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163163

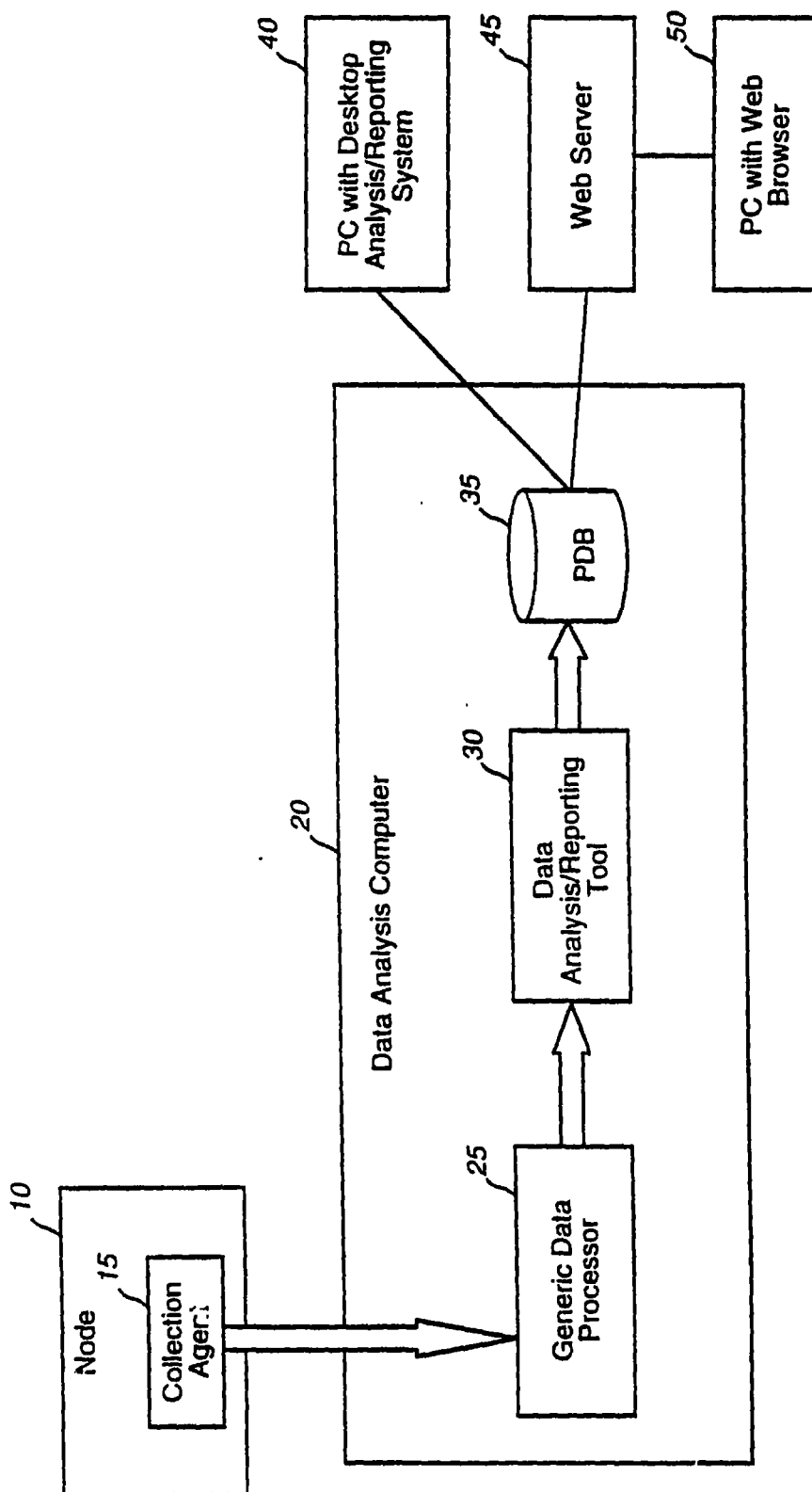


FIG. 1



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„normet09,DISK,c10t10d0,DSKMsp,1997-12-01 06:07:23,1
„normet09,DISK,c10t10d0,DSKMsp,1997-12-01 06:12:24,1
„normet09,DISK,c10t10d0,DSKMsp,1997-12-01 06:17:23,1
„normet09,DISK,c10t10d0,DSKMsp,1997-12-01 06:22:23,1
„normet09,DISK,c10t10d0,DSKMsp,1997-12-01 06:27:24,1
„normet09,DISK,c10t10d0,DSKMsp,1997-12-01 06:32:23,1
„normet09,DISK,c10t2d0,DSKMsp,1997-12-01 06:02:23,1
„normet09,DISK,c10t2d0,DSKMsp,1997-12-01 06:07:23,1
„normet09,DISK,c10t2d0,DSKMsp,1997-12-01 06:37:24,1
„normet09,DISK,c10t2d0,DSKMsp,1997-12-01 06:47:24,1
„normet09,DISK,c10t2d0,DSKMsp,1997-12-01 06:52:24,1
„normet09,DISK,c10t2d0,DSKMsp,1997-12-01 06:57:24,1
„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:00:47,21
„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:02:49,21
„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:04:50,21
„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:06:52,21
„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:08:53,21
„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:10:54,21
„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:12:55,21
„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:14:56,21
„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:16:57,21
„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:18:58,21
„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:21:00,21
„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:23:01,21
„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:25:02,21
„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:27:03,21
„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:29:04,21
„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:31:05,21
„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:33:06,21
„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:35:07,21
„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:37:08,21
„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:39:09,21
„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:41:10,21
„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:43:11,21
„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:45:12,21
„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:47:14,21
„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:49:14,21
„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:51:15,21
„normet09,SMP,CPU_3,SMPIdlePercent,1997-12-01 05:59:11,98
„normet09,SMP,CPU_3,SMPIdlePercent,1997-12-01 05:59:51,77
„normet09,SMP,CPU_3,SMPIdlePercent,1997-12-01 06:00:31,91
„normet09,SMP,CPU_3,SMPIdlePercent,1997-12-01 06:01:11,75
„normet09,SMP,CPU_3,SMPIdlePercent,1997-12-01 06:01:51,90

FIG. 2A

Substitute Sheet (Rule 26)

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```

,,normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:02:31,64
,,normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:03:11,90
,,normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:21:00,21
,,normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:23:01,21
,,normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:25:02,21
,,normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:27:03,21
,,normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:31:05,21
,,normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:33:06,21
,,normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:35:07,21
,,normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:37:08,21
,,normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:39:09,21
,,normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:41:10,21
,,normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:43:11,21
,,normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:45:12,21
,,normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:47:14,21
,,normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:49:14,21
,,normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:51:15,21
,,normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 05:59:11,98
,,normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 05:59:51,77
,,normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:00:31,91
,,normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:01:11,75
,,normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:01:51,90
,,normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:21:00,21
,,normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:23:01,21
,,normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:25:02,21
,,normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:27:03,21
,,normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:29:04,21
,,normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:31:05,21
,,normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:33:06,21
,,normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:35:07,21
,,normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:37:08,21
,,normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:39:09,21
,,normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:41:10,21
,,normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:43:11,21
,,normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:45:12,21
,,normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:47:14,21
,,normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:49:14,21
,,normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:51:15,21
,,normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 05:59:11,98
,,normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 05:59:51,77
,,normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:00:31,91
,,normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:01:11,75
,,normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:01:51,90
...skipping...
,,normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:21:00,21

```

FIG. 2B

Substitute Sheet (Rule 26)

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„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:23:01,21
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„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:27:03,21
„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:29:04,21
„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:31:05,21
„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:33:06,21
„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:35:07,21
„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:37:08,21
„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:39:09,21
„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:41:10,21
„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:43:11,21
„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:45:12,21
„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:47:14,21
„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:49:14,21
„normet09,FILESYSTEM,root,FSCapacity,1997-12-01 06:51:15,21
„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 05:59:11,98
„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 05:59:51,77
„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:00:31,91
„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:01:11,75
„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:01:51,90
„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:02:31,64
„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:03:11,90
„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:03:51,92
„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:04:31,86
„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:05:11,92
„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:05:51,82
„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:06:31,98
„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:07:11,90
„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:07:51,96
„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:08:31,97
„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:09:11,78
„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:09:51,97
„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:10:31,86
„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:11:11,97
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„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:12:31,94
„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:13:11,99
„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:13:51,79
„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:14:31,98
„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:15:11,72
„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:15:51,100
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„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:18:31,90

FIG. 2C

Substitute Sheet (Rule 26)

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„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:19:11,96
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„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:20:31,94
„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:21:12,99
„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:21:52,89
„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:22:32,99
„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:23:12,86
„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:23:52,100
„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:24:32,99
„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:25:12,82
„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:25:52,80
„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:26:32,83
„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:27:12,99
„normet09,SMP,CPU_3,SMPIIdlePercent,1997-12-01 06:27:52,93

FIG. 2D

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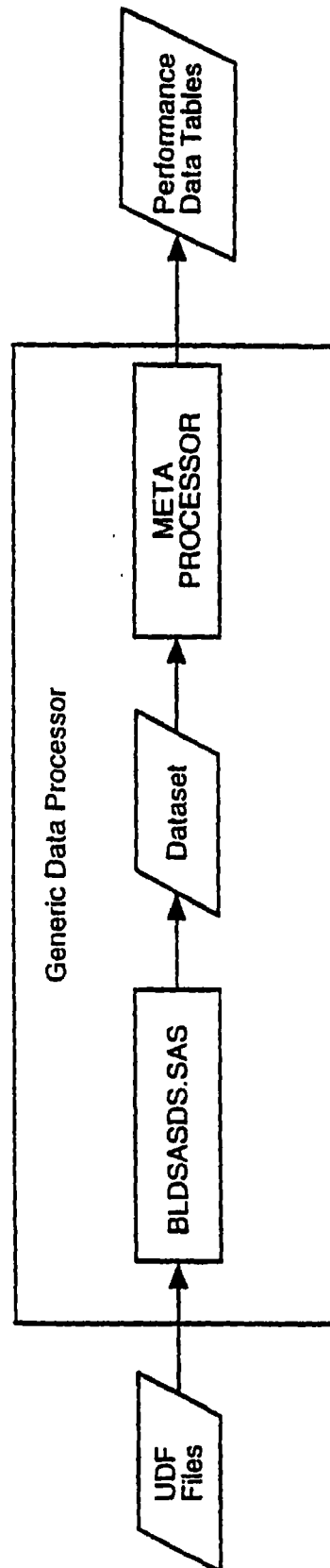


FIG. 3

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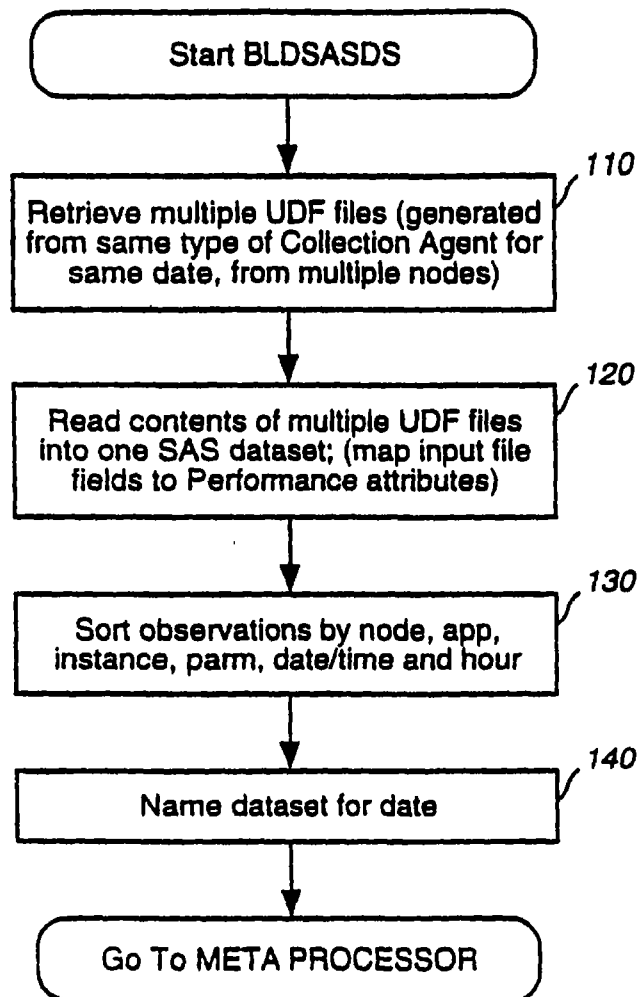


FIG. 4

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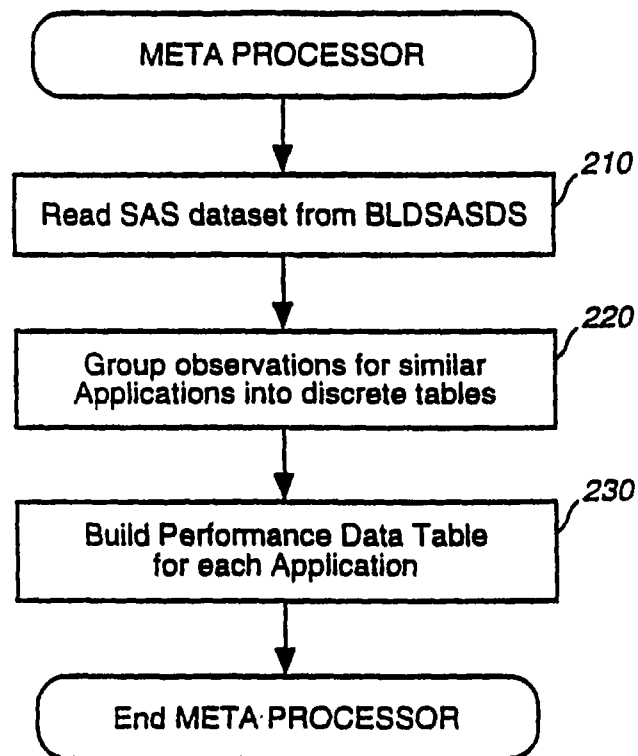


FIG. 5

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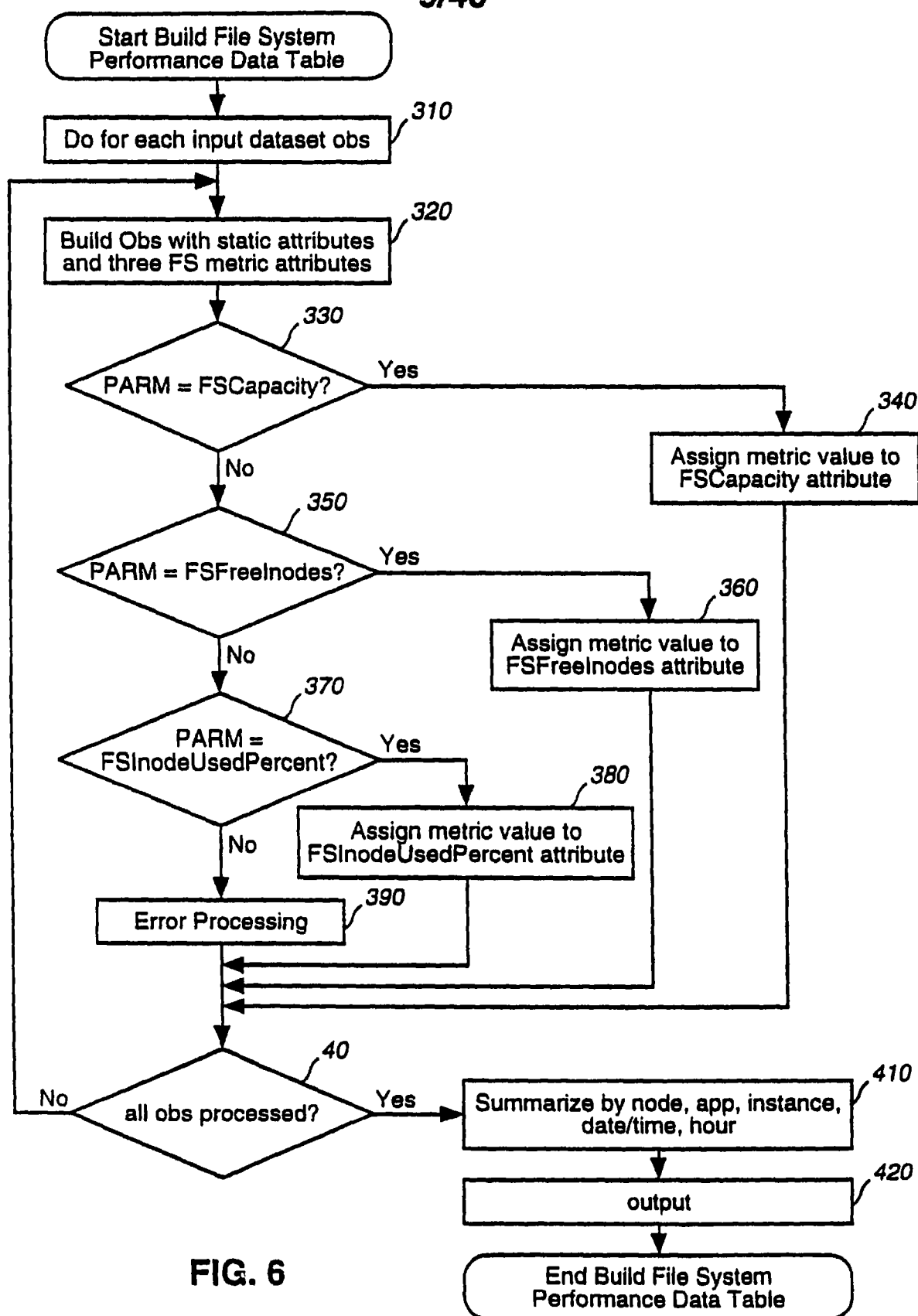


FIG. 6

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```

/* CHANGE LOG
/*
/*
/*
/* ADDED ZONE AND QUARTER VARIABLES
/* 10/28/97 BCB
/*
/* ADDED CPORT TO THIS VERSION TO CREATE TRANSPORT DATASET.
/* 10/28/97 BCB
/*

x 'cd/data1/metroinfo';
run;
/* Read the contents of multiple files into one SAS dataset (using FILEVAR) */
/* the directory where input files live */
%let thedir=/data1/metroinfo;
/* the prefix of files desired */
%let prelist=_1987_120223*; /* CHANGE DATE HERE DAY BEFORE */
/* the prefix of files desired */
%let thelist=_1987_1203*; /* CHANGE DATE HERE DAY WANTED */
/* the prefix of files desired */
%let postlist=_1987_120400*; /* CHANGE DATE HERE NEXT DAY */
/* the actual file list we will use but build it first */
%let filelist=/data1/metroinfo/test.input;
run;
filename outlist'/data 1/metroinfo/filein.dat';
run;
/* cd to the base directory where the input files will come from */
/* x "cd &thedir"; */
%sysexec pwd;
run;
/* simple datastep to build the file list */
filename getlist pipe "ls&prelist> &filelist";
data_null_ infile getlist;
run;

/* read the file list to use in datastep with filevar */
data setup 1;
  infile "&filelist" pad missover lrecl=40;
  input filename $1-40;

filename getlist pipe "ls &thelist> &filelist";
data_null_ infile getlist;
run;

/* read the file list to use in datastep with filevar */
data setup2;
  infile "&filelist" pad missover lrecl=40;
  input filename $1-40;

filename getlist pipe "ls &postlist > &filelist";
data_null_ infile getlist;
run;

