CLD

DCL TABLE 1

LIS

```
 1  !  Version:    'V04-000'
 2  !
 3  !
 4  !     V03-003 DAS0002         David Solomon          27-Jan-1984
 5  !     Remove type declarations for /TYPE and /PROCESS (as they
 6  !     are not used). Add disallow clauses to make /BINARY, /BRIEF,
 7  !     /FULL, and /SUMMARY mutually exclusive. Don't allow /SORT with
 8  !     /SUMMARY. Require /SUMMARY with /REPORT.
 9  !
10  !     V03-002 DAS0001         David Solomon          25-May-1983
11  !     Remove TYPE=xxx from /TYPE, /PROCESS, and /SORT qualifiers,
12  !     because the syntax that ACC accepted in V3 is not accepted
13  !     by DCL in V4, given the existing keyword TYPE definitions.
14  !
15  !     V03-001 PCA1008         Paul C. Anagnostopoulos 25-Mar-1983
16  !     Fix the VALUE clauses so that there are commas between
17  !     the subclauses.  The new CLD requires them.
18
19  define      type        ACNT_REPORT_KEYWORDS
20       keyword            BUFFERED_IO
21       keyword            DIRECT_IO
22       keyword            ELAPSED
23       keyword            EXECUTION
24       keyword            FAULTS
25       keyword            GETS
26       keyword            PAGE_FILE
27       keyword            PAGE_READS
28       keyword            PAGES
29       keyword            PROCESSOR
30       keyword            QIOS
31       keyword            RECORDS                 default
32       keyword            VOLUMES
33       keyword            WORKING_SET
34
35  define      type        ACNT_SUMMARY_KEYWORDS
36       keyword            ACCOUNT
37       keyword            DATE
38       keyword            DAY
39       keyword            HOUR
40       keyword            IMAGE
41       keyword            JOB
42       keyword            MONTH
43       keyword            NODE
44       keyword            PROCESS
45       keyword            QUEUE
46       keyword            TERMINAL
47       keyword            TYPE
48       keyword            UIC
49       keyword            USER            default
50       keyword            WEEKDAY
51       keyword            YEAR
52  !
```

```
53  define      verb            ACCOUNTING
54      image           ACC
55      parameter       P1      label   = INPUT
56                              value   (list,type=$infile,default=SYS$MANAGER:.DAT;)
```

```
 57   !
 58   !  Accounting record output qualifers
 59   !
 60          qualifier         BINARY
 61          qualifier         BRIEF
 62          qualifier         FULL
 63          qualifier         LOG
 64          qualifier         OUTPUT  default
 65                            value   (type=$outfile,default=SYS$OUTPUT)
 66          qualifier         REPORT  default
 67                            value   (type=ACNT_REPORT_KEYWORDS,list)
 68          qualifier         REJECTED
 69                            value   (required,type=$outfile)
 70          qualifier         SUMMARY value   (type=ACNT_SUMMARY_KEYWORDS,list)
 71          qualifier         TITLE   value   (required)
 72   !
 73   !  Accounting record selection qualifiers
 74   !
 75          qualifier         ACCOUNT value   (required,list)
 76          qualifier         ADDRESS value   (required,list)
 77          qualifier         BEFORE  value   (default=TODAY,type=$datetime)
 78          qualifier         ENTRY   value   (required,list)
 79          qualifier         IDENT   value   (required,list)
 80          qualifier         IMAGE   value   (required,list)
 81          qualifier         JOB     value   (required,list)
 82          qualifier         NODE    value   (required,list)
 83          qualifier         OWNER   value   (required,list)
 84          qualifier         PRIORITY value  (required,list)
 85          qualifier         PROCESS value   (required,list)
 86          qualifier         QUEUE   value   (required,list)
 87          qualifier         REMOTE_ID value (required,list)
 88          qualifier         SINCE   value   (default=TODAY,type=$datetime)
 89          qualifier         STATUS  value   (required,list)
 90          qualifier         TERMINAL value  (required,list)
 91          qualifier         TYPE    value   (required,list)
 92          qualifier         UIC     value   (required,list,type=$uic)
 93          qualifier         USER    value   (required,list)
 94   !
 95   !  Accounting record sort qualifiers
 96   !
 97          qualifier         SORT    value   (default=USER,list)
 98
 99          disallow          any2( SUMMARY, SORT )
100          disallow          any2( BRIEF, FULL, BINARY, SUMMARY )
101          disallow          not SUMMARY and REPORT
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

```
 1  |  Version:     'V04-000'
 2  |
 3  |
 4  |     V03-022 DGB0066          Donald G. Blair          03-Jul-1984
 5  |         Allow negation of all qualifiers for ANALYZE/IMAGE and
 6  |         ANALYZE/OBJECT and ANALYZE/RMS_FILE
 7  |
 8  |     V03-021 EAD0147          Elliott A. Drayton       12-Apr-1984
 9  |         Change file default for ANALYZE/ERROR_LOG.
10  |
11  |     V03-020 SAR0244          Sharon A. Reynolds       4-Apr-1984
12  |         Removed the negatable clause from /sid_selection
13  |         for ANALYZE/ERROR_LOG.
14  |
15  |     V03-019 EAD0121          Elliott A. Drayton            24-Mar-1984
16  |         Removed qualifier UNKNOWN.
17  |
18  |     V03-018 EAD0106          Elliott A. Drayton       28-Feb-1984
19  |         Added LIST keyword for parameter(list of input file names)
20  |
21  |     V03-017 WMC0007          Wayne Cardoza            27-Feb-1984
22  |         Remove checkpoint and journaling related stuff.
23  |
24  |     V03-016 JMG0011          Joel M. Gringorten       6-Feb-1984
25  |         Added STATISTICS qualifier for ANALYZE/SUMMARY.
26  |
27  |     V03-015 SAR0185          Sharon A. Reynolds       17-Jan-1984
28  |         Added HISTOGRAM keyword for ANALYZE/ERROR/SUMMARY.
29  |
30  |     V03-014 SAR0123          Sharon A. Reynolds       23-Aug-1983
31  |         Added a file spec value for the /binary qualifier
32  |         for ANALYZE/ERROR_LOG.
33  |
34  |     V03-013 LJA0084          Laurie J. Anderson       25-Jul-1983
35  |         Fix CLD defaults for ANALYZE/AUDIT
36  |
37  |     V03-012 WMC0006          Wayne Cardoza            24-Jul-1983
38  |         Add ANALYZE/PROC/OUTPUT.
39  |
40  |     V03-011 LJA0076          Laurie J. Anderson       21-Jun-1983
41  |         Add support for new ANALYZE/AUDIT utility
42  |
43  |     V03-010 SAR0019          Sharon A. Reynolds,      27-Apr-1983
44  |         Added keyword support for /summary. Removed the negatable
45  |         clause for /brief, /register_dump, and /unknown qualifiers.
46  |         (analyze/error).
47  |
48  |     V03-009 WMC0005          Wayne Cardoza    20-Apr-1983
49  |         Add ANALYZE/PROCESS_DUMP
50  |         THIS AND THE TWO PRECEDING UPDATES WERE ACC!DENTALLY DELETED
51  |         SOMEHOW.
52  |
53  |     V03-008 PCA1012          Paul C. Anagnostopoulos 14-Apr-1983
54  |         Allow /NOOUTPUT on the ANALYZE/RMS command.
55  |
56  |     V03-007 WMC0004          Wayne Cardoza    04-Apr-1983
```

```
57  !               More /CHECKPOINT qualifiers.
58  !
59  !       V03-006 PCA0070         Paul C. Anagnostopoulos 31-Mar-1983
60  !               Remove the PROMPT clauses from the qualifiers added in
61  !               EAD0070.
62  !
63  !       V03-005 EAD0070         Elliott A. Drayton      29-Mar-1983
64  !               Add support for ana/error.
65  !
66  !       V03-004 WMC0003         Wayne Cardoza   25-Mar-1983
67  !               Add /OUTPUT for checkpoint
68  !
69  !       V03-003 WMC0002         Wayne Cardoza   10-Feb-1983
70  !               New checkpoint qualifiers
71  !
72  !       V03-002 MTR0001         Mike Rhodes     3-Jan-1983
73  !               Add list to PATTERN keyword (ANALYZE/MEDIA/EXERCISE).
74  !
75  !       V03-001 WMC0001         Wayne Cardoza   28-Dec-1982
76  !               Add /CHECKPOINT qualifiers
77  !
78  define syntax analyze_crash_dump
79          image sda
80          parameter p1,label=dump_file,prompt="Dump File",value(required,type=$infile)
81          qualifier CRASH_DUMP,default
82          qualifier SYSTEM
83          qualifier SYMBOLS,value(required,type=$infile)
84
85  define syntax analyze_disk_structure
86          image verify
87          parameter p1,label=device,prompt="Device",value(required,type=$device)
88          qualifier CONFIRM
89          qualifier DISK_STRUCTURE,default
90          qualifier LIST,value(type=$outfile)
91          qualifier READ_CHECK
92          qualifier REPAIR
93          qualifier USAGE,value(type=$outfile)
94
95  define type SUMMARY_TYPE_KEYWORDS
96          keyword DEVICE
97          keyword ENTRY
98          keyword HISTOGRAM
99          keyword MEMORY
100         keyword VOLUME
101
102 define type ENTRY_KEYWORDS
103         keyword END,            value(type=$number)
104         keyword START,          value(type=$number)
105
106 define syntax analyze_error_log
107         image SYS$SYSTEM:ERF.EXE
108         parameter P1, label=file_specs,
109                 value(list,type=$infile,default="SYS$ERRORLOG:ERRLOG.SYS")
110         qualifier BEFORE,                value(type=$datetime),nonnegatable
111         qualifier BINARY,                value(type=$outfile)
112         qualifier BRIEF,                 nonnegatable
```

```
113         qualifier ENTRY,                   value(required,
114                                               type=ENTRY_KEYWORDS,list),
115                                               nonnegatable
116         qualifier EXCLUDE,                 value(required,list),
117                                               nonnegatable
118         qualifier FULL,                    negatable
119         qualifier INCLUDE,                 value(required,list),
120                                               nonnegatable
121         qualifier LOG,                     negatable
122         qualifier OUTPUT,                  default,value(default=SYS$OUTPUT),
123                                               nonnegatable
124         qualifier PAGE,                    negatable
125         qualifier REJECTED,                value(type=$outfile)
126         qualifier REGISTER_DUMP,           nonnegatable
127         qualifier SID_REGISTER,            value(required,
128                                               type=$number),nonnegatable
129         qualifier SINCE,                   value(default=today,type=$datetime),
130                                               nonnegatable
131         qualifier STATISTICS,              nonnegatable
132         qualifier SUMMARY,                 value(type=SUMMARY_TYPE_KEYWORDS,list),
133                                               nonnegatable
134
135 define syntax analyze_image
136         image analyzobj
137         parameter p1,label=file_specs,prompt="File(s)",value(required,list,type=$infile)
138         qualifier FIXUP_SECTION,placement=positional
139         qualifier GST,placement=positional
140         qualifier HEADER,placement=positional
141         qualifier OUTPUT,default,value(default="SYS$OUTPUT",type=$outfile)
142         qualifier IMAGE,default
143         qualifier INTERACTIVE
144         qualifier PATCH_TEXT,placement=positional
145
146 define syntax analyze_rms_file
147         image analyzrms
148         parameter p1,label=file_specs,prompt="File(s)",value(required,list,type=$infile)
149         qualifier CHECK
150         qualifier FDL
151         qualifier INTERACTIVE
152         qualifier STATISTICS
153         qualifier SUMMARY
154         qualifier OUTPUT,default,value(type=$outfile)
155
156 define syntax analyze_system
157         image sda
158         noparameters
159
160 !
161 ! Keyword definitions for ANALYZE/MEDIA
162 !
163 define type exer_keywords
164         keyword FULL
165         keyword KEEP, negatable
166         keyword PATTERN, value (list)
167
168 define type show_keywords
```

