, BLKSIZE=3120, DSORG=PS)
//*
//STEP02   EXEC PGM=IEBCOPY
//SYSPRINT DD  SYSOUT=*
//SYSUT3   DD  UNIT=&WUNT, SPACE=(CYL, (20, 10))
//SYSUT4   DD  UNIT=&WUNT, SPACE=(CYL, (20, 10))
//INDD1    DD  DSN=ETI010.FS62LOAD, DISP=OLD, LABEL=(1, SL),
//          UNIT=&TUNT, VOL=SER=&TVLS
//INDD2    DD  DSN=ETI010.FS62SRCE, DISP=OLD, LABEL=(2, SL),
//          UNIT=&TUNT, VOL=REF=* .INDD1
//INDD7    DD  DSN=ETI010.BINT.LOAD, DISP=OLD, LABEL=(7, SL),
//          UNIT=&TUNT, VOL=REF=* .INDD1
//INDD8    DD  DSN=ETI010.BINT.MSGS, DISP=OLD, LABEL=(8, SL),
//          UNIT=&TUNT, VOL=REF=* .INDD1
//INDD9    DD  DSN=ETI010.BINT.PANELS, DISP=OLD, LABEL=(9, SL),
//          UNIT=&TUNT, VOL=REF=* .INDD1
//INDD10   DD  DSN=ETI010.SECT.LOAD, DISP=OLD, LABEL=(10, SL),
//          UNIT=&TUNT, VOL=REF=* .INDD1
//INDD11   DD  DSN=ETI010.SECT.MSGS, DISP=OLD, LABEL=(11, SL),
//          UNIT=&TUNT, VOL=REF=* .INDD1
//INDD12   DD  DSN=ETI010.SECT.PANELS, DISP=OLD, LABEL=(12, SL),
//          UNIT=&TUNT, VOL=(, RETAIN, , , REF=* .INDD1)
//OUTDD1   DD  DSN=&PREFIX..LOAD, DISP=SHR
//OUTDD2   DD  DSN=&PREFIX..SOURCE, DISP=SHR
//OUTDD7   DD  DSN=&PREFIX..BINT.LOAD, DISP=SHR
//OUTDD8   DD  DSN=&PREFIX..BINT.MSGS, DISP=SHR
//OUTDD9   DD  DSN=&PREFIX..BINT.PANELS, DISP=SHR
//OUTDD10  DD  DSN=&PREFIX..SECT.LOAD, DISP=SHR
//OUTDD11  DD  DSN=&PREFIX..SECT.MSGS, DISP=SHR
//OUTDD12  DD  DSN=&PREFIX..SECT.PANELS, DISP=SHR
//*
//STEP03   EXEC PGM=IEBGENER
//SYSPRINT DD  SYSOUT=*
//SYSUT1   DD  DSN=ETI010.BCR00, DISP=OLD, LABEL=(13, SL),
//          VOL=(, RETAIN, , , REF=* .STEP02.INDD1), UNIT=&TUNT
//SYSUT2   DD  DSN=&PREFIX..BCR00, DISP=SHR
//SYSIN    DD  DUMMY
//*
//STEP04   EXEC PGM=IEBGENER
//SYSPRINT DD  SYSOUT=*
//SYSUT1   DD  DSN=ETI010.BCX00, DISP=OLD, LABEL=(14, SL),
//          VOL=(, RETAIN, , , REF=* .STEP02.INDD1), UNIT=&TUNT
//SYSUT2   DD  DSN=&PREFIX..BCX00, DISP=SHR
//SYSIN    DD  DUMMY
//*
//          PEND

```

```
//          EXEC ETIINST
//STEP02.SYSIN DD  *
COPYMOD   OUTDD=OUTDD1,INDD=( ( INDD1,R) ),MAXBLK=32760
COPY      OUTDD=OUTDD2,INDD=( ( INDD2,R) )
COPYMOD   OUTDD=OUTDD7,INDD=( ( INDD7,R) ),MAXBLK=32760
COPY      OUTDD=OUTDD8,INDD=( ( INDD8,R) )
COPY      OUTDD=OUTDD9,INDD=( ( INDD9,R) )
COPYMOD   OUTDD=OUTDD10,INDD=( ( INDD10,R) ),MAXBLK=32760
COPY      OUTDD=OUTDD11,INDD=( ( INDD11,R) )
COPY      OUTDD=OUTDD12,INDD=( ( INDD12,R) )
/*
```

At the completion of the job you should have the following datasets:

```
<PREFIX>.BCR00
<PREFIX>.BCX00
<PREFIX>.BINT.LOAD
<PREFIX>.BINT.MSGS
<PREFIX>.BINT.PANELS
<PREFIX>.BINT.TABLES
<PREFIX>.BMCONFIG
<PREFIX>.LOAD
<PREFIX>.SECT.LOAD
<PREFIX>.SECT.MSGS
<PREFIX>.SECT.PANELS
<PREFIX>.SECT.TABLES
<PREFIX>.SOURCE
```

Step 3: Continue installation from section "Configuring BCOM on OS/390"

See section "Configuring BCOM on OS/390".

Electronic Distribution Package

Content of the Electronic Distribution Package

The electronic distribution package constitutes of one file, *BCOMV51M.BIN*, which contains the following datasets.

Dataset Name	Description
ETIBV51.LOAD	BCOM load modules library
ETIBV51.SOURCE	BCOM sources library (include sample configuration file and JCL's)
ETIBV51.BINT.LOAD	BCOM Interface load modules library
ETIBV51.BINT.MSGS	ISPF messages for BCOM Interface
ETIBV51.BINT.PANELS	ISPF panels for BCOM Interface
ETIBV51.SECT.LOAD	Security table manager load modules library
ETIBV51.SECT.MSGS	ISPF messages for Security table manager
ETIBV51.SECT.PANELS	ISPF panels for Security table manager
ETIBV51.BCR00	BCOM EP English message file
ETIBV51.BCX00	BCOM EP English message file Index

Three other empty dataset will be created during the installation processing:

Dataset Name	Description
<prefix>.BINT.TABLES	ISPF tables for BCOM Interface
<prefix>.SECT.TABLES	ISPF tables for Security table manager
<prefix>.BMCONFIG	BCOM EP Binary configuration file

A second file, *UPAKBCOM.TXT*, contains a sample JCL to unpack the electronic distribution package.

Installation Steps

Step 1: Upload the BCOM electronic distribution package to the OS/390 system

Step 2: Uncompress the BCOM electronic distribution package

Step 3: Continue installation from section "Configuring BCOM on OS/390"

Step 1: Upload the BCOM electronic distribution package

The BCOM electronic distribution package must be uploaded to the OS/390 system in binary format. This can be achieved using FTP or TSO XMIT/RECEIVE.

The OS/390 dataset receiving the package must have the following attributes:

```
DCB=(LRECL=80, BLKSIZE=3120, RECFM=FB),
SPACE=(CYL, (6,2))
```

Step 2: Uncompress the BCOM electronic distribution package

The BCOM package has been built using TSO/E TRANSMIT command.

The BCOM electronic distribution package can be uncompressed using the following JCL. Use the sample UPAKBCOM.TXT which is included in the electronic distribution package. Make sure you follow the instructions before submitting the JCL.

```
//<JOB CARD>
//*-----
//* ETINET BCOM VERSION 5
//*-----
//* JCL TO UNCOMPRESS THE BCOM PACKAGE (FTP, E-MAIL or CD-ROM)
//*
//* FOR QUESTIONS PLEASE CONSULT:
//*   HTTP://WWW.ETINET.COM
//*   MAILTO:SUPPORT1@ETINET.COM
//*
//*-----
//* PREREQUISITE
//* - PRIOR TO USE THIS JCL YOU MUST UPLOAD THE BCOM PACKAGE
//*   TO THE HOST TO A DATASET WITH FOLLOWING ATTRIBUTES:
//*   DCB=(RECFM=FB,LRECL=80,BLKSIZE=3120)
//*
//*-----
//* HOW TO USE THIS JCL
//* - INSERT A VALID JOB CARD
//* - CHANGE <PACKAGE> TO DSN REPRESENTING THE BCOM PACKAGE RECEIVED
//*   FROM ETINET
//* - CHANGE <PREFIX> TO A VALID DSN PREFIX WHICH WILL BE USED FOR
//*   THE CREATION OF THE BCOM SOFTWARE LIBRARY AND DATASET
//* - CHANGE <DUNIT> FOR A VALID DISK UNIT AT YOUR SITE
//* - CHANGE <DVOL> FOR A VALID DISK VOLUME AT YOUR SITE
//*
//*-----
//* VALIDATION
//* AFTER THE JOB EXECUTION YOU SHOULD HAVE THE FOLLOWING DATASETS:
//*
//*   <PREFIX>.BCR00
//*   <PREFIX>.BCX00
//*   <PREFIX>.BINT.LOAD
```

```

/* <PREFIX>.BINT.MSGS
/* <PREFIX>.BINT.PANELS
/* <PREFIX>.BINT.TABLES
/* <PREFIX>.BMCONFIG
/* <PREFIX>.DLIB
/* <PREFIX>.LOAD
/* <PREFIX>.SECT.LOAD
/* <PREFIX>.SECT.MSGS
/* <PREFIX>.SECT.PANELS
/* <PREFIX>.SECT.TABLES
/* <PREFIX>.SOURCE
/*-----
/*
//ALLOCATE EXEC PGM=IEFBR14
//OUTTB1 DD DSN=<PREFIX>.BINT.TABLES,DISP=(NEW,CATLG,DELETE),
//          UNIT=<DUNIT>,SPACE=(TRK,(10,0,10)),VOL=SER=<DVOL>,
//          DCB=(RECFM=FB,LRECL=80,BLKSIZE=3120,DSORG=PO)
//OUTTB2 DD DSN=<PREFIX>.SECT.TABLES,DISP=(NEW,CATLG,DELETE),
//          UNIT=<DUNIT>,SPACE=(TRK,(10,0,5)),VOL=SER=<DVOL>,
//          DCB=(RECFM=FB,LRECL=80,BLKSIZE=3120,DSORG=PO)
//OUTTC3 DD DSN=<PREFIX>.BMCONFIG,DISP=(NEW,CATLG,DELETE),
//          UNIT=<DUNIT>,SPACE=(TRK,(3,0)),VOL=SER=<DVOL>,
//          DCB=(RECFM=FB,LRECL=80,BLKSIZE=3120,DSORG=PS)
//*
//RECEIVE EXEC PGM=IKJEFT01,REGION=6M
//SYSPRINT DD SYSOUT=*
//SYSTSPRT DD SYSOUT=*
//SYSTSIN DD *

RECEIVE INDSN('<PACKAGE>')
DSN('<PREFIX>.DLIB') UNIT(<DUNIT>) VOL(<DVOL>)

RECEIVE INDSN('<PREFIX>.DLIB(LOAD)')
DSN('<PREFIX>.LOAD') UNIT(<DUNIT>) VOL(<DVOL>)

RECEIVE INDSN('<PREFIX>.DLIB(SOURCE)')
DSN('<PREFIX>.SOURCE') UNIT(<DUNIT>) VOL(<DVOL>)

RECEIVE INDSN('<PREFIX>.DLIB(BLOAD)')
DSN('<PREFIX>.BINT.LOAD') UNIT(<DUNIT>) VOL(<DVOL>)

RECEIVE INDSN('<PREFIX>.DLIB(BMSG)')
DSN('<PREFIX>.BINT.MSGS') UNIT(<DUNIT>) VOL(<DVOL>)

RECEIVE INDSN('<PREFIX>.DLIB(BPANEL)')
DSN('<PREFIX>.BINT.PANELS') UNIT(<DUNIT>) VOL(<DVOL>)

RECEIVE INDSN('<PREFIX>.DLIB(SLOAD)')
DSN('<PREFIX>.SECT.LOAD') UNIT(<DUNIT>) VOL(<DVOL>)

RECEIVE INDSN('<PREFIX>.DLIB(SMSG)')
DSN('<PREFIX>.SECT.MSGS') UNIT(<DUNIT>) VOL(<DVOL>)

RECEIVE INDSN('<PREFIX>.DLIB(SPANEL)')
DSN('<PREFIX>.SECT.PANELS') UNIT(<DUNIT>) VOL(<DVOL>)

RECEIVE INDSN('<PREFIX>.DLIB(BCR00)')
DSN('<PREFIX>.BCR00') UNIT(<DUNIT>) VOL(<DVOL>)

RECEIVE INDSN('<PREFIX>.DLIB(BCX00)')
DSN('<PREFIX>.BCX00') UNIT(<DUNIT>) VOL(<DVOL>)