```

FIG. 7A

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```

/* read the file list to use in datastep with filevar */
data setup3;
  infile "&filelist" pad missover lrecl=40;
  input filename $1-40;
run;
/* Now, let's try reading those new little files */
run;
data _null_;
file outlist new notitles noprint;
  put @1 'CARDS';
run;

data testit;
file outlist mod notitles noprint;
  set setup1 setup2 setup3;
  put @1 filename;
run;
OPTIONS PS=35 LS=126 NODATE;
LIBNAME CP '/data1/metroinfo';
FILENAME DATAIN '/data1/metroinfo/filein.dat';
RUN;
DATA ONE;
LENGTH READ_ALL $ 200;
LENGTH APP $ 15;
LENGTH INSTANCE $ 35;
LENGTH PARM $ 20;

INPUT READ_ALL $;
INFILE DUMMY DLM =',' MISSOVER FILEVAR=READ_ALL END=DONE;

DO UNTIL(DONE);

INPUT NODE $
      APP $
      INSTANCE $
      PARM $
      DATEX $ 19.
      METRIC;

OUTPUT;
END;
%INCLUDE DATAIN;
;
/* change data set name to reflect correct day */
DATA CP.DEC0397 (KEEP=NODE APP /* CHANGE DATE HERE DAY WANTED */
  INSTANCE PARM DATE TIME HOUR METRIC DT ZONE QUARTER);
SET ONE;
FORMAT DATE DATE9. TIME TIME8. HOUR Z2. DT DATETIME21.2;

DATEY=SUBSTR(DATEX,1,10);
TIMEY=SUBSTR(DATEX,12,8);

DATE=INPUT(DATEY,YYMMDD10.);

```

FIG. 7B

Substitute Sheet (Rule 26)

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```

TIME=INPUT(TIMEY,TIME8.) ;
DT=DHMS(DATE,HOUR(TIME),MINUTE(TIME),SECOND(TIME));
IF DATE='03DEC1997'D; /* CHANGE DATE HERE DAY WANTED */

HOUR=HOUR(TIME);

IF WEEKDAY(DATE) IN (1, 7) THEN ZONE=3 ;
ELSE IF WEEKDAY(DATE)=6 AND HOUR >= 18 THEN ZONE=3 ;
ELSE IF HOUR >=8 AND HOUR < 18 THEN ZONE = 1 ;
ELSE ZONE=2 ;

IF MINUTE(TIME) <15 THEN QUARTER=0 ;
ELSE IF MINUTE(TIME) >=15 AND MINUTE(TIME) <30 THEN QUARTER=15 ;
ELSE IF MINUTE(TIME) >=30 AND MINUTE(TIME) <45 THEN QUARTER=30 ;
ELSE IF MINUTE(TIME) >=45 THEN QUARTER=45 ;

RUN ;

PROC SORT NODUP DATA = CP.DEC0397 ; /* CHANGE DATE HERE DAY WANTED */
BY NODE APP INSTANCE PARM DATE TIME HOUR;
RUN;

DATA TEMP1;
SET CP.DEC0397; /* CHANGE DATE HERE DAY WANTED */
KEEP NODE DATE HOUR;

PROC SORT DATA = TEMP1 NODUPPLICATES;
BY NODE DATE HOUR;

DATA TEMP2;
SET TEMP1;
KEEP NODE DATE HOUR COUNT;
COUNT = 1;

PROC SUMMARY DATA=TEMP2;
VAR COUNT;
BY NODE DATE;
OUTPUT SUM(COUNT)=HOURS
OUT=TEMP2(DROP=_TYPE_ _FREQ_);

PROC PRINT DATA =TEMP2 NOOBS;
RUN;

QUIT;

```

FIG. 7C

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```

***** ;
LIBNAME CP v612 'data1/metroinfo' ;
x 'cd/data1/metroinfo' ;
run ;

DATA CP.PROCESS (KEEP=NODE APP INSTANCE PARM DATE TIME HOUR METRIC DT
DATETIME QUARTER ZONE) ;

SET CP.NOV3097 ;

FORMAT DATE DATE9. TIME TIME10.2 HOUR Z2. DATETIME DATETIME21.2 ;

DATETIME=DHMS(DATE,HOUR(TIME),MINUTE(TIME),SECOND(TIME));

HOUR=HOUR(TIME);

IF MINUTE(TIME) <15 THEN QUARTER=0;
ELSE IF MINUTE(TIME) >=15 AND MINUTE(TIME) <30 THEN QUARTER=15 ;
ELSE IF MINUTE(TIME) >=30 AND MINUTE(TIME) <45 THEN QUARTER=30 ;
ELSE IF MINUTE(TIME) >=45 THEN QUARTER=45 ;

IF WEEKDAY(DATE) IN (1, 7) THEN ZONE=3 ;
ELSE IF WEEKDAY(DATE)=6 AND HOUR >= 18 THEN ZONE=3 ;
ELSE IF HOUR >=8 AND HOUR <18 THEN ZONE = 1 ;
ELSE ZONE=2 ;

PROC SORT DATA = CP.PROCESS ;
  BY NODE APP INSTANCE DATETIME DATE TIME HOUR;
RUN;
QUIT;
***** ;

* THIS DATA STEP STAGES AND GROUPS FUNCTIONALLY SIMILAR DATA INTO DISCRETE
TABLES

***** ;
LIBNAME CP v612 '/data1/metroinfo';
LIBNAME WORK1 v612 '/data2/temp';

DATA ACT1 CPU1 DSK1 FS1 KER1 MEM1 NET1 NFS1 ORA1 PA1 PROC1
  SMP1 SWP1 SYB1 SDB1 USR1 ;

SET CP.PROCESS ;

  IF APP = 'ACTIVEPROCESS' THEN OUTPUT ACT1;
  ELSE IF APP = 'CPU'      THEN OUTPUT CPU1 ;
  ELSE IF APP = 'DISK'     THEN OUTPUT DSK1 ;
  ELSE IF APP = 'FILESYSTEM' THEN OUTPUT FS1 ;
  ELSE IF APP = 'KERNEL'   THEN OUTPUT KER1 ;
  ELSE IF APP = 'MEMORY'   THEN OUTPUT MEM1 ;
  ELSE IF APP = 'NETWORK'  THEN OUTPUT NET1 ;
  ELSE IF APP = 'NFS'      THEN OUTPUT NFS1 ;

```

FIG. 8A

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```

ELSE IF APP = 'ORACLE7'      THEN OUTPUT ORA1 ;
ELSE IF APP = 'PATROLAGENT'  THEN OUTPUT PA1 ;
ELSE IF APP = 'PROCESS'     THEN OUTPUT PROC1 ;
ELSE IF APP = 'SMP'         THEN OUTPUT SMP1 ;
ELSE IF APP = 'SWAP'        THEN OUTPUT SWP1 ;
ELSE IF APP = 'SYBASE10'    THEN OUTPUT SYB1 ;
ELSE IF APP = 'SYBASE10DB'  THEN OUTPUT SDB1 ;
ELSE IF APP = 'USER'        THEN OUTPUT USR1 ;

***** ;

* BUILD THE Active Process PERFORMANCE DATA TABLE

***** ;
DATA ACT ;
SET ACT1 ;
  KEEP
    APP DATE DATETIME HOUR INSTANCE NODE PARM QUARTER TIME
    ACTPCPUP ACTPCCTM ACTPRDCP ACTPMMEM ACTPMEMW ACTPRRNK ;

LENGTH ACTPMEMW $15 ;

  IF PARM= 'ACTPRCPUPerc'      THEN ACTPCPUP = METRIC ;
ELSE IF PARM='ACTPRCPUTime'    THEN ACTPCCTM = METRIC ;
ELSE IF PARM='ACTPRDeltaCPU'   THEN ACTPRDCP = METRIC ;
ELSE IF PARM='ACTPRMem'       THEN ACTPMMEM = METRIC ;
ELSE IF PARM='ACTPRMemWait'   THEN ACTPMEMW = METRIC ;
ELSE IF PARM='ACTPRRank'      THEN ACTPRRNK = METRIC ;

ATTRIB DATETIME LABEL = 'Date Time Stamp'          FORMAT = DATETIME21.2 ;
ATTRIB DATE LABEL = 'Date'                          FORMAT = DATE9. ;
ATTRIB TIME LABEL = 'Time'                          FORMAT = TIME10.2 ;
ATTRIB HOUR LABEL = 'Hour'                          FORMAT = Z2. ;
ATTRIB QUARTER LABEL = 'Quarter'                    FORMAT = BEST12. ;
ATTRIB INSTANCE LABEL = 'Instance'                  LENGTH = $35 ;
ATTRIB APP LABEL = 'Application'                     LENGTH = $15 ;
ATTRIB NODE LABEL = 'Node'                          LENGTH = $8 ;
ATTRIB ACTPCPUP LABEL = 'Percent CPU utilization of process'  FORMAT = 5.2 ;
ATTRIB ACTPCCTM LABEL = 'Accumulated CPU time used by process'  FORMAT = TIME11.2 ;
;
ATTRIB ACTPRDCP LABEL = 'Change in CPU time since last interval'  FORMAT = BEST12. ;
/* STORED AS A COUNT */
ATTRIB ACTPMMEM LABEL = 'Memory used by process'              FORMAT = BEST12. ;
ATTRIB ACTPMEMW LABEL = 'Active process waiting for memory'   LENGTH = $15 ;
ATTRIB ACTPRRNK LABEL = 'Ranking of active processes (Top 10)'  FORMAT = BEST12. ;

RUN ;

PROC SUMMARY DATA = ACT ;
BY NODE APP INSTANCE DATETIME DATE TIME HOUR;
ID QUARTER ACTPMEMW ;
VAR ACTPCPUP ACTPCCTM ACTPRDCP ACTPMMEM ACTPRRNK ;
OUTPUT OUT= ACT
MEAN=ACTPCPUP ACTPCCTM ACTPRDCP ACTPMMEM ACTPRRNK ;

```

FIG. 8B

Substitute Sheet (Rule 26)

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```

*****
* BUILD THE CPU PERFORMANCE DATA TABLE
*****
DATA CPU ;
SET CPU1 ;
KEEP
  APP DATE DATETIME HOUR INSTANCE NODE PARM QUARTER TIME
  CPUTIL CPIDLETM CPUINT CPULOAD CPUPSWCH CPRUNQSZ
  CPSYSTEM CPUSERTM CPUWIO CPUWSWP ;