```
169          keyword BEFORE, negatable
170          keyword AFTER, negatable
171
172   define syntax analyze_media
173          image analyzbad
174          parameter p1, label=device, prompt="Device", value (required, type=$device)
175
176          qualifier BAD_BLOCKS, nonnegatable, value (list)
177          qualifier EXERCISE, value (list, type=exer_keywords)
178          qualifier LOG
179          qualifier OUTPUT, value (default="SYS$OUTPUT", type=$outfile)
180          qualifier RETRY
181          qualifier SHOW, nonnegatable, value (list, type=show_keywords)
182
183   !**JNL** define syntax analyze_checkpoint
184   !**JNL**         image   chkanal
185   !**JNL**         parameter p1,prompt="File",value(required,type=$infile),label=chkpnt
186   !**JNL**         qualifier full
187   !**JNL**         qualifier quota
188   !**JNL**         qualifier interactive
189   !**JNL**         qualifier database
190   !**JNL**         qualifier output,value(default="SYS$OUTPUT", type=$outfile)
191   !**JNL**         qualifier record,value(required)
192   !**JNL**         qualifier create,value(type=$outfile)
193
194   define syntax analyze_process_dump
195          image analimdmp
196          parameter p1,prompt="File",value(required,type=$infile)
197          qualifier image,          value(type=$outfile)
198          qualifier noimage
199          qualifier interactive
200          qualifier full
201          qualifier miscellaneous
202          qualifier relocation
203          qualifier output,value(default="SYS$OUTPUT", type=$outfile)
204   !
205   !  Keyword definitions for ANALYZE/AUDIT
206   !
207   !**JNL** define type FILE_ACCESS_KEYWORDS
208   !**JNL**         keyword BYPASS,            value( list, type=ACCESS_TYPE_KEYWORDS )
209   !**JNL**         keyword FAILURE,           value( list, type=ACCESS_TYPE_KEYWORDS )
210   !**JNL**         keyword GRPPRV,            value( list, type=ACCESS_TYPE_KEYWORDS )
211   !**JNL**         keyword READALL,           value( list, type=ACCESS_TYPE_KEYWORDS )
212   !**JNL**         keyword SUCCESS,           value( list, type=ACCESS_TYPE_KEYWORDS )
213   !**JNL**         keyword SYSPRV,            value( list, type=ACCESS_TYPE_KEYWORDS )
214   !**JNL**         keyword RECORD_MANAGEMENT, value( list, type=RMS_SERVICES )
215
216   !**JNL** define type ACCESS_TYPE_KEYWORDS
217   !**JNL**         keyword READ
218   !**JNL**         keyword WRITE
219   !**JNL**         keyword EXECUTE
220   !**JNL**         keyword DELETE
221   !**JNL**         keyword OWNER
222
223   !**JNL** define type RMS_SERVICES
224   !**JNL**         keyword CLOSE
```

```
225   !**JNL**        keyword CREATE
226   !**JNL**        keyword DELETE
227   !**JNL**        keyword EXTEND
228   !**JNL**        keyword FIND
229   !**JNL**        keyword GET
230   !**JNL**        keyword OPEN
231   !**JNL**        keyword PUT
232   !**JNL**        keyword READ
233   !**JNL**        keyword TRUNCATE
234   !**JNL**        keyword UPDATE
235   !**JNL**        keyword WRITE
236
237   !**JNL** define type LOGIN_KEYWORDS
238   !**JNL**        keyword BATCH
239   !**JNL**        keyword DIALUP
240   !**JNL**        keyword FAILURES
241   !**JNL**        keyword LOCAL
242   !**JNL**        keyword NETWORK
243   !**JNL**        keyword PROCESS
244
245   !**JNL** define type LOGOUT_KEYWORDS
246   !**JNL**        keyword BATCH
247   !**JNL**        keyword DIALUP
248   !**JNL**        keyword LOCAL
249   !**JNL**        keyword NETWORK
250   !**JNL**        keyword PROCESS
251
252   !**JNL** define type JOURNAL_TYPE_KEYWORDS
253   !**JNL**        keyword AT                  default
254   !**JNL**        keyword AI
255   !**JNL**        keyword BI
256   !**JNL**        keyword RU
257
258   !**JNL** define syntax analyze_audit
259   !**JNL**        image audit
260   !**JNL**        parameter p1,label=file_spec,value(list,type=$infile)
261   !**JNL**        qualifier ACL
262   !**JNL**        qualifier AUTHORIZATION
263   !**JNL**        qualifier BACKWARD,          nonnegatable
264   !**JNL**        qualifier BEFORE,            nonnegatable,value(default=TODAY,type=$datetime)
265   !**JNL**        qualifier FILE_ACCESS,       value(type=FILE_ACCESS_KEYWORDS,list)
266   !**JNL**        qualifier FORWARD,           nonnegatable,default
267   !**JNL**        qualifier FULL
268   !**JNL**        qualifier IDENTIFICATION,    value(list,type=$number,required)
269   !**JNL**        qualifier JOURNAL,           nonnegatable,value(list,type=$infile)
270   !**JNL**        qualifier LOGIN,             value(list,type=LOGIN_KEYWORDS)
271   !**JNL**        qualifier LOGOUT,            value(list,type=LOGOUT_KEYWORDS)
272   !**JNL**        qualifier MAILBOX_IO,        value(list,type=$device)
273   !**JNL**        qualifier MOUNT
274   !**JNL**        qualifier OUTPUT             nonnegatable,value(type=$outfile,default=sys$output:),default
275   !**JNL**        qualifier SETPRV
276   !**JNL**        qualifier SINCE,             nonnegatable,value(default=TODAY,type=$datetime)
277   !**JNL**        qualifier TERMINAL_IO,       value(list,type=$device)
278   !**JNL**        qualifier TYPE,              value(required,type=JOURNAL_TYPE_KEYWORDS)
279   !**JNL**        qualifier UIC,               value(list,type=$uic)
280
```

```
  281   !**JNL** disallow (BACKWARD and FORWARD)
  282   !
  283   !  ANALYZE
  284   !
  285   define verb ANALYZE
  286         image analyzobj
  287         parameter p1,label=file_specs,prompt="File(s)",value(required,list,type=$infile)
  288
  289   !**JNL**        qualifier AUDIT,nonnegatable,syntax=analyze_audit
  290         qualifier CRASH_DUMP,nonnegatable,syntax=analyze_crash_dump
  291         qualifier DISK_STRUCTURE,nonnegatable,syntax=analyze_disk_structure
  292         qualifier ERROR_LOG,nonnegatable,syntax=analyze_error_log
  293         qualifier IMAGE,nonnegatable,syntax=analyze_image
  294         qualifier MEDIA,nonnegatable,syntax=analyze_media
  295         qualifier OBJECT,default,nonnegatable
  296         qualifier RMS_FILE,nonnegatable,syntax=analyze_rms_file
  297         qualifier SYSTEM,nonnegatable,syntax=analyze_system
  298   !**JNL**        qualifier CHECKPOINT,nonnegatable,syntax=analyze_checkpoint
  299         qualifier PROCESS_DUMP,nonnegatable,syntax=analyze_process_dump
  300
  301         qualifier DBG,placement=positional
  302         qualifier EOM,placement=positional
  303         qualifier GSD,placement=positional
  304         qualifier INCLUDE,placement=local,value(default="*",list)
  305         qualifier INTERACTIVE
  306         qualifier LNK,placement=positional
  307         qualifier MHD,placement=positional
  308         qualifier OUTPUT,default,value(default="SYS$OUTPUT",type=$outfile)
  309         qualifier TBT,placement=positional
  310         qualifier TIR,placement=positional
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

```
  1  module BACKUPCMD
  2  !
  3  !   Version:    'V04-000'
  4  !
  5  !       V03-005 LY0515          Larry Yetto            24-JUL-1984 11:08
  6  !               Do not allow both /RECORD and /DELETE on the same line
  7  !
  8  !       V03-004 JEP0004         J. Eric Pollack,       21-Aug-1983
  9  !               Revise /ENCRYPT syntax
 10  !
 11  !       V03-003 JEP0003         J. Eric Pollack,       23-Apr-1983  10:53
 12  !               Add support for encrypted savesets.
 13  !
 14  !       V03-002 MLJ0108         Martin L. Jack         13-Apr-1983
 15  !               Remove $DATETIME from BEFORE and SINCE.
 16  !
 17  !       V03-001 ACG0314         Andrew C. Goldstein    10-Feb-1983  22:24
 18  !               Make /NOREWIND and /NOINITIALIZE default for save sets
 19  !
 20  define type encryp_val
 21      keyword NAME            value(type=$outlog)
 22      keyword ALGORITHM       value(type=$outlog,default="DESCBC")
 23      keyword VALUE           value(list)
 24  define syntax BACKUP_LIST
 25      parameter P1
 26        label=INPUTS
 27        prompt="From"
 28        value(list,type=$infile)
 29      parameter P2
 30        label=OUTPUTS
 31        prompt="To"
 32        value(list,type=$outfile)
 33  define verb BACKUP
 34      parameter P1
 35        label=INPUTS
 36        prompt="From"
 37        value(required,list,type=$infile)
 38      parameter P2
 39        label=OUTPUTS
 40        prompt="To"
 41        value(required,list,type=$outfile)
 42      qualifier ANALYZE
 43      qualifier BACKUP
 44      qualifier BEFORE
 45        value(required)
 46      qualifier BLOCK_SIZE
 47        value(required)
 48      qualifier BRIEF
 49      qualifier BUFFER_COUNT
 50        value(required)
 51      qualifier COMMENT
 52        value(required)
 53      qualifier COMPARE
 54      qualifier CONFIRM
 55      qualifier CRC
 56        default
```

```
57          qualifier CREATED
58          qualifier DELETE
59          qualifier DENSITY
60            value(required)
61          qualifier ENCRYPT
62            value(list,type=encryp_val)
63            disallow ENCRYPT.NAME and ENCRYPT.VALUE
64          qualifier EXCLUDE
65            value(required,list,type=$infile)
66          qualifier EXPIRED
67          qualifier FAST
68          qualifier FULL
69          qualifier GROUP_SIZE
70            value(required)
71          qualifier IGNORE
72            value(required,list,type=$infile)
73          qualifier IMAGE
74          qualifier INCREMENTAL
75          qualifier INITIALIZE
76          qualifier INTERCHANGE
77          qualifier JOURNAL
78            value(type=$outfile)
79          qualifier LABEL
80            value(required,list)
81          qualifier LIST
82            value
83            syntax=BACKUP_LIST
84          qualifier LOG
85          qualifier MODIFIED
86          qualifier NEW_VERSION
87          qualifier OVERLAY
88          qualifier OWNER_UIC
89            placement=local
90            value(type=$uic)
91          qualifier PHYSICAL
92          qualifier PROTECTION
93            placement=positional
94            value(list)
95          qualifier RECORD
96          qualifier REPLACE
97          qualifier REWIND
98          qualifier SAVE_SET
99            placement=local
100         qualifier SELECT
101           value(required,list,type=$infile)
102         qualifier SINCE
103           value(required)
104         qualifier TRUNCATE
105         qualifier VERIFY
106         qualifier VOLUME
107           value(required)
108       disallow  DELETE and RECORD
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

```
 1   !
 2   !  Version:    'V04-000'
 3   !
 4   !**********************************************************************
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23   !*                                                                    *
24   !*                                                                    *
25   !**********************************************************************
26
27   DEFINE VERB CHECKSUM
28       PARAMETER P1,LABEL=input,PROMPT="File",VALUE(REQUIRED)
29       QUALIFIER output, DEFAULT, VALUE(DEFAULT=SYS$OUTPUT)
30       QUALIFIER image
31       QUALIFIER file
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

```
 1   !
 2   !  Version:    'V04-000'
 3   !
 4
 5   define syntax reclaim
 6
 7   image reclaim
 8
 9   parameter p1,label=file_name,prompt="File",value(required,type=$infile)
10   qualifier statistics
11
12
13   define verb convert
14
15   image convert
16
17   parameter p1,label=infile,prompt="Input",value(required,list,type=$infile)
18   parameter p2,label=outfile,prompt="Output",value(required,type=$outfile)
19
20   qualifier append
21   qualifier create,default
22   qualifier fdl,label=fdl,value(required,type=$infile),nonnegatable
23   qualifier exceptions_file,label=exception,value(default="SYS$OUTPUT",type=$infile),nonnegatable
24   qualifier exit
25   qualifier fast_load,default
26   qualifier fill_buckets
27   qualifier fixed_control
28   qualifier key,value(required,type=$number),nonnegatable
29   qualifier merge,nonnegatable
30   qualifier pad,value(default="%D0")
31   qualifier prologue,value(required,type=$number),nonnegatable
32   qualifier read_check
33   qualifier share
34   qualifier sort,default
35   qualifier statistics
36   qualifier truncate
37   qualifier work_files,value(required,type=$number),nonnegatable
38   qualifier write_check
39   qualifier reclaim,syntax=reclaim,nonnegatable
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

```
  1   !
  2   !  Version:    'V04-000'
  3   !
  4
  5   define type protection
  6         keyword system,value
  7         keyword group,value
  8         keyword owner,value
  9         keyword world,value
 10
 11   define verb append
 12         image copy
 13         parameter p1, label=infile, prompt="From",
 14                         value(required,list,impcat,type=$infile)
 15         parameter p2, label=outfile, prompt="To",
 16                         value(required,type=$outfile)
 17         qualifier allocation,   value(required), placement=positional
 18         qualifier contiguous,   placement=positional
 19         qualifier extension,    value(required), placement=positional
 20         qualifier file_maximum, value(required,list), placement=positional
 21         qualifier new_version,
 22         qualifier protection,   value(required,list,type=protection),
 23                         placement=positional
 24         qualifier read_check,   placement=positional
 25         qualifier log
 26         qualifier write_check,  placement=positional
 27         qualifier confirm
 28         qualifier exclude,value(list)
 29         qualifier before,value(default=today)
 30         qualifier since,value(default=today)
 31         qualifier created
 32         qualifier modified
 33         qualifier expired
 34         qualifier backup
 35         qualifier by_owner,value(type=$uic)
 36
 37   define syntax copy_using_pip
 38         image backtrans
 39
 40   define verb copy
 41         image copy
 42         parameter p1, label=infile, prompt="From",
 43                         value(required,list,impcat,type=$infile)
 44         parameter p2,label=outfile, prompt="To",
 45                         value(required,type=$outfile)
 46         qualifier allocation,   value(required,list), placement=positional
 47         qualifier concatenate,  default
 48         qualifier contiguous,   placement=positional
 49         qualifier extension,    value(required), placement=positional
 50         qualifier file_maximum, value(required), placement=positional
 51         qualifier overlay,      placement=positional
 52         qualifier protection,   value(required, list, type=protection),
 53                         placement=positional
 54         qualifier read_check,   placement=positional
 55         qualifier replace,      placement=positional
 56         qualifier log
```

I 5

16-SEP-1984 03:59   VAX/VMS Command Definition Utility (V4-001)   Page 2
15-SEP-1984 22:42   _255DUA28:[CLD.SRC]COPY.CLD;1 (1)