/*

```

Step 3:**Continue from chapter "Configuring BCOM on OS/390"**

See "Configuring BCOM on OS/390" chapter (next).

Configuring BCOM on OS/390

This chapter provides lists of BCOM components and instructions to configure BCOM.

Content of the source library

#index	description of the members contain in the source library
b62acec	data conversion table ASCII to EBCDIC
b62apisp	data OS/390 interface sample program
b62binfo	data ispf interface information
b62ecac	data conversion table ebcdic to ascii
b62ex01	data security exit routine: before allocation
b62secur	data security maintenance system information
b62verf	data security access verification routine
b62vrf2	data previous security access verification routine
b62wdfn	data Cobol copy member that can be used in user exit routines
bicicspr	data cics interface command copy member
bintcopy	data OS/390 interface command copy member
bircodes	data cics + OS/390 interface return codes copy member
cicabint	data cics interface sample program
cicaplid	data cics interface applid definitions for the bcom main task applid
cicmtab	data cics interface vtam modetab definitions for the bcom main task applid
cicpct	data cics interface sample transaction definition listing for the user sample transaction
cicppt	data cics interface sample program definition listing for the cics to bcom subroutine
cictct	data cics interface sample tct definition
cltbint	clist to run the interface in line mode
cltbsna	clist to run bsabint migration tool in line mode
cltispfb	clist to run the ispf interface
cltispsf	clist to run the security maintenance system
deffiles	jcl to create your request, queue and log files
defsec	jcl to create your security file and export file

etiinst	jcl to restore the eti distributiondistribution tape
fdfdsect	data dsect that can be used in user exit routines
filedef	macro for signed numeric conversion customization
fs62rmt	macro remote location configuration macro
fs62dest	macro for the OS/390 print facility
fs62lcl	macro local location configuration macro
fs62pass	macro passthru configuration macro
fs62proc	macro process configuration macro
fs62rout	macro routing class configuration macro
jclapic	jcl to compile and link the sample cics api program
jclapim	jcl to compile and link the sample OS/390 api program
jclbint	jcl to run the interface in batch mode
jclbsna	jcl to run migration tool bsabint in batch mode
jclbsnac	jcl to compile and link bsabint configuration
jclconf	jcl to create your bcom configuration
jclconv	jcl to convert request and queue files from version a0x to the c01 version level
jclfs62	jcl to run bcom
jclimprt	jcl to import the request, queue and log files
jcllog	jcl to list the bcom log files
jclsimp	jcl to run the security import in batch mode
jclsxit	jcl to assemble and link a new security prog.
jcltab	jcl to customize the ascii/ebcdic conversion tables
jcltests	jcl to define request and run test scripts
jcluxit	jcl to link your user exits
jclv40	jcl to convert request and queue files from version c02 to v4.0
readme	data a summary of changes and enhancements
recdef	macro macro for signed numeric conversion customization
secdsect	data dsect used by security access verification
smpconf	data sample configuration macros for BCOM APPC
smpepdef	sample EP definition file
smptcp	sample configuration for BCOM EP
zapallo	jcl to zap certain bcom modules to make a transfer wait for a unit if it is not available
zapbtbj	jcl to zap the main task to increase the number of concurrent bint and/or bjes sessions available
zapsealo	jcl to zap the ispf bint and the security interface for changing the allocation of a "vio" unit to the one supported by your system

Content of the load library

b62bint	user interface module
b62ex19	signed numeric conversion exit
b62ex20	signed numeric conversion exit
b62fio	i/o sub-task
B62log	utility program to list the BCOM log
b62low	logger sub-task
b62lrm	local request manager sub-task
b62main	bcom monitor module
b62out	output writer sub-task (for OS/390 to remote printing)
b62prtd	printd printed support module
b62rqcln	program for converting request + queue files from axx to bxx and cxx versions
b62tcm	time control sub-task
b62v400	program for converting request + queue files from bxx and cxx to v4.0 version
b62xtwr	external writer (for OS/390 to remote printing)
bcccm	bcom/OS390 client session manager
bcclm	bcom/OS390 client manager
bcicss01	cics api subroutine - for cobol version 2
bcscm	bcom/OS390 server session manager
bcsem	bcom/OS390 server manager
bcut	bcom utility dll
bm	tcp/ip network interface dll
bmccfg	to validate and generate ep configuration files.
bsnabin0	utility module to facilitate bcomsna migration
tb	general utility dll (toolbox)
tbtmxit	general utility timer exit

Configuration steps

Two approaches can be used to configure BCOM on OS/390. The first approach consists of using the sample configuration on OS/390 and NSK to obtain a basic setup that can be customized later on. The second approach consists of migrating an existing BCOM V4 configuration file; you should jump to section "Migrating from BCOM previous versions" if you intend to use the migration approach. The remainder of this section describes the sample configuration approach.

The configuration of BCOM is achieved in four steps:

Step 1: Create the BCOM control files

Step 2: EDIT and Generate the BCOM Configuration files

Step 3: Setup the BCOM Startup JCL

Step 4: Setup the BCOM User Interface (BINT)

Step 1: Create the BCOM Control files

Edit the dataset "&PREFIX..SOURCE(DEFFILES)" on the BCOM source lib which was restored during Installation.

```
//<JOB CARD>
//*****
//*
//* HOW TO USE THIS JCL:
//* 1. SUPPLY A VALID JOB CARD FOR YOUR INSTALLATION
//*
//*
//* 2. CHANGE THE DATASET PREFIX "BCOM.FS62" FOR A VALID
//* PREFIX ACCORDING TO YOUR SITES STANDARD.
//*
//* 3. CHANGE THE VOLUME IDENTIFICATION "VVVVVV" FOR THE
//* VOLUME NAME, ON WHICH TO CREATE THE FILES.
//*
//* 4. REVIEW THE SPACE ALLOCATIONS PROVIDED IN THIS
//* SAMPLE. THESE VALUES MAY HAVE TO BE CHANGED
//* DEPENDING ON YOUR REQUIREMENTS.
//*
//* 5. CHECK THE VALUE FOR THE 'RECORD' OPERAND. THIS
//* SAMPLE SETS THE RECORD VALUE TO '1000'. THIS
//* VALUE SHOULD MATCH THE 'MAXLOG=' OPERAND IN YOUR
//* BCOM MONITOR SOURCE CONFIGURATION FILE.
//*
//*****
//*
//STEP01 EXEC PGM=IDCAMS
//SYSPRINT DD SYSOUT=*
//SYSIN DD *
/*-----/*
/* MAKE SURE THE FILES ARE NOT ALREADY THERE */
/*-----/*
DELETE BCOM.FS62.QUEUE
DELETE BCOM.FS62.REQUEST
DELETE BCOM.FS62.LOG1
DELETE BCOM.FS62.LOG2
SET MAXCC = 0
/*-----/*
/* QUEUE FILE DEFINITION */
/*-----/*
DEFINE CLUSTER (NAME (BCOM.FS62.QUEUE)
              TRK(02 01)
```

```

                KEYS (15 0)                -
                CISZ(1024)                 -
                IXD                        -
                ORD                        -
                RECSZ (128 128)           -
                VOL(VVVVVV)               -
                SHR (2 3))                -
        DATA   (NAME(BCOM.FS62.QUEUE.DATA)) -
        INDEX   (NAME(BCOM.FS62.QUEUE.INDEX)) -
/*-----*/
/*   REQUEST FILE DEFINITION              */
/*-----*/
DEFINE   CLUSTER (NAME(BCOM.FS62.REQUEST) -
                TRK(10 05)                -
                KEYS (8 0)                -
                CISZ(4096)                -
                IXD                        -
                ORD                        -
                RECSZ (4096 4096)         -
                VOL(VVVVVV)               -
                SHR (2 3))                -
        DATA   (NAME(BCOM.FS62.REQUEST.DATA)) -
        INDEX   (NAME(BCOM.FS62.REQUEST.INDEX)) -
/*-----*/
/*   LOG FILES DEFINITION                 */
/*-----*/
DEFINE   CLUSTER (NAME(BCOM.FS62.LOG1)    -
                NUMBERED                  -
                RECORD(1000)              -
                RECSZ(160 160)            -
                VOL(VVVVVV)               -
                SHR(2 3))                 -
        DATA   (NAME(BCOM.FS62.LOG1.DATA)) -
DEFINE   CLUSTER (NAME(BCOM.FS62.LOG2)    -
                NUMBERED                  -
                RECORD(1000)              -
                RECSZ(160 160)            -
                VOL(VVVVVV)               -
                SHR(2 3))                 -
        DATA   (NAME(BCOM.FS62.LOG2.DATA)) -
//*/

```

NOTE: These dataset names will be referenced by the BCOM startup JCL STRTBCOM.

Step 2: Edit and Generate the BCOM Configuration files

Existing BCOM customers will notice that the BCOM configuration syntax and structure have been enhanced in order to specify the TCPIP information.

First of all, the concept of BCOM *endpoint (EP)* is now introduced. An endpoint is simply a named communication point (some kind of alias) used between BCOM and an abstracted communication layer. It should be viewed as a replacement to the SNA resources (SNA LU or VTAM APPLID). The definitions of the endpoints (EP) are stored in a new configuration file: the EP definition file. This file specifies the TCPIP resources (addresses, port...) that will be used by BCOM. For more detail about the rules and the syntax of the EP definitions, please consult the section “*Configuring the EP file under OS/390*”.

The validation and the generation of the BCOM configuration is now done in two steps. The first step compiles and validates the definitions of the endpoints on the EP file and produces a binary file which will be used by BCOM; this task is achieved by the module BMCCFG. The second step is the traditional Assemble and Link which validates the standard BCOM configuration file that you are already familiar with. Those two steps can be combined in a single JCL job.

ETI-NET provides a sample configuration file for quick start purposes. You may choose to customize the sample configuration file or to migrate using an existing BCOM V4 configuration file. If you decide to migrate, please skip this section and consult the chapter “*Migrating from previous BCOM versions*” located further in this manual.

Customizing sample configuration

The sample configuration (SMPTCP) provided by ETI-NET is a basic configuration file that contains the definitions for one BCOM EP Server and one BCOM EP Requestor (\$Q1TA). The EP requestor is set up to manage up to 4 sessions and concurrent transfers. For easier understanding, on the Tandem NSK platform, the sample configuration should also be used; it has been setup to correspond with the sample SMPTCP. The configuration file and the JCL need to be customized in order to run properly at your site. Please follow the instructions below:

- 1) Edit the member SMPTCP on the BCOM source library
- 2) Follow the instructions contained in the member under the section “*how to use this jcl*” to adjust the JCL.
- 3) Customize the endpoint (EP) file by locating the DDNAME BMSRC and:
 - a. Look at the IP address and port located under “**NAME = SERVER.OS390**”. These represent the IP address and port that will be used by the BCOM OS/390 server to listen for a new connection. Change

it to the IP address of your OS/390 system, the address 0.0.0.0 can be specified if you want your BCOM server to listen on all the TCIP addresses configured on the TCPIP stack used by BCOM.

- b. Look at the IP address and port located under “**NAME = SERVER.NSK**”. These represent the IP address and port of the **remote (NSK)** BCOM server to connect to. Change it to the IP address and port of your NSK system.
- 4) Customize the BCOM configuration file by locating the DDNAME ASM.SYSIN and:
 - a. Find the keyword “**PSWD=**” and insert the license string provided by ETI-NET.
 - b. Find the keyword “**LLOC=**” and change its value to a valid VTAM APPLID that can be used by BCOM at you site. Here is a sample definition of such an Applid:


```
APPLBCOM VBUILD TYPE=APPL
Q1M      APPL  ACBNAME=Q1M,AUTH=ACQ,PARSESS=YES,EAS=1
```
 - 5) Save, submit the JCL and verify the results. Make sure that you obtain condition code 0 for each job step.
 - 6) Pass to next section “Setup the startup JCL” once the configuration is generated without any error.

As reference, here is the sample configuration file (SMPTCP) provided by ETI-NET, you can find it in the BCOM source library.

```
//JOBNAME  JOB ACCT,PROG,CLASS,MSGCLASS,NOTIFY=
//*****
//*
//*  HOW TO USE THIS JCL:
//*
//*  1.  SUPPLY A VALID JOB CARD FOR YOUR INSTALLATION.
//*  2.  CHANGE 'BCOM.FS62' PREFIX FOR THE PREFIX USED AT
//*      INSTALLATION TIME.
//*  3.  IF 'VIO' IS A VALID WORK UNIT AT YOUR SITE,
//*      LEAVE IT AS IS, OTHERWISE CHANGE 'VIO' TO A
//*      VALID WORK UNIT AT YOUR SITE.
//*
//*****
//ASMLNK  PROC PREFIX='BCOM.FS62',
//        WUNT=VIO
//*****
//* FIRST STEP - VALIDATE THE EP-TABLE
//*****
//BMCFG   EXEC PGM=BMCCFG
//STEPLIB DD DSN=&PREFIX..LOAD,DISP=SHR
//BMCONFIG DD DSN=&PREFIX..BMCONFIG,DISP=SHR
//SYSPRINT DD SYSOUT=*
//*****
//* SECOND STEP - ASSEMBLE AND LINK THE BCOM CONFIGURATION FILE
//*****
//ASM     EXEC PGM=ASMA90,PARM=' OBJECT,NODECK,LINECOUNT(50)',
//        REGION=800K
//SYSLIB  DD DSN=&PREFIX..SOURCE,DISP=SHR
//SYSUT1  DD UNIT=&WUNT,SPACE=(CYL,(10,5)),DSN=&&SYSUT1
//SYSPUNCH DD DUMMY,DCB=(BLKSIZE=800)
```

```

//SYSPRINT DD SYSOUT=*
//SYSLIN DD DISP=(,PASS),UNIT=&WUNT,SPACE=(CYL,(5,5,0)),
// DCB=(BLKSIZE=400),DSN=&&LOADSET
//LKED EXEC PGM=IEWL,PARM='XREF,LET,LIST,NCAL',
// REGION=800K,COND=(4,LT,ASM)
//SYSLIN DD DSN=&&LOADSET,DISP=(OLD,DELETE)
// DD DDNAME=SYSIN
//SYSLMOD DD DSN=&PREFIX..LOAD,DISP=SHR
//SYSUT1 DD UNIT=&WUNT,SPACE=(CYL,(3,2)),DSN=&&SYSUT1
//SYSPRINT DD SYSOUT=*,DCB=(RECFM=FB,BLKSIZE=3509)
// PEND
// EXEC ASMLNK
//BMSRC DD *
SECTION CLIENT
NAME = EP.CLIENT
SERVER = SERVER.NSK