  IF PARM= 'CPUCpuUtil' THEN CPUTIL = METRIC ;
  ELSE IF PARM= 'CPUIdleTime' THEN CPIDLETM = METRIC ;
  ELSE IF PARM= 'CPUInt' THEN CPUINT = METRIC ;
  ELSE IF PARM= 'CPULoad' THEN CPULOAD = METRIC ;
  ELSE IF PARM= 'CPUProcSwch' THEN CPUPSWCH = METRIC ;
  ELSE IF PARM= 'CPURunQSize' THEN CPRUNQSZ = METRIC ;
  ELSE IF PARM= 'CPUSysTime' THEN CPSYSTEM = METRIC ;
  ELSE IF PARM= 'CPUUserTime' THEN CPUSERTM = METRIC ;
  ELSE IF PARM= 'CPUWio' THEN CPUWIO = METRIC ;
  ELSE IF PARM= 'CPUWSwp' THEN CPUWSWP = METRIC ;

ATTRIB DATETIME LABEL = 'Date Time Stamp' FORMAT = DATETIME21.2 ;
ATTRIB DATE LABEL = 'Date' FORMAT = DATE9. ;
ATTRIB TIME LABEL = 'Time' FORMAT = TIME10.2 ;
ATTRIB HOUR LABEL = 'Hour' FORMAT = Z2. ;
ATTRIB QUARTER LABEL = 'Quarter' FORMAT = BEST12. ;
ATTRIB INSTANCE LABEL = 'Instance' LENGTH = $35 ;
ATTRIB APP LABEL = 'Application' LENGTH = $15 ;
ATTRIB NODE LABEL = 'Node' LENGTH = $8 ;
ATTRIB CPUTIL LABEL = 'Percent CPU utilization' FORMAT = 5.2 ;
ATTRIB CPIDLETM LABEL = 'Percent of time CPU was Idle' FORMAT = 5.2 ;
ATTRIB CPUINT LABEL = 'Number of non-VME interrupts' FORMAT = BEST12. ;
ATTRIB CPULOAD LABEL = '1 minute CPU load average' FORMAT = BEST12.2 ;
ATTRIB CPUPSWCH LABEL = 'Number of CPU Context switches' FORMAT = BEST12. ;
ATTRIB CPRUNQSZ LABEL = 'Average number of processes running' FORMAT = BEST12. ;
/* STORED AS A COUNT */
ATTRIB CPSYSTEM LABEL = 'Percent of CPU time spent in system mode' FORMAT = 5.2 ;
ATTRIB CPUSERTM LABEL = 'Percent of CPU time spent in user mode' FORMAT = 5.2 ;
ATTRIB CPUWIO LABEL = 'Percent of CPU time waiting for I/O' FORMAT = 5.2 ;
ATTRIB CPUWSWP LABEL = 'Percent of CPU time waiting for swap I/O' FORMAT = 5.2 ;

RUN;

PROC SUMMARY DATA = CPU ;
BY NODE APP INSTANCE DATETIME DATE TIME HOUR;
ID QUARTER ;
VAR CPUTIL CPIDLETM CPUINT CPULOAD CPUPSWCH CPRUNQSZ
  CPSYSTEM CPUSERTM CPUWIO CPUWSWP ;
OUTPUT OUT= CPU
MEAN=CPUTIL CPIDLETM CPUINT CPULOAD CPUPSWCH CPRUNQSZ

```

FIG. 8B

Substitute Sheet (Rule 26)

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CPSYSTEM CPUSERTM CPUWIO CPUWSWP ;

RUN ;

***** ;

* BUILD THE DISK PERFORMANCE DATA TABLE

***** ;

DATA DSK ;

SET DSK1 ;

KEEP

APP DATE DATETIME HOUR INSTANCE NODE PARM QUARTER TIME
 DSKAVGQ DSKAVGST DSKAVGWT DSKBPS DSKMSPS DSKPCBSY
 DSKREAD DSKRDWRT DSKSPS DSKTPS DSKWRITE ;

IF PARM= 'DSKAvgQueue' THEN DSKAVGQ = METRIC ;
 ELSE IF PARM= 'DSKAvgServ' THEN DSKAVGST = METRIC ;
 ELSE IF PARM= 'DSKAvgWait' THEN DSKAVGWT = METRIC ;
 ELSE IF PARM= 'DSKBps' THEN DSKBPS = METRIC ;
 ELSE IF PARM= 'DSKMSPs' THEN DSKMSPS = METRIC ;
 ELSE IF PARM= 'DSKPercentBusy' THEN DSKPCBSY = METRIC ;
 ELSE IF PARM= 'DSKRead' THEN DSKREAD = METRIC ;
 ELSE IF PARM= 'DSKReadWrite' THEN DSKRDWRT = METRIC ;
 ELSE IF PARM= 'DSKSPs' THEN DSKSPS = METRIC ;
 ELSE IF PARM= 'DSKTPs' THEN DSKTPS = METRIC ;
 ELSE IF PARM= 'DSKWrite' THEN DSKWRITE = METRIC ;

ATTRIB DATETIME LABEL = 'Date Time Stamp' FORMAT = DATETIME21.2 ;
 ATTRIB DATE LABEL = 'Date' FORMAT = DATE9. ;
 ATTRIB TIME LABEL = 'Time' FORMAT = TIME10.2 ;
 ATTRIB HOUR LABEL = 'Hour' FORMAT = Z2. ;
 ATTRIB QUARTER LABEL = 'Quarter' FORMAT = BEST12. ;
 ATTRIB INSTANCE LABEL = 'Instance' LENGTH = \$35 ;
 ATTRIB APP LABEL = 'Application' LENGTH = \$15 ;
 ATTRIB NODE LABEL = 'Node' LENGTH = \$8 ;
 ATTRIB DSKAVGQ LABEL = 'Average number disk I/O requests' FORMAT = BEST12.2 ;
 ATTRIB DSKAVGST LABEL = 'Average service time in ms' FORMAT = TIME11.2 ;
 ATTRIB DSKAVGWT LABEL = 'Average time requests wait in queue' FORMAT = TIME12.2 ;
 ATTRIB DSKBPS LABEL = '1-KB blocks read or written per second' FORMAT = BEST12.2 ;
 /* STORED AS A RATE */
 ATTRIB DSKMSPS LABEL = 'Average disk seek time for the device' FORMAT = TIME12.2 ;
 ATTRIB DSKPCBSY LABEL = 'Percent of time a device is busy' FORMAT = 5.2 ;
 ATTRIB DSKREAD LABEL = 'Number of disk reads per second' FORMAT = 5.2 ;
 ATTRIB DSKRDWRT LABEL = 'Number of read and write reqs to device/sec' FORMAT = 5.2 ;
 ATTRIB DSKSPS LABEL = 'Number of disk seeks per second' FORMAT = BEST12.2 ; /*
 STORED AS A RATE */
 ATTRIB DSKTPS LABEL = 'Number of disk transfers per second' FORMAT = BEST12.2 ; /*
 STORED AS A RATE */
 ATTRIB DSKWRITE LABEL = 'Number of KBs written to disk per second' FORMAT = 5.2 ;

RUN ;

PROC SUMMARY DATA = DSK ;

FIG. 8D

Substitute Sheet (Rule 26)

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```

BY NODE APP INSTANCE DATETIME DATE TIME HOUR;
ID QUARTER ;
VAR DSKAVGQ DSKAVGST DSKAVGWT DSKBPS DSKMSPS DSKPCBSY
    DSKREAD DSKRDWRT DSKSPS DSKTPS DSKWRITE ;
OUTPUT OUT= DSK
MEAN=DSKAVGQ DSKAVGST DSKAVGWT DSKBPS DSKMSPS DSKPCBSY
    DSKREAD DSKRDWRT DSKSPS DSKTPS DSKWRITE ;

***** ;

* BUILD THE FILE SYSTEM PERFORMANCE DATA TABLE

***** ;

DATA FS ;
SET FS1 ;
    KEEP
        APP DATE DATETIME HOUR INSTANCE NODE PARM QUARTER TIME
        FSCAPCTY FSFINODE FSINPCTU ;

    IF PARM= 'FSCapacity'      THEN FSCAPCTY = METRIC ;
    ELSE IF PARM= 'FSFreeInodes' THEN FSFINODE = METRIC ;
    ELSE IF PARM= 'FSInodeUsedPercent' THEN FSINPCTU = METRIC ;

ATTRIB DATETIME LABEL = 'Date Time Stamp'      FORMAT = DATETIME21.2 ;
ATTRIB DATE LABEL = 'Date'                      FORMAT = DATE9. ;
ATTRIB TIME LABEL = 'Time'                      FORMAT = TIME10.2 ;
ATTRIB HOUR LABEL = 'Hour'                      FORMAT = Z2. ;
ATTRIB QUARTER LABEL = 'Quarter'                FORMAT = BEST12. ;
ATTRIB INSTANCE LABEL = 'Instance'              LENGTH = $35 ;
ATTRIB APP LABEL = 'Application'                LENGTH = $15 ;
ATTRIB NODE LABEL = 'Node'                      LENGTH = $8 ;
ATTRIB FSCAPCTY LABEL = 'Percent of file system storage in use' FORMAT = 5.2 ;
ATTRIB FSINPCTU LABEL = 'Number of unused I-nodes on file system' FORMAT = 5.2 ;
ATTRIB FSINPCTU LABEL = 'Percent of I-nodes used' FORMAT = 5.2 ;

RUN ;

PROC SUMMARY DATA = FS ;
BY NODE APP INSTANCE DATETIME DATE TIME HOUR;
ID QUARTER ;
VAR FSCAPCTY FSFINODE FSINPCTU ;
OUTPUT OUT= FS
MEAN=FSCAPCTY FSFINODE FSINPCTU ;

***** ;

* BUILD THE KERNAL PERFORMANCE DATA TABLE

***** ;

DATA KER ;
SET KER1 ;

```

FIG. 8E

Substitute Sheet (Rule 26)

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KEEP

APP DATE DATETIME HOUR INSTANCE NODE PARM QUARTER TIME
 KERDIRBK KERFLUPC KERGNUSD KERIGET KERINUPC KERLGALC
 KERLGFAL KERLGMEM KERLUPCT KERMSG KERNAMEI KEROVALC
 KEROVFAL KERPUPCT KERSEMOP KERSMALC KERSMFAL KERSMMEM
 KERSYSCL ;

IF PARM= 'KERDirBk' THEN KERDIRBK = METRIC ;
 ELSE IF PARM= 'KERFileUsedPercent' THEN KERFLUPC = METRIC ;
 ELSE IF PARM= 'KERGNodeUsedPercent' THEN KERGNUSD = METRIC ;
 ELSE IF PARM= 'KERIGet' THEN KERIGET = METRIC ;
 ELSE IF PARM= 'KERINodeUsedPercent' THEN KERINUPC = METRIC ;
 ELSE IF PARM= 'KERLgAlloc' THEN KERLGALC = METRIC ;
 ELSE IF PARM= 'KERLgFail' THEN KERLGFAL = METRIC ;
 ELSE IF PARM= 'KERLgMem' THEN KERLGMEM = METRIC ;
 ELSE IF PARM= 'KERLockUsedPercent' THEN KERLUPCT = METRIC ;
 ELSE IF PARM= 'KERMsg' THEN KERMSG = METRIC ;
 ELSE IF PARM= 'KERNameI' THEN KERNAMEI = METRIC ;
 ELSE IF PARM= 'KEROvzAlloc' THEN KEROVALC = METRIC ;
 ELSE IF PARM= 'KEROvzFail' THEN KEROVFAL = METRIC ;
 ELSE IF PARM= 'KERProcUsedPercent' THEN KERPUPCT = METRIC ;
 ELSE IF PARM= 'KERSemOps' THEN KERSEMOP = METRIC ;
 ELSE IF PARM= 'KERSmlAlloc' THEN KERSMALC = METRIC ;
 ELSE IF PARM= 'KERSmlFail' THEN KERSMFAL = METRIC ;
 ELSE IF PARM= 'KERSmlMem' THEN KERSMMEM = METRIC ;
 ELSE IF PARM= 'KERSysCall' THEN KERSYSCL = METRIC ;

ATTRIB DATETIME LABEL = 'Date Time Stamp' FORMAT = DATETIME21.2 ;
 ATTRIB DATE LABEL = 'Date' FORMAT = DATE9. ;
 ATTRIB TIME LABEL = 'Time' FORMAT = TIME10.2 ;
 ATTRIB HOUR LABEL = 'Hour' FORMAT = Z2. ;
 ATTRIB QUARTER LABEL = 'Quarter' FORMAT = BEST12. ;
 ATTRIB INSTANCE LABEL = 'Instance' LENGTH = \$35 ;
 ATTRIB APP LABEL = 'Application' LENGTH = \$15 ;
 ATTRIB NODE LABEL = 'Node' LENGTH = \$8 ;
 ATTRIB KERDIRBK LABEL = 'Directory blocks reads per second' FORMAT = BEST12.2 ;
 /* STORED AS A RATE */
 ATTRIB KERFLUPC LABEL = 'Percent Kernel file slots in use' FORMAT = 5.2 ;
 ATTRIB KERGNUSD LABEL = 'Percent of kernel file G-node slots in use' FORMAT = BEST12. ;
 /* STORED AS A COUNT */
 ATTRIB KERIGET LABEL = 'Number of files locate by I-Node entry' FORMAT = BEST12. ; /*
 STORED AS A COUNT */
 ATTRIB KERINUPC LABEL = 'Percent of kernel I-node slots used' FORMAT = 5.2 ;
 ATTRIB KERMSG LABEL = 'Number of message operations per second' FORMAT = BEST12.2
 ; /* STORED AS A RATE */
 ATTRIB KERLGALC LABEL = 'Area allocated in bytes for lg mem reqs' FORMAT = BEST 12.2 ;
 /* STORED AS A RATE */
 ATTRIB KERLGFAL LABEL = 'Number of lg mem pool requests that fail' FORMAT = BEST12.2
 ; /* STORED AS A RATE */
 ATTRIB KERLGMEM LABEL = 'Amount avail to KMA in lg mem pool in bytes' FORMAT =
 BEST 12.2 ; /* STORED AS A RATE */
 ATTRIB KERLUPCT LABEL = 'Percent of kernel lock slots in use' FORMAT = BEST12.2 ; /*
 STORED AS A RATE */

FIG. 8F

Substitute Sheet (Rule 26)

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```

ATTRIB KERMSG LABEL = 'Number of message operations per second'      FORMAT = BEST12.2
; /* STORED AS A RATE */
ATTRIB KERNAMEI LABEL = 'Number of file system pathname searches'      FORMAT = BEST12.
; /* STORED AS A COUNT */
ATTRIB KEROVALC LABEL = 'Area allocated in bytes for oversize mem'      FORMAT = BEST12.2
; /* STORED AS A RATE */
ATTRIB KEROVFAL LABEL = 'Number of ovz mem pool requests that fail'      FORMAT = BEST12.2
; /* STORED AS A RATE */
ATTRIB KEROVMEM LABEL = 'Amount avail to KMA in ovz mem pool in byts'    FORMAT =
BEST12.2 ; /* STORED AS A RATE */
ATTRIB KERPUPCT LABEL = 'Percentage of Kernel process slots used'      FORMAT = 5.2 ; /*
CHECK TO SEE IF IT IS A COUNT */
ATTRIB KERSEMOP LABEL = 'Number of semaphore operations per second'      FORMAT = BEST12.2
; /* STORED AS A RATE */
ATTRIB KERSMALC LABEL = 'Area allocated in bytes for sm mem reqs'      FORMAT = BEST12.2
; /* STORED AS A RATE */
ATTRIB KERSMFAL LABEL = 'Number of sm mem pool requests that fail'      FORMAT = BEST12.2
; /* STORED AS A RATE */
ATTRIB KERSMMEM LABEL = 'Amount avail to KMA in sm mem pool in bytes'    FORMAT =
BEST 12.2 ; /* STORED AS A RATE */
ATTRIB KERSYSCL LABEL = 'Total Number of system calls per second'      FORMAT = BEST12.2
; /* STORED AS A RATE */

```

RUN ;