```
    57          qualifier volume,      value(required)
    58          qualifier write_check,   placement=positional
    59          qualifier truncate,      placement=positional
    60          qualifier confirm
    61          qualifier exclude,value(list)
    62          qualifier before,value(default=today)
    63          qualifier since,value(default=today)
    64          qualifier created
    65          qualifier modified
    66          qualifier expired
    67          qualifier backup
    68          qualifier by_owner,value(type=$uic)
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

```
 1  |
 2  | Version:      'V04-000'
 3  |
 4  |     V03-005 HWS0004        Harold Schultz          07-Feb-1984
 5  |             Changed syntax of /LOGICAL_NAME_TABLE qualifier to
 6  |             /NAME_TABLE. Also added additional protection qualifier
 7  |             when creating a logical name table of the form:
 8  |             CREATE/NAME_TABLE/PROTECTION=(SY:RWED,OW:RWED,...)
 9  |             Add /LOG qualifier to logical name table creation table.
10  |
11  |     V03-004 PCG0002        Peter George            31-May-1983
12  |             Add PREFIX to CREATE/LOGICAL_NAME_TABLE.
13  |
14  |     V03-003 PCG0001        Peter George            27-May-1983
15  |             Add CREATE/LOGICAL_NAME_TABLE.
16  |
17  |     V03-002 MAJ0001        Melanie Johnson         25-May-1983
18  |             These definitions are being added to MCR with the exception of
19  |             CREATE/FDL, which is being flagged for MCR to ignore it.
20  |
21  |
22  |     V03-001 SHZ0001        Stephen H. Zalewski     16-May-1983
23  |             Modified CREATE qualifiers.
24  |
25  |
26  define type protection
27      keyword system,value
28      keyword group,value
29      keyword owner,value
30      keyword world,value
31
32  define syntax fdl
33      image createfdl
34      parameter p1,label=file_name,prompt=" ",value(type=$outfile)
35
36  define type attribute_keywords
37      keyword confine
38      keyword no_alias
39      keyword supersede
40
41  define syntax name_table
42      cliroutine cretable
43      prefix cli$k_cret_
44      parameter p1,prompt="Table name",value(required)
45      qualifier user_mode
46      qualifier supervisor_mode
47      qualifier executive_mode
48      qualifier attributes,value(required,type=attribute_keywords,list)
49      qualifier parent_table,value(required)
50      qualifier quota,value(required,type=$number)
51      qualifier protection,   value(required,list,type=protection)
52      qualifier log
53  define verb create
54      image create
55      parameter p1,prompt="File",value(required,list,impcat,type=$outfile), label=output
56      qualifier directory
```

```
    57          qualifier owner_uic,    value(type=$uic,required)
    58          qualifier protection,   value(required,(ist,type=protection)
    59          qualifier log
    60          qualifier version_limit,value(required)
    61          qualifier volume,       value(required)
    62          qualifier fdl,label=fdl_file,value(type=$infile,required),cliflags(mcrignore),syntax=fdl
    63          qualifier name_table,syntax=name_table
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

```
 1
 2   Version:    'V04-000'
 3
 4       V03-030 HWS0068        Harold Schultz        24-May-1984
 5           Change WRITE/SYMBOL second parameter type to
 6           $QUOTED_STRING.
 7
 8       V03-029 HWS0040        Harold Schultz        26-Mar-1984
 9           Change ALLOCATE syntax to ALLOCATE /GENERIC DEV
10           Add READ/TIME_OUT=n.
11           Add CLOSE/LOG.
12
13       V03-028 PCG0016        Peter George          23-Mar-1984
14           Add /JOB qualifier to logical name commands.
15
16       V03-027 HWS0025        Harold Schultz        09-Mar-1984
17           Add /SYMBOL to WRITE command
18
19       V03-026 PCG0015        Peter George          01-Dec-1983
20           Add DEFINE/KEY/ERASE.
21
22       V03-025 MLJ0025        Martin L. Jack        23-Aug-1983
23           Add DEFINE/FORM/PAGE_SETUP.
24
25       V03-024 MLJ0024        Martin L. Jack        29-Jul-1983
26           Enhance DEFINE/FORM.
27
28       V03-023 PCG0014        Peter George          27-Jul-1983
29           Remove privilege list.
30           Remove X-form of logical name commands.
31
32       V03-022 PCG0013        Peter George          21-Jun-1983
33           Make second WRITE parameter $EXPRESSION.
34
35       V03-021 PCG0012        Peter George          21-Jun-1983
36           Add /CONTINUE to CONNECT and DISCONNECT.
37
38       V03-020 PCG0011        Peter George          21-Jun-1983
39           Add CONNECT and DISCONNECT.
40
41       V03-019 PCG0010        Peter George          31-May-1983
42           Add PREFIX to XDEFINE and XALLOCATE.
43
44       V03-018 MLJ0018        Martin L. Jack        27-May-1983
45           Add DEFINE/FORM and DEFINE/CHARACTERISTIC.
46
47       V03-017 PCG0008        Peter George          27-May-1983
48           Add SECURITY priv.
49           Add XDEFINE, XASSIGN, XALLOCATE, XDALLOCATE, XDEASSIGN.
50
51       V03-016 PCG0007        Peter George          30-Apr-1983
52           Add /LOG to ALLOCATE, ASSIGN, DEFINE.
53
54       V03-015 MLJ0015        Martin L. Jack        27-Apr-1983
55           Changes to STOP/QUEUE for new QUEMAN image.
56
```

```
 57  !        V03-014 PRB0175         Paul Beck                27-APR-1983 15:50:39
 58  !                Add TMPJNL, PRMJNL privileges.
 59  !
 60  !        V03-013 PCG0006         Peter George            10-Apr-1983
 61  !                Modify RECALL, ALLOCATE.
 62  !                Create RUN.CLD.
 63  !
 64  !        V03-012 PCG0005         Peter George            28-Mar-1983
 65  !                Add DEFINE/KEY, RECALL.
 66  !
 67  !        V03-011 PCA1008         Paul C. Anagnostopoulos 25-Mar-1983
 68  !                Make all necessary changes for new CDU.
 69  !
 70  !        V03-010 WMC0010         Wayne Cardoza           07-Mar-1983
 71  !                New RUN/CHECK qualifier
 72  !
 73  !        V03-009 PCA1008         Paul C. Anagnostopoulos  4-Mar-1983
 74  !                Put back the PREFIX clause for the RUN verb.
 75  !
 76  !        V03-008 MLJ0008         Martin L. Jack          01-Mar-1983
 77  !                Changes for new QUEMAN image.
 78  !
 79  !        V03-007 PCA1008         Paul C. Anagnostopoulos 25-Feb-1983
 80  !                Clean up various things.
 81  !
 82  !        V03-006 PCG0004         Peter George            24-Feb-1983
 83  !                Specify NOSTAT for appropriate verbs.
 84  !
 85  !        V03-005 PCG0003         Peter George            05-Jan-1983
 86  !                Add READ/MATCH
 87  !
 88  !        V03-004 PCG0002         Peter George            15-Dec-1982
 89  !                Remove HELP
 90  !
 91  !        V03-003 PCG0001         Peter George            20-Aug-1982
 92  !                Add CANCEL
 93  !
 94  !        V03-002 WMC0001         Wayne Cardoza           11-Aug-1982
 95  !                Add RUN/CHECKPOINT, RUN/RESTART
 96  !
 97  !        V03-001 DWT0053         David Thiel             15-Jul-1982
 98  !                Allow negated privileges
 99  !                Add commands previously defined in DATABASE.MAR
100  !
101  define verb allocate
102          cliroutine allocate
103          prefix cli$k_allo_
104          parameter p1,prompt="Device",value(required,list,type=$device)
105          parameter p2,prompt="Log name",value(type=$outlog)
106          qualifier generic
107          qualifier log
108
109  define syntax merge_queue
110          image queman
111
112  define type tran_attr
```

```
113          keyword concealed
114          keyword terminal
115
116   define type name_attr
117          keyword confine
118          keyword no_alias
119
120   define verb assign
121          cliroutine assign
122          parameter p1,prompt="Device",value(required,type=$infile,list)
123          parameter p2,prompt="Log name",value(required,type=$outlog)
124          qualifier system                              ! Must be #1.
125          qualifier group                               ! Must be #2.
126          qualifier job                                 ! Must be #3.
127          qualifier process                             ! Must be #4.
128          qualifier user_mode                           ! Must be #5.
129          qualifier supervisor_mode                     ! Must be #6.
130          qualifier executive_mode                      ! Must be #7.
131          qualifier table,value(required)               ! Must be #8.
132          qualifier log                                 ! Must be #9.
133          qualifier name_attributes,                    ! Must be #10.
134                value(type=name_attr,list)
135          qualifier translation_attributes,        ! Must be #11.
136                placement=positional,
137                value(type=tran_attr,list)
138          qualifier queue,syntax=merge_queue
139          qualifier merge,syntax=merge_queue
140
141   define verb cancel
142          cliroutine cancel
143          parameter p1,label=p1,prompt="File",value(type=$process)
144          qualifier identification,value(required)
145
146   define verb close
147          prefix cli$k_clos_
148          cliroutine close
149          parameter p1,prompt="Log name",value(required,type=$inlog)
150          qualifier end_of_file,  value(required) ! /EOf and /ERROR must be
151          qualifier error,        value(required) ! first for all file commands.
152          qualifier log
153
154   define verb connect
155          prefix cli$k_conn
156          cliroutine connect
157          parameter p1,prompt="Terminal name",value(required,type=$device)
158          qualifier continue
159          qualifier logout
160          disallow (continue and logout)
161
162   define verb continue
163          synonym c
164          cliroutine continue
165          cliflags(abbreviate,nostatus)
166
167   define syntax deallocate_all_devices
168          noparameters
```

```
169
170     define verb deallocate
171         cliroutine deallocat
172         parameter p1,prompt="Device",value(required,type=$device)
173         qualifier all,syntax=deallocate_all_devices
174
175     define syntax deassign_all_names
176         noparameters
177
178     define syntax deassign_queue
179         image queman
180
181     define verb deassign
182         cliroutine deassign
183         parameter p1,prompt="Log name",value(required,type=$inlog)
184         qualifier system                                  ! Must be #1.
185         qualifier group                                   ! Must be #2.
186         qualifier job                                     ! Must be #3.
187         qualifier process                                 ! Must be #4.
188         qualifier user_mode                               ! Must be #5.
189         qualifier supervisor_mode                         ! Must be #6.
190         qualifier executive_mode                          ! Must be #7.
191         qualifier table,value(required)                   ! Must be #8.
192         qualifier all,syntax=deassign_all_names           ! Must be #9.
193         qualifier queue,syntax=deassign_queue
194
195     define verb debug
196         cliroutine debug
197
198     define verb deck
199         cliroutine deck
200         cliflags(nostatus)
201         qualifier dollars,        value
202
203     define syntax define_characteristic
204         image queman
205         parameter p1,prompt="Char name",value(required)
206         parameter p2,prompt="Char number",value(required)
207
208     define type form_margin
209         keyword bottom,         value(required)
210         keyword left,           value(required)
211         keyword right,          value(required)
212         keyword top,            value(required)
213
214     define syntax define_form
215         image queman
216         parameter p1,prompt="Form name",value(required)
217         parameter p2,prompt="Form number",value(required)
218         qualifier characteristic
219         qualifier description,  nonnegatable,value(required)
220         qualifier length,       nonnegatable,value(required)
221         qualifier margin,       nonnegatable,value(required,list,type=form_margin)
222         qualifier page_setup,   value(required,list)
223         qualifier setup,        value(required,list)
224         qualifier sheet_feed
```