SECTION SERVER
NAME = SERVER.OS390 ;LOCAL SERVER
ADDRESS = 208.180.1.46:1958 ;LOCAL IP ADDRESS

NAME = SERVER.NSK ;REMOTE SERVER
ADDRESS = 208.180.1.19:1958 ;REMOTE IP ADDRESS
//ASM.SYSIN DD *
    FS62LCL LNAME=%Q1M, LOCAL LOCATION NAME C
        LLOC=Q1M, VTAM APPLICATION ID C
        PSWD=000000000000000000000000, PASSWORD C
        DDLOG1=B62LOG1, LOG FILE 1 DDNAME C
        DDLOG2=B62LOG2, LOG FILE 2 DDNAME C
        DDQUEUE=B62QUEUE, QUEUE FILE DDNAME C
        DDRQST=B62RQST, REQUEST FILE DDNAME C
        MAXLOG=1000, MAX NUM OF LOG RECS C
        MSTOPER=, MASTER OPERATOR C
        MAXBLK=32000, MAX RCV BLOCK SIZE C
        MAXBUF=3, MAX BUFS FOR SUB-TASK C
        MXRRQST=1, MAX CONCURRENT REQS C
        SERVCON=7, NM OF SERVER CONNECTS C
        DEFWIND=50, RECEIVE WINDOW COUNT C
        LRETRY=99, MAXIMUM RETRIES C
        LRETIME=1, RETRY INTERVAL C
        SECL=0, SECURITY LEVEL C
        SECDD=, SECURITY DDNAME C
        ENCRYPT=NO, ENCRYPTION IS OFF C
        AUTOSTR=NO, NO AUTO START C
        EP=(SERVER.OS390,-1,10)
*****
    FS62RMT RMTID=%Q1T, REMOTE LOCATION NAME C
        RMTTYPE=TANDEM, REMOTE IS A TANDEM C
        ENCRYPT=NO, ENCRYPTION IS OFF
    FS62ROUT RTECLAS=01, ROUTING CLASS C
        AUTOSTR=NO, NO AUTO START C
        ENCOMP=NO, COMPRESSION IS OFF C
        ENCRYPT=NO, ENCRYPTION IS OFF C
        RTETYPE=STANDARD, STANDARD TRANSFER
*****
    FS62PROC PROCID=$Q1TA, CLIENT PROCESS ID C
        ENCRYPT=NO, ENCRYPTION IS OFF C
        EP=EP.CLIENT, ENDPOINT NAME C
        EPSESS=(2,2,4,30) SESSION PARAMETERS
    FS62PROC END
//LKED.SYSIN DD *
NAME SMPTCP(R)

```

Step 3: Setup the BCOM Startup JCL

Customize the JCL "&PREFIX..SOURCE(STRTBCOM)" on the BCOM source lib which was restored during installation. Follow the instructions provided in the JCL.

```
//JOBNAME JOB ACCT,PROG,CLASS,MSGCLASS,NOTIFY=
//*****
//*
//* HOW TO USE THIS JCL:
//*
//* 1. SUPPLY A VALID JOB CARD FOR YOUR INSTALLATION
//* - OR -
//* IF RUNNING AS A TASK, REMOVE THE JOB CARD.
//* 2. CHANGE 'BCOM.FS62.LOAD' TO YOUR BCOM LOAD
//* LIBRARY.
//* 3. CHANGE 'BCOM.FS62.REQUEST' TO YOUR REQUEST FILE.
//* 4. CHANGE 'BCOM.FS62.QUEUE' TO YOUR QUEUE FILE.
//* 5. IF YOU ARE NOT LOGGING DELETE THE
//* '//B62LOG1' DD STATEMENT. YOUR SOURCE
//* CONFIGURATION FILE HAS 'DDLOG1=,' WHEN YOU ARE
//* NOT LOGGING.
//* IF YOU ARE LOGGING, DO NOT DELETE THE DD
//* STATEMENT. YOUR SOURCE CONFIGURATION FILE HAS
//* 'DDLOG1=B62LOG1' WHEN YOU ARE LOGGING.
//* CHANGE 'BCOM.FS62.LOG1' TO YOUR LOG1 FILE.
//* 6. IF YOU ARE NOT LOGGING DELETE THE
//* '//B62LOG2' DD STATEMENT. YOUR SOURCE
//* CONFIGURATION FILE HAS 'DDLOG2=,' WHEN YOU ARE
//* NOT LOGGING.
//* IF YOU ARE LOGGING, DO NOT DELETE THE DD
//* STATEMENT. YOUR SOURCE CONFIGURATION FILE HAS
//* 'DDLOG2=B62LOG2' WHEN YOU ARE LOGGING.
//* CHANGE 'BCOM.FS62.LOG2' TO YOUR LOG2 FILE.
//* 7. IF RUNNING AS A TASK, BE SURE TO CHANGE THE
//* 'SYSOUT=*' ON THE SYSUDUMP STATEMENT TO A VALID
//* OUTPUT CLASS FOR DUMPS. IF RUNNING AS A JOB,
//* YOU CAN LEAVE AS IS IF THE MESSAGE CLASS IN THE
//* JOB CARD IS A VALID DUMP CLASS.
//* 8. TCPIP STACK LINKLIB:
//* SOME TCPIP STACK INSTALLATION REQUIRED THAT TCPIP
//* LINKLIB BEING SPECIFIED IN THE STEPLIB. REMOVE
//* THE COMMENT AND SPECIFY THE NAME OF YOUR TCPIP
//* LINKLIB IF REQUIRED.
//* 9. TCPIP PROFILE(SYSTCPD)
//* THE TCPIP CONFIGURATION FILE CAN BE EXPLICITLY
//* SPECIFIED BY REMOVING THE COMMENT FOR THE SYSTCPD
//* DDNAME STATEMENT AND BY CODING THE NAME OF YOUR
//* CONFIGURATION FILE. THIS WILL BE REQUIRED IF YOU
//* DO NOT WANT BCOM TO USE THE DEFAULT TCPIP STACK
//* OR IF YOU ARE USING CA TCPACCESS AS YOUR TCPIP
//* STACK.
//*****
//STEP01 EXEC PGM=B62MAIN,PARM=SMPTCP,REGION=32M
//STEPLIB DD DSN=BCOM.FS62.LOAD,
// DISP=SHR
//* DD DSN=TCPIP.SEZALINK,DISP=SHR **TCPIP LINKLIB
//*SYSTCPD DD DSN=TCPIP.TCPIP.DATA,DISP=SHR **TCPIP
CONFIGURATION
//B62RQST DD DSN=BCOM.FS62.REQUEST,
// DISP=SHR
```

```

//B62QUEUE DD DSN=BCOM.FS62.QUEUE,
//          DISP=SHR
//B62LOG1  DD DSN=BCOM.FS62.LOG1,
//          DISP=SHR
//B62LOG2  DD DSN=BCOM.FS62.LOG2,
//          DISP=SHR
//BCR00    DD DSN=BCOM.FS62.BCR00,
//          DISP=SHR
//BCX00    DD DSN=BCOM.FS62.BCX00,
//          DISP=SHR
//BCELOG   DD SYSOUT=*
//BMCONFIG DD DSN=BCOM.FS62.BMCONFIG,
//          DISP=SHR
//SYSABEND DD DUMMY
//SYSUDUMP DD DUMMY

```

Performance note:

BCOM V5.1 for OS/390 has been developed using IBM Language Environment and Dynamic Link Library (DLL) technologies. If you plan to run multiple BCOM instances (address spaces), it is highly recommended to place those DLL in the link pack area (LPA) or the ELPA. This will improve performance and reduce the memory used since all the address spaces will share the same DLL.

The BCOM modules to be put in the LPA are:

BCUT, BM, TB and TBTMMXIT

Those modules can be added to the LPA dynamically using the followins system operator command:

```
SETPROG LPA,ADD,MODENAME=(BCUT,BM,TB,TBTMMXIT),DSNAME=load-lib
```

Submit the created JCL to start BCOM.

Step 4: Setup the BCOM User Interface (BINT)

This section briefly describes the minimal steps to configure the BCOM user interface for ISPF. Please refer to the section “Configuring the BCOM User Interface” at the end of this chapter to setup other types of BCOM user interfaces (batch, line mode...) or to obtain additional information about the BCOM user interface.

ISPF User Interface – Admin Quick Start

- Edit the member CLTISPFB of the BCOM source library and customize it according to the instructions contained at the beginning of the CLIST.
- Execute the CLIST CLTISPFB.


```
EX `<prefix>.SOURCE(CLTISPFB)'
```
- Select option 1 – Administration
- Enter the Administration password (The original password can be found in the member B62BINFO of the BCOM source library). Then you should see the configuration screen illustrated below.

```

2 - BCOM-MVS
File Edit Transfer Fonts Options Macro View Window Help
----- BCOM INTERFACE CONFIGURATION -----
OPTION ===>
                                     USERID   - BRAY2
                                     TIME      - 16:39
                                     TERMINAL  - 3278

AVAILABLE OPTIONS: <A=ADD, M=MOD, V=VIEW, D=DELETE>

ENVIRONMENT NAME   : QUEBEC_

MAIN TASK APPLID   : BRM_____ <APPLID OF THE MAIN TASK>
LOCAL LOCATION     : %QUEBEC_  <DEFAULT LOCAL LOCATION FOR REQUEST MANAGEMENT>

APPLIDS THAT CAN BE USED BY THE BINT :

      BINT01_     BINT05_     BINT09_     _____
      BINT02_     BINT06_     _____     _____
      BINT03_     BINT07_     _____     _____
      BINT04_     BINT08_     _____     _____

PF01/13-HELP      PF03/15-END      ENTER-ACKNOWLEDGE

2 Sess-1          200.100.1.18          $ 2/15
  
```

- **Environment** – Represents a logical name that will be specified by the BCOM user to indicate which BCOM environment they want to interact with...
- **Main Task Applid** – Represents the VTAM applid used by BCOM as configured by the keyword *LLOC* of the macros *FS62LCL* in the BCOM configuration file. In the sample configuration, it is *Q1M*.

- **Local Location** – Represents the BCOM location name as configured by the keyword *LNAME* of the macros FS62LCL in the BCOM configuration file. In the sample configuration, it is %Q1M.
- **APPLIDS that can be used by the BINT** – Represents a pool of VTAM applids that can be used by the BCOM user interface (BINT) to communicate with the BCOM monitor. The number of applids specified will determine the number of users who can concurrently access, via the interface, the environment that you are configuring... As reference, here are the definitions of two sample VTAM applids for the BINT:

```
APPLBINT VBUILD TYPE=APPL
*--- LIST OF APPLID (POOL) RESERVED FOR THE ISPF BINT
BINT01  APPL  ACBNAME=BINT01 ,AUTH=ACQ ,PARSESS=YES ,EAS=1
BINT02  APPL  ACBNAME=BINT02 ,AUTH=ACQ ,PARSESS=YES ,EAS=1
```

- Fill in the different fields and Select option A (Add) when you are ready to create the new profile. The BCOM user interface administrative setup is now completed.

Using the ISPF User Interface

- Make sure BCOM is running or start it by using the BCOM startup JCL (see step 3 – Setup the startup JCL).
- Make sure the “ISPF User Interface – Admin Quick start” has been completed.
- Take note of the BINT environment profile created by the administrator during the “Admin Quick Start”
- Execute the CLIST CLTISPFB
- EX '<prefix>.SOURCE(CLTISPFB)'
- Select option 2 – BCOM and specified the environment created by the administrator. You are now in the BCOM user interface; it's time to explore...
- The setup of BCOM OS/390 is now completed, you can pass to the chapter “Running Test Scripts” to do some file transfers.

Configuration References

Configuring BCOM EP Client and Server under OS/390

To define a BCOM EP server in the section FS62LCL:

Add an EP (endpoint) statement to the macro FS62LCL of the BCOM configuration file.

```
FS62LCL,
...
EP=( epname , maxreq , maxsess )
```

where...

epname: up to 64 chars. Is referenced by the endpoint configuration file.

maxreq: Maximum number of requests that can be treated at the same time.

Maxsess: The maximum number of sessions.
For each session, a new process (TCB) is created.

To define a BCOM EP Client in the section FS62PROC:

Add an EP (endpoint) statement to the macro FS62PROC of the BCOM configuration file.