```

PROC SUMMARY DATA = KER ;
BY NODE APP INSTANCE DATETIME DATE TIME HOUR;
ID QUARTER ;
VAR KERDIRBK KERFLUPC KERGNUSD KERIGET KERINUPC KERLGALC
KERLGFAL KERLGMEM KERLUPCT KERMSG KERNAMEI KEROVALC
KEROVFAL KERPUPCT KERSEMOP KERSMALC KERSMFAL KERSMMEM
KERSYSCL ;
OUTPUT OUT= KER
MEAN=KERDIRBK KERFLUPC KERGNUSD KERIGET KERINUPC KERLGALC
KERLGFAL KERLGMEM KERLUPCT KERMSG KERNAMEI KEROVALC
KEROVFAL KERPUPCT KERSEMOP KERSMALC KERSMFAL KERSMMEM
KERSYSCL ;

```

RUN ;

***** ;

* BUILD THE MEMORY PERFORMANCE DATA TABLE

***** ;

DATA MEM ;

SET MEM1 ;

KEEP

```

APP DATE DATETIME HOUR INSTANCE NODE PARM QUARTER TIME
MEMACVPG MEMADTRF MEMALOC MEMBFBRE MEMBREAD MEMBREQ
MEMBWRIT MEMBPREQ MEMCACHE MEMCOW MEMCOPYW MEMDFILL
MEMFLUSH MEMFREEM MEMHPMEM MEMIDGET MEMIDPRG MEMIDWRP
MEMLREAD MEMLWRT MEMOVRHD MEMPFALT MEMPREAD MEMPWRT
MEMPGANT MEMPGFRD MEMPGIN MEMPGOUT MEMPSCND MEMPGFIL

```

FIG. 8G

Substitute Sheet (Rule 26)

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MEMPGSWP MEMRCACH MEMRFALT MEMREGIN MEMRGOUT MEMREQ
MEMSTEAL MEMSWPBF MEMSYNC MEMTFALT MEMUNUSD MEMVMPRG
MEMWCACH MEMWIRE MEMZERO ;

```

IF PARM= 'MEMActiveVirPage' THEN MEMACVPG = METRIC ;
ELSE IF PARM= 'MEMAddrTransFault' THEN MEMADTRF = METRIC ;
ELSE IF PARM= 'MEMAllocD' THEN MEMALOC D = METRIC ;
ELSE IF PARM= 'MEMBFree' THEN MEMBFREE = METRIC ;
ELSE IF PARM= 'MEMBRead' THEN MEMBREAD = METRIC ;
ELSE IF PARM= 'MEMBReq' THEN MEMBREQ = METRIC ;
ELSE IF PARM= 'MEMBWrt' THEN MEMBWRT = METRIC ;
ELSE IF PARM= 'MEMBlkPerReq' THEN MEMBPREQ = METRIC ;
ELSE IF PARM= 'MEMCache' THEN MEMCACHE = METRIC ;
ELSE IF PARM= 'MEMCow' THEN MEMCOW = METRIC ;
ELSE IF PARM= 'MEMCpyW' THEN MEMCOPYW = METRIC ;
ELSE IF PARM= 'MEMDFill' THEN MEMDFILL = METRIC ;
ELSE IF PARM= 'MEMFlush' THEN MEMFLUSH = METRIC ;
ELSE IF PARM= 'MEMFreeMem' THEN MEMFREEM = METRIC ;
ELSE IF PARM= 'MEMHeapMem' THEN MEMHPMEM = METRIC ;
ELSE IF PARM= 'MEMIdGet' THEN MEMIDGET = METRIC ;
ELSE IF PARM= 'MEMIdPrg' THEN MEMIDPRG = METRIC ;
ELSE IF PARM= 'MEMIdWrp' THEN MEMIDWRP = METRIC ;
ELSE IF PARM= 'MEMLRead' THEN MEMLREAD = METRIC ;
ELSE IF PARM= 'MEMLWrt' THEN MEMLWRT = METRIC ;
ELSE IF PARM= 'MEMOverHd' THEN MEMOVRHD = METRIC ;
ELSE IF PARM= 'MEMPFault' THEN MEMPFALT = METRIC ;
ELSE IF PARM= 'MEMPRead' THEN MEMPREAD = METRIC ;
ELSE IF PARM= 'MEMPWrt' THEN MEMPWRT = METRIC ;
ELSE IF PARM= 'MEMPageAnticipated' THEN MEMPGANT = METRIC ;
ELSE IF PARM= 'MEMPageFreed' THEN MEMPGFRD = METRIC ;
ELSE IF PARM= 'MEMPagein' THEN MEMPGIN = METRIC ;
ELSE IF PARM= 'MEMPageOut' THEN MEMPGOUT = METRIC ;
ELSE IF PARM= 'MEMPageScanned' THEN MEMPSCND = METRIC ;
ELSE IF PARM= 'MEMPgFil' THEN MEMPGFIL = METRIC ;
ELSE IF PARM= 'MEMPgSwp' THEN MEMPGSWP = METRIC ;
ELSE IF PARM= 'MEMRCache' THEN MEMRCACH = METRIC ;
ELSE IF PARM= 'MEMRFault' THEN MEMRFALT = METRIC ;
ELSE IF PARM= 'MEMRegionsIn' THEN MEMREGIN = METRIC ;
ELSE IF PARM= 'MEMRegionsOut' THEN MEMRGOUT = METRIC ;
ELSE IF PARM= 'MEMReq' THEN MEMREQ = METRIC ;
ELSE IF PARM= 'MEMSteal' THEN MEMSTEAL = METRIC ;
ELSE IF PARM= 'MEMSwpBf' THEN MEMSWPBF = METRIC ;
ELSE IF PARM= 'MEMSync' THEN MEMSYNC = METRIC ;
ELSE IF PARM= 'MEMTFault' THEN MEMTFALT = METRIC ;
ELSE IF PARM= 'MEMUnused' THEN MEMUNUSD = METRIC ;
ELSE IF PARM= 'MEMVmPrg' THEN MEMVMPRG = METRIC ;
ELSE IF PARM= 'MEMWCach' THEN MEMWCACH = METRIC ;
ELSE IF PARM= 'MEMWire' THEN MEMWIRE = METRIC ;
ELSE IF PARM= 'MEMZero' THEN MEMZERO = METRIC ;

```

```

ATTRIB DATETIME LABEL = 'Date Time Stamp' FORMAT = DATETIME21.2 ;
ATTRIB DATE LABEL = 'Date' FORMAT = DATE9. ;
ATTRIB TIME LABEL = 'Time' FORMAT = TIME10.2 ;
ATTRIB HOUR LABEL = 'Hour' FORMAT = Z2. ;

```

FIG. 8H

Substitute Sheet (Rule 26)

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```

ATTRIB MEMPGFIL LABEL = 'Number of raw reads/sec from char device'      FORMAT = BEST12.
;
ATTRIB MEMPGSWP LABEL = 'Number of raw writes/sec to char device'      FORMAT = BEST12.
;
ATTRIB MEMRCACH LABEL = 'Percent of I reads in the buffer cache'        FORMAT = 5.2      ;
ATTRIB MEMRFALT LABEL = 'Number of 1-KB mem pgs swaped in'              FORMAT = BEST12.
;
ATTRIB MEMREGIN LABEL = 'Number of 1-KB mem pgs swaped out'             FORMAT = BEST12.
;
ATTRIB MEMRGOUT LABEL = 'Number of mem alloc reqs per second'           FORMAT = BEST12.
;
ATTRIB MEMREQ LABEL = 'Number of pg refnce faults per second'           FORMAT = BEST12. ;
ATTRIB MEMSTEAL LABEL = 'Number of pg prtctn flts on writable pgs'      FORMAT = BEST12. ;
ATTRIB MEMSWPBF LABEL = 'Number of sawp buffer calls per second'         FORMAT = BEST12.
;
ATTRIB MEMSYNC LABEL = 'Number of TLB flushes/s all processors'          FORMAT = BEST12. ;
ATTRIB MEMTFALT LABEL = 'Number of user page table faults'              FORMAT = BEST12. ;
ATTRIB MEMUNUSD LABEL = 'Number of bytes of heap memory available'       FORMAT = BEST12.
;
ATTRIB MEMVMPRG LABEL = 'Number of individual TLB entrs purged/s'       FORMAT = BEST12.
;
ATTRIB MEMWCACH LABEL = 'Percent of 1 blks written to buff cache'       FORMAT = 5.2      ;
ATTRIB MEMWIRE LABEL = 'Number of 1-KB mem pgs non-swappable'          FORMAT = BEST12.
;
ATTRIB MEMZERO LABEL = 'Number of mem pgs zero-filled on demand'       FORMAT = BEST12.
;

```

RUN ;

PROC SUMMARY DATA = MEM ;

BY NODE APP INSTANCE DATETIME DATE TIME HOUR;

ID QUARTER ;

VAR MEMACVPG MEMADTRF MEMALOC D MEMBFREE MEMBREAD MEMBREQ
MEMBWRT MEMBPREQ MEMCACHE MEMCOW MEMCOPYW MEMDFILL
MEMFLUSH MEMFREEM MEMHPMEM MEMIDGET MEMIDPRG MEMIDWRP
MEMLREAD MEMLWRT MEMOVRHD MEMPFALT MEMPREAD MEMPWRT
MEMPGANT MEMPGFRD MEMPGIN MEMPGOUT MEMPSCND MEMPGFIL
MEMPGSWP MEMRCACH MEMRFALT MEMREGIN MEMRGOUT MEMREQ
MEMSTEAL MEMSWPBF MEMSYNC MEMTFALT MEMUNUSD MEMVMPRG
MEMWCACH MEMWIRE MEMZERO ;

OUTPUT OUT= MEM

MEAN=MEMACVPG MEMADTRF MEMALOC D MEMBFREE MEMBREAD MEMBREQ
MEMBWRT MEMBPREQ MEMCACHE MEMCOW MEMCOPYW MEMDFILL
MEMFLUSH MEMFREEM MEMHPMEM MEMIDGET MEMIDPRG MEMIDWRP
MEMLREAD MEMLWRT MEMOVRHD MEMPFALT MEMPREAD MEMPWRT
MEMPGANT MEMPGFRD MEMPGIN MEMPGOUT MEMPSCND MEMPGFIL
MEMPGSWP MEMRCACH MEMRFALT MEMREGIN MEMRGOUT MEMREQ
MEMSTEAL MEMSWPBF MEMSYNC MEMTFALT MEMUNUSD MEMVMPRG
MEMWCACH MEMWIRE MEMZERO ;

*****;

FIG. 8J

Substitute Sheet (Rule 26)

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* BUILD THE NETWORK PERFORMANCE DATA TABLE

*****;

DATA NET ;

SET NET1 ;

KEEP

APP DATE DATETIME HOUR INSTANCE NODE PARM QUARTER TIME
NETCOLPC NETIERRP NETOERRP NETPKTSI NETPKTSO ;

IF PARM= 'NETCollisionPrc' THEN NETCOLPC = METRIC ;
ELSE IF PARM= 'NETInErrPrc' THEN NETIERRP = METRIC ;
ELSE IF PARM= 'NETOutErrPrc' THEN NETOERRP = METRIC ;
ELSE IF PARM= 'NETPacketsin' THEN NETPKTSI = METRIC ;
ELSE IF PARM= 'NETPacketsOut' THEN NETPKTSO = METRIC ;

ATTRIB DATETIME LABEL = 'Date Time Stamp' FORMAT = DATETIME21.2 ;
ATTRIB DATE LABEL = 'Date' FORMAT = DATE9. ;
ATTRIB TIME LABEL = 'Time' FORMAT = TIME10.2 ;
ATTRIB HOUR LABEL = 'Hour' FORMAT = Z2. ;
ATTRIB QUARTER LABEL = 'Quarter' FORMAT = BEST12. ;
ATTRIB INSTANCE LABEL = 'Instance' LENGTH = \$35 ;
ATTRIB APP LABEL = 'Application' LENGTH = \$15 ;
ATTRIB NODE LABEL = 'Node' LENGTH = \$8 ;
ATTRIB NETCOLPC LABEL = 'Percent of output attempts made by host' FORMAT = 5.2 ;
ATTRIB NETIERRP LABEL = 'Percent of incoming packets with errors' FORMAT = 5.2 ;
ATTRIB NETOERRP LABEL = 'Percent of outgoing packets with errors' FORMAT = 5.2 ;
ATTRIB NETPKTSI LABEL = 'Total incoming packets in interval' FORMAT = BEST 12. /*
STORED AS A COUNT */
ATTRIB NETPKTSO LABEL = 'Total outgoing packets in interval' FORMAT = BEST12. /*
STORED AS A COUNT */

RUN ;

PROC SUMMARY DATA = NET ;
BY NODE APP INSTANCE DATETIME DATE TIME HOUR;
ID QUARTER ;
VAR NETCOLPC NETIERRP NETOERRP NETPKTSI NETPKTSO ;
OUTPUT OUT= NET
MEAN=NETCOLPC NETIERRP NETOERRP NETPKTSI NETPKTSO ;

*****;

* BUILD THE NETWORK FILE SYSTEM PERFORMANCE DATA TABLE

*****;

DATA NFS ;

SET NFS1 ;

KEEP

FIG. 8K

Substitute Sheet (Rule 26)

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APP DATE DATETIME HOUR INSTANCE NODE PARM QUARTER TIME
 NFSCBADC NFSCCALL NFSCCRTE NFSCFSST NFSCGATR NFSCLINK
 NFSCCLKUP NFSCMKDR NFSCNCLG NFSCNCLS NFSCNULL NFSCREAD
 NFSCRDDR NFSCRDLK NFSCRMVE NFSCRNME NFSCRMDR NFSCRBCL
 NFSCRBXI NFSCRCAL NFSCRNCD NFSCRNLR NFSCRRTN NFSCRTOT
 NFSCRWAT NFSCSATR NFSCSLNK NFSCWRTN NFSSBADC NFSSCALL
 NFSSCRTE NFSSFSST NFSSGATR NFSSLINK NFSSLKUP NFSSMKDR
 NFSSNULL NFSSREAD NFSSRDDR NFSSRDLK NFSSRMVE NFSSRNME
 NFSSRMDR NFSSRBCL NFSSRBLN NFSSRCAL NFSSNRCV NFSSRXCL
 NFSSSATR NFSSSLNK NFSSWRTN ;