```
225          qualifier stock,          nonnegatable,value(required)
226          qualifier truncate
227          qualifier width,          nonnegatable,value(required)
228          qualifier wrap
229
230   define syntax define_key
231          prefix cli$k_defk_
232          cliroutine defkey
233          parameter p1,prompt="Key name",value(required)
234          parameter p2,prompt="Equivalence name",value(required)
235          qualifier echo
236          qualifier terminate
237          qualifier lock_state
238          qualifier if_state,value(required,list)
239          qualifier set_state,value(required)
240          qualifier log
241          qualifier erase
242          disallow (not lock_state and terminate and set_state)
243          disallow (lock_state and not set_state)
244
245   define verb define
246          cliroutine define
247          prefix cli$k_defi_
248          parameter p1,prompt="Log name",value(required,type=$outlog)
249          parameter p2,prompt="Equ name",value(required,type=$infile,list)
250          qualifier system                           ! Must be #1.
251          qualifier group                            ! Must be #2.
252          qualifier job                              ! Must be #3.
253          qualifier process                          ! Must be #4.
254          qualifier user_mode                        ! Must be #5.
255          qualifier supervisor_mode                  ! Must be #6.
256          qualifier executive_mode                   ! Must be #7.
257          qualifier table,value(required)            ! Must be #8.
258          qualifier log                              ! Must be #9.
259          qualifier name_attributes,                 ! Must be #10.
260               value(type=name_attr,list)
261          qualifier translation_attributes,          ! Must be #11.
262               placement=positional,
263               value(type=tran_attr,list)
264          qualifier key,syntax=define_key
265          qualifier characteristic,syntax=define_characteristic
266          qualifier form,syntax=define_form
267
268   ! DEPOSIT uses the same qualifiers as EXAMINE, and they must appear in the
269   ! same order.
270
271   define verb deposit
272          cliroutine deposit
273          cliflags(immediate,nostatus)
274          qualifier ascii,nonnegatable
275          qualifier byte,nonnegatable
276          qualifier decimal,nonnegatable
277          qualifier hexadecimal,nonnegatable
278          qualifier long,nonnegatable
279          qualifier octal,nonnegatable
280          qualifier word,nonnegatable
```

```
281
282     define verb disconnect
283             cliroutine disconnect
284             qualifier continue
285
286     define verb dsm
287             image   dsm
288             cliflags(foreign)
289
290     define verb eod
291             cliroutine eod
292             cliflags(immediate,nostatus)
293
294     define verb eoj
295             cliroutine eoj
296
297     define verb examine
298             cliroutine examine
299             prefix cli$k_exam_
300             cliflags(immediate,nostatus)
301             qualifier ascii,nonnegatable
302             qualifier byte,nonnegatable
303             qualifier decimal,nonnegatable
304             qualifier hexadecimal,nonnegatable
305             qualifier long,nonnegatable
306             qualifier octal,nonnegatable
307             qualifier word,nonnegatable
308
309     define verb exit
310             cliroutine exit
311             cliflags(immediate)
312
313     define verb goto
314             cliroutine goto
315             cliflags(nostatus)
316             parameter p1,prompt="Label",value(required)
317
318     define verb if
319             cliroutine if
320             cliflags(immediate,nostatus)
321
322     define verb inquire
323             cliroutine inquire
324             prefix cli$k_inqu_
325             cliflags(immediate)
326             qualifier        global,nonnegatable
327             qualifier        local,nonnegatable
328             qualifier        punctuation
329
330     define verb logout
331             cliroutine logout
332             qualifier brief
333             qualifier full
334             qualifier hangup
335
336     define verb mcr
```

```
337          cliroutine mcr
338          cliflags(foreign)
339
340   define verb on
341          cliroutine on
342          cliflags(immediate)
343
344   define type share_options
345          keyword read
346          keyword write
347
348   define verb open
349          cliroutine open
350          prefix cli$k_open_
351          parameter p1,prompt="Log name",value(required,type=$outlog)
352          parameter p2,prompt="File",value(required,type=$infile)
353          qualifier end_of_file,  value(required)  ! Make /EOF=1, /ERROR=2 for
354          qualifier error,        value(required)  ! all file commands
355          qualifier read
356          qualifier write
357          qualifier share,        value(type=share_options)
358          qualifier append
359          disallow (write and append)
360
361   define type match_keys
362          keyword eq
363          keyword ge
364          keyword gt
365
366   define verb read
367          cliroutine read
368          prefix cli$k_read_
369          parameter p1,prompt="Log name",value(required,type=$inlog)
370          parameter p2,prompt="Symbol",value(required,type=$outfile)
371                          ! $outfile on p2 needed to preserve double quotes
372          qualifier end_of_file,  value(required) ! Make /EOF=1, /ERROR=2 for
373          qualifier error,        value(required) ! all file commands
374          qualifier key,          value(required,list)
375          qualifier index,        value(required)
376          qualifier delete
377          qualifier lock,         default
378          qualifier prompt,       value(required)
379          qualifier match,        value(required,type=match_keys)
380          qualifier time_out      value(required,type=$number)
381
382   define syntax recall_all_commands
383          cliroutine recall
384          noparameters
385
386   define verb recall
387          cliroutine recall
388          parameter p1,value(type=$rest_of_line)
389          qualifier all,syntax=recall_all_commands
390
391   define syntax stop_cpu
392          image mp
```

```
  393          noparameters
  394
  395   define syntax stop_queue
  396          image queman
  397          parameter p1,prompt="Queue",value(required)
  398
  399   define syntax stop_queue_manager
  400          image queman
  401          noparameters
  402
  403   define syntax write_symbol_out
  404          parameter p1,prompt="Log name",value(required,type=$inlog)
  405          parameter p2,prompt="Symbol",value(required,list,type=$quoted_string)
  406
  407
  408   define verb stop
  409          cliroutine stop
  410          cliflags(nostatus)
  411          parameter p1,prompt="Process",value(type=$process)
  412          qualifier manager,        nonnegatable,syntax=stop_queue_manager
  413          qualifier abort,          nonnegatable,syntax=stop_queue
  414          qualifier next,           nonnegatable,syntax=stop_queue
  415          qualifier identification,nonnegatable,value(required)
  416          qualifier requeue,        nonnegatable,value,syntax=stop_queue
  417          qualifier entry,          nonnegatable,value(required),syntax=stop_queue
  418          qualifier priority,       nonnegatable,value(required),syntax=stop_queue
  419          qualifier cpu,            nonnegatable,syntax=stop_cpu
  420          qualifier queue,          nonnegatable,syntax=stop_queue
  421          qualifier hold,           syntax=stop_queue
  422          qualifier reset,          nonnegatable,syntax=stop_queue
  423
  424   define verb wait
  425          cliroutine wait
  426          cliflags(immediate,nostatus)
  427
  428   define verb write
  429          cliroutine write
  430          prefix cli$k_writ_
  431          parameter p1,prompt="Log name",value(required,type=$inlog)
  432          parameter p2,prompt="Expression",value(required,list,type=$expression)
  433          qualifier end_of_file,  value(required) ! Make /EOF=1, /ERROR=2 for
  434          qualifier error,        value(required) ! all file commands
  435          qualifier update
  436          qualifier symbols,        nonnegatable,syntax=write_symbol_out
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

```
  1  !
  2  !  Version:    'V04-000'
  3  !
  4  !      V03-014 PCB0002          Peter George              13-Mar-1984
  5  !      Remove last vestiges of old command interface
  6  !      from DELETE command definition.  Add DEL/SYM/LOG.
  7  !
  8  !      V03-013 WMC0004          Wayne Cardoza             16-Jan-1984
  9  !      Remoce all CHKPNT stuff
 10  !
 11  !      V03-012 SHZ0004          Stephen H. Zalewski       10-Dec-1983
 12  !      Remove the /ON qualifier from DELETE and PURGE as it
 13  !      will not be implemented.
 14  !
 15  !      V03-011 WMC0003          Wayne Cardoza             31-Aug-1983
 16  !      CHECKPOINT should use BY_OWNER
 17  !
 18  !      V03-010 MLJ0010          Martin L. Jack            27-Mar-1983
 19  !      Add DELETE/FORM and DELETE/CHARACTERISTIC.
 20  !
 21  !      V03-009 PCG001           Peter George              28-Mar-1983
 22  !      Add DELETE/KEY.
 23  !
 24  !      V03-008 PCA1008          Paul C. Anagnostopoulos 25-Mar-1983
 25  !      Make all necessary changes for new CDU.
 26  !
 27  !      V03-007 SHZ003  Stephan H. Zalewski               12-Mar-1983
 28  !      Changed /BYOWNER to /BY_OWNER for DELETE and PURGE.
 29  !
 30  !      V03-006 PCA1008          Paul C. Anagnostopoulos 10 Feb 1983
 31  !      Change /UIC qualifiers to /BYOWNER.
 32  !
 33  !      V03-005 SHZ0002          Stephen H. Zalewski       21-Jan-1983
 34  !      Add /ON qualifier to DELETE and PURGE.
 35  !
 36  !      V03-004 WMC0002          Wayne Cardoza             19-Jan-1983
 37  !      Add /LOG to DEL/CHECKPOINT
 38  !
 39  !      V03-003 WMC0001          Wayne Cardoza             05-Jan-1983
 40  !      New DEL/CHECKPOINT qualifiers.
 41  !
 42  !      V03-002 SHZ0001          Stephen H. Zalewski       5-Dec-1982
 43  !      Add a bunch of new qualifiers for both DELETE and PURGE.
 44  !
 45  !      V03-001 MAJ0001          Melanie Johnson 07-Oct-1982
 46  !      Put mcrignore flag into cliflags construct.
 47  !
 48  define syntax delete_characteristic
 49      image queman
 50      parameter p1,prompt="Char name",value(required)
 51
 52  define syntax delete_form
 53      image queman
 54      parameter p1,prompt="Form name",value(required)
 55
 56  define syntax delete_entry_or_queue
```

```
57          image queman
58          parameter p1,prompt="Queue",value(required)
59
60  define syntax delete_all_symbols
61          noparameters
62
63  define syntax delete_symbol
64          cliroutine delsym
65          prefix cli$k_dlsy_
66          parameter p1,prompt="Symbol",value(required,type=$insym)
67          qualifier all,          syntax=delete_all_symbols
68          qualifier global
69          qualifier local
70          qualifier log
71
72  !**JNL** define syntax delete_checkpoint
73  !**JNL**         image chkcancmd
74  !**JNL**         parameter p1,prompt="File",value(required,list,impcat,type=$infile)
75  !**JNL**         qualifier log
76  !**JNL**         qualifier created
77  !**JNL**         qualifier modified
78  !**JNL**         qualifier confirm
79  !**JNL**         qualifier since,       value(default=today,type=$datetime)
80  !**JNL**         qualifier before,      value(default=today,type=$datetime)
81  !**JNL**         qualifier expired
82  !**JNL**         qualifier by_owner,    value(type=$uic)
83  !**JNL**         qualifier exclude,     value(required,list)
84
85  define syntax delete_all_keys
86          noparameters
87
88  define syntax delete_key
89          cliroutine delkey
90          prefix cli$k_delk_
91          parameter p1,prompt="Key name",value(required)
92          qualifier log
93          qualifier state,value(required,list)
94          qualifier all,syntax=delete_all_keys
95
96  define verb delete
97          image delete
98          parameter p1,prompt="File",value(required,list,impcat,type=$infile), label=input
99          qualifier backup
100         qualifier before,          value(default=today,type=$datetime)
101 !**JNL**         qualifier checkpoint,   syntax=delete_checkpoint
102         qualifier confirm
103         qualifier created
104         qualifier entry,           value(required,list),syntax=delete_entry_or_queue
105         qualifier erase
106         qualifier exclude,         value(required,list)
107         qualifier expired
108         qualifier log
109         qualifier modified
110         qualifier queue,           cliflags(mcrignore),syntax=delete_entry_or_queue
111         qualifier since,           value(default=today,type=$datetime)
112         qualifier symbol,          cliflags(mcrignore),syntax=delete_symbol
```

```
113         qualifier by_owner,      value(type=$uic)
114         qualifier key,           cliflags(mcrignore),syntax=delete_key
115         qualifier characteristic,syntax=delete_characteristic
116         qualifier form,          syntax=delete_form
117
118   define verb purge
119         image delete
120         parameter p1,prompt="File",value(list,impcat,type=$infile,default="*.*"), label=input
121         qualifier backup
122         qualifier before,        value(default=today,type=$datetime)
123         qualifier confirm
124         qualifier created
125         qualifier erase
126         qualifier exclude,       value(required,list)
127         qualifier expired
128         qualifier keep,          value(required)
129         qualifier log
130         qualifier modified
131         qualifier since,         value(default=today,type=$datetime)
132         qualifier by_owner,      value(type=$uic)
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