```
FS62PROC
PROCID=$AAAA,
EP=epname,
EPSESS=( x, y, z, t )
```

where...

epname up to 64 chars. Is referenced by the endpoint configuration file.

x: Number of sessions at startup

y: The increment by which additional sessions are started

z: The maximum number of sessions.

t: Inactivity timeout value in minutes.
The incremented sessions are terminated when timeout expires.

Configuring the EP file under OS/390

This is a new configuration file that is required in BCOM V5 to define TCP/IP characteristics. There is an EP configuration file on every BCOM node. The syntax of the parameters is the same on all platforms although some parameters are platform specific. The EP file associates an endpoint to an IP address. In the case of a requester it associates also the requester to a remote server.

The EP file definition is usually included in the configuration JCL as an in stream dataset reference by the DDNAME BMSRC. The program BMCCFG compiles the content of BMSRC to a binary format and stores it to the file specified by the DDNAME BMCONFIG (normally referring to dataset prefix.BMCONFIG).

For each FS62PROC that contains an EP statement, add an entry in the CLIENT SECTION of the EP configuration file.

You should also have an entry in the SERVER SECTION of the EP configuration file for the server statement of the FS62LCL section.

For each remote server, add an entry in the SERVER SECTION.

Defining a client Endpoint

To define a client endpoint used by a BCOM EP requestor you need to add two statements in the SECTION CLIENT.

NAME =

This indicates the beginning of a new endpoint definition. The name should be the same as the one in following "EP =" in the FS62PROC section.

SERVER =

This indicates the remote server to which this particular client will connect. The server should be defined in the SERVER SECTION. See the section "*Defining a remote server endpoint*" below.

Defining a local server Endpoint

A local server endpoint is required when an Endpoint has been specified in the macro FS62LCL of the BCOM configuration file. There are two statements to fill in into the SECTION SERVER to define a server Endpoint.

NAME =

This indicates the beginning of a new endpoint definition. The name should match the endpoint specified in the macro FS62LCL of the BCOM configuration file (SMTPCP).

ADDRESS =

Specifies the IP address, in the form of

nnn.nnn.nnn.nnn[:pppp] or
dsnname[:pppp]

where

nnn.nnn.nnn.nnn is the local IP address in doted format
pppp is the port number. The default port number is 1958.

Under OS/390, if you specify an address of 0.0.0.0:portnumber the server will service all connection requests for the TCP/IP stack used by BCOM, regardless of the network adapter on which they arrive.

Defining a remote server Endpoint

A remote server is a server that the local clients (requestors) will connect to. There are two statements to fill in to define a server.

NAME =

This indicates the beginning of a new endpoint definition. This name is symbolic and is referenced by the statement SERVER in the CLIENT SECTION of the EP configuration file. We recommend to use the same name as the one that defines the server in the local BCOMCONF and EP file.

ADDRESS =

Specifies the IP address, in one of the two following formats:

nnn.nnn.nnn.nnn[:pppp] or
dsnname[:pppp]

where

nnn.nnn.nnn.nnn is the local IP address in doted format,
pppp is the port number. The default port number is 1958.

Compiling the EP file

Submit the configuration JCL to compile the EP configuration.

EP file example

```

//<jobcard>
//BMCFG EXEC PGM=BMCCFG
//STEPLIB DD DSN=&PREFIX..LOAD,DISP=SHR
//BMCONFIG DD DSN=&PREFIX..BMCONFIG,DISP=SHR
//SYSPRINT DD SYSOUT=*
//BMSRC DD *

SECTION CLIENT
NAME = EP.CLIENT
SERVER = SERVER.NSK

SECTION SERVER
NAME = SERVER.OS390 ;LOCAL SERVER
ADDRESS = 208.180.1.46:1958 ;LOCAL IP ADDRESS

NAME = SERVER.NSK ;REMOTE SERVER
ADDRESS = 208.180.1.19:1958 ;REMOTE IP ADDRESS

```

Configuring the BCOM User Interface

Three categories of BCOM interface exist on OS/390:

- 1) A full screen interface using ISPF/PDF services is available to pass commands interactively to BCOM. See the section “*Configuring ISPF Bcom User Interface (BINT)*” for instructions to install and setup.
- 2) A line mode interface is available to pass commands to BCOM in batch via a JCL or to pass commands interactively under TSO. See the section “Configuring the line mode interface” for instructions to install and setup.
- 3) A programmatic interface (API) is also available for OS/390 applications and CICS transactions, but it will not be discussed in this document. See the “*BCOM V5 for MVS User’s Guide*” for more details about the programmatic interface.

Configuring ISPF BCOM User Interface (BINT)**Installing the interface temporarily**

A temporary setup will reallocate the ISPF environment every time the BCOM interface (BINT) is invoked. This is useful for portability, testing or evaluation, and consists of executing a stand-alone CLIST from your TSO session. The CLIST allocates the specific ISPF libraries and concatenates them to those of your TSO logon procedure.

The following sample CLIST will dynamically allocate the ISPF libraries required for the MENU-DRIVEN interface of BCOM:

```
SET PREFIX='RESTORING JOB PREFIX '- SEE CHAPTER 2 FOR RESTORING JCL
ISPEXEC LIBDEF ISPPLIB DATASET ID ('&PREFIX..BINT.PANELS')
ISPEXEC LIBDEF ISPMLIB DATASET ID ('&PREFIX..BINT.MSGS)
ISPEXEC LIBDEF ISPTLIB DATASET ID ('&PREFIX..BINT.TABLES)
ISPEXEC LIBDEF ISPTABL DATASET ID ('&PREFIX..BINT.TABLES)
ISPEXEC LIBDEF ISPLLIB DATASET ID ('&PREFIX..BINT.LOAD)
ISPEXEC SELECT PGM(B62BITST) NEWAPPL(BINT) PASSLIB
```

The sample of this CLIST can be found in member CLTISPFB in the ETI-NET distribution tape source library.

Invoking the Menu Interface

Once you have written the above TSO CLIST into a member of your clist dataset library (e.g. as member "MENUBINT"), you only have to type the name from the command line (outside of ISPF) of a TSO screen in order to invoke the BINT program.

If your clist library has been concatenated to your TSO-ISPF clist library at LOGON time, then simply type in the name of your CLIST from the ISPF option "6 Command":

```
MENUBINT
```

If you created your clist library as a sequential CLIST dataset, or if your clist library is not dynamically allocated to SYSPROC, or if you are executing TSO in the command-line mode (outside of ISPF), then type the following fully qualified command name to invoke the Menu Interface:

```
EXEC '<YOUR.CLIST.DATASET>(MENUBINT)'
```

You can now pass to the section *"BCOM ISPF Administrative setup"* to complete the ISPF Bint setup.

Installing the Interface Permanently

A permanent setup will configure the Menu Interface into the TSO-ISPF environment of your TSO LOGON Procedure; this will integrate the libraries of the BCOM interface to those defined in your standard TSO logon procedure. By modifying your ISPF Main Menu Panel (or some other panel) you will then be able to associate some selectable menu item to the Menu Interface of BCOM.

Please consult the *"BCOM for MVS V5 Installation Guide"* for instructions to install the ISPF BINT permanently.

You can now pass to the section *"BCOM ISPF Administrative setup"* to complete the ISPF Bint setup.

BCOM ISPF-Administrative Setup

In order to create and maintain session environments (profiles) for BCOM users, you or the system administrator, will select the option ADMINISTRATION FUNCTIONS from the General Menu.

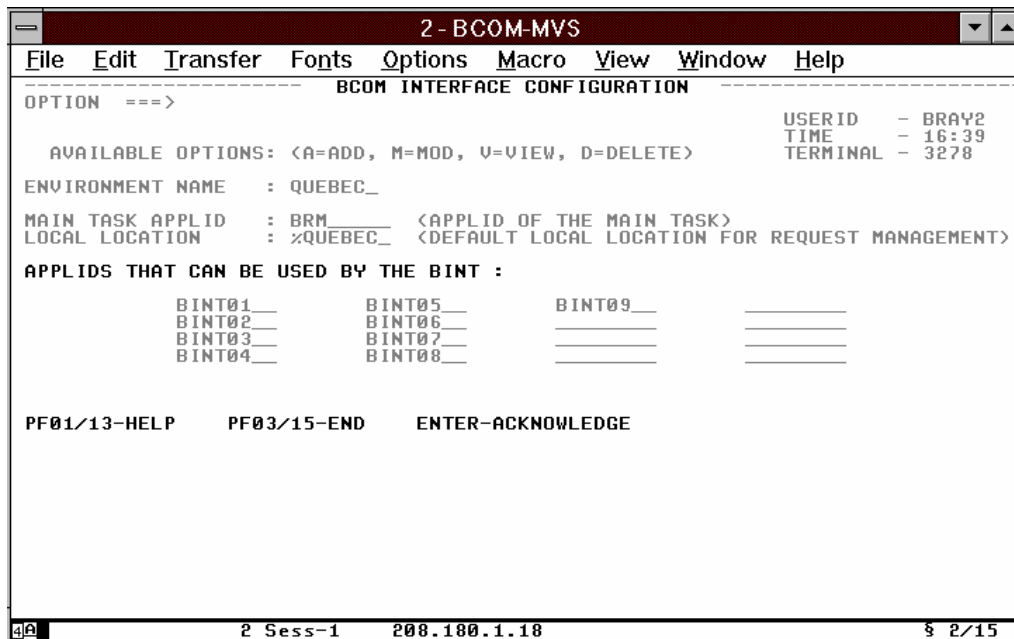
A BCOM control password is required to gain access to the INTERFACE CONFIGURATION panel: this control password is found in member B62BINFO of the FS62SRCE library.

User session environments

Some control information must be configured into the User Interface before a TSO user is allowed to initiate a session with BCOM.

This control information is called a 'session environment' and its characteristics are set by selecting the option ADMINISTRATION FUNCTIONS and replying to the password prompt.

FIG 3-3. User Session Environments



The Session Environment Profile

The Session Environment Profile is used to provide certain details of the User Interface and to pre-set some of the parameters needed to establish their BINT session.

BCOM is a SNA application: the BCOM Main Task Monitor must be accessed through a unique VTAM APPLID and even the OS/390 User Interface program will use APPC protocols to communicate with the Main Task Monitor. The Session Environment Profile defines the necessary VTAM APPLID's that can be used in establishing BINT sessions with a particular BCOM Main Task¹.

This is particularly useful when running different copies of BCOM at the same installation.

Its content is described below.

ENVIRONMENT NAME	This name is unique per ISPF Table dataset and serves to store the characteristics being set by this function.
MAIN TASK APPLID	This is the VTAM APPLID of the BCOM Main Task.
LOCAL LOCATION	This is the default local location for the indicated MAIN TASK APPLID. This name must begin by a % sign and will automatically be inserted in your request definitions under the keyword LOCAL-LOCATION.
APPLID's TO USE	This is a list of all the VTAM APPLID's that can be used by the User Interface in establishing communication with the Main Task of BCOM.

Note:

Do not forget to add to VTAM the APPLID's defined in this environment profile - see the installation procedures in your BCOM for MVS Installation & Operations Manual.

Using the Session Environment Profile

There are different ways to use a Session Environment Profile; for example:

- TO DISTINGUISH BETWEEN DIFFERENT BCOM ENVIRONMENTS - by pre-setting the name of a TEST or a PRODUCTION BCOM APPLID and local location name, your users do not have to know the WHERE's and HOW's in order to connect to the right BCOM program.
- TO CONTROL THE NUMBER OF CONCURRENT USERS - defining a short list of APPLID's for the Interface will limit the number of concurrent sessions started with the User Interface.

Note that the ADMINISTRATION FUNCTIONS of the BINT are completely "stand-alone": they do not require any communication session with BCOM.

¹ Take note that BCOM OS/390 is using VTAM and SNA to communicate between the BINT and BCOM monitor and so even when your BCOM client and Server are using TCPIP to communicate.

Administration Functions

The following Administration Functions can then be selected from the session environment panel:

A	ADD	To ADD a new environment configuration to your ISPF Table library. The environment name must be unique.
M	MODIFY	To MODIFY an existing environment configuration. The environment name must exist in your ISPF Table library.
D	DELETE	To DELETE an existing environment configuration. The environment name must exist in your ISPF Table library.
V	VIEW	To VIEW an existing environment configuration. The environment name must exist in your ISPF Table library.

Configuring the line mode user interface

By starting up a copy of the B62BINT, you gain access to the services of the Monitor and can enter operator commands to control the evolution of the platform.

TSO BINTS

The BCOM User Interface called BINT, is used to communicate with an active BCOM Monitor (or Main Task). It is the vehicle through which all requests are defined and queued for transfer. In addition, all operational commands are entered through that interface.

There are two methods by which you can interface to the BCOM program from your 3270 terminal:

You can run the command-line interface from a TSO clist : this interactive method is based on a simple "line at a time" display mechanism;

You can run the Menu interface for TSO-ISPF : this interactive method is based on panel displays and is a more congenial to work.

COMMAND-LINE BINT

Starting a B62BINT Job - Startup JCL for the User Interface

The BCOM User Interface is used to communicate with an active BCOM Monitor. To facilitate the definition of file transfer requests, the B62BINT interface allows you to set default values for a number of request definition parameters.

Tailor the sample JCL in member JCLBINT of the source library:

```
//<jobcard>
//STEPXX EXEC PGM=B62BINT,
//          parm='<B62BINT-applid>, <b62main-applid>',          X
//          <def-Lloc>, <def-Rloc>,<def-Rtc>, <def-pri>'
//STEPLIB DD DISP=SHR,DSN=BCOM.FS62.LOAD
//SYSPRINT DD SYSOUT=*
//SYSOUT DD SYSOUT=*
//COMMOUT DD SYSOUT=*
//COMMIN DD *
Your B62BINT commands
/*
```

The following parameters are provided on the EXEC statement:

B62BINT APPLID mandatory	A VTAM APPLID to be used by your B62BINT subtask.
B62MAIN APPLID mandatory	The VTAM APPLID of the B62MAIN task.
DEF LLOC optional	A default name for the local location for request definitions; must begin with a % sign;
DEF RLOC optional	A default name for a remote location for request definitions; must begin with a % sign;
DEF RTC optional	A default routing class for request definitions;
DEF PRI optional	A default PRIORITY CLASS for request definitions.

Note 1: *The optional parameters are positional.*

```
Ex. 1: . . . B62MAIN-APPLID '
Ex. 2: . . . B62MAIN-APPLID , DEF-LLOC , , DEF-RTC '
```

Note 2: *Insure that there are NO sequence numbers within the JCL file as these will be interpreted with the B62BINT commands and create a syntax error. (Use UNNUM mode).*

Note 3: *You may want to copy or move this member to an OS/390 procedure library (such as SYS2-PROCLIB), which is accessible to TSOsss.*

Example:

```

//JOBNAME JOB ACCT,PROG,CLASS,MSGCLASS,NOTIFY=
//*****
//*
//* HOW TO USE THIS JCL:
//*
//* 1. SUPPLY A VALID JOB CARD FOR YOUR INSTALLATION.
//* 2. CHANGE 'INTAPPL' TO YOUR BATCH INTERFACE VTAM
//* APPLICATION ID.
//* 3. CHANGE 'LOCAPPLID' TO YOUR BCOM MONITOR VTAM
//* APPLICATION ID.
//* 4. CHANGE '%MYLOC' TO YOUR BCOM MONITOR LOCAL
//* LOCATION NAME.
//* 5. CHANGE '%REMLOC1' TO YOUR PARTNER'S LOCATION
//* NAME.
//* 6. CHANGE 'RCID' TO YOUR PARTNER'S ROUTING CLASS.
//* 7. CHANGE 'PC' TO A VALID NUMERIC PRIORITY CLASS
//* BETWEEN '01' AND '99'.
//* 8. CHANGE 'BCOM.LOAD.LIBRARY' TO YOUR BCOM LOAD
//* LIBRARY.
//* 9. THE //COMMIN DD STATEMENT CONTAINS THE INTERFACE
//* COMMANDS. (IN THIS EXAMPLE A STATUS COMMAND).
//* MAKE SURE THE COMMAND HAS SPACES IN COLUMNS 73 TO
//* 80. THIS DD STATEMENT COULD ALSO POINT TO A FILE
//* WITH A RECORD SIZE OF 80 BYTES. AGAIN, THIS FILE
//* SHOULD CONTAIN SPACES IN COLUMNS 73 TO 80.
//* 10. THE //COMMOUT DD STATEMENT SHOULD POINT TO A
//* SYSOUT CLASS THAT WILL CONTAIN THE RESULTS OF THE
//* COMMANDS ISSUED IN THE //COMMIN DD STATEMENT.
//* 11. THE //SYSUDUMP DD STATEMENT SHOULD POINT TO A
//* VALID DUMP SYSOUT CLASS.
//*
//* PLEASE NOTE THAT '%MYLOC', '%REMLOC1', 'RCID',
//* 'PC' ARE OPTIONAL PARMS THAT PROVIDE DEFAULTS TO
//* USERS OF THE BATCH INTERFACE. THE MINIMUM PARMS
//* NEEDED TO RUN THE INTERFACE ARE 'INTAPPL' AND
//* 'LOCAPPLID'.
//*
//* EXAMPLE:
//*
//* PARM='INTAPPL,LOCAPPLID'
//*
//*****
//STEP01 EXEC PGM=B62BINT,
// PARM='INTAPPL,LOCAPPLID,%MYLOC,%REMLOC1,RCID,PC'
//STEPLIB DD DSN=BCOM.FS62.LOAD,
// DISP=SHR
//COMMOUT DD SYSOUT=*
//SYSUDUMP DD SYSOUT=*
//COMMIN DD *
STATUS
/*

```

Starting a TSO B62BINT – CLIST for TSO Interface

You can create a CLIST that will start up the B62BINT program directly from your TSO terminal. To do this, tailor the sample CLIST provided in member CLTBINT of the source library:

```

FREE F(COMMIN,COMMOUT)
/*****
/*
/* CLIST TO EXECUTE THE BINT INTERFACE IN LINE MODE
/*
/*
/* WHAT TO CHANGE:
/*
/* 1. CHANGE 'BCOM.FS62' PREFIX TO THE BCOM LIBRARY
/* PREFIX USED AT THE INSTALLATION TIME.
/*
/* 2. CHANGE 'INTAPPL' TO YOUR INTERFACE VTAM APPLID.
/*
/* 3. CHANGE 'LOCAPPLID' TO YOUR BCOM MONITOR VTAM
/* APPLID.
/*
/* 4. CHANGE '%MYLOC' TO YOUR BCOM MONITOR LOCAL
/* LOCATION.
/*
/* 5. CHANGE '%REMLOC1' TO YOUR PARTNER'S LOCATION
/* NAME.
/*
/* 6. CHANGE 'RCID' TO THE ROUTING CLASS USED FOR
/* YOUR PARTNER'S LOCATION.
/*
/* 7. CHANGE 'PC' TO A PRIORITY CLASS.
/*
/* PLEASE NOTE THAT %MYLOC, %REMLOC1, RCID, AND PC ARE
/* USED TO SUPPLY DEFAULT VALUES FOR USERS OF THE
/* LINE MODE INTERFACE. THERE ARE OPTIONAL. THE
/* FOLLOWING IS THE MINIMUM NEEDED TO RUN THE INTERFACE:
/*
/* CALL '&BINTLD..LOAD(B62BINT)' +
/* '&P1,&P2'
/*
/*
/*****
FREE F(COMMIN,COMMOUT)
ALLOC FI(COMMIN) DA(*)
ALLOC FI(COMMOUT) DA(*)
SET BINTLD=BCOM.FS62
SET P1=INTAPPL
SET P2=LOCAPPLID
SET P3=%MYLOC
SET P4=%REMLOC1
SET P5=RCID
SET P6=PC
CALL '&BINTLD..LOAD(B62BINT)' +
      '&P1,&P2,&P3,&P4,&P5,&P6'
FREE F(COMMIN,COMMOUT)

```

The default parameters specified on the PARM= operand is used in conjunction with the SET and RESET commands of the B62BINT subtask. They will pre-set the corresponding keywords of SET commands and will also be used at RESET time. To override them, enter another value with the SET command.

Installation on NSK

The BCOM software is packaged in two permanent sub-volumes, and may contain one or two optional sub-volume, to facilitate the installation / upgrade process.

- BKV510E sub-volume contains all executables.
- BKV510D sub-volume contains all data files, obey files and messages.
- BKV510A. This sub-volume is optional, or “Add-on”. If it exists, this sub-volume contains the software changed since the general release.
- BKV510B. This second “Add-on” sub-volume, if it exists, contains data files, obey files or messages changed since the general release.

NOTE: Depending on the software release condition, either one, both or none of the “add-on” subvolume can exist.

Restore the Distribution CD / Tape

Restore the two permanent sub-volumes (and one optional sub-volume) as shown below.

Restoring from tape

```
RESTORE $tape, *.*.*, &  
MAP NAME *.*.* TO $vol.*.*, MYID, LISTALL
```

This will create two permanent sub-volumes BKV510E and BKV510D. The add-on sub-volumes BKV510A and/or BKV510B are also created.

Restoring from CD

First, upload the file BKV510ED.BIN to your Tandem; please use BINARY option when uploading. Then, use the UNPAKN utility to unpack it.

```
RUN UNPAKN BKV510ED, *.*.*, &  
MAP NAME *.*.* TO $vol.*.*, MYID, LISTALL
```

This will create two permanent sub-volumes BKV510E and BKV510D.

If the \Add-on directory exists on the software CD, upload the file BKV510AB.BIN from the \Add-on directory to your Tandem, using BINARY option. Then, use the UNPAK utility to unpack it.

```
RUN UNPAKN BKV510AB, *.*.*, &  
MAP NAME *.*.* TO $vol.*.*, MYID, LISTALL
```

The add-on sub-volumes BKV510A and/or BKV510B are created.

Process the Add-on sub-volume

If the Add-on subvolume BKV510A exists, replace the corresponding software in BKV510E sub-volume by those on the BKV510A sub-volume, like this:

```
FUP DUP $vol.BKV510A.*, $vol.BKV510E.*, PURGE, SOURCEDATE
```

Similarly, if the Add-on subvolume BKV510B exists, replace the corresponding software in BKV510D sub-volume by those on the BKV510B sub-volume, like this:

```
FUP DUP $vol.BKV510B.*, $vol.BKV510D.*, PURGE, SOURCEDATE
```

Make sure that to set the correct alternative keys files for the data files like EVNTDB, CATBK and CATBKFIL.

Create the working sub-volume

Create the working sub-volume BCOMV510 from which you will be running BCOM.

```
FUP DUP $vol.BKV510D.*, $vol.BCOMV510.*, SOURCEDATE
```

Customize your Environment

Once you have created the working subvolume in \$vol.BCOMV510, customize your environment as follows:

Go through the following file making sure to point the executables to the sub-volume BKV510E in the following file

- Edit STRTBGEN to customize for your environment
- Edit STRTBINT to customize for your environment
- Edit STRTBLOG to customize for your environment
- Edit STRTBMON to customize for your environment
- Edit STRTDIRS to customize for your environment
- Edit STRTDIST to customize for your environment
- Edit STRTEGEN to customize for your environment
- Edit ONLDEXIT obey file.

Please follow the instructions inside the file closely. If you do not have a customized user-exit library, please select one of the two sample one in the BKV501E subvolume: EXITV5C (for Native-C version), or EXITV5P (for pTAL version).

To customize your user exit library, please consult the *BCOM for NSK Guardian Installation and Operation Guide* document, *Customizing BCOM* section. This section also describes the guide line to migrating your existing user exits for BCOM APPC to BCOM EP.

- Obey this ONLDEXIT obey file to link the user-exit library to BCOM-EP components. **This step must be executed only once.**

NOTE: *Make sure the Key sequenced files points to the correct alternative key file, by providing the correct \$vol in the following commands.*

```
FUP ALTER QUEUE, ALTFIL( 0, $vol.BCOMV510.QUEUE0)
FUP ALTER CATBK, ALTFIL( 0, $vol.BCOMV510.CATBK0)
FUP ALTER CATBKFIL, ALTFIL( 0, $vol.BCOMV510.CATBKFI0)
FUP ALTER EVNTDB, ALTFIL( 0, $vol.BCOMV510.EVNTDB0)
```

Configuration Adjustments

Under Tandem, the configuration of the Endpoint server and requestor is almost the same as the APPC server and requestor.

Edit BCOMCONF file and locate the "DEFINE EP-REQUESTOR". The keyword ENDPOINT points to the session properties for that requestor.

Customize the definition according to your environment (see example below).

```

COMMENT *****
COMMENT END-POINT REQUESTOR
COMMENT *****
DEFINE   EP-SERVER,
        NAME           $Q1ER,
        TYPE           STANDARD,
        MAXRQST        4,
        PROCESS-CPU    0,
        PROCESS-PRI    120,
        IO-PROCESS-CPU SAME,
        AUTO-STARTUP   NO,
        MAXBLK         32000,
        WINDCNT        50,
        OPTION-FLAG    00,
        PRINT-DELAY    20,
        ENCOMP         NO,
        DATA-ENCRYPTION NO,
        ROUTING        %Q1M(1,2,3,4,5),
        ENDPOINT       EP.CLIENT(2,2,4, 30);

```

The syntax is:

```
ENDPOINT epname(x,y,z,t)
```

where...

epname: up to 64 chars. Is referenced by the ENDPOINT configuration file.

X: Number of sessions at startup

Y: The sessions increment value

Z: The maximum number of session.

T: Inactivity timeout value in minute. The incremented sessions are terminated when it expires.

To define a server, a section DEFINE EP-SERVER is included:

```

COMMENT *****
COMMENT END-POINT SERVER
COMMENT *****
DEFINE    EP-SERVER,
          NAME                $Q1ES,
          TYPE                 STANDARD,
          MAXRQST              4,
          PROCESS-CPU         0,
          PROCESS-PRI         120,
          DESTFILE             $S.#BCOMEPI,
          AUTO-STARTUP        NO,
          MAXBLK               32000,
          WINDCNT              50,
          ENDPOINT             SERVER.NSK(4);

```

The syntax is:

```
ENDPOINT epname(x)
```

where...

epname: up to 64 chars. Is referenced by the ENDPOINT configuration file.

x: Maximum number of sessions.

Configuring the EP File under Tandem

This is a new configuration file that is required in BCOM V5 to define TCP/IP characteristics. There is an EP configuration file on every BCOM node. The syntax of the parameters is the same on all platforms although some parameters are platform specific. The EP file associates an endpoint to an IP address. In the case of a requestor it associates also the requestor to a remote server. The EP file default name is BMCONF. To configure your BMCONF file (in you working subvolume) do the following:

```
VOLUME $vol.BCOMV510
```

Edit the configuration file

```
TEDIT BMCONF
```

- For each DEFINE EP-REQUESTOR section in the BCOMCONF file, add an entry in the EP configuration file in the CLIENT SECTION.
- For each DEFINE EP-SERVER section in the BCOMCONF file, add an entry in the EP configuration file in the SERVER SECTION.
- For each remote server, add an entry in the SERVER SECTION as appropriate.

Defining a client

To define a client (or requestor). There are three statements to fill in to define a client under the SECTION CLIENT.

NAME =

This indicates the beginning of a new definition. The name should be the same as the one in following ENDPOINT in the BCOMCONF file's DEFINE EP-REQUESTOR section.

SERVER =

This indicates the remote server to which this particular client will connect. The remote server should be defined in the SERVER SECTION.

TCPPROCESS =

This specifies the TCP/IP process that the client will use to connect to the remote server. If you don't specify any, the system default will be used.

See example below.

Defining a local server

A local server is a server defined in the local BCOMCONF file in the DEFINE EP-SERVER section. There are four statements to fill in to define a local server.

NAME =

indicates the beginning of a new definition. The name should be the same as the one in following ENDPOINT in the BCOMCONF file's DEFINE EP-SERVER section.

ADDRESS =

Specifies the IP address, in the form of

nnn.nnn.nnn.nnn[:pppp] or
dsname[:pppp]

where

nnn.nnn.nnn.nnn is the local IP address in doted format
pppp is the port number. The default port number is 1958.

TCPPROCESS =

This specifies the TCP/IP process that the server will use to listen for connection from remote client. If you don't specify any, the system default will be used.

TCPRESOLVER =

If the local server address is given as a DSN name then the host file should be specified under this keyword; if not specified, the system default will be used.

Defining a remote server

A remote server is a server defined that the local clients (requestors) will connect to. There are three statements to fill in to define a remote server.

NAME =

indicates the beginning of a new definition. This name is symbolic and is referenced by the statement server in the CLIENT SECTION but we recommend that the same name as the one that define the server in its local BCOMCONF and EP file.

ADDRESS =

Specifies the IP address, in one of the two following formats:

```
nnn.nnn.nnn.nnn[:pppp]           or
dsnname[:pppp]
```

where

```
nnn.nnn.nnn.nnn  is the local IP address in doted format,
pppp              is the port number. The default port number is 1958.
```

TCPRESOLVER =

If the remote server address is given as a DSN name then the host file should be specified under this keyword; if not specified, the system default will be used.

Compiling the EP file

Before being used the configuration file must be compiled and put in a binary format. To do that use the OBEY file STRTEGEN. It contains the command:

```
RUN subvol.BMCCFG BMCONF BMCFG
```

Where

```
BMCONF  is the INPUT file
BMCFG   is the OUTPUT file
```

NOTE: *The BMCONF and BMCFG files are provided in the BKV510D Distribution subvolume.*

BMCONF example

```
; ENDPOINT CONFIGURATION FILE
;
SECTION CLIENT
NAME          = EP.CLIENT
SERVER        = SERVER.OS390
TCPPROCESS    = $ZTC1

SECTION SERVER
NAME          = SERVER.OS390
ADDRESS       = 208.180.1.46:1958
TCPRESOLVER   = $SYSTEM.TCPIP.HOST

NAME          = SERVER.NSK
ADDRESS       = 208.180.1.19:1958
TCPPROCESS    = $ZTC2
TCPRESOLVER   = $SYSTEM.TCPIP.HOST
```

Running BCOM

To start BCOM, simply obeying the file STRTALL, like this:

```
> O STRTALL
```

Running Test Scripts

Preparation for the Test Scripts

The test scripts are made up of 6 requests that are chained together. See the following set of requests going both from OS/390 to Tandem/NSK and from Tandem/NSK to OS/390. Then follow step by step the instructions on the next page.

Requests from Tandem to OS/390

S1U001	Send File unstructured	sends file to OS/390
S1D001	Receive File Unstructured	receives file from OS/390
S1U002	Send File Entry Sequence	sends file to OS/390
S1D002	Receive File Entry Sequence	receives file from OS/390
S1U003	Send File Unstructured Large	sends file to OS/390
S1D003	Receive File Unstructured Large	receives file from OS/390

Requests from OS/390 to Tandem /NSK

C1D001	Receive File Unstructured	receives file from NSK
C1U001	Send File unstructured	sends file to NSK
C1D002	Receive File Entry Sequence	Receives file from NSK
C1U002	Send File Entry Sequence	sends file to NSK
C1D003	Receive File Unstructured Large	receives file from NSK
C1U003	Send File Unstructured Large	sends file to NSK

Instructions for Running Test Scripts

It is suggested that the tests started first with queueing the requests from Tandem/NSK, then queueing requests from OS/390.

Test Queueing Requests from Tandem/NSK

1. TEDIT BETA1S in your Working sub-volume
2. Replace all "yourvol" by your installation volume.
3. Replace all "yourunit" by your installation unit.
4. Replace all "BCOM.FS62." to the MVS prefix of your test environment on OS/390.
5. Exit TEDIT
6. Start BCOM on OS/390 by submitting prefix.SOURCE (STRTB.COM)
7. Start BCOM on NSK by obeying (STRTALL).
8. Start BINT on NSK by obeying (STRTBINT)
9. ~START \$NTR1 Start EP Requestor inside BINT
10. ~START \$NTS1 Start EP Server inside BINT
11. ~STATUS \$NTR1 Should be CONNECTED YES
12. ~O BETA1S To load and define the requests chain.
13. ~QUEUE #S1U001 Queue the first request in the chain.
14. ~QLIST Check to see requests executing.
15. LISTLOG View and verify the results of the six-chained requests.

Test Queueing Requests from OS/390

1. Edit the JCL *bcom.fs62.SOURCE(JCLTESTS)* to conform to your environment.
2. Submit the JCL *bcom.fs62.SOURCE(JCLTESTS)* to define the request to BCOM.
3. Edit the clist file CLTISPFB for your environment
4. EXEC CLTISPFB to start your MVS BINT
5. Go to MANAGEMENT and start the process \$NSK01.
6. Process status should be "IN SESS".
7. Go to REQUEST list.
8. Queue the request #C1U001 that will start a chain of 6 requests.
9. View log to check results.

Migrating from previous versions

This section describes the steps that an existing BCOM customer must perform in order to preserve his existing BCOM V4 (APPC) environment when upgrading to BCOM V5.1 (APPC and TCP/IP).

The migration process described below assumes that a customer wants to preserve his existing BCOM APPC environment while adding BCOM TCP/IP as an alternate path between two BCOM nodes.

OS/390 Migration

Pre-Requisites

- Make sure the BCOM OS/390 software have been restored correctly on disk.

Migrating the BCOM Control files

Two BCOM control files (Queue and Request) are mandatory, and three control files are optional (Log1 and Log2 are required if you wish to activate the BCOM logger, the security file is required if you want to run with the BCOM security feature) to run BCOM V5.1 on OS/390.

All those control files are compatible between BCOM Version 4 and Version 5.1. BCOM V5 can be run with your existing control files (or a copy if you prefer) without any conversion or migration.

Your existing BCOM OS/390 requests can run over BCOM V5.1 (over APPC or TCPIP) without any modification.

Migrating the BCOM Configuration

The existing BCOM V4 source configuration can be used in APPC with BCOM V5.1 without any change, and by regenerating it using the new BCOM V5.1 library. A sample JCL (JCLCONF) is available in the BCOM source library to generate the configuration file.

If you intend to change your BCOM configuration to use TCP/IP then you should read the section "Migrating from SNA to TCP/IP"

Migrating from SNA to TCP/IP

The support of TCP/IP in BCOM is offered via the concept of BCOM abstracted endpoint (EP). So in order to configure BCOM over TCP/IP you need to configure one BCOM EP server (via macro FS62LCL) and BCOM EP client processes (via macro FS62PROC). A new configuration file, the EP definition file, contains the endpoint definitions and specifies the TCPIP resources to be used for a BCOM endpoint.

Prepare the BCOM EP Definition File

The member SMPEPDEF of the BCOM source library can be used as a starting point to setup your BCOM EP definition file. SMPEPDEF contains sample endpoint definitions for BCOM client and BCOM server. You might decide to use those endpoint definitions for you own BCOM configuration, if you do so make sure that you specify the IP addresses proper to your installation...

Please consult the section “*Configuring the EP file under OS/390*” for more details about the BCOM endpoint definition.

Migrating the BCOM Configuration File

Copy your BCOM configuration source file to a new member; this will become your new configuration for BCOM V5.1.

To define a BCOM EP server

- Edit the configuration file
- Locate the macros FS62LCL and take note of the parameters for APPC:
 - MXRRQST – Represents the maximum number of concurrent transfers for all the BCOM APPC sessions (Client and server).
 - SERVCON – Represents the number of session control blocks reserved for the APPC server sessions.
- Add an EP statement in the FS62LCL configuration MACRO to define a BCOM EP server (to service TCPIP sessions).

```
FS62LCL,
...
EP= ( epname , maxreq , maxsess )
```

where...

epname: up to 64 chars. Must be unique and refers to the endpoint configuration file in the server section.

maxreq: Maximum number of requests that can be treated by the EP Server.

Maxsess: The maximum number of sessions that can be accepted by the EP Server. For each session, a new process (TCB) is created.

- Edit the EP definition file and add a “local server endpoint” in the SECTION SERVER. The IP address specified should be the address to be used by the OS/390 system to listen for connection, or 0.0.0.0 to listen on all the addresses supported by the TCPIP stack used by BCOM.

To define a BCOM EP Client

- Edit the BCOM configuration file
- Locate the macros FS62PROC for the BCOM APPC client and take note of the following parameters:
 - The number of SNA LU (Logical Unit) specified; this represents the number of sessions configured for the BCOM APPC client.
- Duplicate the entire content of the Macros FS62PROC, and change the PROCID to be unique in the configuration file. This will become your new BCOM EP client.
- For the new BCOM EP client: remove the LUNAME statement and replace it by an EP (endpoint) and EPSESS (endpoint sessions) statements.

```
FS62PROC
PROCID=$AAAA,
EP=epname,
EPSESS=( x , y , z , t )
```

where...

epname up to 64 chars. Is referenced by the endpoint configuration file.

x : Number of sessions at startup

y : The increment by which additional sessions are started.

z : The maximum number of sessions.

t : Inactivity timeout value in minutes.
The incremented sessions are terminated when it expires.

- Edit the EP file and add a “*client endpoint*” in the SECTION CLIENT and the corresponding “*remote server Endpoint*” in the SECTION SERVER. The IP address and port specified should be the address of the remote system and the port configured for the BCOM server on the remote system.

Migrating the BCOM Configuration JCL

- Copy your configuration JCL to new JCL member; this will become your new configuration JCL.
- Make sure the JCL is using the new BCOM V5.1 library.
- Add new JOB step that will invoke BMCCFG to validate and compile the new EP file which contain the endpoint definitions.

Example

```
//*****  
//* VALIDATE THE EP FILE  
//*****  
//BMCFG EXEC PGM=BMCCFG  
//STEPLIB DD DSN=&PREFIX..LOAD,DISP=SHR  
//BMCONFIG DD DSN=&PREFIX..BMCONFIG,DISP=SHR  
//BMSRC DD DSN=<ep-file>,DISP=SHR  
//SYSPRINT DD SYSOUT=*
```

Generate the BCOM configuration

- Submit your new configuration JCL and make sure you obtain condition code of zero for each of the job step.

Migrating the BCOM Startup JCL

Additional files are required and need to be specified in the startup JCL in order to run BCOM V5.1. The startup JCL is the JCL running the program B62MAIN. You can browse the member (STRTBCOM) for a sample. Here are the steps to migrate your existing startup JCL.

- Copy your startup JCL to a new member.
- Edit the new member; this will become your startup JCL for BCOM 5.1.
- EXEC Card: Make sure that the runtime parameter (PARM=) represent your BCOM V5.1 configuration member in the load library...

- STEPLIB DD
 - Make sure you specified the BCOM V5.1 library.
 - Concatenate the TCPIP linklib if it's required at your site.
- SYSTCPD DD
 - Specify the TCPIP profile dataset if it's required at your site or if you do not want BCOM to use the default TCPIP profile.
- BCR00, BCX00 and BMCONFIG DD
 - Add three new DD statements (BCR00, BCX00 and BMCONFIG) and specify the name of the dataset create during the installation.
- BCELOG DD
 - Add a BCELOG DD statement and assign it to a DUMMY dataset.

Performance note:

BCOM V5.1 for OS/390 has been developed using IBM Language Environment and Dynamic Link Library (DLL) technologies. If you plan to run multiple BCOM instances (address spaces), it is highly recommended to place those DLL in the link pack area (LPA) or the ELPA. This will improve performance and reduce the memory used since all the address spaces will share the same DLL.

The BCOM modules to be put in the LPA are:

BCUT, BM, TB and TBTMMXIT

Those modules can be added to the LPA dynamically using the followins system operator command:

```
SETPROG LPA,ADD,MODENAME=(BCUT,BM,TB,TBTMMXIT),DSNAME=load-lib
```

Migrating the ISPF Bint

Some modifications have been made in the BINT to operate and monitor the BCOM ep processes. Make sure to keep the versions of BINT and BCOM in-synch (i.e.: BINT version 4 for BCOM version 4, and BINT version 5.1 for BCOM version 5.1). The migration is straightforward, and the ISPF BINT environment profile can be shared between version 4 and version 5 without any problem. A sample clist can be found in the member CLTISPFB of the BCOM source library. Here are the instructions to migrate your existing CLIST:

- Copy your actual clist to a new Clist.
- Edit the new clist; this will become your BCOM V5.1 BINT Clist.
- Change the datasets for ISPPLIB, ISPMLIB and ISPLLIB to the new BCOM V5.1 datasets created during the installation.
- Keep the ISPTLIB and ISPTABL to their actual dataset assignment to share your actual ISPF BINT environment setup between V4 and V5.1. Or change the assignments to new BCOM V5.1 table datasets created during the installation to separate BCOM V4 and V5.1 setups.

Migrating the Batch Bint

Some modification has been made in the BINT to operate and monitor the BCOM ep processes. Make sure to keep the versions of BINT and BCOM in-synch (i.e.: BINT version 4 for BCOM version 4, and BINT version 5.1 for BCOM version 5.1). The syntax of the all the BINT commands is compatible between version 4 and version 5.1.

For each JCL that uses program B62BINT, you should make the following the verification (and/or modification)

- Steplib should refer to BCOM V5.1 library.

Migrating the BCOM External Writer

The BCOM external writer and output writer have been enhanced to use BCOM EP client as well as the existing BCOM APPC client. The implementation of the BCOM EP is completely transparent to the user. However you will need to do the following task to achieve the migration:

- Steplib should refer to BCOM V5.1 library. Remember that the BCOM external writer module (B62XTWR) must be run from an APF authorized library.

- The existing BCOM output writer configuration must be regenerated.
- As a new requirement, BCOM (module B62MAIN) must be run from an APF authorized library when the BCOM client specified in the output writer configuration is a BCOM EP client.

Migrating the BCOM OS/390 User Exit

The BCOM OS/390 User Exits are fully compatible between V4 and V5. However you will need to link your user exits with the BCOM V5 modules; this can be achieved by using your actual JCL and modifying it to use the BCOM V5 source and load library, or by customizing the sample JCL (JCLUXIT) provided by ETI-NET for this purpose.

Tandem / NSK Migration

Pre-Requisites:

- Make sure the step "Installation Tandem/NSK BCOM EP Software" above is completed.
- Make sure the step "Running the Test Scripts" above is completed.

Migrating your old NSK environment

Transfer old BCOM environment to new environment

- Assumption.

To simplify the procedure, it is assumed that your old BCOM environment is in \$vol.subvol subvolume, and your old BCOM environment's Request file is REQUEST, Queue file name is QUEUE, and BCOM Configuration file is BCOMCONF.

- Copy content of your existing Request and Queue files to BCOM-EP working subvolume.