IF PARM= 'NFSCBadCall'	THEN NFSCBADC = METRIC ;
ELSE IF PARM= 'NFSCCall'	THEN NFSCCALL = METRIC ;
ELSE IF PARM= 'NFSCCreate'	THEN NFSCCRTE = METRIC ;
ELSE IF PARM= 'NFSCFsStat'	THEN NFSCFSST = METRIC ;
ELSE IF PARM= 'NFSCGetAttr'	THEN NFSCGATR = METRIC ;
ELSE IF PARM= 'NFSCLink'	THEN NFSCLINK = METRIC ;
ELSE IF PARM= 'NFSCLookUp'	THEN NFSCCLKUP = METRIC ;
ELSE IF PARM= 'NFSCMkDir'	THEN NFSCMKDR = METRIC ;
ELSE IF PARM= 'NFSCNclGet'	THEN NFSCNCLG = METRIC ;
ELSE IF PARM= 'NFSCNclSleep'	THEN NFSCNCLS = METRIC ;
ELSE IF PARM= 'NFSCNull'	THEN NFSCNULL = METRIC ;
ELSE IF PARM= 'NFSCRead'	THEN NFSCREAD = METRIC ;
ELSE IF PARM= 'NFSCReadDir'	THEN NFSCRDDR = METRIC ;
ELSE IF PARM= 'NFSCReadLink'	THEN NFSCRDLK = METRIC ;
ELSE IF PARM= 'NFSCRemove'	THEN NFSCRMVE = METRIC ;
ELSE IF PARM= 'NFSCRename'	THEN NFSCRNME = METRIC ;
ELSE IF PARM= 'NFSCRmDir'	THEN NFSCRMDR = METRIC ;
ELSE IF PARM= 'NFSCRpcBadCall'	THEN NFSCRBCL = METRIC ;
ELSE IF PARM= 'NFSCRpcBadXid'	THEN NFSCRBXI = METRIC ;
ELSE IF PARM= 'NFSCRpcCall'	THEN NFSCRCAL = METRIC ;
ELSE IF PARM= 'NFSCRpcNewCred'	THEN NFSCRNCD = METRIC ;
ELSE IF PARM= 'NFSCRpcNullRecv'	THEN NFSCRNLR = METRIC ;
ELSE IF PARM= 'NFSCRpcRetrans'	THEN NFSCRRTN = METRIC ;
ELSE IF PARM= 'NFSCRpcTimeOut'	THEN NFSCRTOT = METRIC ;
ELSE IF PARM= 'NFSCRpcWait'	THEN NFSCRWAT = METRIC ;
ELSE IF PARM= 'NFSCSetAttr'	THEN NFSCSATR = METRIC ;
ELSE IF PARM= 'NFSCSymLink'	THEN NFSCSLNK = METRIC ;
ELSE IF PARM= 'NFSCWrite'	THEN NFSCWRTN = METRIC ;
ELSE IF PARM= 'NFSSBadCall'	THEN NFSSBADC = METRIC ;
ELSE IF PARM= 'NFSSCall'	THEN NFSSCALL = METRIC ;
ELSE IF PARM= 'NFSSCreate'	THEN NFSSCRTE = METRIC ;
ELSE IF PARM= 'NFSSFsStat'	THEN NFSSFSST = METRIC ;
ELSE IF PARM= 'NFSSGetAttr'	THEN NFSSGATR = METRIC ;
ELSE IF PARM= 'NFSSLink'	THEN NFSSLINK = METRIC ;
ELSE IF PARM= 'NFSSLookUp'	THEN NFSSLKUP = METRIC ;
ELSE IF PARM= 'NFSSMkDir'	THEN NFSSMKDR = METRIC ;
ELSE IF PARM= 'NFSSNull'	THEN NFSSNULL = METRIC ;
ELSE IF PARM= 'NFSSRead'	THEN NFSSREAD = METRIC ;
ELSE IF PARM= 'NFSSReadDir'	THEN NFSSRDDR = METRIC ;
ELSE IF PARM= 'NFSSReadLink'	THEN NFSSRDLK = METRIC ;
ELSE IF PARM= 'NFSSRemove'	THEN NFSSRMVE = METRIC ;
ELSE IF PARM= 'NFSSRename'	THEN NFSSRNME = METRIC ;
ELSE IF PARM= 'NFSSRmDir'	THEN NFSSRMDR = METRIC ;

FIG. 8L

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```

ELSE IF PARM= 'NFSSRpcBadCall'          THEN NFSSRBCL = METRIC ;
ELSE IF PARM= 'NFSSRpcCall'             THEN NFSSRCAL = METRIC ;
ELSE IF PARM= 'NFSSRpcNullRecv'         THEN NFSSNRCV = METRIC ;
ELSE IF PARM= 'NFSSRpcXdrCall'          THEN NFSSRXCL = METRIC ;
ELSE IF PARM= 'NFSSSetAttr'             THEN NFSSSATR = METRIC ;
ELSE IF PARM= 'NFSSSymLink'             THEN NFSSSLNK = METRIC ;
ELSE IF PARM= 'NFSSWrite'               THEN NFSSWRTE = METRIC ;

ATTRIB DATETIME LABEL = 'Date Time Stamp'          FORMAT = DATETIME21.2 ;
ATTRIB DATE LABEL = 'Date'                        FORMAT = DATE9. ;
ATTRIB TIME LABEL = 'Time'                        FORMAT = TIME10.2 ;
ATTRIB HOUR LABEL = 'Hour'                        FORMAT = Z2. ;
ATTRIB QUARTER LABEL = 'Quarter'                  FORMAT = BEST12. ;
ATTRIB INSTANCE LABEL = 'Instance'                 LENGTH = $35 ;
ATTRIB APP LABEL = 'Application'                   LENGTH = $15 ;
ATTRIB NODE LABEL = 'Node'                         LENGTH = $8 ;
ATTRIB NFSCBADCL LABEL = 'Percent of NFS client calls that failed'  FORMAT = 5.2 ;
ATTRIB NFSCCALL LABEL = 'Number of NFS client calls made'           FORMAT = BEST 12. ;
ATTRIB NFSCCRTE LABEL = 'Percent of NFS clnt calls new file crte'   FORMAT = 5.2 ;
ATTRIB NFSCFSST LABEL = 'Percent of NFS clnt calls retrieve file'   FORMAT = 5.2 ;
ATTRIB NFSCGATR LABEL = 'Percent of NFS clnt calls request attr'    FORMAT = 5.2 ;
ATTRIB NFSCLINK LABEL = 'Percent of NFS clnt calls crte hard link'  FORMAT = 5.2 ;
ATTRIB NFSCLKUP LABEL = 'Percent of NFS clnt calls dir path lkup'   FORMAT = 5.2 ;
ATTRIB NFSCMKDR LABEL = 'Percent of NFS clnt calls create dir'      FORMAT = 5.2 ;
ATTRIB NFSCNCLG LABEL = 'Number of client request a new handle'     FORMAT = BEST12. ;
ATTRIB NFSCNCLS LABEL = 'Number of kernel waits to get clnt strct'  FORMAT = BEST12. ;
ATTRIB NFSCNULL LABEL = 'Percent of NFS NULL client calls'          FORMAT = 5.2 ;
ATTRIB NFSCREAD LABEL = 'Percent of NFS clnt calls read files'      FORMAT = 5.2 ;
ATTRIB NFSCRDDR LABEL = 'Percent of NFS client calls read dir'      FORMAT = 5.2 ;
ATTRIB NFSCRDLK LABEL = 'Percent of NFS clnt calls read symb link'  FORMAT = 5.2 ;
ATTRIB NFSCRMOVE LABEL = 'Percent of NFS clnt calls to rm files'    FORMAT = 5.2 ;
ATTRIB NFSCRNME LABEL = 'Percent of NFS clnt calls to ren files'    FORMAT = 5.2 ;
ATTRIB NFSCRMDR LABEL = 'Percent of NFS clnt calls to rm dirs'      FORMAT = 5.2 ;
ATTRIB NFSCRBCL LABEL = 'Number of NFS clnt RPC calls in error'     FORMAT = BEST12. ;
ATTRIB NFSCRBXI LABEL = 'Percent of clnt RPC calls mult resp'       FORMAT = 5.2 ;
ATTRIB NFSCRCAL LABEL = 'Number of NFS clnt RPC calls made server'  FORMAT = BEST12. ;
;
ATTRIB NFSCRNCD LABEL = 'Percent of clnt RPC calls to ref authent'   FORMAT = 5.2 ;
ATTRIB NFSCRNLR LABEL = 'Number of empty messages from TCP or LAN'   FORMAT = BEST12. ;
ATTRIB NFSCRRTN LABEL = 'Number of NFS clnt RPC retransmissions'    FORMAT = BEST12. ;
;
ATTRIB NFSCRTOT LABEL = 'Percent of clnt RPC calls that timed out'   FORMAT = 5.2 ;
ATTRIB NFSCRWAT LABEL = 'Number of times clnt rqst wait for handl'    FORMAT = BEST12. ;
ATTRIB NFSCSATR LABEL = 'Percent of NFS clnt calls to store file'     FORMAT = 5.2 ;
ATTRIB NFSCSLNK LABEL = 'Percent of NFS clnt clis to crte sym link'   FORMAT = 5.2 ;
ATTRIB NFSCWRTE LABEL = 'Percent of NFS clnt calls to write files'    FORMAT = 5.2 ;
ATTRIB NFSSBADCL LABEL = 'Percent of NFS svr calls that failed'       FORMAT = 5.2 ;
ATTRIB NFSSCALL LABEL = 'Number of NFS svr calls made'                FORMAT = BEST12. ;
ATTRIB NFSSCRTE LABEL = 'Percent of NFS svr calls to create file'     FORMAT = 5.2 ;
ATTRIB NFSSFSST LABEL = 'Percent of NFS svr calls to get fs'          FORMAT = 5.2 ;
ATTRIB NFSSGATR LABEL = 'Percent of NFS svr calls to get attr'        FORMAT = 5.2 ;
ATTRIB NFSSLINK LABEL = 'Percent of NFS svr calls create hrd link'    FORMAT = 5.2 ;
ATTRIB NFSSLKUP LABEL = 'Percent of NFS svr calls dir path lkup'      FORMAT = 5.2 ;

```

FIG. 8M

Substitute Sheet (Rule 26)

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```

ATTRIB NFSSMKDR LABEL = 'Percent of NFS svr calls create dirs'    FORMAT = 5.2 ;
ATTRIB NFSSNULL LABEL = 'Percent of NULL NFS svr calls'          FORMAT = 5.2 ;
ATTRIB NFSSREAD LABEL = 'Percent of NFS svr calls read data file'  FORMAT = 5.2 ;
ATTRIB NFSSRDDR LABEL = 'Percent of NFS svr calls read dirs'      FORMAT = 5.2 ;
ATTRIB NFSSRDLK LABEL = 'Percent of NFS svr calls read sym links'  FORMAT = 5.2 ;
ATTRIB NFSSRMVE LABEL = 'Percent of NFS svr calls rm files'        FORMAT = 5.2 ;
ATTRIB NFSSRNME LABEL = 'Percent of NFS svr calls ren files'       FORMAT = 5.2 ;
ATTRIB NFSSRMDR LABEL = 'Percent of NFS svr calls rm dirs'        FORMAT = 5.2 ;
ATTRIB NFSSRBCL LABEL = 'Percent of NFS RPC svr rqsts rejected'    FORMAT = 5.2 ;
ATTRIB NFSSRBLN LABEL = 'Number of svr RPC calls truncated'        FORMAT = BEST12. ;
ATTRIB NFSSRCAL LABEL = 'Number of NFS svr RPC calls'              FORMAT = BEST12. ;
ATTRIB NFSSNRCV LABEL = 'Number of NULL RPC calls svr received'    FORMAT = BEST12. ;
;
ATTRIB NFSSRXCL LABEL = 'Number of NFS svr RPC calls bad headers'  FORMAT = BEST12. ;
;
ATTRIB NFSSSATR LABEL = 'Percent of NFS svr calls to store file'    FORMAT = 5.2 ;
ATTRIB NFSSSLNK LABEL = 'Percent of NFS svr calls create sym lnk'  FORMAT = 5.2 ;
ATTRIB NFSSWRTE LABEL = 'Percent of NFS svr calls to write files'   FORMAT = 5.2 ;

```

RUN ;

PROC SUMMARY DATA = NFS ;

BY NODE APP INSTANCE DATETIME DATE TIME HOUR;

ID QUARTER ;

```

VAR NFSCBADC NFSCCALL NFSCCRTE NFSCFSST NFSCGATR NFSCLINK
  NFSCCLKUP NFSCMKDR NFSCNCLG NFSCNCLS NFSCNULL NFSCREAD
  NFSCRDDR NFSCRDLK NFSCRMVE NFSCRNME NFSCRMMDR NFSCRBCL
  NFSCRBXI NFSCRCAL NFSCRNCD NFSCRNLR NFSCRRTN NFSCRTOT
  NFSCRWAT NFSCSATR NFCSLNK NFSCWRTE NFSSBADC NFSSCALL
  NFSSCRTE NFSSFSST NFSSGATR NFSSLINK NFSSLKUP NFSSMKDR
  NFSSNULL NFSSREAD NFSSRDDR NFSSRDLK NFSSRMVE NFSSRNME
  NFSSRMDR NFSSRBCL NFSSRBLN NFSSRCAL NFSSNRCV NFSSRXCL
  NFSSSATR NFSSSLNK NFSSWRTE ;

```

OUTPUT OUT= NFS

```

MEAN=NFSCBADC NFSCCALL NFSCCRTE NFSCFSST NFSCGATR NFSCLINK
  NFSCCLKUP NFSCMKDR NFSCNCLG NFSCNCLS NFSCNULL NFSCREAD
  NFSCRDDR NFSCRDLK NFSCRMVE NFSCRNME NFSCRMMDR NFSCRBCL
  NFSCRBXI NFSCRCAL NFSCRNCD NFSCRNLR NFSCRRTN NFSCRTOT
  NFSCRWAT NFSCSATR NFCSLNK NFSCWRTE NFSSBADC NFSSCALL
  NFSSCRTE NFSSFSST NFSSGATR NFSSLINK NFSSLKUP NFSSMKDR
  NFSSNULL NFSSREAD NFSSRDDR NFSSRDLK NFSSRMVE NFSSRNME
  NFSSRMDR NFSSRBCL NFSSRBLN NFSSRCAL NFSSNRCV NFSSRXCL
  NFSSSATR NFSSSLNK NFSSWRTE ;

```

RUN ;

*****;

* BUILD THE Oracle7 PERFORMANCE DATA TABLE

*****;

DATA ORA ;

SET ORA1 ;

KEEP

APP DATE DATETIME HOUR INSTANCE NODE PARM QUARTER TIME

FIG. 8N

Substitute Sheet (Rule 26)

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ORAACTTR ORAALERT ORAARCFS ORABFBSY ORABKCKR ORACHDRW
 ORACHHTR ORADCHHR ORADSKST ORADSPBY ORADSPWT ORAENQTO
 ORAFRESF ORAFRESP ORAMAXEX ORAOCURU ORAPROCU ORARDGNR
 ORARDNAR ORASESUS ORAVERVR ORLIBCHR ORRDSZAV ORRLBTSU
 ORSDIPRG ORSTSUSD ORTRANRT ;