```
  1    MODULE dif_command
  2  !
  3  !  Version:    'V04-000'
  4  !
  5  !      V03-001 PCG0001          Peter George              30-Mar-1983
  6  !              Use CLI keyword parsing.
  7  !
  8
  9    define type ignore_keywords
 10          keyword blank_lines
 11          keyword comments
 12          keyword form_feeds
 13          keyword header,value(default=2,type=$number)
 14          keyword trailing_spaces
 15          keyword spacing
 16          keyword edited,default
 17          keyword exact
 18          keyword pretty
 19
 20    define type mode_keywords
 21          keyword ascii,default
 22          keyword hexadecimal
 23          keyword octal
 24
 25    define type separated_keywords
 26          keyword master,default
 27          keyword revision,default
 28
 29    define verb differences
 30          image diff
 31          parameter p1,prompt="File 1",value(required,list,impcat,type=$infile),label=input1
 32          parameter p2,prompt="File 2",value(type=$infile),label=input2
 33          qualifier change_bar,    placement=local,value(list)
 34          qualifier comment_delimiters,value(list)
 35          qualifier ignore,        default,value(list,type=ignore_keywords)
 36          qualifier line_width,    value(required,type=$number)
 37          qualifier match,         value(required,type=$number)
 38          qualifier maximum_differences,value(required,type=$number)
 39          qualifier merged,        value(type=$number)
 40          qualifier mode,          default,value(list,type=mode_keywords)
 41          qualifier output,        value(type=$outfile)
 42          qualifier parallel,      value(type=$number)
 43          qualifier separated,     value(list,type=separated_keywords)
 44          qualifier slp
 45          qualifier width,         value(required,type=$number)
 46          qualifier window,        value(required,type=$number)
 47          qualifier number,        default
 48
 49          disallow (slp AND (merged OR parallel OR separated OR change_bar OR
 50                         hexadecimal OR octal OR line_width OR width OR
 51                         pretty OR edited OR number))
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

```
  1  ! DIRECTORY.CLD
  2  !
  3  ! Version:    'V04-000'
  4  !
  5  ! Modification history:
  6  !
  7  !    V03-002  LMP0276          L. Mark Pilant,          11-Jul-1984  11:43
  8  !             Make applicable qualifiers negatable.  Also, remove
  9  !             the default value for the /OUTPUT qualifier as it is
 10  !             defaulted in the DIRECTORY image.
 11  !
 12  !    V03-001  MCN0173          Maria del C. Nasr        25-Jun-1984
 13  !             Make the /OUTPUT qualifier default to SYS$OUTPUT, and
 14  !             negatable.
 15  !
 16  define type date_options
 17        keyword all,               nonnegatable
 18        keyword created,           default,nonnegatable
 19        keyword expired,           nonnegatable
 20        keyword modified,          nonnegatable
 21        keyword backup,            nonnegatable
 22
 23  define type size_options
 24        keyword all,               nonnegatable
 25        keyword allocation,        nonnegatable
 26        keyword used,              default,nonnegatable
 27
 28  define type width_options
 29        keyword display,           default,value(default=0),nonnegatable
 30        keyword filename,          default,value(default=19),nonnegatable
 31        keyword owner,             default,value(default=20),nonnegatable
 32        keyword size,              default,value(default=6),nonnegatable
 33
 34  define type sel_size_options
 35        keyword minimum_size,      default,value(default=0),nonnegatable
 36        keyword maximum_size,      default,value(default=1073741823),nonnegatable
 37
 38  define type select_options
 39        keyword size,              default,value(list,type=sel_size_options),nonnegatable
 40        keyword acl,               nonnegatable
 41
 42  define type owner_options
 43        keyword identifier
 44
 45  define verb directory
 46        image directory
 47        parameter p1,prompt="File",value(list,impcat,type=$infile),label=INPUT
 48        qualifier acl
 49        qualifier backup
 50        qualifier before,          value(default=TODAY,type=$datetime)
 51        qualifier brief,           default,nonnegatable
 52        qualifier by_owner,        value(type=$uic)
 53        qualifier columns,         default,value(default=4)
 54        qualifier created
 55        qualifier date,            value(list,type=date_options)
 56        qualifier exclude,         value(required,list)
```

```
57        qualifier expired
58        qualifier file_id
59        qualifier full
60        qualifier grand_total
61        qualifier heading,        default
62        qualifier modified
63        qualifier output,         default,value(type=$file)
64        qualifier owner,          value(type=owner_options)
65        qualifier printer
66        qualifier protection
67        qualifier security
68        qualifier select,         value(required,list,type=select_options)
69        qualifier since,          value(default=TODAY,type=$datetime)
70        qualifier size,           value(list,type=size_options)
71        qualifier total
72        qualifier trailing,       default
73        qualifier versions,       value(required)
74        qualifier width,          default,value(list,type=width_options)
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

```
 1  !
 2  !  Version:      'V04-000'
 3  !
 4  !     V03-004 HH0004              Hai Huang                 28-Feb-1984
 5  !             Add DISMOUNT CLUSTER qualifier.
 6  !
 7  !     V03-003 HH0003              Hai Huang                 16-Feb-1983
 8  !             Add DISMOUNT ABORT qualifier.
 9  !
10  !     V03-002 MCN0135             Maria del C. Nasr         31-Oct-1983
11  !             Eliminate prefix clause, since it is not needed with
12  !             the new CLI interface.
13  !
14  !     V03-001 PCA1008             Paul C. Anagnostopoulos 10 Feb 1983
15  !             Remove the MCR DMO verb name, because the DMO command has
16  !             become a separate CLD.
17  !             Add a comment about the equivalent CLD for MCR.
18  !
19  ! Don't forget the DMO.CLD file.  It contains an equivalent set of
20  ! definitions for MCR which must also be enhanced.
21  !
22  define verb dismount
23          image dismount
24          parameter p1,prompt="Device",value(required,type=$device),label=device
25          qualifier unload,default
26          qualifier unit
27          qualifier abort
28          qualifier cluster
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

```
 1  !
 2  !  Version:      'V04-000'
 3  !
 4  !     SHZ0001 Stephen H. Zalewski              12-Apr-1984
 5  !             Move all checks for conflicting qualifiers from DUMP image
 6  !             to the CLD.
 7  !
 8  define type dump_blocks
 9          keyword start,            value(type=$number)
10          keyword end,              value(type=$number)
11          keyword count,            value(type=$number)
12
13  define verb dump
14          parameter p1,prompt="File",value(required,type=$infile),label=input
15          qualifier allocated
16          qualifier ascii
17          qualifier blocks,        value(list,type=dump_blocks)
18          qualifier byte
19          qualifier decimal
20          qualifier file_header
21          qualifier formatted,     default
22          qualifier header
23          qualifier hexadecimal
24          qualifier longword
25          qualifier number,        value(type=$number)
26          qualifier octal
27          qualifier output,        value(type=$outfile)
28          qualifier printer
29          qualifier records,       value(list,type=dump_blocks)
30          qualifier word
31
32          disallow  any2(octal,decimal,hexadecimal)
33          disallow  any2(byte,word,longword)
34          disallow  records and blocks
35          disallow  printer and output
36          disallow  records and allocated
37          disallow  blocks.end and blocks.count
38          disallow  records.end and records.count
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

```
 1  !
 2  ! Version:    'V04-000'
 3  !
 4  !     V03-012 PCB0002        Peter George         13-Mar-1984
 5  !             Remove last vestiges of old command inteface.
 6  !
 7  !     V03-011 RRB0012        Rowland R. Bradley    04-Jan-1984
 8  !             Disallow /NOINTERACTIVE with /DISPLAY, /CREATE, /RESP,
 9  !             /SCRIPT, /NUMBER_KEYS and/or /PROMPTING.
10  !
11  !     V03-010 LMP0185        L. Mark Pilant,      31-Jan-1984  11:31
12  !             Add support for the EDIT/ACL/OBJECT=type command.
13  !
14  !     V03-009 DLB0001        David Ballenger      29-Jul-1983
15  !             Add separate syntax definition for EDIT/SLP and comment
16  !             out qualifiers, etc. for EDIT/SOS.  The EDIT/SOS definitions
17  !             can be "permanently" removed at a later date.
18  !
19  !     V03-008 MHB0096        Mark Bramhall        28-Jul-1983
20  !             Add EDIT/TECO.
21  !
22  !     V03-007 PCG0001        Peter George         27-Jul-1983
23  !             Add EDIT/DPE.
24  !
25  !     V03-006 LMP0107        L. Mark Pilant,      28-Apr-1983  9:14
26  !             Set the correct default for the /MODE qualifier
27  !
28  !     V03-005 KFH0002        Ken Henderson        26 Apr 1983
29  !             Add /SCRIPT keywords to EDIT/FDL:
30  !             add_key, delete_key, redesign => touchup
31  !
32  !     V03-004 KFH0001        Ken Henderson        14 Apr 1983
33  !             Add qualifiers to EDIT/FDL:
34  !             /DISPLAY/EMPHASIS/GRANULARITY
35  !             /RESPONSES/INTERACTIVE/CREATE
36  !             /NUMBER_KEYS
37  !
38  !     V03-003 PCA1008        Paul C. Anagnostopoulos 25-Feb-1983
39  !             Replace the ZZZZ qualifiers with something more reasonable,
40  !             since the new CDU requires unique names.
41  !
42  !     V03-002 PCA1008        Paul C. Anagnostopoulos 11 Feb 1983
43  !             Add a comment about the equivalent CLD for MCR.
44  !
45  !     V03-001 LMP0072        L. Mark Pilant,      19-Jan-1983  22:10
46  !             Incorporate the ACL editor into the build.  It is invoked
47  !             with the EDIT/ACL DCL command.
48  !
49  ! Don't forget the EDT.CLD file.  It contains an equivalent set of
50  ! definitions for MCR which must also be enhanced, but only for EDT.
51
52  define type keep_file
53          keyword recovery
54          keyword journal
55
56  define type mode_types
```

```
 57          keyword prompt              default,negatable
 58
 59   define type acl_objects
 60          keyword file
 61          keyword device
 62          keyword queue
 63          keyword event_cluster
 64          keyword logical_name_table
 65          keyword process
 66          keyword global_section
 67
 68   define syntax acledit
 69          image acledt
 70          parameter p1,prompt="Object Name",value(required,type=$infile),label=input
 71          qualifier journal,      default,value(type=$infile)
 72          qualifier recover,      value(type=$infile)
 73          qualifier keep,         value(list,type=keep_file)
 74          qualifier mode,         default,value(type=mode_types)
 75          qualifier object_type,  value(type=acl_objects)
 76
 77   define syntax teco_mung
 78          parameter p1            !!!, value(type=$rest_of_line)
 79
 80   define syntax edit_using_teco
 81          image teco
 82          qualifier command,      default,value(type=$infile)
 83          qualifier create,       default
 84          qualifier memory,       default
 85          qualifier execute,      value(required,type=$infile),syntax=teco_mung
 86          parameter p1,           value(type=$infile)
 87          qualifier output,       value(required,type=$outfile)
 88          qualifier read_only
 89
 90   define syntax edit_using_dpe
 91          image dpe
 92          parameter p1,           label=input,prompt="File",
 93                                  value(required,type=$infile)
 94          qualifier command,      default,value(type=$infile)
 95          qualifier context,      default,value(type=$infile)
 96          qualifier journal,      default,value(type=$infile)
 97          qualifier output,       default,value(type=$outfile)
 98          qualifier read_only
 99          qualifier recover
100
101   define type script_options
102          keyword add_key
103          keyword delete_key
104          keyword indexed
105          keyword optimize
106          keyword relative
107          keyword sequential
108          keyword touchup
109
110   define type prpt_options
111          keyword brief
112          keyword full
```

```
113
114     define type disp_options
115             keyword line
116             keyword fill
117             keyword add
118             keyword init
119             keyword record
120             keyword key
121
122     define type emph_options
123             keyword flatter
124             keyword smaller
125
126     define type gran_options
127             keyword one
128             keyword two
129             keyword three
130             keyword four
131             keyword double
132             keyword 1
133             keyword 2
134             keyword 3
135             keyword 4
136
137     define type resp_options
138             keyword automatic
139             keyword manual
140
141     define syntax edf
142             image edf
143             parameter p1,label=p1,prompt="File",value(required,type=$infile)
144             qualifier output,        value(required,type=$outfile)
145             qualifier analysis,      value(required,type=$infile)
146             qualifier interactive,   default
147             qualifier emphasis,      value(required,type=emph_options)
148             qualifier granularity,   value(required,type=gran_options)
149             qualifier create
150             qualifier number_keys,   value(required)
151             qualifier display,       value(required,type=disp_options)
152             qualifier responses,     value(required,type=resp_options)
153             qualifier script,        value(required,type=script_options)
154             qualifier prompting,     value(required,type=prpt_options)
155             disallow        (neg interactive) and (create or number_keys or
156                             display or responses or script or prompting)
157
158
159
160     !SOS define syntax edit_using_sos
161     !SOS   image backtrans
162
163     define type slp_audit_options
164             keyword position,        value(type=$number,default=80), default
165             keyword size,            value(type=$number,default=8),  default
166
167     define syntax edit_using_slp
168             image backtrans
```

