

COMTEK /400

Installation Guide

COMTEK NMServer for AS/400

Ver. E – Q309



COMTEK

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COMTEK /400
Installation Guide

This guide (Ver E Q309) to be used with
COMTEK /400 v3.03 and later.

INTRODUCTION

This Installation Guide provides the information required to install and test COMTEK /400. (Formerly called COMTEK NMServer for OS/400).

The COMTEK /400 MIB is designed to be used with any standard SNMP Manager such as SiteScope, SNMPc, SolarWinds, Vantage, or NetView.

COMTEK /400 monitors IBM iSeries (AS/400) System Hardware, Operating System and Applications, and provides alerts that allow corrective measures to be taken *before* users are impacted..

The COMTEK installation process described in this document is simple and safe.

More detailed information about the product is contained in the COMTEK NMServer for AS/400 User Guide. Referring to the User Guide should not be necessary to install and test COMTEK.

When you have completed the first few Installation Steps, COMTEK /400 will be capable of monitoring CPU, communications, DISK, Applications, QSYSOPR, and other QUEUES. In addition, the extensive COMTEK /400 MIB will be available to any standard SNMP based manager such as OpenView, SiteScope, SNMPc, SolarWinds, or Vantage.

The Enhanced Monitoring Steps describe additional types of monitoring COMTEK /400 is capable of performing. These include monitoring of Critical Processes, and Filtering of QSYSOPR and other queues. Filtered messages are made available to the SNMP manager.

Part of the installation process involves inserting a License Key into the product. If you have not received a License Key from COMTEK Services, please contact COMTEK by email or phone before proceeding with installation. Briefly, the installation process consists of the following steps:

- Download COMTEK/400 from www.comtekservices.com
- Load COMTEK/400 to the OS/400 computer.
- Configure COMTEK /400: Setup IBM Master Agent
- Test COMTEK /400.

We are confident you will find COMTEK /400 a valuable and reliable addition to your computer system management facilities.

COMTEK /400 is being used to monitor hundreds of i5 OS (AS/400, OS/400) machines worldwide, and has proven to be a reliable, robust product. Installation locations include Europe, Africa, Asia, Far East, Australia, and North and South America.

INSTALL COMTEK on AS/400 (iSeries)

Prerequisite: You must have OS/400 V5R3 (i5OS) or higher. If you are running an earlier release of the OS/400 operating system, please contact COMTEK Services.

Note: QSYSOPR may be shared in COMTEK /400 v3.06 and v3.08. COMTEK /400 v3.09 must "lock" QSYSOPR.

Download COMTEK /400

1. Start a browser on your personal computer and go to the COMTEK Services website (www.comtekservices.com).
2. The Home Page lists information about the COMTEK Agents. In the column labeled "AS/400 SNMP Agent," click the Download a Free Evaluation link.
3. Enter the requested information on the form and click the Submit button.
4. A "Thank you for trying NM Server" page will appear. Click the "Click here" link to get the standard File Download Dialog. Click the Save button and then save the Zip file in an appropriate directory on your personal computer.
5. The downloaded file will have a name similar to `nmserver400v308.zip`.

Unzip COMTEK

1. On your PC, unzip the `nmserver400v3xx.zip` file into a directory of your choice.
2. Five (5) subdirectories will have been created by the Unzip step: Install Guide, Agent, Doc, MIB and Tools.
3. The Agent Subdirectory contains the COMTEK /400 product SAVEFILE.
4. The Doc Subdirectory contains the NMServer/400 User's Guide and any other user documentation that is available. Documentation is in .pdf format; use an Acrobat Reader to view the files.
5. The MIB Subdirectory contains the MIB file that must be loaded into your SNMP Manager.
6. The Tools Subdirectory contains a set of documents for using COMTEK /400 with Managers such as HP OpenView Network Node Manager (NNM), Compuware Vantage, HP SiteScope, and others.

i.

LOAD COMTEK on AS/400 Computer

IMPORTANT NOTES: This first step is to FTP the COMTEK file from your PC to the AS/400.

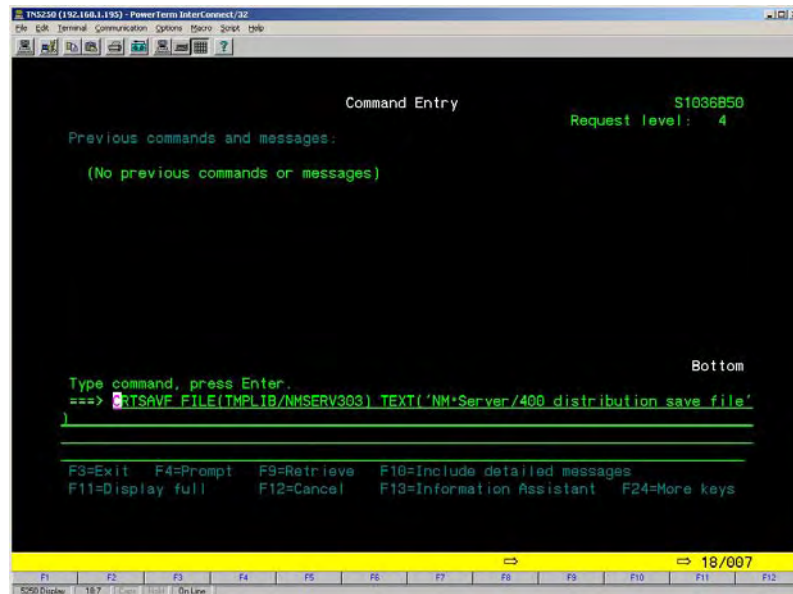
When FTP'ing a SAVEFILE to an AS/400, it is necessary to pre-create the destination file on the AS/400 before doing the actual file transfer. If the SAVEFILE is not created in advance, the file transfer will not create a SAVEFILE but rather a PHYSICAL FILE. Also, the file transfer must be done in BINARY mode. The following instructions will install the complete NMServer/400 product.

If you are running AS/400 System V5R3 or higher, use the commands detailed below. If you are running an earlier release of the OS/400 operating system, please contact COMTEK Services by phone or email.

1. Log into the target AS/400 system.
2. Create the SAVEFILE on your AS/400 by issuing the following commands:
CRTSAVF FILE(yourlib/nmserv30x) TEXT('NMServer/400 distribution save file')

Note: yourlib can be any library of your choice.

Command example.



```
Command Entry                                S1036850
                                           Request level: 4

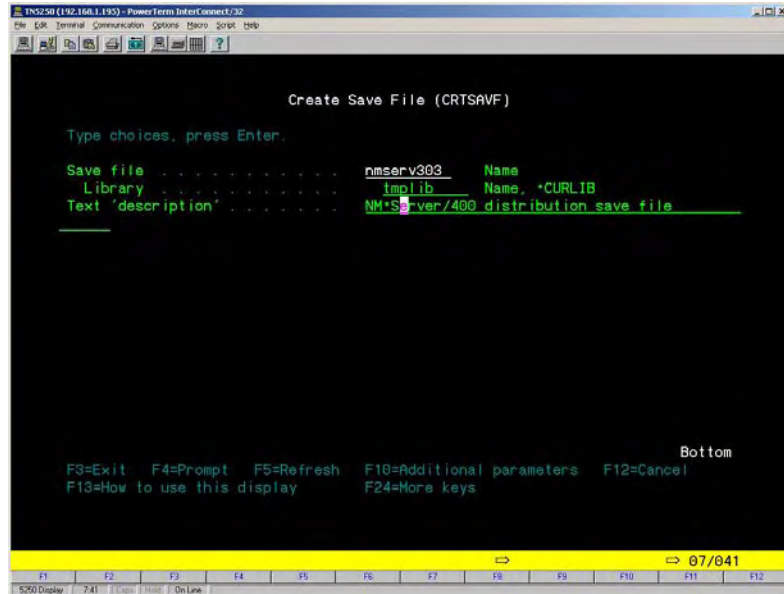
Previous commands and messages:
(No previous commands or messages)

Type command, press Enter.
==>> CRTSAVF FILE(TMPLIB/NMSERV303) TEXT('NMServer/400 distribution save file')

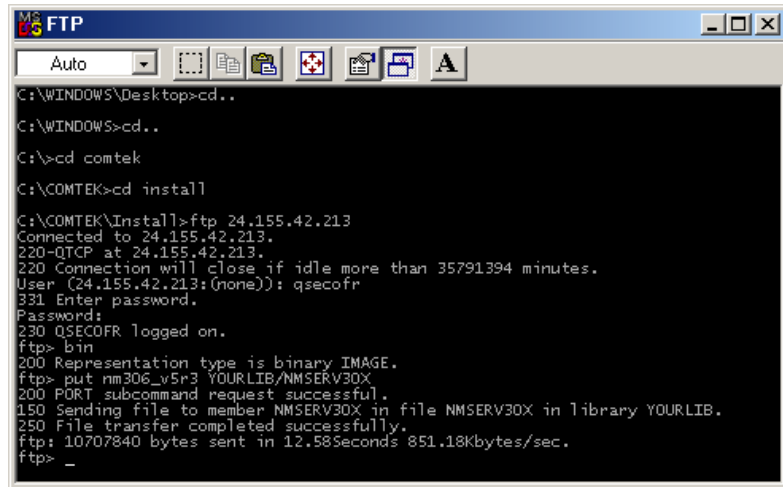
Bottom
F3=Exit  F4=Prompt  F9=Retrieve  F10=Include detailed messages
F11=Display full  F12=Cancel  F13=Information Assistant  F24=More keys

18/007
```

Prompted Image Example.