IF PARM= 'ActiveTransactions'	THEN ORAACTTR = METRIC ;
ELSE IF PARM= 'Alerts'	THEN ORAALERT = METRIC ;
ELSE IF PARM= 'ArchiveFreeSpace'	THEN ORAARCFS = METRIC ;
ELSE IF PARM= 'BkgdCheckpointRate'	THEN ORABKCKR = METRIC ;
ELSE IF PARM= 'BufferBusyRate'	THEN ORABFBSY = METRIC ;
ELSE IF PARM= 'CacheHitRatio'	THEN ORACHHTR = METRIC ;
ELSE IF PARM= 'ChainedRows'	THEN ORACHDRW = METRIC ;
ELSE IF PARM= 'DictCacheHitRatio'	THEN ORADCHHR = METRIC ;
ELSE IF PARM= 'DiskSorts'	THEN ORADSKST = METRIC ;
ELSE IF PARM= 'DispatcherBusyRates'	THEN ORADSPBY = METRIC ;
ELSE IF PARM= 'DispatcherWaitTimes'	THEN ORADSPWT = METRIC ;
ELSE IF PARM= 'EnqueueTimeouts'	THEN ORAENQTO = METRIC ;
ELSE IF PARM= 'FreeSpace'	THEN ORAFRESF = METRIC ;
ELSE IF PARM= 'FreeSpaceDeficit'	THEN ORAFRESP = METRIC ;
ELSE IF PARM= 'LibraryCacheHitRatio'	THEN ORLIBCHR = METRIC ;
ELSE IF PARM= 'MaximumExtents'	THEN ORAMAXEX = METRIC ;
ELSE IF PARM= 'OpenCursorsUsed'	THEN ORAOCURU = METRIC ;
ELSE IF PARM= 'ProcessesUsed'	THEN ORAPROCU = METRIC ;
ELSE IF PARM= 'RedoGeneration Rate'	THEN ORARDGNR = METRIC ;
ELSE IF PARM= 'RedoNotArchived'	THEN ORARDNAR = METRIC ;
ELSE IF PARM= 'RedoSizeAverage'	THEN ORRDSZAV = METRIC ;
ELSE IF PARM= 'RollbackTSUsed'	THEN ORRLBTSU = METRIC ;
ELSE IF PARM= 'SessionsUsed'	THEN ORASESUS = METRIC ;
ELSE IF PARM= 'ShutdownInProgress'	THEN ORSDIPRG = METRIC ;
ELSE IF PARM= 'SystemTSUsed'	THEN ORSTSUSD = METRIC ;
ELSE IF PARM= 'TransactionRate'	THEN ORTRANRT = METRIC ;
ELSE IF PARM= 'VersionVerification'	THEN ORAVERVR = METRIC ;

ATTRIB DATETIME LABEL = 'Date Time Stamp'	FORMAT = DATETIME21.2 ;
ATTRIB DATE LABEL = 'Date'	FORMAT = DATE9. ;
ATTRIB TIME LABEL = 'Time'	FORMAT = TIME10.2 ;
ATTRIB HOUR LABEL = 'Hour'	FORMAT = Z2. ;
ATTRIB QUARTER LABEL = 'Quarter'	FORMAT = BEST12. ;
ATTRIB INSTANCE LABEL = 'Instance'	LENGTH = \$35 ;
ATTRIB APP LABEL = 'Application'	LENGTH = \$15 ;
ATTRIB NODE LABEL = 'Node'	LENGTH = \$8 ;
ATTRIB ORAACTTR LABEL = 'Percent of active vs total transactions'	FORMAT = 5.2 ;
ATTRIB ORAALERT LABEL = 'Oracle alert log errors'	FORMAT = BEST12. ;
ATTRIB ORAARCFS LABEL = 'Number of Archive logs space available'	FORMAT = BEST12. ;
;	
ATTRIB ORABKCKR LABEL = 'Number of checkpoints taken per hour'	FORMAT = BEST12.2 ;
;	
ATTRIB ORABFBSY LABEL = 'Ratio of waits to block gest per interval'	FORMAT = BEST12.2 ;
ATTRIB ORACHHTR LABEL = 'Ratio of cache hits to all data bfr rds'	FORMAT = BEST12.2 ;
ATTRIB ORACHDRW LABEL = 'Number of chained row fetches per hour'	FORMAT = BEST12.2 ;
;	
ATTRIB ORADCHHR LABEL = 'Percent of of Dict reads cache hits'	FORMAT = 5.2 ;
ATTRIB ORADSKST LABEL = 'Percent of sorts that are disk sorts'	FORMAT = 5.2 ;

FIG. 80

Substitute Sheet (Rule 26)

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```

ATTRIB ORADSPBY LABEL = 'Percent of busiest dispatcher busy'      FORMAT = 5.2      ;
ATTRIB ORADSPWT LABEL = 'Average longest wait time Sec/100'      FORMAT = TIME12.2 ;
ATTRIB ORAENQTO LABEL = 'Number of locks not granted immediately'  FORMAT = BEST12.2 ;
;
ATTRIB ORAFRESP LABEL = 'Percentage of space available'          FORMAT = 5.2      ;
ATTRIB ORAFRESO LABEL = 'Segment does not have another extent'    FORMAT = BEST12.  ;
ATTRIB ORLIBCHR LABEL = 'Percent of library cache hits'          FORMAT = 5.2      ;
ATTRIB ORAMAXEX LABEL = 'Percent of Extents available'           FORMAT = 5.2      ;
ATTRIB ORAOCURU LABEL = 'Percent of Open Cursors available'       FORMAT = 5.2      ;
ATTRIB ORAPROCU LABEL = 'Percent of Processes available'          FORMAT = 5.2      ;
ATTRIB ORARDGNR LABEL = 'Blocks per interval of redo data genrted' FORMAT = BEST12.2 ;
;
ATTRIB ORARDNAR LABEL = 'Number of redo logs not yet archived'     FORMAT = BEST12.  ;
ATTRIB ORRDSZAV LABEL = 'Average size of last n redo log entries'  FORMAT = BEST12.2 ;
ATTRIB ORRLBTSU LABEL = 'Percent of space used in the rollback TS' FORMAT = 5.2      ;
ATTRIB ORASESUS LABEL = 'Percent of total sessions active'        FORMAT = 5.2      ;
ATTRIB ORSDIPRG LABEL = 'Shutdowns in progress'                  FORMAT = BEST12.  ;
ATTRIB ORSTSUSD LABEL = 'Percent of System TS used'               FORMAT = 5.2      ;
ATTRIB ORTRANRT LABEL = 'Number of transactions per interval'     FORMAT = BEST12.  ;
ATTRIB ORAVERVR LABEL = 'Verification of db objects loaded'       FORMAT = BEST12.  ;

```

RUN ;

```

PROC SUMMARY DATA = ORA ;
BY NODE APP INSTANCE DATETIME DATE TIME HOUR;
ID QUARTER ;
VAR ORAACTTR ORAALERT ORAARCFS ORABFBSY ORABKCKR ORACHDRW
    ORACHHTR ORADCHHR ORADSKST ORADSPBY ORADSPWT ORAENQTO
    ORAFRESO ORAFRESP ORAMAXEX ORAOCURU ORAPROCU ORARDGNR
    ORARDNAR ORASESUS ORAVERVR ORLIBCHR ORRDSZAV ORRLBTSU
    ORSDIPRG ORSTSUSD ORTRANRT ;
OUTPUT OUT= ORA
MEAN=ORAACTTR ORAALERT ORAARCFS ORABFBSY ORABKCKR ORACHDRW
    ORACHHTR ORADCHHR ORADSKST ORADSPBY ORADSPWT ORAENQTO
    ORAFRESO ORAFRESP ORAMAXEX ORAOCURU ORAPROCU ORARDGNR
    ORARDNAR ORASESUS ORAVERVR ORLIBCHR ORRDSZAV ORRLBTSU
    ORSDIPRG ORSTSUSD ORTRANRT ;

```

RUN ;

*****;

* BUILD THE PATROL AGENT PERFORMANCE DATA TABLE

*****;

```

DATA PA ;
SET PA1 ;
KEEP
    APP DATE DATETIME HOUR INSTANCE NODE PARM QUARTER TIME
    PADBEXSC PAINTERR PAOUTSJB PATOTERR PAUSRERR PAWKRATE ;

    IF PARM= 'PADeltaBetweenExecSecs' THEN PADBEXSC = METRIC ;
    ELSE IF PARM= 'PAInternalError' THEN PAINTERR = METRIC ;

```

FIG. 8P

Substitute Sheet (Rule 26)

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```

ELSE IF PARM= 'PAOutstandingJobs'      THEN PAOUTSJB = METRIC ;
ELSE IF PARM= 'PATotalErrors'           THEN PATOTERR = METRIC ;
ELSE IF PARM= 'PAUserErrors'            THEN PAUSRERR = METRIC ;
ELSE IF PARM= 'PAWorkRateExecsMin'      THEN PAWKRATE = METRIC ;

ATTRIB DATETIME LABEL = 'Date Time Stamp'      FORMAT = DATETIME21.2 ;
ATTRIB DATE LABEL = 'Date'                     FORMAT = DATE9. ;
ATTRIB TIME LABEL = 'Time'                     FORMAT = TIME10.2 ;
ATTRIB HOUR LABEL = 'Hour'                     FORMAT = Z2. ;
ATTRIB QUARTER LABEL = 'Quarter'               FORMAT = BEST 12. ;
ATTRIB INSTANCE LABEL = 'Instance'             LENGTH = $35 ;
ATTRIB APP LABEL = 'Application'               LENGTH = $15 ;
ATTRIB NODE LABEL = 'Node'                     LENGTH = $8 ;
ATTRIB PADBEXSC LABEL = 'Number of seconds between executions'  FORMAT = BEST 12. ;
;
ATTRIB PAINTERR LABEL = 'Number of miscellaneous internal errors'  FORMAT = BEST12. ;
ATTRIB PAOUTSJB LABEL = 'Number of executing jobs on the PA'      FORMAT = BEST12. ;
ATTRIB PATOTERR LABEL = 'Number of errors detected by the PA'      FORMAT = BEST12. ;
ATTRIB PAUSRERR LABEL = 'Number or errors in user-specified cmds'  FORMAT = BEST12. ;
ATTRIB PAWKRATE LABEL = 'Number of instruction execs performed/m'  FORMAT = BEST12. ;
;

RUN ;

PROC SUMMARY DATA = PA ;
BY NODE APP INSTANCE DATETIME DATE TIME HOUR;
ID QUARTER ;
VAR PADBEXSC PAINTERR PAOUTSJB PATOTERR PAUSRERR PAWKRATE ;
OUTPUT OUT= PA
MEAN=PADBEXSC PAINTERR PAOUTSJB PATOTERR PAUSRERR PAWKRATE ;

*****

* BUILD THE PROCESS PERFORMANCE DATA TABLE

*****

DATA PROC ;
SET PROC1 ;
KEEP
APP DATE DATETIME HOUR INSTANCE NODE PARM QUARTER TIME
PRCAUSRP PRCEXEC PRCNOZOM PRCNUMPR PRCWAIT PRCPWTIN
PRCPWTUN PRCTOPPS PRCUSERP PRCNUMP ;

LENGTH PRCTOPPS $120 ;

IF PARM= 'PROCAvgUsrProc'      THEN PRCAUSRP = METRIC ;
ELSE IF PARM= 'PROCExec'      THEN PRCEXEC = METRIC ;
ELSE IF PARM= 'PROCNoZombies' THEN PRCNOZOM = METRIC ;
ELSE IF PARM= 'PROCNumProcs'  THEN PRCNUMPR = METRIC ;
ELSE IF PARM= 'PROCProcWait'  THEN PRCWAIT = METRIC ;
ELSE IF PARM= 'PROCProcWaitInt' THEN PRCPWTIN = METRIC ;
ELSE IF PARM= 'PROCProcWaitUnint' THEN PRCPWTUN = METRIC ;

```

FIG. 8Q

Substitute Sheet (Rule 26)

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```

ELSE IF PARM= 'PROCTopProcs'      THEN PRCTOPPS = METRIC ;
ELSE IF PARM= 'PROCUserProcs'     THEN PRCUSERP = METRIC ;
ELSE IF PARM= 'ProcNumProcs'      THEN PRCNUMP = METRIC ;

ATTRIB DATETIME LABEL = 'Date Time Stamp'      FORMAT = DATETIME21.2 ;
ATTRIB DATE LABEL = 'Date'                      FORMAT = DATE9. ;
ATTRIB TIME LABEL = 'Time'                      FORMAT = TIME10.2 ;
ATTRIB HOUR LABEL = 'Hour'                      FORMAT = Z2. ;
ATTRIB QUARTER LABEL = 'Quarter'                FORMAT = BEST12. ;
ATTRIB INSTANCE LABEL = 'Instance'              LENGTH = $35 ;
ATTRIB APP LABEL = 'Application'                LENGTH = $15 ;
ATTRIB NODE LABEL = 'Node'                      LENGTH = $8 ;
ATTRIB PRCAUSRPP LABEL = 'Average Number Non-root user processes'  FORMAT = BEST12. ;
;
ATTRIB PRCEXEC LABEL = 'Number of exec system calls per second'    FORMAT = BEST12. ;
ATTRIB PRCNOZOM LABEL = 'Number of zombie processes'              FORMAT = BEST12. ;
ATTRIB PRCNUMPR LABEL = 'Number of active processes on the system'  FORMAT = BEST12. ;
;
ATTRIB PRCWAIT LABEL = 'Number of processes waiting for resources'  FORMAT = BEST12. ;
ATTRIB PRCPWTIN LABEL = 'Number of procs in interruptable wait'     FORMAT = BEST12. ;
ATTRIB PRCPWTUN LABEL = 'Number of procs in uninterruptable wait'   FORMAT = BEST12. ;
ATTRIB PRCTOPPS LABEL = 'Top CPU using processes (max 10)'          LENGTH = $120 ;
ATTRIB PRCUSERP LABEL = 'Number of nonroot user processes'          FORMAT = BEST12. ;
ATTRIB PRCNUMP LABEL = 'Number of processes per nonroot user'       FORMAT = BEST12.2 ;

RUN ;

PROC SUMMARY DATA = PROC ;
BY NODE APP INSTANCE DATETIME DATE TIME HOUR;
ID QUARTER PRCTOPPS ;
VAR PRCAUSRPP PRCEXEC PRCNOZOM PRCNUMPR PRCWAIT PRCPWTIN
    PRCPWTUN PRCUSERP PRCNUMP ;
OUTPUT OUT= PROC
MEAN=PRCAUSRPP PRCEXEC PRCNOZOM PRCNUMPR PRCWAIT PRCPWTIN
    PRCPWTUN PRCUSERP PRCNUMP ;