```
169         parameter p1,              prompt="File",
170                                    value(required,type=$infile),label=input
171         qualifier audit_trail,     value(list,type=slp_audit_options)
172         qualifier checksum,        value(type=$number)
173         qualifier listing,         value(type=$outfile)
174         qualifier output,          value(type=$outfile),default
175         qualifier report
176         qualifier truncate,        value(type=$number)
177         qualifier tab
178
179  define syntax sumslp
180         image sumslp
181
182  define verb edit
183         image edt
184         parameter p1,prompt="File",value(required,type=$infile),label=input
185  !SOS   qualifier decide
186  !SOS   qualifier exact
187  !SOS   qualifier expert
188  !SOS   qualifier increment,       value
189  !SOS   qualifier isave,           value
190  !SOS   qualifier line
191         qualifier listing,         value(type=$outfile)
192  !SOS   qualifier lower
193         qualifier output,          value(type=$outfile)
194  !SOS   qualifier pline,           value
195         qualifier read_only
196  !SOS   qualifier save,            value
197         qualifier slp,             syntax=edit_using_slp
198  !SOS   qualifier sos,             syntax=edit_using_sos
199  !SOS   qualifier start,           value
200  !SOS   qualifier step,            value
201         qualifier header
202         qualifier sum,             syntax=sumslp
203         qualifier update,          value(list),placement=local
204         qualifier edt
205         qualifier command,         default,value(type=$infile)
206         qualifier recover
207         qualifier journal,         default,value(type=$infile)
208         qualifier $1_filler,       label=dmy1
209         qualifier $2_filler,       label=dmy2
210  !SOS   qualifier bak,             default
211  !SOS   qualifier num,             default
212         qualifier fdl,             syntax=edf
213         qualifier create,          default
214         qualifier acl,             syntax=acledit
215         qualifier dpe,             syntax=edit_using_dpe
216         qualifier teco,            syntax=edit_using_teco
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

```
 1  !       Title encrypt.cld Command Definition for ENCRYPT/DECRYPT
 2  !       Version 'v04-000'
 3  !
 4  !
 5  ! Modified by:
 6  !
 7  !   V01-002 MSH0073        Michael S. Harvey        15-Aug-1984
 8  !           Add support for /JOB qualifier.
 9  !
10  !   V01-001 JEP0004        J. Eric Pollack          12-Aug-1983
11  !           Revise syntax. Remove /supermode...
12  !
13  !
14  !
15  !
16  ! Command definition for the VAX/VMS ENCRYPTION Facility
17  !
18  !
19  ! define the type for the /ALGORITHM= list
20  !
21  !
22  DEFINE TYPE algorithm_option
23          KEYWORD DES,
24          KEYWORD DESECB,
25          KEYWORD DESCBC,default
26          KEYWORD DESCFB,
27          KEYWORD DESDAC,
28          KEYWORD RSA,
29          KEYWORD ALC,
30          KEYWORD VPA,
31          KEYWORD NUL
32  !
33  ! Define the syntax of the facility command to define encryption keys
34  !
35  define syntax create_encrypt_key
36          qualifier CREATE_KEY,default
37          parameter p1,prompt="Key Name",value(required,type=$inlog)
38          parameter p2,prompt="Key Value",value(required,type=$outlog)
39          qualifier compress
40          qualifier group
41          qualifier hexadecimal,negatable,value(default=NOHEXADECIMAL)
42  :3      qualifier hexadecimal,value(default=NOHEXADECIMAL)
43          qualifier log
44          qualifier parity
45          qualifier process,default
46          qualifier system
47          qualifier job
48          disallow any2(system,group,process,job)
49          disallow hexadecimal and compress
50          disallow hexadecimal and parity
51  !
52  ! Define the syntax of the facility command to delete encryption keys
53  !
54  define syntax eliminate_encrypt_key
55          qualifier REMOVE_KEY,default
56  :3          qualifier CREATE_KEY,negatable,value(default="NOCREATE_KEY")
```

```
 57          qualifier CREATE_KEY,value(default="NOCREATE_KEY")
 58          parameter p1,prompt="Key Name",value(required,type=$inlog)
 59          qualifier system
 60          qualifier group
 61          qualifier job
 62          qualifier process,default
 63          qualifier log
 64          disallow any2(system,group,process,job)
 65    !
 66    ! Define the syntax of the facility command to test the encryption interfaces
 67    !
 68    DEFINE SYNTAX syntax_test
 69          QUALIFIER TEST_FACILITY,default
 70    !3            qualifier CREATE_KEY,negatable,value(default="NOCREATE_KEY")
 71    !3            qualifier REMOVE_KEY,negatable,value(default="NOREMOVE_KEY")
 72          qualifier CREATE_KEY,value(default="NOCREATE_KEY")
 73          qualifier REMOVE_KEY,value(default="NOREMOVE_KEY")
 74          QUALIFIER algorithm, VALUE(LIST,
 75                        TYPE=algorithm_option)
 76          QUALIFIER input,  DEFAULT, VALUE(DEFAULT="SYS$INPUT",TYPE=$INFILE)
 77          QUALIFIER log
 78          QUALIFIER output, DEFAULT, VALUE(DEFAULT="SYS$OUTPUT",TYPE=$OUTFILE)
 79          QUALIFIER select, VALUE(LIST,DEFAULT="QUICK")
 80          NOPARAMETERS
 81    !
 82    ! Define the root commands
 83    !
 84    DEFINE VERB ENCRYPT
 85          IMAGE encrypfac
 86          QUALIFIER CREATE_KEY,SYNTAX = create_encrypt_key
 87          QUALIFIER REMOVE_KEY,SYNTAX = eliminate_encrypt_key
 88          QUALIFIER TEST_FACILITY,SYNTAX = syntax_test
 89          QUALIFIER log
 90          PARAMETER P1,
 91                LABEL=INPUT,
 92                PROMPT="Input File(s)",
 93                VALUE(REQUIRED,LIST)
 94          PARAMETER P2,
 95                LABEL=KEY,
 96                PROMPT="Key Name",
 97                VALUE(REQUIRED,TYPE=$INLOG)
 98          QUALIFIER algorithm,
 99                VALUE(LIST,TYPE=algorithm_option)
100          QUALIFIER delete
101          QUALIFIER erase
102          QUALIFIER output,
103                DEFAULT,
104                VALUE(TYPE=$OUTFILE)
105          QUALIFIER statistics
106          qualifier confirm
107          qualifier exclude,value(list)
108          qualifier before,value(default=today)
109          qualifier since,value(default=today)
110          qualifier by_owner,value(type=$uic)
111
112    DEFINE VERB DECRYPT
```

```
113              IMAGE encrypfac
114              PARAMETER P1,
115                      LABEL=INPUT,
116                      PROMPT="Input File(s)",
117                      VALUE(REQUIRED,LIST)
118              PARAMETER P2,
119                      LABEL=KEY,
120                      PROMPT="Key Name",
121                      VALUE(REQUIRED,TYPE=$INLOG)
122              QUALIFIER algorithm,
123                      VALUE(LIST,TYPE=algorithm_option)
124              QUALIFIER delete
125              QUALIFIER erase
126              QUALIFIER log
127              QUALIFIER output,
128                      DEFAULT,
129                      VALUE(TYPE=$OUTFILE)
130              QUALIFIER statistics
131              qualifier confirm
132              qualifier exclude,value(list)
133              qualifier before,value(default=today)
134              qualifier since,value(default=today)
135              qualifier by_owner,value(type=$uic)
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

1 7

16-SEP-1984 04:00   VAX/VMS Command Definition Utility (V4-001)   Page 1
15-SEP-1984 22:43   _255DUA28:[CLD.SRC]EXCHANGE.CLD;1 (1)

```
 1    MODULE exchange
 2
 3    !
 4    !   Version:    'V04-000'
 5    !
 6    !*********************************************************************
 7    !*                                                                   *
 8    !*   COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                         *
 9    !*   DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.          *
10    !*   ALL RIGHTS RESERVED.                                           *
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25    !*                                                                   *
26    !*                                                                   *
27    !*********************************************************************
28
29
30    DEFINE VERB  exchange
31
32        IMAGE  exchange
33
34        PARAMETER P1, LABEL=command, VALUE(TYPE=$REST_OF_LINE)
35
36        QUALIFIER        cache
37        QUALIFIER        message DEFAULT
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

```
 1  !
 2  !   Version:     'V04-000'
 3  !
 4  !       V03-002 MCN0173        Maria del C. Nasr        25-Jun-1984
 5  !               Make /OUTPUT qualifier default to SYS$OUTPUT
 6  !
 7  !       V03-001 PCG0001        Peter George             11-Apr-1984
 8  !               Add DISALLOW statements.
 9  !
10
11  DEFINE TYPE scope_keywords
12          KEYWORD          ALL,default
13          KEYWORD          NONE
14          KEYWORD          PROCESS
15          KEYWORD          GROUP
16          KEYWORD          SYSTEM
17
18  DEFINE VERB HELP
19          IMAGE VMSHELP
20          PARAMETER        P1,label=keywords,
21                           value(type=$rest_of_line)
22          QUALIFIER        PROMPT,default
23          QUALIFIER        PAGE,default
24          QUALIFIER        INSTRUCTIONS,default
25          QUALIFIER        OUTPUT,default
26                           value(type=$file,default="SYS$OUTPUT")
27          QUALIFIER        LIBRARY,default,
28                           value(type=$infile,default="HELPLIB")
29          QUALIFIER        LIBLIST,default
30          QUALIFIER        USERLIBRARY,default,negatable,
31                           value(type=scope_keywords,list)
32          DISALLOW         (ALL and NONE)
33          DISALLOW         (ALL or NONE) and (PROCESS or GROUP or SYSTEM)
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

```
 1  !
 2  !   Version:     'V04-000'
 3  !
 4  !       V03-016 JAK0227         J A Krycka              17-Aug-1984
 5  !               Disallow certain printer queue specific qualifiers to be used
 6  !               with /BATCH and /GENERIC.
 7  !
 8  !       V03-015 JAK0226         J A Krycka              16-Aug-1984
 9  !               Omit "list" as an attribute for the /OWNER_UIC qualifier.
10  !
11  !       V03-014 JAK0220         J A Krycka              12-Jul-1984
12  !               Add [NO]FEED option to the /DEFAULT qualifier.
13  !
14  !       V03-013 MCN0174         Maria del C. Nasr       09-Jul-1984
15  !               Make qualifiers negatable to follow the standard rule.
16  !
17  !       V03-012 PCG0001         Peter George            20-Feb-1984
18  !               Modify behavior of INIT/QUEUE/BLOCK.
19  !
20  !       V03-011 MCN0144         Maria del C. Nasr       19-Jan-1984
21  !               Fix image name for INITIALIZE.
22  !
23  !       V03-010 MCN0140         Maria del C. Nasr       23-Nov-1983
24  !               Change to new CLI interface for INIT image.
25  !
26  !       V03-009 MLJ0009         Martin L. Jack  29-Jul-1983
27  !               Add /LIBRARY and /SCHEDULE.
28  !
29  !       V03-008 MAJ0002         Melanie Johnson 22-Jun-1983
30  !               Put mcrignore flag on the init/queue qualifiers.
31  !
32  !       V03-007 MLJ0007         Martin L. Jack  27-May-1983
33  !               Changes for new QUEMAN image.
34  !
35  !       V03-006 MLJ0006         Martin L. Jack  27-Apr-1983
36  !               Changes for new QUEMAN image.
37  !
38  !       V03-005 STJ3087         Steven Jeffreys 24-Apr-1983
39  !               Added /[NO]ERASE and /[NO]HIGHWATER.
40  !
41  !       V03-004 MMD0076         Meg Dumont      08-Apr-1983
42  !               Added support for new qualifiers on /LABEL and /OVERRIDE and
43  !               added the /INTERCHANGE qualifier
44  !
45  !       V03-003 MLJ0002         Martin L. Jack  03-Jan-1982
46  !               Changes for new QUEMAN image.
47  !
48  !       V03-001 MAJ0001         Melanie Johnson 07-Oct-1982
49  !               Put mcrignore flag into cliflags construct.
50  !
51  define type print_bft
52          keyword all,default
53          keyword one
54
55  define type defaults
56          keyword burst,negatable,value(type=print_bft)
```

L 7

16-SEP-1984 04:00   VAX/VMS Command Definition Utility (V4-001)   Page 2
15-SEP-1984 22:43   _255DUA28:[CLD.SRC]INIT.CLD;1 (1)

```
 57            keyword feed,negatable
 58            keyword flag,negatable,value(type=print_bft)
 59            keyword trailer,negatable,value(type=print_bft)
 60
 61    define type retain
 62            keyword all,default
 63            keyword error
 64
 65    define type schedule
 66            keyword size,negatable
 67
 68    define type separate
 69            keyword burst,negatable
 70            keyword flag,negatable
 71            keyword reset,negatable,value(required,list)
 72            keyword trailer,negatable
 73
 74    define type protection
 75            keyword system,value
 76            keyword group,value
 77            keyword owner,value
 78            keyword world,value
 79
 80    define type init_overrides
 81            keyword expiration
 82            keyword accessibility
 83            keyword owner_identifier
 84
 85    define type datacheck_options
 86            keyword read
 87            keyword write
 88
 89    define type index_position
 90            keyword beginning
 91            keyword middle
 92            keyword end
 93            keyword block,value(required)
 94
 95    define type ansi
 96            keyword volume_accessibility,value(required)
 97            keyword owner_identifier,value(required,type=$infile)
 98
 99    define syntax init_queue
100            image queman
101            parameter p1,prompt="Queue",value(required)
102
103    define verb initialize
104            image init
105            parameter p1,prompt="Device",value(required,type=$device),label=device
106            parameter p2,prompt="Label",value(required),label=volume
107            qualifier accessed,     value(required,type=$number)
108            qualifier badblocks,    value(required,list)
109            qualifier base_priority,value(required),cliflags(mcrignore),syntax=init_queue
110            qualifier batch,        cliflags(mcrignore),syntax=init_queue
111            qualifier block_limit,  value(list),cliflags(mcrignore),syntax=init_queue
112            qualifier characteristics,cliflags(mcrignore),syntax=init_queue,value(required,list)
```