1. FTP the SAVEFILE from your PC to the AS/400. Make sure to use a BINARY transfer.



2. Restore the objects to the COMTEK1 library by issuing the following command:
RSTLIB LIB(COMTEK1) DEV(*SAVF) SAVF(YOURLIB/NMSERV30X)

```
TNS250 (192.168.1.195) - PowerTerm InterConnect/32
Command Entry                                     $1036850
Request level: 4
Previous commands and messages:
(No previous commands or messages)

Type command, press Enter.
===> RSTLIB SAVLIB(COMTEK1) DEV(*SAVF) SAVF(TEMPLIB/NMSERV303)

F3=Exit  F4=Prompt  F9=Retrieve  F10=Include detailed messages
F11=Display full  F12=Cancel  F13=Information Assistant  F24=More keys

18/007
```

FTP MIB File to Manager

From your PC, FTP the MIB file (found in MIB Directory) to your SNMP Manager (Vantage, OpenView, SiteScope). This file is not needed on the AS/400 System.

IMPORTANT: Set FTP file transfer mode to ASCII and transfer the nmservers400.mib MIB file to your SNMP Manager.

Load/compile the MIB file into your SNMP Manager (OpenView, Vantage) according to that manager's instructions. The procedure for loading MIBs into an SNMP Manager is manager specific. Check your manager's documentation for correct procedures.

Configure IBM Master Agent

Enter Manager Address, Community Info

IMPORTANT: The IBM SNMP Master Agent must be running to use COMTEK /400. The IBM Master Agent is included as part of OS/400 TCP/IP.

1. Obtain the “community” information for each Network Manager (SiteScope, Vantage, OpenView) that you wish to have monitor this AS/400. This community information determines which Managers will be allowed access to COMTEK /400. The required information is the community string, IP address and access privileges that the manager requires.
2. On all SNMP managers that are to receive COMTEK /400 TRAPS, look up the trap community string. The trap information required is: the trap community string, the IP address of the SNMP manager and the trap port number that the SNMP manager uses when listening for traps from SNMP agents. This information is used to determine which manager(s) COMTEK /400 will send traps to.
3. On your AS/400, Use IBM's CHGSNMPA command to enter the above community and trap information. To use the command, key CHGSNMPA on a command line and hit F4.

IMPORTANT: When entering SNMP community names under OS/400, always enclose the community name in single quotes ('). If the community name is not enclosed in single quotes, the community name will be converted to all capital letters. The community name sent in an SNMP GET or SET request must match both in spelling and in case with the community name that is configured in OS/400 for the transaction to succeed. Consult IBM documentation for instructions on configuring the IBM Master Agent.

```

Change SNMP Attributes (CHGSNMPA)

Type choices, press Enter.

System contact . . . . . 'COMTEK AS/400 administrator'

System location . . . . . 'DALLAS'

Send authentication traps . . . *YES      *SAME, *YES, *NO
Automatic start . . . . . *YES      *SAME, *YES, *NO
Object access . . . . . *READ     *SAME, *READ, *WRITE, *NONE
Log set requests . . . . . *NO       *SAME, *YES, *NO
Log get requests . . . . . *NO       *SAME, *YES, *NO
Log traps . . . . . *NO       *SAME, *YES, *NO

More...
F3=Exit  F4=Prompt  F5=Refresh  F12=Cancel  F13=How to use this display
F24=More keys

```

Use the Page Down key to use the rest of the options.

```

Change SNMP Attributes (CHCSNMPPA)
Type choices, press Enter.
Trap managers:
Manager internet address . . . '68.167.92.142'
Community name . . . . . 'PUBLIC'
-----
Translate community name . . . *YES      *YES, *NO
Manager internet address . . . '199.0.51.21'
Community name . . . . . 'PUBLIC'
-----
Translate community name . . . *YES      *YES, *NO
More...
F3=Exit  F4=Prompt  F5=Refresh  F12=Cancel  F13=How to use this display
F24=More keys

```

Use the Page Down key to use the rest of the options.

```

Change SNMP Attributes (CHCSNMPPA)
Type choices, press Enter.
Manager internet address . . . '199.0.51.22'
Community name . . . . . 'PUBLIC'
-----
Translate community name . . . *YES      *YES, *NO
+ for more values _
-----
Bottom
F3=Exit  F4=Prompt  F5=Refresh  F12=Cancel  F13=How to use this display
F24=More keys

```

Configure SNMP Manager

Load MIB into Manager

IMPORTANT: Set FTP file transfer mode to ASCII when you transfer the nmserveras400.mib MIB file to your SNMP Manager.

1. The MIB directory contains the MIB file that must be loaded into your SNMP Manager (OpenView, Vantage, SiteScope). This file is not needed on the AS/400 system. FTP the MIB file (found in MIB Directory on your PC) to your SNMP Manager (Vantage, OpenView, SiteScope). This file is not needed on the AS/400 System. You may have done this FTP earlier in the FTP MIB to MANAGER Step.
2. Set the FTP file transfer mode to ASCII and transfer the nmserveras400.mib MIB file to your SNMP Manager.
3. Load/compile the MIB file into your SNMP Manager according to your manager's instructions. The procedure for loading MIBs into an SNMP Manager is manager specific.
4. Check your manager's documentation for correct procedures.
5. Browse NMServer MIB to verify access.

NOTE: Installation aids for selected Network Managers have been provided in the TOOLS subdirectory on your PC. This subdirectory was created when you unzipped the download from COMTEK.

Configure COMTEK

RESTORE COMTEK LIBRARY

NOTE: You may have done this restore earlier in the FTP to AS/400 step above.

- (On the AS/400) Restore the objects to the COMTEK1 library by issuing the following command:
RSTLIB LIB(COMTEK1) SAVLIB(COMTEK1)DEV(*SAVF)SAVF(yourlib/nmserv30x)

Command and Prompted Image Examples

```

PowerTerm InetConnect/32
File Edit Terminal Communication Options Macro Search Help

Command Entry                                     S1036B50
Request level: 4

Previous commands and messages:

(No previous commands or messages)

Type command, press Enter.
===> RSTLIB SAVLIB(COMTEK1) DEV(*SAVF) SAVF(TEMPLIB/NMSERV303)

F3=Exit  F4=Prompt  F9=Retrieve  F10=Include detailed messages
F11=Display full  F12=Cancel  F13=Information Assistant  F24=More keys

18/007

```

```

PowerTerm InetConnect/32
File Edit Terminal Communication Options Macro Search Help

Restore Library (RSTLIB)

Type choices, press Enter.

Saved library . . . . . > COMTEK1      Name, *NONSYS, *ALLUSR, *IBM
Device . . . . . > *SAVF              Name, *SAVF, *MEDDFN
Save file . . . . . nmserv303         Name
Library . . . . . templib            Name, *LIBL, *CURLIB

F3=Exit  F4=Prompt  F5=Refresh  F10=Additional parameters  F12=Cancel
F13=How to use this display  F24=More keys

09/046

```

ADMIN – Configuration Tool

ADMIN is used to configure COMTEK /400.

After you have COMTEK /400 restored into the COMTEK1 library, an application called ADMIN is used to configure COMTEK to perform the monitoring and reporting you wish.

The operation of COMTEK /400 is controlled by CONFIGURATION FILES supplied as part of the product. These files will be located in the COMTEK1 library, and will have names such as INIT_CFG and CRIT_PROCS. ADMIN is used to enter the required information into these files.

The purpose of ADMIN is to assist the user in STARTING, STOPPING, and CONFIGURING COMTEK /400. ADMIN will be located in the COMTEK1 Library.

To start ADMIN, key COMTEK1/ADMIN and press return as shown:

```
MAIN                               AS/400 Main Menu                               System: $1036B50
Select one of the following:

  1. User tasks
  2. Office tasks
  3. General system tasks
  4. Files, libraries, and folders
  5. Programming
  6. Communications
  7. Define or change the system
  8. Problem handling
  9. Display a menu
 10. Information Assistant options
 11. Client Access/400 tasks

 90. Sign off

Selection or command
==> comtek1/admin

F3=Exit  F4=Prompt  F9=Retrieve  F12=Cancel  F13=Information Assistant
F23=Set initial menu
(C) COPYRIGHT IBM CORP. 1980, 2000.
```

Start ADMIN

NOTE: DO NOT try to START COMTEK now. COMTEK will not run without a license key.

```
ADM0001          COMTEK / 400 Administration          5/27/09
COMTEK                                     02:07:51

Please enter your choice in Selection and press return.

      1. Start COMTEK
      2. End   COMTEK
      3. Edit Configuration
      4. Show Version

      Selection 3

Enter Selection and press return.
Press F3 to return to previous screen.

F3=exit
```

ADMIN – First Screen

NOTE: DO NOT try to Start COMTEK now. It will fail to start without a license key.