RUN ;

```

```

*****
* BUILD THE Sybase10DB PERFORMANCE DATA TABLE
*****

```

```

DATA SDB ;
SET SDB1 ;
KEEP
    APP DATE DATETIME HOUR INSTANCE NODE PARM QUARTER TIME
    SDBEXSPC SDBSGSPC SDBSUSIX SDBTRLOG ;

    IF PARM= 'S10DBExpansionSpace' THEN SDBEXSPC = METRIC ;
    ELSE IF PARM= 'S10DBSegSpace'   THEN SDBSGSPC = METRIC ;
    ELSE IF PARM= 'S10DBSuspectIndex' THEN SDBSUSIX = METRIC ;
    ELSE IF PARM= 'S10DBTransactionLogS' THEN SDBTRLOG = METRIC ;

```

FIG. 8R

Substitute Sheet (Rule 26)

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```

ATTRIB DATETIME LABEL = 'Date Time Stamp'          FORMAT = DATETIME21.2 ;
ATTRIB DATE LABEL = 'Date'                          FORMAT = DATE9. ;
ATTRIB TIME LABEL = 'Time'                          FORMAT = TIME10.2 ;
ATTRIB HOUR LABEL = 'Hour'                          FORMAT = Z2. ;
ATTRIB QUARTER LABEL = 'Quarter'                    FORMAT = BEST12. ;
ATTRIB INSTANCE LABEL = 'Instance'                  LENGTH = $35 ;
ATTRIB APP LABEL = 'Application'                    LENGTH = $15 ;
ATTRIB NODE LABEL = 'Node'                          LENGTH = $8 ;
ATTRIB SDBEXSPC LABEL = 'Percent Expansion Space Available'  FORMAT = 5.2 ;
ATTRIB SDBSGSPC LABEL = 'Segment Space'              FORMAT = BEST12. ;
ATTRIB SDBSUSIX LABEL = 'Suspect Index'              FORMAT = BEST12. ;
ATTRIB SDBTRLOG LABEL = 'Percent Transaction Log Space Available'  FORMAT = 5.2 ;

```

RUN ;

```

PROC SUMMARY DATA = SDB ;
BY NODE APP INSTANCE DATETIME DATE TIME HOUR;
ID QUARTER ;
VAR SDBEXSPC SDBSGSPC SDBSUSIX SDBTRLOG ;
OUTPUT OUT= SDB
MEAN=SDBEXSPC SDBSGSPC SDBSUSIX SDBTRLOG ;

```

RUN ;

*****,

* BUILD THE SMP PERFORMANCE DATA TABLE

*****,

```

DATA SMP ;
SET SMP1 ;
KEEP

```

```

APP DATE DATETIME HOUR INSTANCE NODE PARM QUARTER TIME
SMPCTXSW SMPXCCLS SMPIDLPC SMPINTTR SMPINTER SMPINVCX
SMPMAJFT SMPMINFT SMPRQ15M SMPRQ1MN SMPRQ5MN SMPSPNMX
SMPSPNRW SMPSYSCL SMPSYSPC SMPTHMIG SMPUSRPC SMPWTPCT ;

```

```

IF PARM= 'SMPContextSwitch'      THEN SMPCTXSW = METRIC ;
ELSE IF PARM= 'SMPCrossCalls'    THEN SMPXCCLS = METRIC ;
ELSE IF PARM= 'SMPIdlePercent'   THEN SMPIDLPC = METRIC ;
ELSE IF PARM= 'SMPIntThread'     THEN SMPINTTR = METRIC ;
ELSE IF PARM= 'SMPInterrupts'    THEN SMPINTER = METRIC ;
ELSE IF PARM= 'SMPInvContSwitch' THEN SMPINVCX = METRIC ;
ELSE IF PARM= 'SMPMajorFaults'   THEN SMPMAJFT = METRIC ;
ELSE IF PARM= 'SMPMinorFaults'  THEN SMPMINFT = METRIC ;
ELSE IF PARM= 'SMPRunQLen15Min'  THEN SMPRQ15M = METRIC ;
ELSE IF PARM= 'SMPRunQLen1Min'  THEN SMPRQ1MN = METRIC ;
ELSE IF PARM= 'SMPRunQLen5Min'  THEN SMPRQ5MN = METRIC ;
ELSE IF PARM= 'SMPSpinMutex'     THEN SMPSPNMX = METRIC ;
ELSE IF PARM= 'SMPSpinRdWr'     THEN SMPSPNRW = METRIC ;
ELSE IF PARM= 'SMPSystemCalls'   THEN SMPSYSCL = METRIC ;
ELSE IF PARM= 'SMPSystemPrcnt'   THEN SMPSYSPC = METRIC ;
ELSE IF PARM= 'SMPThMigration'   THEN SMPTHMIG = METRIC ;
ELSE IF PARM= 'SMPUserPercent'   THEN SMPUSRPC = METRIC ;

```

FIG. 8S

Substitute Sheet (Rule 26)

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```

ELSE IF PARM= 'SMPWaitPercent'      THEN SMPWTPCT = METRIC ;

ATTRIB DATETIME LABEL = 'Date Time Stamp'      FORMAT = DATETIME21.2 ;
ATTRIB DATE LABEL = 'Date'                      FORMAT = DATE9. ;
ATTRIB TIME LABEL = 'Time'                      FORMAT = TIME10.2 ;
ATTRIB HOUR LABEL = 'Hour'                      FORMAT = Z2. ;
ATTRIB QUARTER LABEL = 'Quarter'                FORMAT = BEST12. ;
ATTRIB INSTANCE LABEL = 'Instance'              LENGTH = $35 ;
ATTRIB APP LABEL = 'Application'                LENGTH = $15 ;
ATTRIB NODE LABEL = 'Node'                     LENGTH = $8 ;
ATTRIB SMPCTXSW LABEL = 'Number of CPU context switches'  FORMAT = BEST12. ;
ATTRIB SMPXCCLS LABEL = 'Number of interprocessor cross-calls'  FORMAT = BEST12. ;
ATTRIB SMPIDLPC LABEL = 'Percent of time the CPU was idle'      FORMAT = TIME11.2 ;
ATTRIB SMPINTTR LABEL = 'Number of processor interrupts'        FORMAT = BEST12. ;
ATTRIB SMPINTER LABEL = 'Number of interrupts as threads'        FORMAT = BEST12. ;
ATTRIB SMPINVCX LABEL = 'Number of involuntary context switches'  FORMAT = BEST12. ;
ATTRIB SMPMAJFT LABEL = 'Number of major faults'                 FORMAT = BEST12. ;
ATTRIB SMPMINFT LABEL = 'Number of minor faults'                 FORMAT = BEST12. ;
ATTRIB SMPRQ15M LABEL = 'Number of procs in the CPU run queue 1mn'  FORMAT = BEST12. ;
;
ATTRIB SMPRQ1MN LABEL = 'Number of procs in the CPU run queue 5mn'  FORMAT = BEST12. ;
;
ATTRIB SMPRQ5MN LABEL = 'Number of procs in the CPU run queue 15m'  FORMAT = BEST12. ;
;
ATTRIB SMPSPNMX LABEL = 'Number of spins locks not acqrd 1st try'    FORMAT = BEST12. ;
ATTRIB SMPSPNRW LABEL = 'Number of r/w locks not acqrd on 1st try'    FORMAT = BEST12. ;
ATTRIB SMPSYSCL LABEL = 'Number of system calls'                     FORMAT = BEST12. ;
ATTRIB SMPSYSPC LABEL = 'Processor time spent on sys activities'      FORMAT = TIME11.2 ;
ATTRIB SMPTHMIG LABEL = 'Number of thread migs another processor'    FORMAT = BEST12. ;
;
ATTRIB SMPUSRPC LABEL = 'Processor time spent waiting'                FORMAT = TIME11.2 ;
ATTRIB SMPWTPCT LABEL = 'Processor time spent on user activities'     FORMAT = TIME11.2 ;

RUN ;

PROC SUMMARY DATA = SMP ;
BY NODE APP INSTANCE DATETIME DATE TIME HOUR;
ID QUARTER ;
VAR SMPCTXSW SMPXCCLS SMPIDLPC SMPINTTR SMPINTER SMPINVCX
    SMPMAJFT SMPMINFT SMPRQ15M SMPRQ1MN SMPRQ5MN SMPSPNMX
    SMPSPNRW SMPSYSCL SMPSYSPC SMPTHMIG SMPUSRPC SMPWTPCT ;
OUTPUT OUT= SMP
MEAN=SMPCTXSW SMPXCCLS SMPIDLPC SMPINTTR SMPINTER SMPINVCX
    SMPMAJFT SMPMINFT SMPRQ15M SMPRQ1MN SMPRQ5MN SMPSPNMX
    SMPSPNRW SMPSYSCL SMPSYSPC SMPTHMIG SMPUSRPC SMPWTPCT ;

RUN ;

*****;

* BUILD THE SWAP PERFORMANCE DATA TABLE

*****;

```

FIG. 8T

Substitute Sheet (Rule 26)

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```

DATA SWP ;
SET SWP1 ;
KEEP
  APP DATE DATETIME HOUR INSTANCE NODE PARM QUARTER TIME
  SWPSFRSP SWPSIZE SWPUSDPC SWPTOTFR SWPTOTSZ SWPTOTUP
  SWPNPAVL ;

  IF PARM= 'SWPSwapFreeSpace' THEN SWPSFRSP = METRIC ;
  ELSE IF PARM= 'SWPSwapSize' THEN SWPSIZE = METRIC ;
  ELSE IF PARM= 'SWPSwapUsedPercent' THEN SWPUSDPC = METRIC ;
  ELSE IF PARM= 'SWPTotSwapFreeSpace' THEN SWPTOTFR = METRIC ;
  ELSE IF PARM= 'SWPTotSwapSize' THEN SWPTOTSZ = METRIC ;
  ELSE IF PARM= 'SWPTotSwapUsedPercent' THEN SWPTOTUP = METRIC ;
  ELSE IF PARM= 'SWPnPageSizeAvail' THEN SWPNPAVL = METRIC ;

ATTRIB DATETIME LABEL = 'Date Time Stamp' FORMAT = DATETIME21.2 ;
ATTRIB DATE LABEL = 'Date' FORMAT = DATE9. ;
ATTRIB TIME LABEL = 'Time' FORMAT = TIME10.2 ;
ATTRIB HOUR LABEL = 'Hour' FORMAT = Z2. ;
ATTRIB QUARTER LABEL = 'Quarter' FORMAT = BEST12. ;
ATTRIB INSTANCE LABEL = 'Instance' LENGTH = $35 ;
ATTRIB APP LABEL = 'Application' LENGTH = $15 ;
ATTRIB NODE LABEL = 'Node' LENGTH = $8 ;
ATTRIB SWPNPAVL LABEL = 'Number of swap pages available' FORMAT = BEST12. ;
/* STORED AS A COUNT */
ATTRIB SWPTOTFR LABEL = 'Size of the free swap space' FORMAT = BEST12. ; /*
STORED AS A COUNT */
ATTRIB SWPTOTSZ LABEL = 'Size of the entire swap space' FORMAT = BEST12. ; /*
STORED AS A COUNT */
ATTRIB SWPSFRSP LABEL = 'Size of the available swap space' FORMAT = BEST12. ; /*
STORED AS A COUNT */
ATTRIB SWPSIZE LABEL = 'Size of a particular swap area' FORMAT = BEST12. ; /*
STORED AS A COUNT */
ATTRIB SWPUSDPC LABEL = 'Percentage of swap space used' FORMAT = 5.2 ;

RUN ;

PROC SUMMARY DATA = SWP ;
BY NODE APP INSTANCE DATETIME DATE TIME HOUR;
ID QUARTER ;
VAR SWPSFRSP SWPSIZE SWPUSDPC SWPTOTFR SWPTOTSZ SWPTOTUP
  SWPNPAVL ;
OUTPUT OUT= SWP
  MEAN=SWPSFRSP SWPSIZE SWPUSDPC SWPTOTFR SWPTOTSZ SWPTOTUP
  SWPNPAVL ;
RUN ;

*****

* BUILD THE Sybase10 PERFORMANCE DATA TABLE

*****

DATA SYB ;
SET SYB1 ;

```

FIG. 8U

Substitute Sheet (Rule 26)

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KEEP

APP DATE DATETIME HOUR INSTANCE NODE PARM QUARTER TIME
 S10BUSST S10BLPCS S10CONNR S10CPUBY S10CPUIL S10CPUIO
 S10DKIOE S10DKIOR S10DKIOW S10IDLPR S10LK4GC S10LKRMN
 S10MUPRC S10MRRDV S10NBLPR S10NPROC S10PKTER S10PKRCV
 S10PKSNT ;

IF PARM= 'S10BackupServerStatu'	THEN S10BUSST = METRIC ;
ELSE IF PARM= 'S10BlockerProcs'	THEN S10BLPCS = METRIC ;
ELSE IF PARM= 'S10ConnectionsRemain'	THEN S10CONNR = METRIC ;
ELSE IF PARM= 'S10CpuBusy'	THEN S10CPUBY = METRIC ;
ELSE IF PARM= 'S10CpuIdle'	THEN S10CPUIL = METRIC ;
ELSE IF PARM= 'S10CpuIoBusy'	THEN S10CPUIO = METRIC ;
ELSE IF PARM= 'S10DiskIoErrs'	THEN S10DKIOE = METRIC ;
ELSE IF PARM= 'S10DiskIoReads'	THEN S10DKIOR = METRIC ;
ELSE IF PARM= 'S10DiskIoWrites'	THEN S10DKIOW = METRIC ;
ELSE IF PARM= 'S10IdleProcs'	THEN S10IDLPR = METRIC ;
ELSE IF PARM= 'S10Locks4GC'	THEN S10LK4GC = METRIC ;
ELSE IF PARM= 'S10LocksRemaining'	THEN S10LKRMN = METRIC ;
ELSE IF PARM= 'S10MemoryUsedByProcs'	THEN S10MUPRC = METRIC ;
ELSE IF PARM= 'S10MirrorDevices'	THEN S10MRRDV = METRIC ;
ELSE IF PARM= 'S10NumBlockedProcs'	THEN S10NBLPR = METRIC ;
ELSE IF PARM= 'S10NumProcesses'	THEN S10NPROC = METRIC ;
ELSE IF PARM= 'S10PacketErrs'	THEN S10PKTER = METRIC ;
ELSE IF PARM= 'S10PacketsRcvd'	THEN S10PKRCV = METRIC ;
ELSE IF PARM= 'S10PacketsSent'	THEN S10PKSNT = METRIC ;