```
VOLUME $vol.BCOMV510
FUP COPY $vol.subvol.QUEUE, QUEUE
FUP COPY $vol.subvol.REQUEST, REQUEST
```

- Modify Existing BCOM Configuration file, as follows

- + Duplicate your old BCOM configuration file to the working subvolume.

```
$FUP DUP $vol.subvol.BCOMCONF, *, PURGE
```

- + Edit it

```
TEDIT BCOMCONF
```

For PSWD attribute, replace the existing password by the the V5.1 password.

- + Replace keyword "APPC-REMOTE-IDENTIFICATION" with new keyword "BCOM-REMOTE-IDENTIFICATION" modify keyword.

- + Duplicate each Standard APPC requestor already defined as follows: add EP requestor for each APPC requestor.

```

COMMENT *****
COMMENT DUPLICATED APPC REQUESTOR
COMMENT *****
DEFINE APPC-REQUESTOR,
        NAME                $Q1MR,
        TYPE                 STANDARD,
        MAXRQST              2,
        PROCESS-CPU          1,
        PROCESS-PRI          160,
        AUTO-STARTUP         NO,
        MAXBLK                4096,
        WINDCNT              50,
        ENCOMP                NO,
        DATA-ENCRYPTION     NO,
        ROUTING               %Q1M (1,2),
        LU                    \XXXX.$Q1R1.#Q1RMT06,
        LU                    \XXXX.$Q1R1.#Q1RMT07;

```

- + Modify duplicated requestors' define statement, name statement and replace all LU's with one ENDPOINT Keyword. All other parameters remain the same, as follows:

```

COMMENT *****
COMMENT ENDPOINT REQUESTOR
COMMENT *****
DEFINE EP-REQUESTOR,
        NAME                $Q1ER,
        TYPE                 STANDARD,
        MAXRQST              2,
        PROCESS-CPU          1,
        PROCESS-PRI          160,
        AUTO-STARTUP         NO,
        MAXBLK                4096,
        WINDCNT              50,
        ENCOMP                NO,
        DATA-ENCRYPTION     NO,
        ROUTING               %Q1M (1,2),
        ENDPOINT              EP.CLIENT (1, 1, 2, 30);

```

- + Duplicate each Standard APPC server already defined as follows: add an EP server for each APPC server

```

COMMENT *****
COMMENT DUPLICATED APPC SERVER
COMMENT *****
DEFINE APPC-SERVER,
        NAME                $Q1MS,
        TYPE                 STANDARD,
        MAXRQST              2,
        PROCESS-CPU          0,
        PROCESS-PRI          160,
        AUTO-STARTUP         NO,
        MAXBLK                4096,
        WINDCNT              50,
        DESTFILE              $$.#BCOM,
        PRNTCNTL              YES,
        LU                    \XXXX.$Q1R1.#Q1RMT01,
        LU                    \XXXX.$Q1R1.#Q1RMT02;

```

- + Modify duplicated servers' define statement, name statement and replace all LU's with one ENDPOINT Keyword. All other parameters remains the same, as follows:

```

COMMENT *****
COMMENT END-POINT SERVER
COMMENT *****
DEFINE EP-SERVER,
      NAME           $Q1ES,
      TYPE           STANDARD,
      MAXRQST       2,
      PROCESS-CPU   0,
      PROCESS-PRI   160,
      AUTO-STARTUP  NO,
      MAXBLK        4096,
      WINDCNT       50,
      DESTFILE      $S.#BCOM,
      PRNTCNTL      YES,
      ENDPOINT      SERVER.NSK(2);

```

The syntax is:

```
ENDPOINT epname(x)
```

where...

* *epname*: up to 64 chars. Is referenced by the ENDPOINT configuration file.

* *x*: Maximum number of sessions.

- Generate a new BCOM configuration

```
> O STRTBGEN
```

Configuring the EP File

Set default volume/subvolume to your BCOM-EP working subvolume:

```
VOLUME $vol.BCOMV510
```

Edit the configuration file:

```
TEDIT BMCONF
```

- For each ENDPOINT keyword in the BCOMCONF file, add an entry in the EP configuration file in the CLIENT SECTION or the SERVER SECTION as appropriate. See example below.
- For each remote server defined on the IBM side, add an entry in the EP configuration file in SERVER SECTION as appropriate. See example below

- For each requestor defined in the CLIENT SECTION above, point to the desired remote server defined in the SERVER SECTION. The requestor will then connect to the remote server specified. See example below

```
; ENDPOINT CONFIGURATION FILE
;
SECTION CLIENT
NAME          = EP.CLIENT
SERVER        = SERVER.OS390
TPCPROCESS    = $ZTC1

SECTION SERVER
NAME          = SERVER.OS390
ADDRESS       = 208.180.1.46:1958
TCPRESOLVER   = $SYSTEM.TCPIP.HOST

NAME          = SERVER.NSK
ADDRESS       = 208.180.1.19:1958
TCPRESOLVER   = $SYSTEM.TCPIP.HOST
```

- Use obey file STRTEGEN to validate the EP table and create a binary file to be used by BCOM.
- Start new BCOM environment, by executing the following command (from TACL)

```
>O STRTALL
```

BCOM EP Remote Print Feature on NSK:

The Remote Print feature in BCOM-EP is the same as in BCOM-APPC, except for the following:

- The program for Print process has to be ETI-NET provided program and it is called BEPSPOOL.
- User cannot send the data directly to the print device. The data have to come through the device's location in the spooler.

Example:

Assume the EP Requestor name is \$Q1ER, then issue the following commands in SPOOLCOM to add a print process and a print device

```
) PRINT $EP, FILE BEPSPOOL
) DEV $Q1ER.#PRINT, PROCESS $EP, EXCLUSIVE OFF!, RESTART 30
) LOC #EREQ.PRINT, DEV $Q1ER.#PRINT
) DEV $Q1ER.#PRINT, START
```

To send a report (named <report>) to the remote printer, issue the following command from TACL

```
>FUP COPY <report>, $S.#Q1ER.PRINT
```

The report CANNOT be sent to the remote printer by issuing the following command from TACL

```
>FUP COPY <report>, $Q1ER.#PRINT      !!!! THIS IS INCORRECT
```

BCOM EP Exit Routine Feature on NSK:

If your BCOM-APPC uses customized user exit routines, and you wish to convert them for using with BCOM-EP, the following should be noted:

- In BCOM-APPC, only the customized user exits are bound (i.e. using BINDER) to the BCOM-APPC transfer program objects. In BCOM EP, ALL user exits must be linked (using NLD) to the BCOM EP objects.
- In BCOM-APPC, if user exits are not used, the binding step can be omitted. In BCOM-EP, the user-exits must be linked whether they are used or not. Two samples user exits library, EXITV5C (Native-C version) and EXITV5P (pTAL version), are provide for the linking.
- In BCOM-EP, the user exit must be written in C or pTAL languages.
- Compare to BCOM-APPC user exits, the data structures used in BCOM-EP users exits have several changes, file name format, some field size, etc. to reflect the changes in Guardian capacities (like file size, etc.).

For more information, please consult the *BCOM for Guardian NSK Installation and Operation Guide* document, section *Customizing BCOM*.

User Testing Methodology

Two approaches are available for existing customers to test BCOM-EP: stand-alone testing or migration testing. Stand-alone testing is the preferred approach for customers implementing new applications over TCP/IP. Migration approach is the preferred approach for customers that are currently using BCOM in a SNA environment but want to switch to a TCP/IP environment.

Stand-alone Testing

ETI-NET provides its customers with a pre-configured BCOM-EP stand-alone environment as well as pre-defined test scripts.

Migration (Production Mode) Testing

Most existing BCOM customers will want to test BCOM-EP by using their existing BCOM test environment. These customers will use the 'migration' approach, thus preserving their existing request files and modifying the existing BCOM Configuration files to add BCOM-EP support. In this scenario, the customer will have 2 possible configuration approaches to test BCOM-EP.

Approach 1:

Shared Routing-Class between APPC & EP processes

Let's assume that the customer is using Routing-Class 1 for Standard APPC process. Routing-class 1 is also configured for the EP process. This means that either process can handle a Request queued to Routing-class 1. At BCOM startup time, the customer starts either the EP or the APPC process. Then, all requests are queued without change.

The BCOM configuration necessary for this approach is shown in Appendix A "Example 1: Alternate Path"

Approach 2:

Routing-Class specific to EP process

Let's assume that the customer is using Routing-Class 1 for Standard APPC process. The Routing -class 2 is configured for an EP process. At queue time, a customer can override the Request Routing-Class to test over EP (i.e. TCP/IP).

The BCOM configuration necessary for this approach is shown in Appendix A "Example 2: Dedicated Path".

Appendix :

Configuration Examples

This appendix shows various examples of BCOM and EP configuration files.

Example 1: Alternate Paths

This example shows the OS/390 and NSK configuration files for a setup where an APPC Requestor and an EP Requestor are assigned to the same Routing class. All bold items are new parameters.

BCOM OS/390 Configuration File

```

*
* CONFIGURATION BCOM V5.1 FOR Q1M
*
      FS62LCL LNAME=%Q1M,                                LOCAL LOCATION NAME    C
          LLOC=Q1M,                                       VTAM APPLICATION ID    C
          PSWD=xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx,     PASSWORD                C
          DDLOG1=B62LOG1,                                  LOG FILE 1 DDNAME      C
          DDLOG2=B62LOG2,                                  LOG FILE 2 DDNAME      C
          DDQUEUE=B62QUEUE,                                QUEUE FILE DDNAME      C
          DDRQST=B62RQST,                                  REQUEST FILE DDNAME    C
          MAXLOG=1000,                                     MAX NUM OF LOG RECS   C
          MSTOPER=,                                        MASTER OPERATOR        C
          MAXBLK=15900,                                    MAX RCV BLOCK SIZE    C
          MAXBUF=8,                                        MAX BUFs FOR SUB-TASK C
          MXRRQST=1,                                       MAX CONCURRENT REQs   C
          SERVCN=8,                                        NM OF SERC01 CONNECTS C
          DEFWIND=50,                                       RECEIVE WINDOW COUNT   C
          LRETRY=10,                                       MAXIMUM RETRIES       C
          LRETIME=3,                                       RETRY INTERVAL        C
          SECL=0,                                          SECURITY LEVEL         C
          SECDD=B62SECUR,                                  SECURITY DDNAME        C
          AUTOSTR=NO,                                       NO AUTO START         C
          EP=( SERVER.Q1M.MVS,8,32)
*
      FS62RMT RMTID=%Q1T,                                  REMOTE LOCATION NAME  C
          RMTTYPE=TANDEM
*
      FS62ROUT RTECLAS=01,                                  ROUTING CLASS         C
          AUTOSTR=NO,                                       NO AUTO START         C
          ENCOMP=YES,                                       COMPRESSION IS ON     C
          RTETYPE=STANDARD
*

```

```
* APPC CLIENT - STANDARD
*
      FS62PROC PROCID=$Q1TR,                REMOTE PROCESS ID   C
      LUNAME=(Q1RMT01,Q1RMT02)
*
* EP CLIENT - STANDARD ONLY (BASIC=3, INC=1, MAX=5, IDLETIME=10)
*
      FS62PROC PROCID=$Q1TA                REQUESTOR PROCESS ID C
      ENCRYPT=NO,                           C
      EP=CLIENT.EP,                         C
      EPSSESS=(3,1,5,10)
*
      FS62PROC END
```

EP Table on OS/390

```
SECTION CLIENT
NAME = CLIENT.EP
SERVER = SERVER.Q1T.NSK

SECTION SERVER
NAME = SERVER.Q1M.MVS
ADDRESS = 208.180.1.46:1958

NAME = SERVER.Q1T.NSK
ADDRESS = 208.180.1.19:1958
```

BCOM NSK Configuration File

```

COMMENT *****
COMMENT *      BCOMCONF                               *
COMMENT *      BCOM V5.1  SAMPLE CONFIGURATION FILE   *
COMMENT *
COMMENT *****

COMMENT *****
COMMENT *      LOCAL SITE DEFINITIONS                 *
COMMENT *****

DEFINE  LOCAL-IDENTIFICATION,
        LLOC                                %Q1T,
        PSWD                                XXXX XXXX XXXX XXXX XXXX XXXX,
        LTYPE                                TANDEM,
        LOCAL-APPLID                         Q1T,
        LOPTIONS                             STANDARD,
        SYSNAMES                             \XXXX,
        NORMAL-IO-COMPLETION-CODES          ALL,
        BACKUP-CATALOG                       YES,
COMMENT DAILY-TASK-FILE                      STRTPCAT,
COMMENT DAILY-TASK-TIME                      9,
        EVENT-LOGGING                       NO;

DEFINE  LTRANSFER-PARAMETERS,
        LRETRY                               10,
        LRETIME                              01,
        FTRETRY                              05,
        WINDCNT                              20,
        MAXBLK                              15000;