The screen above allows you to choose the ADMIN function you wish to perform.

The first thing you need to do with ADMIN is insert the LICENSE KEY supplied by COMTEK. This key is sent to you by email. It is not part of the download from the COMTEK web site. If you have not received a license key, contact COMTEK.

Insert License Key

To insert the LICENSE KEY into COMTEK /400, type 3 as your SELECTION on the First COMTEK Administration screen. Then press RETURN.

The following screen will allow you to select the (INITIAL CONFIGURATION) file that contains the LICENSE KEY.

```

ADM0003                               Edit Configuration Files                               5/29/09
COMTEK

Key X to Select   Config File
-                CRIT_PROCS   CRITICAL PROCESS Monitoring
-                DUMPTRAP    DISPLAY Recent Messages
X                INIT_CFG    INITIAL DISK, CPU, Other Threshold
-                Q_MON_CFG   MONITOR Generic Queues
-                SKIP_MSGID  MONITOR QSYSOPR
-                SKIP_PGM    GENERIC Queue Filter

Enter X to Select and press return.
Press F3 to return to previous screen.

Bottom

F3=exit

```

ADMIN Select Config File Screen

Select INIT_CFG (Initial Configuration) by keying X in the blank, and pressing RETURN.

The following screen will be displayed:

```

ADM0004                               Edit Configuration File                               5/27/09
COMTEK                               02:28:18

I to Insert
D to Delete       To change data, simply key over it and hit ENTER
C to Copy

# INITIAL CONFIGURATION FILE
#
# THIS IS AN EXAMPLE INITIAL CONFIGURATION FILE FOR THE
# COMTEK /400 SUBAGENT. COPYRIGHT COMTEK SERVICES LLC 1995-2009
#
# THE FORMAT OF THIS FILE IS: CONFIGURATION TOKEN=VALUE
#
# TO INSERT A NEW LICENSE KEY, KEY OR PASTE THE NEW KEY OVER THE XXX
#
# NOTE: THERE MUST BE NO SPACE BETWEEN LICENSE KEY=XXXX
#
LICENSE KEY=TZDRUJ5MTE7HFYC99J
#
# NOTE: THE # IN THE FIRST POSITION MAKES THAT LINE A COMMENT

More...

F3=exit                               Page-Down for More

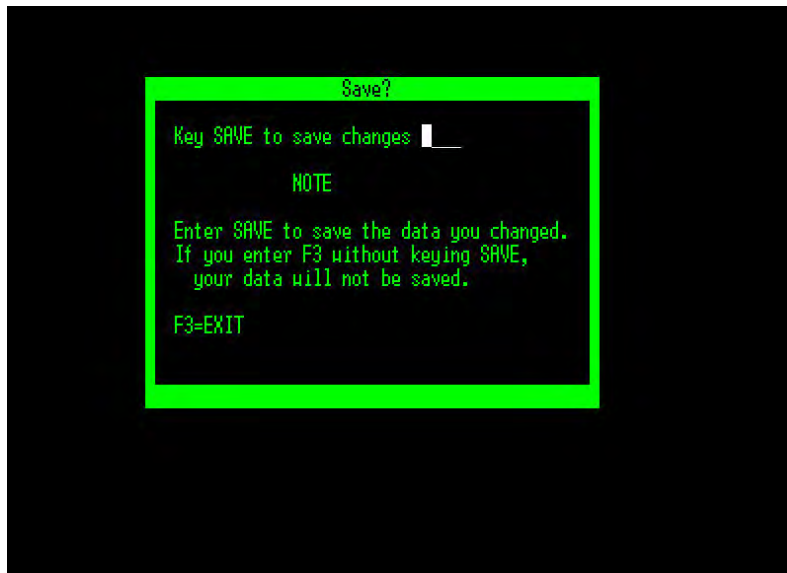
```

INITIAL CONFIGURATION First Screen

This screen displays the contents of the INIT_CFG configuration file. The INIT_CFG file contains the many parameters and setup information that COMTEK /400 uses. The screen above is the first few lines of the file, and contains the license key. The license key may be XXXXX.

Insert License Key

1. To enter the License key, move to the line that has LICENSE KEY in it. Use the arrow keys on your keyboard to go where you want.
2. Insert the NEW LICENSE KEY by entering it directly over the XXX. Check to be sure you have done it correctly.
3. IMPORTANT! Press ENTER. You must press ENTER (Return) to cause the change you have just entered to be accepted.
4. Then Press F3 to exit this screen and display the SAVE screen.



SAVE? Screen

To SAVE the LICENSE KEY you entered, key SAVE and press RETURN.

IMPORTANT - You must key the word SAVE and press RETURN or your key will not be saved.

After you key SAVE and press return, you will be returned to the COMTEK ADMIN screen.

IMPORTANT If you press F3 without entering SAVE, the data you entered will be lost.

After you have entered the license key, the next step is to enter other INITIAL CONFIGURATION items. The first item is the DISK FULL setting.

Set the DISK FULL threshold in the step below.

Configure DISK FULL

The next step in configuring COMTEK is to change the DISK FULL setting to 10%.

The reason to set this to 10%, is this will cause COMTEK /400 to begin sending DISK NEARLY FULL TRAPS to the SNMP Manager as soon as COMTEK is started. This is a valuable test because 1) You can see that COMTEK is working, and 2) DISK FULL Traps are sent to the SNMP Manager. This provides test data to use in configuring the SNMP Manager.

To change the DISK FULL parameter, navigate forward to the part of the INIT_CONFIG file that deals with disks:

```
ADM0004          Edit Configuration File          5/05/09
COMTEK          12:56:51

I to Insert
D to Delete      To change data, simply key over it and hit ENTER
C to Copy

#
#   DISK TRAP SETTINGS
#
# DISK FULL REFERS TO SYSTEM ASP (AUX STORAGE POOL) AND IS SPECIFIED
# IN TEN-THOUSANDTHS OF A PERCENT, THUS 95% WOULD BE SPECIFIED AS 950000
#   10% WOULD BE SPECIFIED AS 100000
DISK FULL THRESHOLD=900000
DISK FULL CLR THRESHOLD=850000
DISK WAIT TIME=600
# DISK WAIT TIME SPECIFIES HOW MANY SECONDS TO WAIT BETWEEN DISK POLLS
DISK RESEND TRAP COUNT=5
# DISK RESEND TRAP COUNT IS HOW MANY TIMES DISK IS POLLED BEFORE
# DISK TRAP IS SENT
#
More...

F3=exit          Page-Down for More
```

1. Change the DISK FULL parameter to 100000. Key directly over what is there. Note that 100000 is equal to 10%. IMPORTANT! Be careful to make this change carefully. If you are not sure of your work, use F3 to get out and do NOT SAVE.
2. Press RETURN
3. Use F3 to get to SAVE? screen.
4. SAVE your work.

IMPORTANT! Be careful to make changes carefully. If you are not sure of your work, use F3 to get out and do NOT SAVE.

Start COMTEK

IMPORTANT NOTE: Notes: THE IBM MASTER AGENT MUST BE RUNNING before you start COMTEK /400. If you start COMTEK/400 before the IBM master agent, COMTEK will fail to start and will put error messages in QSYSOPR.

You may start COMTEK from the ADMIN application or on the command line. ADMIN is outlined here. Start from COMMAND LINE is shown in a later section of this manual.

Use ADMIN

Launch COMTEK ADMIN.

```
MAIN                               AS/400 Main Menu                               System: S1036850
Select one of the following:
  1. User tasks
  2. Office tasks
  3. General system tasks
  4. Files, libraries, and folders
  5. Programming
  6. Communications
  7. Define or change the system
  8. Problem handling
  9. Display a menu
 10. Information Assistant options
 11. Client Access/400 tasks

 90. Sign off

Selection or command
==> kontek1/admin

F3=Exit  F4=Prompt  F9=Retrieve  F12=Cancel  F13=Information Assistant
F23=Set initial menu
(C) COPYRIGHT IBM CORP. 1980, 2000.
```

Select START COMTEK from the ADMIN Screen.

```
ADM0001          COMTEK / 400 Administration          5/27/09
COMTEK                                     02:44:31

Please enter your choice in Selection and press return.

    1. Start COMTEK
    2. End   COMTEK
    3. Edit Configuration
    4. Show Version

           Selection 1

Enter Selection and press return.
Press F3 to return to previous screen.

F3=exit
```

When you select START and press enter, COMTEK /400 will be started.

After this step, COMTEK /400 will be running.

When COMTEK is running, COMTEK MIB items will be visible to the manager, and TRAPS for DISK NEARLY FULL will be sent to manager.