ATTRIB DATETIME LABEL = 'Date Time Stamp'	FORMAT = DATETIME21.2 ;
ATTRIB DATE LABEL = 'Date'	FORMAT = DATE9. ;
ATTRIB TIME LABEL = 'Time'	FORMAT = TIME10.2 ;
ATTRIB HOUR LABEL = 'Hour'	FORMAT = Z2. ;
ATTRIB QUARTER LABEL = 'Quarter'	FORMAT = BEST12. ;
ATTRIB INSTANCE LABEL = 'Instance'	LENGTH = \$35 ;
ATTRIB APP LABEL = 'Application'	LENGTH = \$15 ;
ATTRIB NODE LABEL = 'Node'	LENGTH = \$8 ;
ATTRIB S10BUSST LABEL = 'Backup Server Status'	FORMAT = BEST12. ;
ATTRIB S10BLPCS LABEL = 'Number of Blocker Procs'	FORMAT = BEST12. ;
ATTRIB S10CONNR LABEL = 'Percent Connections Remain'	FORMAT = 5.2 ;
ATTRIB S10CPUBY LABEL = 'Percent CPU Busy'	FORMAT = 5.2 ;
ATTRIB S10CPUIL LABEL = 'Percent Cpu Idle'	FORMAT = 5.2 ;
ATTRIB S10CPUIO LABEL = 'Percent Cpu Io Busy'	FORMAT = 5.2 ;
ATTRIB S10DKIOE LABEL = 'Disk I/O Errs'	FORMAT = BEST12. ;
ATTRIB S10DKIOR LABEL = 'Disk I/O Reads'	FORMAT = BEST12. ;
ATTRIB S10DKIOW LABEL = 'Disk I/O Writes'	FORMAT = BEST12. ;
ATTRIB S10IDLPR LABEL = 'Idle Processes'	FORMAT = BEST12. ;
ATTRIB S10LK4GC LABEL = 'Locks 4GC'	FORMAT = BEST12. ;
ATTRIB S10LKRMN LABEL = 'Locks Remaining'	FORMAT = BEST12. ;
ATTRIB S10MUPRC LABEL = 'Memory Used By Processes'	FORMAT = BEST12. ;
ATTRIB S10MRRDV LABEL = 'Mirrored Devices'	FORMAT = BEST12. ;
ATTRIB S10NBLPR LABEL = 'Number of Blocked Processes'	FORMAT = BEST12. ;
ATTRIB S10NPROC LABEL = 'Number of Processes'	FORMAT = BEST12. ;
ATTRIB S10PKTER LABEL = 'Number of Packet Errs'	FORMAT = BEST12. ;
ATTRIB S10PKRCV LABEL = 'Number of Packets Rcvd'	FORMAT = BEST12. ;
ATTRIB S10PKSNT LABEL = 'Number of Packets Sent'	FORMAT = BEST12. ;

FIG. 8V

Substitute Sheet (Rule 26)

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RUN ;

```
PROC SUMMARY DATA = SYB ;
BY NODE APP INSTANCE DATETIME DATE TIME HOUR;
ID QUARTER ;
VAR S10BUSST S10BLPCS S10CONNR S10CPUBY S10CPUIL S10CPUIO
    S10DKIOE S10DKIOR S10DKIOW S10IDLPR S10LK4GC S10LKRMN
    S10MUPRC S10MRRDV S10NBLPR S10NPROC S10PKTER S10PKRCV
    S10PKSNT ;
OUTPUT OUT= SYB
MEAN=S10BUSST S10BLPCS S10CONNR S10CPUBY S10CPUIL S10CPUIO
    S10DKIOE S10DKIOR S10DKIOW S10IDLPR S10LK4GC S10LKRMN
    S10MUPRC S10MRRDV S10NBLPR S10NPROC S10PKTER S10PKRCV
    S10PKSNT ;
```

RUN ;

*****;

* BUILD THE USER PERFORMANCE DATA TABLE

*****;

DATA USR ;

SET USR1 ;

KEEP

APP DATE DATETIME HOUR INSTANCE NODE PARM QUARTER TIME
USRNOSES USRNUMBR ;

IF PARM= 'USRNoUser' THEN USRNUMBR = METRIC ;
ELSE IF PARM= 'USRNoSession' THEN USRNOSES = METRIC ;

```
ATTRIB DATETIME LABEL = 'Date Time Stamp'    FORMAT= DATETIME21.2 ;
ATTRIB DATE LABEL= 'Date'                    FORMAT = DATE9.    ;
ATTRIB TIME LABEL = 'Time'                    FORMAT = TIME10.2  ;
ATTRIB HOUR LABEL = 'Hour'                     FORMAT = Z2.    ;
ATTRIB QUARTER LABEL = 'Quarter'                FORMAT = BEST12.  ;
ATTRIB INSTANCE LABEL = 'Instance'              LENGTH = $35    ;
ATTRIB APP LABEL = 'Application'                LENGTH = $15    ;
ATTRIB NODE LABEL = 'Node'                      LENGTH = $8     ;
ATTRIB USRNUMBR LABEL = 'Number of unique users currently logged' ;
ATTRIB USRNUMBR LABEL = 'Number of active non-root user sessions' ;
```

RUN ;

```
PROC SUMMARY DATA = USR ;
BY NODE APP INSTANCE DATETIME DATE TIME HOUR;
ID QUARTER ;
VAR USRNOSES USRNUMBR ;
OUTPUT OUT=USR
MEAN=USRNOSES USRNUMBR ;
RUN ;
```

QUIT;

FIG. 8W

Substitute Sheet (Rule 26)

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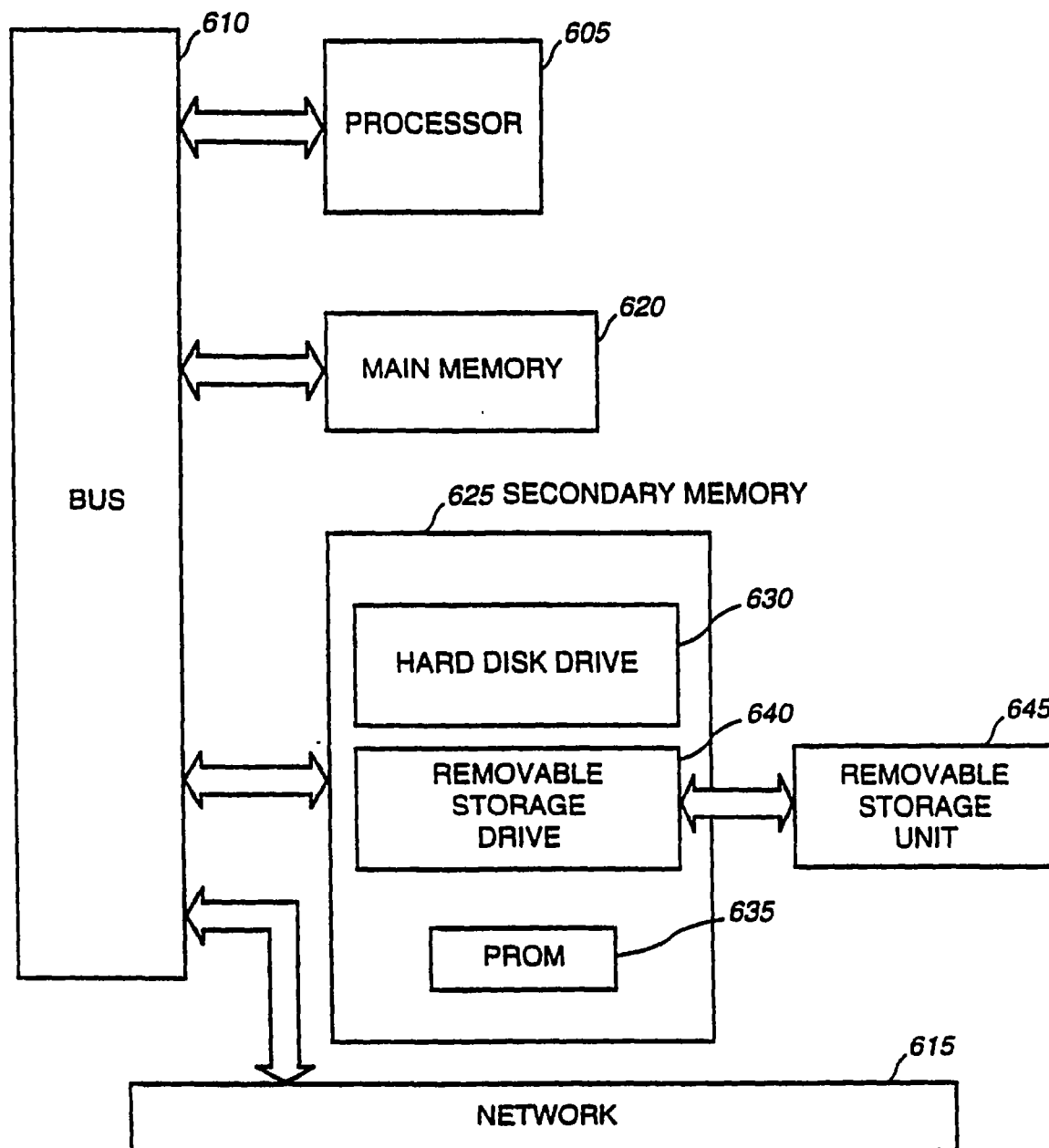


FIG. 9

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Patrol Parameter	ITSV Variable Name	Description
ACTPRCPUPerc	ACTPCPUP	% of CPU use for the selected active process.
ACTPRCPUTime	ACTPCCTM	Accumulated CPU time for the selected active process.
ACTPRDeltaCPU	ACTPRDCP	Change in CPU time since the last collection.
ACTPRMem	ACTPMEM	Amount of memory the selected active process is consuming.
ACTPRMemWait	ACTPMEMW	Warns if the active process is waiting for memory.
ACTPRRank	ACTPRRNK	Rank of active processes.
CPUCpuUtil	CPUTIL	Percent CPU utilization
CPUIdleTime	CPIDLETIM	Percent of time CPU was idle
CPUInt	CPUINT	# of non-VME device interrupts.
CPUload	CPULOAD	1-minute load average from the uptime command.
CPUProcSwch	CPUPSWCH	Total # of CPU context switches per second.
CPURunQSize	CPRUNQSZ	Average # of processes in the run
CPU SysTime	CPSYSTM	Percent of CPU time spent in system mode
CPUUserTime	CPUSERTM	Percent of CPU time spent in user mode
CPUWSwp	CPUWSWP	% of time the CPU spends waiting for swap I/O operations.
CPUWio	CPUWIO	% of time that the CPU spends waiting for I/O operations.
DSKAvgQueue	DSKAVGQ	Average # of disk I/O requests in the
DSKAvgServ	DSKAVGST	Average service time (ms), in which transfer requests are completed
DSKAvgWait	DSKAVGWT	Average time transfer requests wait in queue
DSKBps	DSKBPS	# of 1-KB blocks read from or written to the device per second.
DSKMSPs	DSKMSPS	Average disk seek time for the device.
DSKPercentBusy	DSKPCBSY	Percent of time a the device is busy
DSKRead	DSKREAD	# of disk read requests per second.
DSKReadWrite	DSKRDWRT	# of read and write requests made to the device per second.
DSKSps	DSKSPS	# of disk seeks per second.
DSKTps	DSKTPS	# of disk transfers performed per second.
DSKWnte	DSKWRITE	# of KBs written to disk per second.
FSCapacity	FSCAPCTY	Percent of file system storage currently in
FSFreeInodes	FSFINODE	# of unused I-nodes on the local file system.
FSInodeUsedPercent	FSINPCTU	Percent of I nodes used
KERDirBik	KERDIRBK	# of directory blocks read per second
KERFileUsedPercent	KERFLUPC	The % of Kernel file slots in use
KERGNodeUsedPercent	KERGNUSD	% of the kernel G-node slots being used.
KERIGet	KERIGET	# of files locate by an I-Node entry
KERINodeUsedPercent	KERINUPC	% of kernel I-node slots being used.
KERLgAlloc	KERLGALC	Memory in bytes allocated for large memory requests by KMA
KERLgFail	KERLGFAL	# of large memory pool requests that were not satisfied.
KERLgMem	KERLGMEM	Amount of memory in bytes available in the KMA
KERLockUsedPercent	KERLUPCT	% of the kernel lock slots being used.
KERMsg	KERMSG	# of message operations per second
KERNameI	KERNAMEI	# of file system pathname searches being performed.
KEROvzAlloc	KEROVALC	Amount of memory dynamically allocated for oversized requests.

FIG. 10A

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Patrol Parameter	ITSV Variable Name	Description
PAUserErrors	PAUSRERR	# of errors that have occurred in user-specified commands.
PAWorkRateExecsMin	PAWKRATE	# of instruction exec performed per min by the PATROL Agent.
PRNQLength	PRNQLNTH	# of print jobs waiting in the print queue.
PROCAvgUsrProc	PRCAUSRP	Average # of processes per non root
PROCExec	PRCEXEC	# of exec system calls per second.
PROCNoZombies	PRCNOZOM	Total # of zombie processes.
PROCNumProcs	PRCNUMPR	Total # of active processes on the system.
PROCProcWait	PRCWAIT	# of processes currently waiting for
PROCProcWaitInt	PRCPWTIN	# of processes in an interruptible wait state.
PROCProcWaitUnint	PRCPWTUN	# of processes in an uninterruptible wait state.
PROCTopProcs	PRCTOPPS	# of processes (up to a maximum of
PROCUserProcs	PRCUSERP	# of non root user processes
ProcNumProcs	PRCNUMP	# of active processes on the system
SMPContextSwitch	SMPCTXSW	# of CPU context switches.
SMPCrossCalls	SMPXCCLS	# of interprocessor cross-calls.
SMPIdlePercent	SMPIDLPC	Percent of time CPU was idle
SMPIntThread	SMPINTTR	# of interrupts as threads, excluding clock interrupts.
SMPInterrupts	SMPINTER	# of processor interrupts.
SMPInvContSwitch	SMPINVCX	# of processor involuntary context switches.
SMPMajorFaults	SMPMAJFT	# of major faults.
SMPMinorFaults	SMPMINFT	# of minor faults.
SMPRunQLen15Min	SMPRQ15M	Avg # of processes in CPU run queue during the last 15 minutes.
SMPRunQLen1Min	SMPRQ1MN	Avg # of processes in CPU run queue during the last minute.
SMPRunQLen5Min	SMPRQ5MN	Avg # of processes in CPU run queue during the last 5 minutes.
SMPSpinMutex	SMPSPNMX	# of spins on mutexes, or locks not acquired on the first try.
SMPSpinRdWr	SMPSPNRW	# of reader and writer locks not acquired on the first try.
SMPSystemCalls	SMPYSCL	# of system calls.
SMPSystemPrcnt	SMPYSPC	Amount of time spent on system activities
SMPThMigration	SMPTHMIG	# of thread migrations to another processor.
SMPUserPercent	SMPUSRPC	Amount of time spent on user requested
SMPWaitPercent	SMPWTPCT	Amount of processor time spent waiting.
SWPSwapFreeSpace	SWPSFR5P	Size of the available swap space.
SWPSwapSize	SWPSIZE	Size of a particular swap area.
SWPSwapUsedPercent	SWPUSDPC	% of swap space used for a particular swap area.
SWPTotSwapFreeSpace	SWPTOTFR	Size of the free swap space
SWPTotSwapSize	SWPTOTSZ	Size of the entire swap space
SWPTotSwapUsedPercent	SWPTOTUP	% of the entire swap space that is in use.
SWPnPageSizeAvail	SWPNPAVL	# of swap pages available on the
USRNoSession	USRNOSES	# of active nonroot user sessions currently on this machine.
USRNoUser	USRNUMBR	# of unique users currently logged

FIG. 10D