DEFINE  LSECURITY-PARAMETERS,
COMMENT MSTOPER                             255,255,
COMMENT USERID-FILE                         USERID,
        FS-SECLEVEL                          0;

DEFINE  LSTARTUP-SHUTDOWN-PARAMETERS,
        AUTO-STARTALL                       NO,
        STOPLOGGER                          YES;

DEFINE  LFILE-DEFINITIONS,
COMMENT DNSMGR-NODE                          \XXXX,
        QUEUE-FILE                          QUEUE,
        REQUEST-FILE                        REQUEST;

COMMENT *****
COMMENT *      REMOTE SITE DEFINITIONS                 *
COMMENT *****

DEFINE  BCOM-REMOTE-IDENTIFICATION,
        RLOC                                %Q1M
        RTYPE                                IBM/M:P,
        APPLID                              Q1M;

```

```

COMMENT *****
COMMENT * APPC - TO IBM MVS *
COMMENT *****

DEFINE APPC-REQUESTOR,
NAME $Q1MR,
TYPE STANDARD,
MAXRQST 2,
PROCESS-CPU 1,
PROCESS-PRI 160,
AUTO-STARTUP NO,
MAXBLK 4096,
WINDCNT 20,
ENCOMP NO,
DATA-ENCRYPTION NO,
ROUTING %Q1M (1,2,3,4,5),
LU \XXXX.$Q1R1.#Q1RMT06,
LU \XXXX.$Q1R1.#Q1RMT07;

DEFINE APPC-REQUESTOR,
NAME $Q1MM,
TYPE MULTIPLX,
MAXRQST 1,
PROCESS-CPU 0,
PROCESS-PRI 160,
AUTO-STARTUP NO,
MAXBLK 4096,
WINDCNT 20,
ENCOMP NO,
DATA-ENCRYPTION NO,
ROUTING %Q1M (1,2,3,4,5),
LU \XXXX.$Q1R1.#Q1RMT15,
LU \XXXX.$Q1R1.#Q1RMT16,
LU \XXXX.$Q1R1.#Q1RMT17,
LU \XXXX.$Q1R1.#Q1RMT18;

DEFINE APPC-SERVER,
NAME $Q1MS,
TYPE STANDARD,
MAXRQST 2,
PROCESS-CPU 0,
PROCESS-PRI 160,
AUTO-STARTUP NO,
MAXBLK 4096,
WINDCNT 20,
DESTFILE $S.#BCOM,
PRNTCNTL YES,
LU \XXXX.$Q1R1.#Q1RMT01,
LU \XXXX.$Q1R1.#Q1RMT02;

DEFINE APPC-SERVER,
NAME $Q1MN,
TYPE MULTIPLX,
MAXRQST 1,
PROCESS-CPU 0,
PROCESS-PRI 160,
AUTO-STARTUP NO,
MAXBLK 4096,
WINDCNT 20,
LU \XXXX.$Q1R1.#Q1RMT11,
LU \XXXX.$Q1R1.#Q1RMT12,
LU \XXXX.$Q1R1.#Q1RMT13,
LU \XXXX.$Q1R1.#Q1RMT14;

```

```

COMMENT *****
COMMENT * END-POINT - TO IBM MVS *
COMMENT *****
DEFINE EP-REQUESTOR,
      NAME          $Q1ER,
      TYPE          STANDARD,
      MAXRQST       4,
      PROCESS-CPU   0,
      PROCESS-PRI   120,
      IO-PROCESS-CPU 0,
      AUTO-STARTUP  NO,
      MAXBLK        32000,
      WINDCNT       50,
      OPTION-FLAG   00,
      PRINT-DELAY   20,
      ENCOMP        NO,
      DATA-ENCRYPTION NO,
      ROUTING       %Q1M (1,2,3,4,5),
      ENDPOINT      EP.CLIENT (2,2,4,30);

DEFINE EP-SERVER,
      NAME          $Q1ES,
      TYPE          STANDARD,
      MAXRQST       4,
      PROCESS-CPU   0,
      PROCESS-PRI   120,
      AUTO-STARTUP  NO,
      MAXBLK        32000,
      WINDCNT       50,
      ENDPOINT      SERVER.NSK(4);

COMMENT **** END ****

```

EP Table on NSK

```

; ENDPOINT CONFIGURATION FILE
;
SECTION CLIENT
NAME      = EP.CLIENT
SERVER    = SERVER.OS390

SECTION SERVER
NAME      = SERVER.OS390
ADDRESS   = 208.180.1.46:1958

NAME      = SERVER.NSK
ADDRESS   = 208.180.1.19:1958

```

Example 2: Dedicated Paths

This example shows the OS/390 and NSK configuration files for a setup where an APPC Requestor and an EP Requestor are assigned to a different Routing class. A request queued to Routing-class 1 is using an APPC connection while a request queued to Routing-class 2 is using an EP connection. All bold items are new parameters.

BCOM OS/390 Configuration File

```

*
* CONFIGURATION MVS BCOM V5.1 FOR Q1M:
*
      FS62LCL LNAME=%Q1M,                LOCAL LOCATION NAME    C
      LLOC=Q1M,                          VTAM APPLICATION ID    C
      PSWD=xxxxxxxxxxxxxxxxxxxxxxxxxxxx,  PASSWORD                C
      DDLOG1=B62LOG1,                    LOG FILE 1 DDNAME      C
      DDLOG2=B62LOG2,                    LOG FILE 2 DDNAME      C
      DDQUEUE=B62QUEUE,                  QUEUE FILE DDNAME      C
      DDRQST=B62RQST,                    REQUEST FILE DDNAME    C
      MAXLOG=1000,                        MAX NUM OF LOG RECS    C
      MSTOPER=,                           MASTER OPERATOR        C
      MAXBLK=15900,                       MAX RCV BLOCK SIZE     C
      MAXBUF=8,                           MAX BUFS FOR SUB-TASK  C
      MXRRQST=4,                          MAX CONCURRENT REQS    C
      SERVCON=8,                          NM OF SERC01 CONNECTS C
      DEFWIND=50,                         RECEIVE WINDOW COUNT   C
      LRETRY=10,                          MAXIMUM RETRIES        C
      LRETIME=3,                          RETRY INTERVAL         C
      SECL=0,                              SECURITY LEVEL          C
      SECDD=B62SECUR,                     SECURITY DDNAME         C
      AUTOSTR=NO,                         NO AUTO START          C
      EP= ( SERVER.Q1M.MVS,8,32),        Maxrqst,Maxsession
*
      FS62RMT RMTID=%Q1T,                 REMOTE LOCATION NAME   C
      RMTTYPE=TANDEM,                     REMOTE IS AN IBM       C
      RMTTPN=BFSSER                       TEST 1ST COM. PROB
*
      FS62ROUT RTECLAS=01,                 ROUTING CLASS          C
      AUTOSTR=NO,                          NO AUTO START          C
      ENCOMP=YES,                          COMPRESSION IS ON      C
      RTETYPE=STANDARD
*
* APPC CLIENT - STANDARD
*
      FS62PROC PROCID=$Q1TR,               REMOTE PROCESS ID      C
      LUNAME=(Q1RMT01,Q1RMT02)
*
      FS62ROUT RTECLAS=02,                 ROUTING CLASS          C
      AUTOSTR=NO,                          NO AUTO START          C
      ENCOMP=YES,                          COMPRESSION IS ON      C
      RTETYPE=STANDARD
*
* EP CLIENT - STANDARD ONLY (BASIC=3, INC=1, MAX=5, IDLETIME=10)
*
      FS62PROC PROCID=$Q1TA                REQUESTOR PROCESS ID   C
      ENCRYPT=NO,                           C
      EP=CLIENT.EP,                        C
      EPSSESS=(3,1,5,10)                   C
*
      FS62PROC END

```

EP Table on OS/390

```
CLIENT
NAME = CLIENT.EP
SERVER = SERVER.Q1T.NSK

SERVER
SERVER = SERVER.Q1M.MVS
ADDR = 208.180.1.46:1958

SERVER
SERVER = SERVER.Q1T.NSK
ADDR = 208.180.1.19:1958
```

BCOM NSK Configuration File

```

COMMENT *****
COMMENT *      BCOMCONF                                *
COMMENT *      BCOM V5.1  SAMPLE CONFIGURATION FILE    *
COMMENT *                                                                 *
COMMENT *****

COMMENT *****
COMMENT *      LOCAL SITE DEFINITIONS                  *
COMMENT *****

DEFINE  LOCAL-IDENTIFICATION,
        LLOC                                %Q1T,
        PSWD                                XXXX XXXX XXXX XXXX XXXX XXXX,
        LTYPE                                TANDEM,
        LOCAL-APPLID                         Q1T,
        LOPTIONS                             STANDARD,
        SYSNAMES                             \XXXX,
        NORMAL-IO-COMPLETION-CODES          ALL,
        BACKUP-CATALOG                       YES,
COMMENT DAILY-TASK-FILE                      STRTPCAT,
COMMENT DAILY-TASK-TIME                      9,
        EVENT-LOGGING                       NO;

DEFINE  LTRANSFER-PARAMETERS,
        LRETRY                               10,
        LRETIME                              01,
        FTRETRY                              05,
        WINDCNT                              20,
        MAXBLK                              15000;

DEFINE  LSECURITY-PARAMETERS,
COMMENT MSTOPER                             255,255,
COMMENT USERID-FILE                         USERID,
        FS-SECLEVEL                          0;

DEFINE  LSTARTUP-SHUTDOWN-PARAMETERS,
        AUTO-STARTALL                       NO,
        STOPLOGGER                          YES;

DEFINE  LFILE-DEFINITIONS,
COMMENT DNSMGR-NODE                          \XXXX,
        QUEUE-FILE                          QUEUE,
        REQUEST-FILE                        REQUEST;

COMMENT *****
COMMENT *      REMOTE SITE DEFINITIONS                  *
COMMENT *****

DEFINE  BCOM-REMOTE-IDENTIFICATION,
        RLOC                                %Q1M
        RTYPE                                IBM/M:P,
        APPLID                              Q1M;

```

```

COMMENT *****
COMMENT * APPC - TO IBM MVS *
COMMENT *****
DEFINE APPC-REQUESTOR,
      NAME $Q1MR,
      TYPE STANDARD,
      MAXRQST 2,
      PROCESS-CPU 1,
      PROCESS-PRI 160,
      AUTO-STARTUP NO,
      MAXBLK 4096,
      WINDCNT 20,
      ENCOMP NO,
      DATA-ENCRYPTION NO,
      ROUTING %Q1M (1),
      LU \XXXX.$Q1R1.#Q1RMT06,
      LU \XXXX.$Q1R1.#Q1RMT07;

DEFINE APPC-REQUESTOR,
      NAME $Q1MM,
      TYPE MULTIPLX,
      MAXRQST 1,
      PROCESS-CPU 0,
      PROCESS-PRI 160,
      AUTO-STARTUP NO,
      MAXBLK 4096,
      WINDCNT 20,
      ENCOMP NO,
      DATA-ENCRYPTION NO,
      ROUTING %Q1M (1),
      LU \XXXX.$Q1R1.#Q1RMT15,
      LU \XXXX.$Q1R1.#Q1RMT16,
      LU \XXXX.$Q1R1.#Q1RMT17,
      LU \XXXX.$Q1R1.#Q1RMT18;

DEFINE APPC-SERVER,
      NAME $Q1MS,
      TYPE STANDARD,
      MAXRQST 2,
      PROCESS-CPU 0,
      PROCESS-PRI 160,
      AUTO-STARTUP NO,
      MAXBLK 4096,
      WINDCNT 20,
      DESTFILE $$.#BCOM,
      PRNTCNTL YES,
      LU \XXXX.$Q1R1.#Q1RMT01,
      LU \XXXX.$Q1R1.#Q1RMT02;

DEFINE APPC-SERVER,
      NAME $Q1MN,
      TYPE MULTIPLX,
      MAXRQST 1,
      PROCESS-CPU 0,
      PROCESS-PRI 160,
      AUTO-STARTUP NO,
      MAXBLK 4096,
      WINDCNT 20,
      LU \XXXX.$Q1R1.#Q1RMT11,
      LU \XXXX.$Q1R1.#Q1RMT12,
      LU \XXXX.$Q1R1.#Q1RMT13,
      LU \XXXX.$Q1R1.#Q1RMT14;

```

```

COMMENT *****
COMMENT * END-POINT - TO IBM MVS *
COMMENT *****
DEFINE EP-REQUESTOR,
NAME $Q1ER,
TYPE STANDARD,
MAXRQST 4,
PROCESS-CPU 0,
PROCESS-PRI 120,
IO-PROCESS-CPU 0,
AUTO-STARTUP NO,
MAXBLK 32000,
WINDCNT 50,
OPTION-FLAG 00,
PRINT-DELAY 20,
ENCOMP NO,
DATA-ENCRYPTION NO,
ROUTING %Q1M (2),
ENDPOINT EP.CLIENT (2,2,4,30);

DEFINE EP-SERVER,
NAME $Q1ES,
TYPE STANDARD,
MAXRQST 4,
PROCESS-CPU 0,
PROCESS-PRI 120,
AUTO-STARTUP NO,
MAXBLK 32000,
WINDCNT 50,
ENDPOINT SERVER.NSK(4);

COMMENT **** END ****

```

EP Table on NSK

```

; ENDPOINT CONFIGURATION FILE
;
SECTION CLIENT
NAME = EP.CLIENT
SERVER = SERVER.OS390

SECTION SERVER
NAME = SERVER.OS390
ADDRESS = 208.180.1.46:1958

NAME = SERVER.NSK
ADDRESS = 208.180.1.19:1958

```

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