TEST COMTEK operation

From your SNMP Manager (SNMPC, OpenView, SiteScope, Vantage) you should be able to poll any of the COMTEK SNMP variables. You should be able to “walk the MIB” with any standard tool.

If you wish to POLL one of the MIB items, a good choice would be CPU utilization. The OID (Object Identifier) for CPU Utilization is:

1.3.6.1.4.1.597.3.1.2.1

The description of this MIB item is

cpuPercentProcessUnitUsed (cpu usage)

In addition, TRAPS will be received from COMTEK indicating COLD START, Critical Process Missing, and Disk Nearly Full. The initial configuration file settings may be changed to stop the traps if desired.

Below are more of the AS/400 MIB items that we suggest monitoring:

OID (Object Identifier)	MIB ITEM
1.3.6.1.4.1.597.3.1.2.6	cpuPercentSystemASP (total system storage pool)
1.3.6.1.4.1.597.3.1.4.1	usersSignedOn
1.3.6.1.4.1.597.3.1.5.2	batchJobsRunning
1.3.6.1.4.1.597.3.3.1	jqNumProcs

SUCCESSFUL Installation

COMTEK /400 has been successfully installed when the MIB can be POLLED by the SNMP Manager, and TRAPS are being received at the SNMP Manager.

After the above steps have been completed, COMTEK /400 has been installed successfully. The MIB may be polled and DISK NEARLY FULL and PROCESS MISSING TRAPS are being sent to the manager.

The following sections describe ADVANCED features of COMTEK /400; including monitoring of QSYSOPR or other queues, checking CRITICAL PROCESSES are running, and others.

ENHANCED MONITORING

Previous sections have described how to install COMTEK /400 and configure DISK FULL, CPU BUSY, and other initial parameters.

The following paragraphs outline CRITICAL PROCESS MISSING, QSYSOPR Filtering, and GENERIC QUEUE monitoring.

CRITICAL PROCESS Monitoring

COMTEK /400 CRITICAL PROCESS Monitoring is easy to configure.

Your site may wish to have COMTEK /400 inform the Manager (SiteScope, OpenView) if a mission critical process has failed. COMTEK /400 is able to perform this function by sending a "CRITICAL PROCESS MISSING" TRAP. COMTEK can monitor one or many processes.

To CONFIGURE Critical Process Monitoring, INSERT the NAMES of the processes you wish to monitor in the CRIT_PROCS configuration file. COMTEK /400 will check for the existence of these processes at a user defined interval, and send a CRITICAL PROCESS MISSING Trap to the manager if the process has failed. Please find additional detail in the User's guide.

Another use for this feature is to use it as a HEARTBEAT to inform the manager that the AS/400 is alive and running. This is done by having COMTEK /400 check for the existence of a NON-EXISTENT process. COMTEK /400 will then send a trap indicating that CRITICAL PROCESS XXX is not running. This trap will be sent at user specified intervals. The SNMP manager can be programmed to detect the absence of these traps, and thereby provide an alert that the AS/400 (or COMTEK /400) is not running.

Critical processes are matched on a combination of USERNAME, JOBNAME, and SUBSYSTEM.

The special token *ANY can be used with the username and subsystem name fields.

The number of instances that are expected to be on the system can be specified as a value of 0 or greater. If the actual number of instances is less than the specified number of instances a critical process trap missing trap will be generated.

A regular expression can be specified to match the active job STATUS. The subsystem and regular expression for the active job status are optional, but the subsystem must be specified if the regular expression is specified.

Please see instructions included in the CRIT_PROCS file and in Editing the Critical Process File the User Guide.

Use ADMIN to set up Critical Process checking in COMTEK /400.

ADMIN is the name of one Component (application) supplied as part of COMTEK /400. The purpose of ADMIN is to assist the user in STARTING, STOPPING, and CONFIGURING COMTEK /400. ADMIN will be located in the COMTEK1 Library.

To start ADMIN on the AS/400, key the command COMTEK1/ADMIN and press return.

```
MAIN                               AS/400 Main Menu                               System: S1036B50
Select one of the following:

  1. User tasks
  2. Office tasks
  3. General system tasks
  4. Files, libraries, and folders
  5. Programming
  6. Communications
  7. Define or change the system
  8. Problem handling
  9. Display a menu
 10. Information Assistant options
 11. Client Access/400 tasks

 90. Sign off

Selection or command
==> comtek1/admin

F3=Exit  F4=Prompt  F9=Retrieve  F12=Cancel  F13=Information Assistant
F23=Set initial menu
(C) COPYRIGHT IBM CORP. 1980, 2000.
```

Start ADMIN

Then select Edit Configuration (3) and press return.

```
ADM0001                             COMTEK / 400 Administration                             5/27/09
COMTEK                               02:07:51
Please enter your choice in Selection and press return.

  1. Start COMTEK
  2. End COMTEK
  3. Edit Configuration
  4. Show Version

Selection 3

Enter Selection and press return.
Press F3 to return to previous screen.

F3=exit
```

Select CRIT_PROCS which controls CRITICAL PROCESS Monitoring by keying an X next to CRIT_PROCS, and press RETURN.

```

ADM0003                               Edit Configuration Files                               5/29/09
COMTEK

Key X to Select  Config File
-               CRIT_PROCS  CRITICAL PROCESS Monitoring
-               DUMPTRAP    DISPLAY Recent Messages
X               INIT_CFG    INITIAL DISK, CPU, Other Threshold
-               Q_MON_CFG   MONITOR Generic Queues
-               SKIP_HSCID  MONITOR QSYSOPR
-               SKIP_PGM    GENERIC Queue Filter

                                                    Bottom

Enter X to Select and press return.
Press F3 to return to previous screen.

                                                    F3=exit

```

Select Config File

The following screens will be shown. These screens describe the method of defining the Critical Process Monitoring.

```

ADM0004                               Edit Configuration File                               6/02/09
COMTEK                               04:01:26

I to Insert
D to Delete      To change data, simply key over it and hit ENTER
C to Copy

#
# CRIT_PROCS          CRITICAL PROCESS MONITORING
#
# Example COMTEK CRITICAL PROCESS MONITOR setup file.
#
# This file tells COMTEK which processes to monitor.
#
# A CRITICAL PROCESS MISSING TRAP will be sent if the correct
# number of processes is not running.
#
# See Examples on next page. (Page-Down)
#
#
#
                                                    More...

F3=exit                               Page-Down for More

```

Critical Process Config File Screen 1

Briefly, the CRIT_PROCS file contains a list of the processes COMTEK /400 will look for, and the number of copies of those processes that should be running.

Critical Processes are matched on a combination of USERNAME, and SUBSYSTEM. The special token *ANY can be used for the USERNAME and SUBSYSTEM name Fields.

The screens below explain how to set up Critical Process checking.

Lines that begin with # are considered comments.

```

ADM0004          Edit Configuration File          6/02/09
COMTEK          04:01:26

I to Insert
D to Delete      To change data, simply key over it and hit ENTER
C to Copy

#
# Critical processes are matched on a combination of username,
# and subsystem. The special token *ANY can be used with the
# username and subsystem name fields.
#
# The number of instances that are expected to be on the system
# can be specified as a value of 0 or greater. If the actual number
# of instances is less than the specified number of instances
# a critical process trap missing trap will be generated. A regular
# A regular expression can be specified to match the active job status.
# The subsystem and regular expression for the active job status
# are OPTIONAL, but the subsystem must be specified if the
# the regular expression is specified.
#
More...

F3=exit          Page-Down for More

```

Critical Process Config File Screen 2

```

ADM0004          Edit Configuration File          6/02/09
COMTEK          04:01:26

I to Insert
D to Delete      To change data, simply key over it and hit ENTER
C to Copy

#
#
#
# The order of the fields is:
#
# username  jobname  number of      subsystem  regular exp for
#           instances
#
# In this example, there must be 2 instances of jobname datagather
# running for username payr23 in subsystem productn or trap sent.
#
#PAYR23 DATAGTHR 2 PRODUCTN
#
# In this example, there must be 1 copy of jobname konteksnmp running
More...

F3=exit          Page-Down for More

```

Critical Process Config File Screen 3

Screen 3 above shows the example:

QSYSOPR Monitoring

The ability to MONITOR the OS/400 QSYSOPR queue is an important part of COMTEK /400.

Please note that COMTEK /400 does NOT require exclusive use of QSYSOPR. Other applications or operators can access QSYSOPR even while COMTEK /400 is running.

COMTEK /400 is able to MONITOR messages arriving on the QSYSOPR queue, FILTER those messages, and forward SOME or ALL of the messages to the SNMP Manager.

Filtering is based on MESSAGE ID, and message CONTENT including WILD CARD options and IMPROMPTU messages.

QSYSOPR filtering or forwarding is specified by entries in a file called COMTEK1/COMTEKCFG(SKIP_MSGID).