```
113          qualifier cluster_size, value(required,type=$number)
114          qualifier cpudefault,   value(required),cliflags(mcrignore),syntax=init_queue
115          qualifier cpumaximum,   value(required),cliflags(mcrignore),syntax=init_queue
116          qualifier data_check,   value(list,type=datacheck_options)
117          qualifier default,      value(required,list,type=defaults),cliflags(mcrignore),syntax=init_queue
118          qualifier density,      value(required)
119          qualifier directories,  value(required,type=$number)
120          qualifier disable_swapping,cliflags(mcrignore),syntax=init_queue
121          qualifier enable_generic,cliflags(mcrignore),syntax=init_queue
122          qualifier erase
123          qualifier extension,    value(required,type=$number)
124          qualifier file_protection,value(required,list,type=protection)
125          qualifier form,         value(required),cliflags(mcrignore),syntax=init_queue
126          qualifier generic,      value(list),cliflags(mcrignore),syntax=init_queue
127          qualifier group
128          qualifier headers,      value(required,type=$number)
129          qualifier highwater,    default
130          qualifier index,        value(required,type=index_position)
131          qualifier interchange
132          qualifier job_limit,    value(required),cliflags(mcrignore),syntax=init_queue
133          qualifier label,        value(required,list,type=ansi)
134          qualifier library,      value(required),cliflags(mcrignore),syntax=init_queue
135          qualifier maximum_files,value(required,type=$number)
136          qualifier on,           value(type=$infile,required),cliflags(mcrignore),syntax=init_queue
137          qualifier override,     value(required,list,type=init_overrides)
138          qualifier owner_uic,    value(required,type=$uic)
139          qualifier processor,    value(required),cliflags(mcrignore),syntax=init_queue
140          qualifier protection,   value(required,list,type=protection)
141          qualifier queue,        cliflags(mcrignore),syntax=init_queue
142          qualifier retain,       value(type=retain),cliflags(mcrignore),syntax=init_queue
143          qualifier schedule,     value(required,list,type=schedule),cliflags(mcrignore),syntax=init_queue
144          qualifier separate,     value(required,list,type=separate),cliflags(mcrignore),syntax=init_queue
145          qualifier share,        default
146          qualifier start,        cliflags(mcrignore),syntax=init_queue
147          qualifier structure,    value(required,type=$number)
148          qualifier system
149          qualifier terminal,     cliflags(mcrignore),syntax=init_queue
150          qualifier user_name,    value(required)
151          qualifier verified,     default
152          qualifier windows,      value(required,type=$number)
153          qualifier wsdefault,    value(required),cliflags(mcrignore),syntax=init_queue
154          qualifier wsextent,     value(required),cliflags(mcrignore),syntax=init_queue
155          qualifier wsquota,      value(required),cliflags(mcrignore),syntax=init_queue
156          disallow group and system
157          disallow default and (batch or generic)
158          disallow separate and (batch or generic)
159          disallow form and (batch or generic)
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

```
 1  !
 2  ! Version:      'V04-000'
 3  !
 4  !     V03-008 GJA0092         Greg Awdziewicz        25-Jul-1984
 5  !             - Reverse the nonnegatable mistake. Only qualifiers
 6  !             which require values should be nonnegatable.
 7  !
 8  !     V03-007 MCN0143         Maria del C. Nasr      29-Jun-1984
 9  !             Make nonnegatable, qualifiers that should be so. Add
10  !             the /DATA qualifier with keywords EXPAND and COMPRESS
11  !             to do the data reduction work.  Eliminate REDUCE
12  !             option from /COMPRESS.
13  !
14  !     V03-006 JWT0124         Jim Teague             16-Jun-1983
15  !             /EXTRACT requires a value; /ONLY doesn't necessarily
16  !             need /LIST.
17  !
18  !     V03-005 JWT0120         Jim Teague             18-May-1983
19  !             Remove some disallow clauses.
20  !
21  !     V03-004 JWT0103         Jim Teague             06-Apr-1983
22  !             Mutual exclusion final touches to new cli interface.
23  !             Remove prefixes and outputs; squeeze becomes default
24  !             as stated by documentation.
25  !
26  !     V03-003 PCA1008         Paul C. Anagnostopoulos 10 Feb 1983
27  !             Merge the outputs list for DCL and MCR, because the CDU no
28  !             longer supports different lists.
29  !
30  !     V03-002 JWT0060         Jim Teague             20-Oct-1982
31  !             Need to rearrange the new reduce keyword.
32  !
33  !     V03-001 JWT0056         Jim Teague             19-Oct-1982
34  !             Add REDUCE keyword to /COMPRESS qualifier.
35  !
36  define syntax library_only
37          parameter p1,prompt="Library",value(required,type=$infile)
38
39
40  define syntax optional_files
41          parameter p1,prompt="Library",value(required,type=$infile)
42          parameter p2,prompt="File",value(list,impcat,type=$infile)
43
44
45  define syntax library_using_lbr
46          image backtrans
47
48  define type create_options
49          keyword blocks,         value(required)
50          keyword globals,        value(required)
51          keyword modules,        value(required)
52          keyword keysize,        value(required)
53          keyword history,        value(required)
54          keyword version,        value(required)
55
56  define type compress_options
```

```
 57              keyword blocks,         value(required)
 58              keyword globals,        value(required)
 59              keyword modules,        value(required)
 60              keyword keysize,        value(required)
 61              keyword history,        value(required)
 62              keyword version,        value(required)
 63              keyword keep
 64
 65      define type cross_options
 66              keyword all
 67              keyword module
 68              keyword none
 69              keyword symbol
 70              keyword value
 71
 72      define type data_options
 73              keyword reduce
 74              keyword expand
 75
 76      define verb library
 77              image librarian
 78              parameter p1,prompt="Library",value(required,type=$infile)
 79              parameter p2,prompt="File",value(required,list,impcat,type=$infile)
 80              qualifier compress,     value(list,type=compress_options),
 81                                      syntax=library_only
 82              qualifier create,       value(list,type=create_options),
 83                                      syntax=optional_files
 84              qualifier data,         value(required,type=data_options),
 85                                      syntax=library_only,nonnegatable
 86              qualifier delete,       value(required,list),
 87                                      syntax=optional_files,nonnegatable
 88              qualifier extract,      value(required,list),
 89                                      syntax=library_only,nonnegatable
 90              qualifier insert
 91              qualifier list,         value(type=$outfile),
 92                                      syntax=optional_files
 93              qualifier remove,       value(required,list),
 94                                      syntax=optional_files,nonnegatable
 95              qualifier replace
 96              qualifier macro
 97              qualifier object
 98              qualifier output,       value(type=$outfile),default
 99              qualifier names
100              qualifier full
101              qualifier globals,      default
102              qualifier rsx11,        syntax=library_using_lbr
103              qualifier selective_search
104              qualifier squeeze,      default
105              qualifier log
106              qualifier width,        value(required),nonnegatable
107              qualifier cross_reference,value(list,type=cross_options),
108                                      syntax=library_only
109              qualifier only,         value(required,list)
110              qualifier help
111              qualifier text
112              qualifier modules,      value(required,list),placement=local
```

```
113        qualifier share
114        qualifier history
115        qualifier before,        value(default=today, type=$datetime)
116        qualifier since,         value(default=today, type=$datetime)
117        disallow ( extract and ( compress or create or delete or insert or
118                                 list or remove or replace or names or
119                                 full or globals or selective_search or
120                                 squeeze or cross_reference or width ) )
121        disallow ( compress and create )
122        disallow ( cross_reference and ( list or macro or help or text or
123                                 before or since or history ) )
124        disallow ( any2 ( help , share , text , macro , object ) )
125        disallow ( ( full or names or history or before or since )
126                     and not list )
127        disallow ( ( remove or names or globals ) and
128                     ( text or help or macro ) )
129
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

```
 1  !
 2  !  Version:      'V04-000'
 3  !
 4  !      V03-004 ADE0001         Alan D. Eldridge        12-Apr-1984
 5  !              Make /MAP, /EXE, and /SYM positional
 6  !
 7  !      V03-003 JWT0114         Jim Teague              27-Apr-1983
 8  !              Remove prefixes and outputs; map is un-defaulted.
 9  !
10  !      V03-002 JWT0099         Jim Teague              06-Apr-1983
11  !              Do mutual exclusion stuff to go along with
12  !              new interface in Linker.
13  !
14  !      V03-001 PCA1008         Paul C. Anagnostopoulos 10 Feb 1983
15  !              Merge the outputs list for DCL and MCR, as the CDU no
16  !              longer supports separate lists.
17  !
18  define syntax link_using_tkb
19          image backtrans
20
21  define verb link
22          image link
23          parameter p1,prompt="File",value(required,list,impcat,type=$infile)
24          qualifier brief
25          qualifier cross_reference
26          qualifier debug,        value(type=$infile)
27          qualifier executable,   value(type=$outfile),placement=positional,default
28          qualifier include,      value(required,list),placement=local
29          qualifier library,      placement=local
30          qualifier shareable,    value(type=$outfile)
31          qualifier contiguous
32          qualifier map,          value(type=$outfile),placement=positional,batch
33          qualifier options,      placement=local
34          qualifier selective_search,placement=local
35          qualifier symbol_table, value(type=$outfile),placement=positional
36          qualifier syslib,       default
37          qualifier system,       value
38          qualifier supress,      default,value(default="SYSLIB,DEBUG,WEAK") ! && whats this?
39          qualifier rsx11,        syntax=link_using_tkb
40          qualifier full
41          qualifier concatenated, placement=local,syntax=link_using_tkb
42          qualifier default_library,value(required,type=$infile),
43                                  syntax=link_using_tkb
44          qualifier exit,         value(default=1),syntax=link_using_tkb
45          qualifier header
46          qualifier overlay_description,syntax=link_using_tkb
47          qualifier position_independent,syntax=link_using_tkb
48          qualifier sequential,   syntax=link_using_tkb
49          qualifier trace,        default
50          qualifier tkb_options,  value(type=$infile),syntax=link_using_tkb
51          qualifier post_mortem,  syntax=link_using_tkb
52          qualifier sysshr,       default
53          qualifier userlibrary,  default,value(list)
54          qualifier p0image
55          qualifier protect
56          disallow ( ( full or brief or cross_reference ) and not map )
```

```
57          disallow ( any2 ( system , debug , shareable ) )
58          disallow ( protect and system )
59          disallow ( p0image and ( shareable or system ) )
60          disallow ( header and shareable )
61          disallow ( brief and ( cross_reference or full ) )
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

```
 1  !
 2  !   Version:    'V04-000'
 3  !
 4  !       V03-010 RRB0022 Rowland R. Bradley            21-Jun-1984
 5  !               Remove nonnegatable from /DISABLE, /ENABLE, /UPDATE
 6  !               and /LIBBRARY.
 7  !
 8  !       V03-009 PCG0001         Peter George           13-Mar-1984
 9  !               Remove last vestiges of old command inteface.
10  !               Remove DEFAULT clause from /SHOW qualifier.
11  !
12  !       V03-008 RRB0015         Rowland R. Bradley     24-Feb-1984
13  !               Remove default settings for /DISABLE and /ENABLE since
14  !               these override any switches set by the user w/ .ENABLE
15  !               or .DISABLE.  Defaults must be set in MACRO.EXE.
16  !
17  !       V03-007 RRB0014         Rowland R. Bradley     23-Feb-1984
18  !               Remove disallow of /LIB and /UPDATE.  This must be
19  !               handled by the program since context(position) is
20  !               important.
21  !
22  !       V03-006 RRB0010         Rowland R. Bradley     25-Jan-1984
23  !               Set correct defaults for /DISABLE, /ENABLE, /SHOW, /LIST,
24  !               and /CROSS_REFERENCE.  Inserted "nonnegatable" where apropo.
25  !
26  !       V03-005 MTR0003         Mike Rhodes            7-Apr-1983
27  !               Correct the default keyword specification for /DEBUG.
28  !
29  !       V03-004 MTR0002         Mike Rhodes            28-Mar-1983
30  !               Modify the OBJECT and LISTING qualifiers to make them positional
31  !
32  !       V03-003 MTR0001         Mike Rhodes            24-Mar-1983
33  !               Modify the NOSHOW qualifier to accept a list of show keywords.
34  !               (This is done because negated qualifiers can't have keywords.)
35  !
36  !       V03-002 PCA1008         Paul C. Anagnostopoulos 10 Feb 1983
37  !               Merge the outputs list for DCL and MCR, as the new CDU does not
38  !               support separate lists.
39  !
40  !       V03-001 MTR0001         Mike Rhodes            9-Feb-1983
41  !               Add 'label' field to parameter specification.
42  !
43  define type enable_options
44      keyword ama
45      keyword dbg
46      keyword fpt
47      keyword gbl
48      keyword lsb
49      keyword tbk
50      keyword absolute
51      keyword debug
52      keyword truncation
53      keyword global
54      keyword suppression
55      keyword traceback
56
```

```
 57    define type show_options
 58            keyword cnd,default
 59            keyword mc,default
 60            keyword md,default
 61            keyword me
 62            keyword meb
 63            keyword conditionals
 64            keyword calls
 65            keyword definitions
 66            keyword expansions
 67            keyword binary
 68
 69    define type crf_options
 70            keyword all
 71            keyword directives
 72            keyword macros,default
 73            keyword opcodes
 74            keyword registers
 75            keyword symbols,default
 76
 77    define type debug_options
 78            keyword all,default
 79            keyword none
 80            keyword symbols
 81            keyword traceback
 82
 83    define syntax macro_using_mac
 84            image backtrans
 85
 86    define verb macro
 87            image macro32
 88            parameter p1,label=file,
 89                                prompt="File",value(required,list,type=$infile)
 90            qualifier disable,      value(required,list,
 91                                type=enable_options)
 92            qualifier enable,       value(required,list,
 93                                type=enable_options)
 94            qualifier library,      placement=local
 95            qualifier listing,      placement=positional,
 96                                value(type=$outfile),batch
 97            qualifier object,       placement=positional,
 98                                value(type=$outfile),default
 99            qualifier show,         value(list,type=show_options)
100            qualifier rsx11,        syntax=macro_using_mac
101            qualifier noshow,       value(list,type=show_options)
102            qualifier cross_reference,
103                                value(list,type=crf_options)
104            qualifier update,       value(list),placement=local
105            qualifier debug,        value(list,type=debug_options)
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