NOTE: There must be an entry in the INIT_CFG (Initial Configuration) file to tell COMTEK /400 where to find the file containing messages to forward to the manager. This file must be specified in the INIT_CFG file entry QSYSOPR_MSG_FILTER_FILE. The default setting is COMTEK1/COMTEKCFG(SKIP_MSGID).

The following refers to a QSYSOPR filter file named SKIP_MSGID.

```

ADAD004          Edit Configuration File          5/27/09
COMTEK          02:53:34

I to Insert
D to Delete      To change data, simply key over it and hit ENTER
C to Copy

#
# SKIP MSGID QSYSOPR MESSAGE FILTER FILE
#
# This file defines the filter used to select which QSYSOPR
# messages are to be forwarded to the SNMP manager(s).
#
# Messages are matched on the message ID.
# List the message IDs that you want to match in this file,
# one per line.
#
# For messages that MATCH you may:
#
# FILTER (do not send this message to snmp manager) OR
# FORWARD (send this message to manager). NOT BOTH
More...

F3=exit          Page-Down for More

```

SKIP_MSGID screen 1

The function of the QSYSOPR_MSG_FILTER_FILE filter is set by including either a *FILTER_SPEC_MSGS token or the *FORWARD_SPEC_MSGS token in the QSYSOPR_MSG_FILTER_FILE.

*FILTER_SPEC_MSGS indicates that messages matching one of the entries in the file should be FILTERED OUT and all OTHER messages should be FORWARDED to the SNMP manager.

*FORWARD_SPEC_MSGS indicates that only messages matching one of the entries in the filter file should be forwarded to the SNMP manager and all other messages should be discarded.

Messages are MATCHED on the MESSAGE ID. For messages that MATCH, you may either FILTER or FORWARD the matched message to the SNMP Manager.

You might think of the SPEC as meaning SPECIFIC. In other words, you would FILTER OUT SPECIFIC messages, or you would FORWARD SPECIFIC MESSAGES.

Only the FIRST INSTANCE of either *FORWARD_SPEC_MSGS or *FILTER_SPEC_MSGS is accepted. All other instances are ignored. *If the filter file does not contain either of these key words, then *FILTER_SPEC_MSGS is assumed.* Therefore, the default is that all messages are forwarded unless some are specifically filtered out. Most users prefer to utilize *FILTER_SPEC_MSGS rather than *FORWARD_SPEC_MSGS. This ensures that unanticipated messages will be forwarded to the SNMP manager.

```

ADM0004                               Edit Configuration File                               5/27/09
COMTEK                               03:34:59

I to Insert
D to Delete      To change data, simply key over it and hit ENTER
C to Copy

#
# The following are TOKENS which control the filtering.
#
#*FORWARD_SPEC_MSGS This tells the filter to FORWARD messages
#                   that match specified message IDs.
#
#*FILTER_SPEC_MSGS  This tells the filter to DISCARD messages
#                   that match specified message IDs.
#
#*BLANK_ID          This is used to specify messages that do not contain
#                   a message ID (inprontu messages)
#
# If you do not specify filter or forward, FILTER is assumed.
More...

F3=exit                               Page-Down for More

```

SKIP_MSGID Screen 2

Summary: QSYSOPR MESSAGE ID filtering is controlled by two items:

- An ENTRY in the INIT_CFG file with the token QSYSOPR_MSG_FILTER_FILE to tell COMTEK where to find the filtering instructions, and
- The actual FILTER FILE containing the filtering instructions.

NOTE: If you do not specify filter or forward, FILTER is assumed.

NOTE: If you have multiple FORWARD_SPEC_MSGS or FILTER_SPEC_MSGS tokens, ONLY the first is accepted.

NOTE: QSYSOPR messages are NOT removed from QSYSOPR by COMTEK. Messages remain in QSYSOPR even after a copy is sent to the manager.

```

ADM0004                               Edit Configuration File                               5/27/09
COMTEK                               03:38:52

I to Insert
D to Delete      To change data, simply key over it and hit ENTER
C to Copy

#
#
#
#
# If you do not specify filter or forward, FILTER is assumed.
#
# NOTE: If you have multiple FORWARD SPEC MSGS or FILTER SPEC MSGS
# tokens, ONLY the first is accepted.
#
# NOTE: QSYSOPR messages are NOT removed from QSYSOPR.
# Messages remain in QSYSOPR even after a copy is sent to the manager.
#
#
More...

F3=exit                               Page-Down for More

```

SKIP_MSGID screen 3

See examples below.

FILTER QSYSOPR MESSAGES

*FILTER_SPEC_MSGS

The following is an example of the QSYSOPR message ID filter configuration file that filters out two message IDs and forwards the rest. (Any entry that begins with a pound character [#] is considered a comment).

```

ADM0004                               Edit Configuration File                               5/27/09
COMTEK                               03:43:21

I to Insert
D to Delete      To change data, simply key over it and hit ENTER
C to Copy

#
# The following filter file that will cause only two message IDs
# to be FILTERED out. Filtered out means not forwarded.
# All other messages will be forwarded.
#*FILTER_SPEC_MSGS
#UCS1234
#CPF5678
# If you remove the # in the three lines above, this filter will be active.
# The above filter file will cause QSYSOPR messages with IDs
# UCS1234 and CPF5678 to be filtered out. All other messages
# will be forwarded to the manager.
#
#
#
More...

F3=exit                               Page-Down for More

```

SKIP_MSGID Screen 4

In the above example, all messages **except** those with message IDs UCS1234, CPF5678, CPF1010 will be forwarded to the SNMP manager.

NOTE: All entries in the above example begin with a # meaning all are comments. To make this example active, you would need to remove the # from the 4 lines beginning with *FILTER_SPEC_MSGS.

*FORWARD_SPEC_MSGS

The following is an example of the QSYSOPR message ID forward configuration file that forwards only the specified three message IDs to the SNMP manager. (Any entry that begins with a pound character [#] is considered a comment).

```

ADM0004                               Edit Configuration File                               5/27/09
COMTEK                                                                           03:38:52

I to Insert
D to Delete                               To change data, simply key over it and hit ENTER
C to Copy

# The following filter file that will cause only three message IDs to be
# forwarded to the manager.
# All other messages will be filtered out. (not forwarded)
#
#*FORWARD_SPEC_MSGS
#UCS1234
#CPF5678
#CPF1010
# If you remove the # in the previous 4 lines this filter
# will become active.
#
# The above filter file will cause only three message IDs to be FORWARDED
# to the manager.
# All other messages will be filtered out. (not forwarded)
More...

F3=exit                               Page-Down for More

```

SKIP_MSGID Screen 5

In the above example, **only** QSYSOPR messages that have message IDs UCS1234, CPF5678, CPF1010 will be forwarded to the SNMP manager. All other messages will NOT be forwarded.

NOTE: All entries in the above example begin with a # meaning all are comments. To make this example active, you would need to remove the # from the 4 lines beginning with *FILTER_SPEC_MSGS.

USING WILD CARDS

The asterisk (*) can be used as a wildcard when specifying message IDs. When the asterisk is used, it cannot be the first character in the message ID.

The following is an example of the *FORWARD_SPEC_MSGS using the asterisk as a wildcard when specifying message IDs.

```

ADM0004          Edit Configuration File          5/27/09
COMTEK          03:46:07

I to Insert
D to Delete      To change data, simply key over it and hit ENTER
C to Copy

#
# WILD CARDS
#
# The asterisk (*) can be used as a wildcard when specifying message IDs.
# An asterisk (*) MAY NOT be the first character in the message ID.
#
#This is a comment in the QSYSOPR message ID configuration filefile
#*FORWARD_SPEC_MSGSMSGS
#UCS12*
#This is a comment at the end of the file
#
# In the above example filter file, all QSYSOPR messages except
# those with the message ID UCS1200 through UCS12FF are forwarded.
#
More...

F3=exit          Page-Down for More

```

SKIP_MSGID Screen 6

In the above example, all QSYSOPR messages **except** those with the message ID UCS1200 through UCS12FF are forwarded to the SNMP manager as traps.

NOTE: All entries in the above examples begin with a #. This means all are comments. To make this example active, you would need to remove the # from the 3 lines beginning with *FORWARD_SPEC_MSGS.

```

ADM0004          Edit Configuration File          5/27/09
COMTEK          03:46:07

I to Insert
D to Delete      To change data, simply key over it and hit ENTER
C to Copy

# The following is an example of the QSYSOPR message ID filter
# file that only forwards the messages whose Ids are specified:
#
# This is a comment in the QSYSOPR message ID configuration file.
#
#*FORWARD_SPEC_MSGS
#UCS*
#CPF1*
#This is a comment at the end of the file
#
# The effect of this filter is to forward the QSYSOPR messages
# that have message IDs CPF1000 through CPF1FFF and UCS0000
# through UCSFFFF to the Manager.
#
More...

F3=exit          Page-Down for More

```

SKIP_MSGID Screen 7

In the above example, only QSYSOPR messages that have message IDs CPF1000 through CPF1FFF and UCS0000 through UCSFFFF will be sent to the SNMP manager. Messages can also be forwarded or filtered if they do not have message IDs using a *BLANK_ID token or contain specific text by defining a regular expression filter (REGEX). See comments in skip_msgid file on the AS400 or in the User Guide.

BLANK ID and BLANK Regular Expression.

```

ADM0004          Edit Configuration File          5/27/09
COMTEK          03:46:07

I to Insert
D to Delete      To change data, simply key over it and hit ENTER
C to Copy

# BLANK MESSAGE ID
#
# Not all QSYSOPR messages contain a message ID. To filter out QSYSOPR
# messages which do not contain a message ID, use the special token
#*BLANK ID.
#
# This is a comment in the QSYSOPR message ID configuration file
#*FORWARD SPEC MSGS
#UCS1234
#*BLANK ID
# This is a comment at the end of the configuration file.
#
# In the above example filter configuration file, messages with blank ID
# and messages with ID UCS1234 will be forwarded to the manager.
More...

F3=exit          Page-Down for More

```

SKIP_MSGID Screen 8

```

ADM0004          Edit Configuration File          5/27/09
COMTEK          03:58:33

I to Insert
D to Delete      To change data, simply key over it and hit ENTER
C to Copy

#
#*FORWARD REGEX MESSAGES This tells the filter to forward only
# messages that match the match regular expression specified
# by the special token *BLANK REGEX. This only works with
# messages that do not contain a message ID.
# If *BLANK ID is specified, regular expression checking is disabled
# because *BLANK ID is the same as using the regular expression .
#
#*FILTER REGEX MSGS This tells the filter to discard messages that
# match the regular expression specified by the special token *BLANK ID.
# If *BLANK ID is specified, regular expression is disabled becausr
# *BLANK ID is the same as using a regular experssion of blanks.
#
#
More...

F3=exit          Page-Down for More

```

SKIP_MSGID Screen 9

```
ADM0004          Edit Configuration File          5/27/09
COMTEK          04:01:12

I to Insert
D to Delete      To change data, simply key over it and hit ENTER
C to Copy

#*BLANK RESEX █
#
# This specifies a regular expression to match when checking messages
# which do NOT contain a message ID. There can be up to 200 instances
# of this special token in this file.
#
###FORWARD RESEX MESSAGES
#*BLANK RESEX TEST
#*BLANK RESEX test
# This is a comment
# The above filter file would cause messages with no message ID
# and the word TEST or the word test to be forwarded.
#
# THIS IS THE END OF THE SAMPLE QSYSOPR FILTER FILE

Bottom

F3=exit          Page-Down for More
```

SKIP_MSGID Screen 10

Screens 8, 9, and 10 show the use of BLANK ID and BLANK Regular Expressions within QSYSOPR. Further explanation of these special features may be found in the COMTEK NMServer for OS/400 User Guide.

NOTE: COMTEK /400 v3.06 and 3.08 are able to share QSYSOPR queue without “locking” it. This allows the user to have the queue in “break” mode while QSYSOPR is running.

COMTEK /400 v3.09 requires a lock on QSYSOPR. This means that v3.09 cannot share QSYSOPR with another application.

GENERIC QUEUE Monitoring

In addition to monitoring the QSYSOPR queue, COMTEK /400 is able to monitor GENERIC queues.

GENERIC filtering / forwarding is specified by entries in a file called COMTEK1/COMTEKCFG(Q_MON_CFG).

Set Up GENERIC QUEUE Monitoring

COMTEK /400 is able to monitor and filter one or more OS/400 GENERIC MESSAGE QUEUES. Messages arriving on those selected queues will be filtered with the GENERIC QUEUE FILTER FILE specified.

COMTEK /400 can selectively filter and forward messages from GENERIC queues based on MESSAGE ID, and message CONTENT including WILD CARD options and IMPROMPTU messages.

To set up monitoring of a GENERIC QUEUE, you enter the queue NAME and FILTER FILE NAME in a configuration file called Q_MON_CFG.

There may be multiple GENERIC QUEUE FILTER FILES, or the same FILTER FILE may be used to monitor/filter more than one GENERIC MESSAGE QUEUES.

Only one GENERIC QUEUE FILTER FILE is included with COMTEK /400.

The name of the GENERIC QUEUE FILTER FILE provided is SKIP_PGM, shown below. You may edit and use this file if you wish, or create and use other file(s).

If you need more filter files, create the other files in COMTEK1/COMTEKCFG. See generic queue filter file paragraphs below.

Use ADMIN to select and edit the Q_MON_CFG file.

Launch ADMIN, select Q_MON_CFG, and press enter.

```

ADM0003                               Edit Configuration Files                               5/30/09
COMTEK

Key X to Select  Config File
-               CRIT_PROCS  CRITICAL PROCESS Monitoring
-               DUMPTRAP   DISPLAY Recent Messages
X               INIT_CFG   INITIAL DISK, CPU, Other Threshold
|               Q_MON_CFG  MONITOR Generic Queues
-               SKIP_MSGID MONITOR OSYSOPR
-               SKIP_PGM   GENERIC Queue Filter

Enter X to Select and press return.
Press F3 to return to previous screen.

Bottom

F3=exit

```

Select Q_MON_CFG Screen

The following Q_MON_CFG screen will be displayed.

```

COMTEK                               06:31:31

I to Insert
D to Delete      To change data, simply key over it and hit ENTER
C to Copy

# Q_MON_CFG Specify GENERIC QUEUES to MONITOR
#
# This file identifies the queues you wish to monitor.
# Put the NAME of each QUEUE you wish to monitor and the FILTER FILE
# to use to MONITOR that queue with here. One queue per line.
#
# The format of this file is:
#
#<MSGQ NAME> <MSGQ LIB> <MIN SEV> <MAX AGE> <FILTER FILE>
#
# SAMPLE
#QPGMR QUSRSYS 0 15 COMTEK1/COMTEKCFG(SKIP_PGM)
#
More...

F3=exit Page-Down for More

```

Q_MON_CFG Screen 1

There must be an entry in the Q_MON_CFG file for each GENERIC queue you wish to monitor.

The format rules for Q_MON_CFG are the same as all other COMTEK /400 configuration files:

Lines beginning with # are comments.
Any line beginning with * is active.

Page down for next screen.

```

ADM0004          Edit Configuration File          5/30/09
COMTEK          06:47:55

I to Insert
D to Delete      To change data, simply key over it and hit ENTER
C to Copy

#QPGMR      QUSRSYS      0 15 COMTEK1/COMTEKCFG(SKIP_PGM)
#
# FORMAT of each line in the GENERIC QUEUE MONITORING File:
#
#<MSGQ NAME> <MSGQ LIB> <MIN SEV> <MAX AGE> <FILTER FILE>
#
# <MSGQ NAME> The NAME of the MESSAGE QUEUE you wish to monitor.
# <MSGQ LIB> The LIBRARY that Message Queue is in.
# <MIN SEV> The MINIMUM SEVERITY CODE in that message to forward.
# <MAX AGE> The NUMBER of MINUTES OLD for messages to be forwarded.
# <FILTER FILE> The NAME of the FILTER FILE to use to FILTER this queue.
#
#QPGMR      QUSRSYS      0 15 COMTEK1/COMTEKCFG(SKIP_PGM)
#
Bottom

F3=exit          Page-Down for More

```

Q_MON_CFG Screen 2

The format rules for Q_MON_CFG are the same as all other COMTEK /400 configuration files:

- Lines beginning with # are comments.
- Any line beginning with * is active.

Enter the NAME and information required for each queue to be monitored.

The format and meaning of the entries in Q_MON_CFG is shown on this screen.

In this example, queue QPGMR will be monitored if the # is removed.

QPGMR is the name of the queue to be monitored.

QUSRSYS is the library in which QPHMR may be found.

The Minimum Severity Code for messages to be forwarded is 0 (zero).

When COMTEK /400 is started, MAX AGE specifies how old (15 minutes) the messages in the queue can be. Select a small number of minutes if the queue is old or large.

FILTER FILE is the NAME of the FILTER file which is to be used to filter this queue.

GENERIC QUEUE FILTER FILE

The purpose of the GENERIC QUEUE FILTER FILE is to select messages that are to be forwarded to the SNMP manager.

Recall that the NAME of a GENERIC QUEUE FILTER FILE is specified for each queue to be monitored listed in the Q_MON_CFG file.

Only one GENERIC QUEUE FILTER FILE is included with COMTEK /400. You may add others as needed.

The name of the GENERIC QUEUE FILTER FILE provided is SKIP_PGM, shown below. You may edit and use this (SKIP_PGM) file if you wish, or create and use other file(s).

NOTE: Put all GENERIC QUEUE FILTER FILEs in COMTEK1/COMTEKCFG.

All GENERIC QUEUE FILTER FILES in COMTEK1/COMTEKCFG will be displayed on the following screen.

In this example, the NAME of the GENERIC QUEUE FILTER FILE is SKIP_PGM.

```

ADM0003          Edit Configuration Files          5/29/09
COMTEK

Key X to Select  Config File
-               CRIT_PROCS  CRITICAL PROCESS Monitoring
-               DUMPTRAP    DISPLAY Recent Messages
|               INIT_CFG    INITIAL DISK, CPU, Other Threshold
-               Q_MON_CFG   MONITOR Generic Queues
-               SKIP_HSGID  MONITOR QSYSOPR
-               SKIP_PGM    GENERIC Queue Filter

Enter X to Select and press return.
Press F3 to return to previous screen.

Bottom

F3=exit

```

SKIP_PGM Screen 1

Use ADMIN to select SKIP_PGM and press enter.

The screen below is the first of the SKIP_PGM generic queue filter file.

```

ROMD004          Edit Configuration File          5/30/09
COMTEK          04:17:52

I to Insert
D to Delete      To change data, simply key over it and hit ENTER
C to Copy

#
# SKIP_PGM  GENERIC QUEUE MESSAGE FILTER FILE
#
# This file defines the filter used to select which GENERIC QUEUE
# messages are to be forwarded to the SNMP manager(s).
#
# You may have one GENERIC QUEUE message filter file, or
# this filter file may be used for more than one GENERIC QUEUE.
# Do not use this filter file for QSYSOPR.
#
# Messages are matched on the message ID.
# List the message IDs that you want to match in this file,
# one per line.
#
More...

F3=exit          Page-Down for More

```

SKIP_PGM Filter Screen 2

The FUNCTION of the GENERIC QUEUE FILTER FILE filter is set by including either a *FILTER_SPEC_MSGS token or the *FORWARD_SPEC_MSGS token in the GENERIC QUEUE FILTER FILE.

Messages are MATCHED on the MESSAGE ID. For messages that MATCH, you may either FILTER or FORWARD the matched message to the SNMP Manager.

Only the FIRST INSTANCE of either *FORWARD_SPEC_MSGS or *FILTER_SPEC_MSGS is accepted. All other instances are ignored. *If the filter file does not contain either of these key words, then *FILTER_SPEC_MSGS is assumed.* Therefore, the default is that all messages are forwarded unless some are specifically filtered out. Most users prefer to utilize *FILTER_SPEC_MSGS rather than *FORWARD_SPEC_MSGS. This ensures that unanticipated messages will be forwarded to the SNMP manager.

*FILTER_SPEC_MSGS indicates that messages matching one of the entries in the file should be FILTERED OUT and all OTHER messages should be FORWARDED to the SNMP manager.

*FORWARD_SPEC_MSGS indicates that only messages matching one of the entries in the filter file should be forwarded to the SNMP manager and all other messages should be discarded.

You might think of the SPEC as meaning SPECIFIC. In other words, you would FILTER OUT SPECIFIC messages, or you would FORWARD SPECIFIC messages.

Only the FIRST INSTANCE of either *FORWARD_SPEC_MSGS or *FILTER_SPEC_MSGS is accepted. All other instances are ignored. *If the filter file does not contain either of these key words, then *FILTER_SPEC_MSGS is assumed.* Therefore, the default is that all messages are forwarded unless some are specifically filtered out. Most users prefer to utilize *FILTER_SPEC_MSGS rather than *FORWARD_SPEC_MSGS. This ensures that unanticipated messages will be forwarded to the SNMP manager.

```

ADM0004          Edit Configuration File          5/30/09
COMTEK          04:17:52

I to Insert
D to Delete      To change data, simply key over it and hit ENTER
C to Copy

#
# For messages that MATCH you may:
#
# FILTER (do not send this message to snmp manager) OR
# FORWARD (send this message to manager).  NOT BOTH
#
# Any line that begins with a * is ACTIVE.
# Any line that begins with a # is a comment
#
# The following are TOKENS which control the filtering.
#
##*FORWARD SPEC MSGS This tells the filter to FORWARD messages
#                       that match specified message IDs.
#
More...

F3=exit          Page-Down for More

```

SKIP_PGM Filter Screen 3

NOTE: If you do not specify filter or forward, FILTER is assumed.

NOTE: If you have multiple FORWARD_SPEC_MSGS or FILTER_SPEC_MSGS tokens, ONLY the first is accepted.

NOTE: GENERIC messages are NOT removed from the QUEUE by COMTEK. Messages remain in the queue even after a copy is sent to the manager.

```

ADM0004          Edit Configuration File          5/30/09
COMTEK          04:17:52

I to Insert
D to Delete      To change data, simply key over it and hit ENTER
C to Copy

#
##*FILTER SPEC MSGS This tells the filter to DISCARD messages
#                       that match specified message IDs.
#
##*BLANK ID          This is used to specify messages that do not contain
#                       a message ID (inprontu messages)
#
# If you do not specify filter or forward, FILTER is assumed.
#
# NOTE: If you have multiple FORWARD_SPEC_MSGS or FILTER_SPEC_MSGS
# tokens, ONLY the first is accepted.
#
# NOTE: Messages are NOT removed from the queue being monitored.
# Messages remain in the queue even after a copy is sent to the manager.
#
More...

F3=exit          Page-Down for More

```

SKIP_PGM Filter Screen 4

```

ADM0004          Edit Configuration File          5/30/09
COMTEK          04:17:52

I to Insert
D to Delete      To change data, simply key over it and hit ENTER
C to Copy

#
# The following filter file that will cause only three message IDs to be
# forwarded to the manager.
# All other messages will be filtered out. (not forwarded)
#
#*FORWARD SPEC MSGS
#UCS1234
#CPF5678
#CPF1010
# If you remove the # in the previous 4 lines this filter
# will become active.
#
# The above filter file will cause only three message IDs to be FORWARDED
# to the manager. All other messages will NOT be sent to manager.
More...

F3=exit          Page-Down for More

```

SKIP_PGM Filter Screen 5

```

ADM0004          Edit Configuration File          5/30/09
COMTEK          04:17:52

I to Insert
D to Delete      To change data, simply key over it and hit ENTER
C to Copy

#
# Any line that begins with a * is ACTIVE.
# Any line that begins with a # is considered a comment.
#
# The following filter file that will cause only two message IDs
# to be FILTERED out. Filtered out means not forwarded.
# All other messages will be forwarded.
#*FILTER SPEC MSGS
#UCS1234
#CPF5678
# If you remove the # in the three lines above, this filter will be active.
# The above filter file will cause generic queue messages with IDs
# UCS1234 and CPF5678 to be filtered out. All other messages
# will be forwarded to the manager.
More...

F3=exit          Page-Down for More

```

SKIP_PGM Filter Screen 6

```

ADM0004          Edit Configuration File          5/30/09
COMTEK          04:17:52

I to Insert
D to Delete      To change data, simply key over it and hit ENTER
C to Copy

#
# WILD CARDS
#
# The asterisk (*) can be used as a wildcard when specifying message IDs.
# An asterisk (*) MAY NOT be the first character in the message ID.
#
#This is a comment in the generic queue message filter file
##FORWARD SPEC MSGS
#UCS12*
#This is a comment at the end of the file
#
# In the above example generic queue messages with IDs UCS1200
# through UCS12FF are forwarded. All others are NOT forwarded.
#
More...

F3=exit          Page-Down for More

```

SKIP_PGM Filter Screen 7

OTHER Filter Functions

All filtering available for QSYSOPR MONITORING are also available for GENERIC QUEUE MONITORING.

These functions include REGEX and BLANK ID

See QSYSOPR message filtering for specific information about using these functions.

Installation Complete

At this point, the COMTEK /400 installation is complete. Your site will probably want to run COMTEK /400 whenever the AS/400 is in production. If this is the case, you will want to make sure COMTEK /400 is started automatically started at IPL time. Make sure the IBM SNMP Master Agent is started before COMTEK /400.

The final installation step has to do with the OS/400 startup (IPL) procedure. Modify your IPL processing so that the IBM Master Agent (part of TCP) is started automatically, and then COMTEK /400 is started. This will result in COMTEK /400 being operational whenever the AS/400 is running.

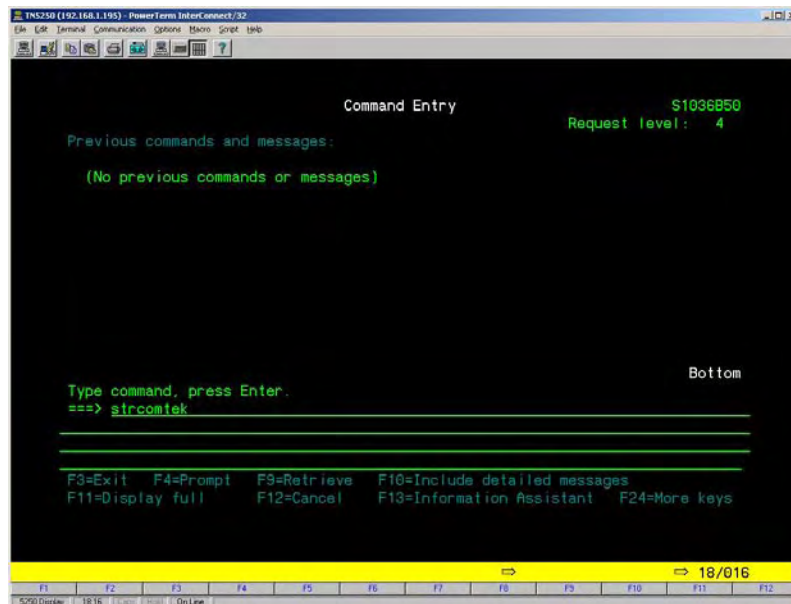
Command Line Commands

The following COMTEK /400 commands may be done from the COMMAND LINE:

STRCOMTEK (START and START with customized options)
 ENDCOMTEK (END and END with customized options)
 BUILD QUEUES (Use Only if a QUEUE Corrupted - See User Guide)
 DUMP TRAPS (Use Only to see Traps recently sent to Manager)

START COMTEK /400

To START COMTEK, enter an AS/400 command of "COMTEK1/STRCOMTEK" and press Enter to execute with default options.



Command Line STRCOMTEK

START WITH CUSTOMIZED OPTIONS

To start COMTEK with customized options enter "COMTEK1/STRCOMTEK" press F4 INSTEAD of Enter. In this case, the Start Comtek SNMP Sub-Agent (STRCOMTEK) screen will be displayed and look similar to the following example image. Select Yes or No for the various options and press Enter to execute the start.

```

TNS250 (192.168.1.195) - PowerTerm InterConnect/32
Start Comtek SNMP Sub-Agent (STRCOMTEK)

Type choices, press Enter.

Start kernel (COMTEKSNMP)? . . . . . *YES      Character value, *YES, *NO
Start COMTEKCPU? . . . . . *YES      Character value, *YES, *NO
Start COMTEKDSK? . . . . . *YES      Character value, *YES, *NO
Start COMTEKPSB? . . . . . *YES      Character value, *YES, *NO
Start COMTEKQSYS? . . . . . *YES      Character value, *YES, *NO
Start COMTEKQHST? . . . . . *NO       Character value, *YES, *NO
Start COMTEKUTRP? . . . . . *YES      Character value, *YES, *NO
Start COMTEKRCOM? . . . . . *YES      Character value, *YES, *NO
Start COMTEKCMN? . . . . . *YES      Character value, *YES, *NO
Start COMTEKGENQ? . . . . . *YES      Character value, *YES, *NO
Start SNMP DPI debugging? . . . . . *NO       Character value, *YES, *NO

Bottom
F3=Exit  F4=Prompt  F5=Refresh  F12=Cancel  F13=How to use this display
F24=More keys

05/037
  
```

COMMAND LINE START with CUSTOMIZED OPTIONS

STOP COMTEK /400

To STOP COMTEK, enter an AS/400 command of "COMTEK1/ENDCOMTEK" and press Enter to execute with default options.

To stop COMTEK with customized options, press F4 instead of Enter. In this case, the End Comtek SNMP Sub-Agent (ENDCOMTEK) screen will be displayed. Select Yes or No for the various options and press Enter to execute the stop.

```

TNS250 (192.168.1.195) - PowerTerm InterConnect/32
Command Entry
Request level: 4

Previous commands and messages:
(No previous commands or messages)

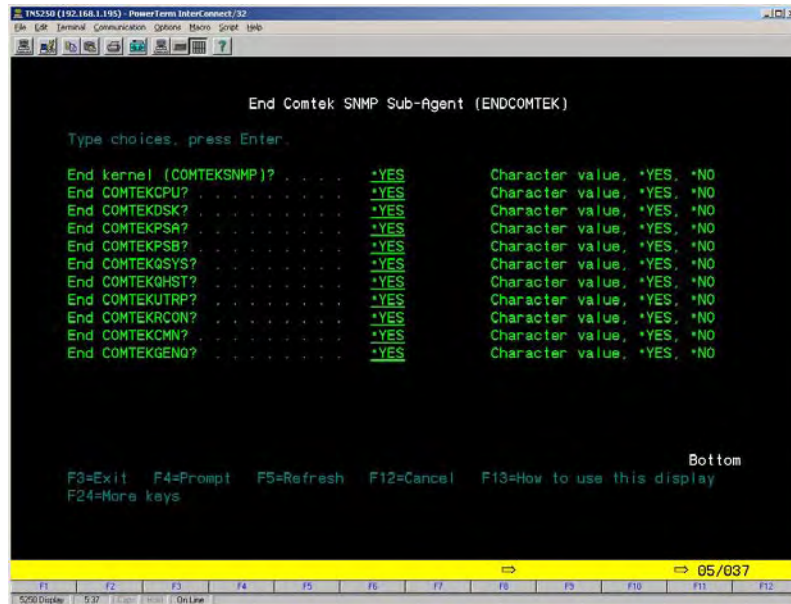
Type command, press Enter.
==> endcomtek

Bottom
F3=Exit  F4=Prompt  F9=Retrieve  F10=Include detailed messages
F11=Display full  F12=Cancel  F13=Information Assistant  F24=More keys

18/016
  
```

Command Line END COMTEK

To stop COMTEK with customized options, press F4 instead of Enter. In this case, the End Comtek SNMP Sub-Agent (ENDCOMTEK) screen will be displayed and look similar to the following example image. Select Yes or No for the various options and press Enter to execute the stop.



Command Line ENDCOMTEK with customized options.

Troubleshooting

Most problems encountered in implementing COMTEK /400 are the result of configuration errors with TCP/IP, the IBM Master Agent, and COMTEK /400.

The first step in troubleshooting is to see if COMTEK /400 is running. COMTEK will fail to start if the IBM SNMP Master Agent is not running, so if COMTEK is up, you can be assured that IBM SNMP is running.

Follow the steps below to verify that COMTEK /400 is running.

1. CONFIRM THAT COMTEK /400 IS RUNNING

To make sure COMTEK /400 is running, do a WRKACTJOB and check the jobs running.

```
MAIN                               AS/400 Main Menu                               System:  S1036B50
Select one of the following:

  1. User tasks
  2. Office tasks
  3. General system tasks
  4. Files, libraries, and folders
  5. Programming
  6. Communications
  7. Define or change the system
  8. Problem handling
  9. Display a menu
 10. Information Assistant options
 11. Client Access/400 tasks

 90. Sign off

Selection or command
==> WRKACTJOB

F3=Exit  F4=Prompt  F9=Retrieve  F12=Cancel  F13=Information Assistant
F23=Set initial menu
(C) COPYRIGHT IBM CORP. 1980, 2000.
```

WRKACTJOB

```

Work with Active Jobs                                     S1036850
                                                    05/07/09 04:34:21
CPU %:   .0   Elapsed time: 00:00:00   Active jobs: 104

Type options, press Enter.
 2=Change  3=Hold  4=End  5=Work with  6=Release  7=Display message
 8=Work with spooled files 13=Disconnect ...

Opt  Subsystem/Job  User      Type  CPU %  Function      Status
---  ---          ---      ---   ---   ---          ---
 1   QSYSARRK      QSYS      SBS   .0     DEQ          DEQ
 2   COMTEKCHMC   COMTEK    BCH   .0     PGM-CHTKCHMC DEQ
 3   COMTEKDSK    COMTEK    BCH   .0     PGM-CHTKDSK  DEQ
 4   COMTEKPSB    COMTEK    BCH   .0     PGM-CHTKPSB  DEQ
 5   COMTEKRCON   COMTEK    BCH   .0     PGM-CHTKRCON DEQ
 6   COMTEKTHRT   COMTEK    BCH   .0     PGM-CHTKTHRT DEQ
 7   COMTEKUTRP   COMTEK    BCH   .0     PGM-CHTKUTRP DEQ
 8   QGLDPUBA     QDIRSRV   ASJ   .0     PGM-QGLDPUBA SIG
 9   QGLDPUBE     QDIRSRV   ASJ   .0     PGM-QGLDPUBE DEQ

More...

Parameters or command
==>
F3=Exit   F5=Refresh   F7=Find     F10=Restart statistics
F11=Display elapsed data  F12=Cancel  F23=More options  F24=More keys

```

Under USER QSYS, if you find a set of COMTEK jobs, you can be assured that COMTEK /400 is running. COMTEK will not run without TCP and SNMP.

If COMTEK /400 is NOT running, do the following steps.

2. CONFIRM that TCP/IP is running.
3. CONFIRM that IBM SNMP Master Agent is configured properly.

Recall that IBM and the IBM Master Agent control which SNMP Manager has permission to query the COMTEK MIB. Also recall that the IBM Master Agent determines where traps will be sent.

4. CONFIRM that the IBM Master Agent is running.

Review the Troubleshooting Guide in Chapter 2 of the User's Guide. Check the NMServer/400 FAQ at www.comtekservices.com/as400_faq.htm for more troubleshooting tips. For additional help, contact support@comtekservices.com.

After completing the installation test, reset the CPU_TRAP_THRESHOLD to 900-950 as appropriate for your installation by following the steps in the "Configure the COMTEK Agent" section.

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