```
 1    !
 2    !   Version:      'V04-000'
 3    !
 4
 5    define type reply_types
 6          keyword extract
 7
 8    define type edit_types
 9          keyword send
10          keyword reply,value(type=reply_types)
11          keyword forward
12
13    define syntax decmail
14          image decmail
15
16    define verb mail
17          image mail
18          parameter p1,prompt="File",value(type=$infile),label=file
19          parameter p2,prompt="To",value(list,impcat),label=tolist
20          qualifier subject,        value(required)
21          qualifier decmail,        syntax=decmail
22          qualifier edit,value(list,type=edit_types)
23          qualifier protocol value(required)
24          qualifier self
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

```
 1    !
 2    !   MESSAGE.CLD -- Command Languge Definition file for the MESSAGE compiler.
 3    !
 4    !   Version:     'V04-000'
 5    !
 6    !       V03-002 GJA0061        Greg Awdziewicz          9-Jan-1984
 7    !               - Remove the pseudo qualifier /noObject now that the negatable
 8    !               operator is allowed in the Disallow clause.
 9    !
10    !       V03-001 GJA0054        Greg Awdziewicz          1-Dec-1983
11    !               - Make changes for the new CLI interface and fix the behavior
12    !               to be consistent with the Command Language User's Guide rules
13    !               and to enforce the restrictions on mutually exclusive
14    !               qualifiers.
15    !               - Change qualifiers /Listing & /File to /List & /File_name to
16    !               agree with documentation and to be consistent with other
17    !               compilers.
18    !
19    Define      Verb              Message
20          Image               Message
21          Parameter           P1                        ! The only parameter is the
22                              Prompt="File"             ! source file of messages.
23                              Value (required, list, type=$FILE)
24          Qualifier           FILE_NAME                 ! An object file of  previously compiled messages.
25                              Value (required, type=$FILE)
26          Qualifier           LIST
27                              Batch                     ! Defaulted for batch only.
28                              Placement=positional
29                              Value (type=$FILE)
30          Qualifier           MDL                       ! (for DEC internal use -- not documented)
31                              Placement=positional
32                              Value (type=$FILE)
33          Qualifier           SDL                       ! (for DEC internal use -- not documented)
34                              Placement=positional
35                              Value (type=$FILE)
36          Qualifier           OBJECT
37                              Default
38                              Placement=positional
39                              Value (type=$FILE)
40          Qualifier           SYMBOLS
41                              Default
42          Qualifier           TEXT
43                              Default
44          Disallow            File_name and Text
45          Disallow            Neg Object and (File_name or Symbols or Text)
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

J 8

16-SEP-1984 04:00   VAX/VMS Command Definition Utility (V4-001)   Page 1
15-SEP-1984 22:44   _255DUA28:[CLD.SRC]MONITOR.CLD;1 (1)

```
  1  !
  2  !  Version:    'V04-000'
  3  !
  4  !  ****************************************************************
  5  !  *                                                              *
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 23  !  *                                                              *
 24  !  *                                                              *
 25  !  ****************************************************************
 26  !
 27  !
 28  !
 29  !  MODIFIED BY:
 30  !
 31  !      V03-004 PRS1011          Paul R. Senn          29-Feb-1984     14:00
 32  !              add /FLUSH_INTERVAL qualifier
 33  !
 34  !      V03-003 TLC1052          Thomas L. Cafarella   17-Feb-1984     11:00
 35  !              Add /BY_NODE qualifier and change /INPUT to accept
 36  !              a list (in support of multi-file summary capability).
 37  !
 38  !      V03-002 TLC1042          Thomas L. Cafarella   19-Jun-1983     15:00
 39  !              Add /ITEM qualifier for homogeneous classes.
 40  !
 41  !      V03-001 TLC1028          Thomas L. Cafarella   14-Apr-1983     16:00
 42  !              Modify for interactive user interface.
 43  !
 44  !
 45
 46  define      verb      MONITOR
 47       image      MONITOR
 48       parameter  P1,         label=CLASS_NAME,
 49                              value (list)
 50       qualifier  BEGINNING,  nonnegatable,
 51                              value
 52       qualifier  ENDING,     nonnegatable,
 53                              value
 54       qualifier  INTERVAL,   nonnegatable,
 55                              value
 56       qualifier  FLUSH_INTERVAL,     nonnegatable,
```

```
57                              value
58         qualifier   VIEWING_TIME, nonnegatable,
59                              value
60         qualifier   INPUT,       value (list)
61         qualifier   DISPLAY,     value, default
62         qualifier   RECORD,      value
63         qualifier   SUMMARY,     value
64         qualifier   COMMENT,     value
65         qualifier   BY_NODE
66
67         qualifier   ALL,         nonnegatable, placement=local
68         qualifier   CURRENT,     nonnegatable, placement=local
69         qualifier   AVERAGE,     nonnegatable, placement=local
70         qualifier   MINIMUM,     nonnegatable, placement=local
71         qualifier   MAXIMUM,     nonnegatable, placement=local
72
73         qualifier   TOPCPU,      nonnegatable, placement=local
74         qualifier   TOPDIO,      nonnegatable, placement=local
75         qualifier   TOPBIO,      nonnegatable, placement=local
76         qualifier   TOPFAULT,    nonnegatable, placement=local
77
78         qualifier   CPU,         placement=local
79
80         qualifier   PERCENT,     placement=local
81
82         qualifier   ITEM,        nonnegatable, placement=local
83                              value (list)
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

```
 1  !
 2  !  Version:    'V04-000'
 3  !
 4  !      V03-007 DAS0002         David Solomon          09-Jul-1984
 5  !              Add /[NO]REBUILD.
 6  !
 7  !      V03-006 HH0028          Hai Huang              27-Jun-1984
 8  !              Make appropriate qualifiers negatable.
 9  !
10  !      V03-005 HH0004          Hai Huang              09-Mar-1984
11  !              Add /CLUSTER qualifier.
12  !
13  !      V03-004 WMC0001         Wayne Cardoza          16-Jan-1984
14  !              Remove all journaling keywords.
15  !
16  !      V03-003 DAS0001         David Solomon          29-Nov-1983
17  !              Add RECORD_SIZE keyword for /JOURNAL qualifier.
18  !
19  !      V03-002 MCN0138         Maria del C. Nasr      12-Jul-1983
20  !              Make changes for new CLI interface.  Take out prefix
21  !              clause, which is no longer needed.  Add disallow clauses
22  !              for qualifiers that cannot go together.
23  !
24  !      V03-001 MMD0056         Meg Dumont             28-Mar-1983
25  !      Changed /OVERRIDE to inc OWNER_IDENTIFIER, added /AUTO and /INIT
26  !
27  !
28  define type cache_options
29      keyword extent,         value(required,type=$number),negatable
30      keyword file_id,        value(required,type=$number),negatable
31      keyword limit,          value(required,type=$number)
32      keyword quota,          value(required,type=$number),negatable
33      keyword writethrough
34
35  define type datacheck_options
36      keyword read
37      keyword write
38
39  define type initialize_options
40      keyword all
41      keyword continuation
42
43  !**JNL** define type journal_options
44  !**JNL**         keyword newfile
45  !**JNL**         keyword size,           value(required,type=$number)
46  !**JNL**         keyword extension,      value(required,type=$number)
47  !**JNL**         keyword quota,          value(required,type=$number)
48  !**JNL**         keyword RECORD_SIZE,    value(required,type=$number)
49
50  define type mount_overrides
51      keyword accessibility
52      keyword expiration
53      keyword identification, syntax=mount_wo_label
54      keyword setid
55      keyword lock
56      keyword owner_identifier
```

```
57
58    define type protection
59          keyword system,value
60          keyword group,value
61          keyword owner,value
62          keyword world,value
63
64    define syntax mount_wo_label
65          parameter p1,prompt="Device",value(required,list,type=$device),label=devices
66          parameter p2,prompt="Label",value(list),label=volumes
67          parameter p3,prompt="Log name",value(type=$outlog),label=lognames
68          disallow (<mount>foreign or <mount>nolabel) and (<mount>accessed or
69                                                           <mount>automatic or
70                                                           <mount>bind or
71                                                           <mount>cache or
72                                                           <mount>extension or
73                                                           <mount>hdr3 or
74                                                           <mount>initialize or
75                                                           <mount>label or
76                                                           <mount>processor or
77                                                           <mount>quota or
78                                                           <mount>rebuild or
79                                                           <mount>windows)
80          disallow (<mount>group or <mount>system) and <mount>share
81          disallow <mount>system and <mount>group
82
83    define verb mount
84          image vmount
85          parameter p1,prompt="Device",value(required,list,type=$device),label=devices
86          parameter p2,prompt="Label",value(required,list),label=volumes
87          parameter p3,prompt="Log name",value(type=$outlog),label=lognames
88          qualifier accessed,     value(required,type=$number)
89          qualifier assist        default
90          qualifier automatic     default
91          qualifier bind,         value(required)
92          qualifier blocksize,    value(required,type=$number)
93          qualifier cache,        value(required,list,type=cache_options)
94          qualifier cluster
95          qualifier comment,      value(required)
96          qualifier data_check,   value(list,type=datacheck_options)
97          qualifier density,      value(required,type=$number)
98          qualifier extension,    value(required,type=$number)
99          qualifier foreign,      syntax=mount_wo_label,nonnegatable
100         qualifier group
101         qualifier hdr3,         default
102         qualifier initialize    value(required,type=initialize_options)
103  !**JNL**       qualifier journal        value(list,type=journal_options)
104  !
105  ! Due to some constraints in DCL and CLI parsing, the NOLABEL qualifier must
106  ! be defined explicitly in this CLD, and cannot be specified as the negation
107  ! of LABEL.  In that way we can use a different syntax for each one, and
108  ! also take advantage of the disallow clause.
109  !
110         qualifier label,        default,nonnegatable
111         qualifier nolabel,      nonnegatable,syntax=mount_wo_label
112         qualifier message       default
```

```
113         qualifier mount_verification    default
114         qualifier override,        value(required,list,type=mount_overrides)
115         qualifier owner_uic,       value(required,type=$uic)
116         qualifier processor,       value(required)
117         qualifier protection,      value(required,list,type=protection)
118         qualifier quota,           default
119         qualifier rebuild,         default
120         qualifier recordsize,      value(required,type=$number)
121         qualifier share
122         qualifier system
123         qualifier unload           default
124         qualifier windows,         value(required,type=$number)
125         qualifier write,           default
126         disallow (group or system) and share
127         disallow label and nolabel
128         disallow system and group
129
130   !
131   ! The following qualifiers have been commented out, since they were never
132   ! implemented.  They are not being coded with the new CLI interface, but
133   ! are included here for historical purposes.
134   !
135   !     qualifier drive,           value(required),
136   !                                placement=positional
137   !     qualifier ebcdic,          value(required,list)
138   !     qualifier interchange
139   !     qualifier user,            value(required,type=$uic)
140   !     qualifier visual,          value(required)
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

```
 1   !
 2   !  Version:      'V04-000'
 3   !
 4   !      V03-004 MCN0180        Maria del C. Nasr        11-Jul-1984
 5   !              Make qualifiers negatable.
 6   !
 7   !      V03-003 PCG0001        Peter George             13-Mar-1984
 8   !              Remove OUTPUTS statement.
 9   !
10   !      V03-002 MTR0025        Mike Rhodes               9-Aug-1983
11   !              Add /ABSOLUTE qualifier, to allow patching non-image
12   !              files (eg. ISAM) at absolute (virtual) addresses.
13   !
14   !      V03-001 MTR0001        Mike Rhodes               9-Feb-1983
15   !              Add 'label' field to parameter specification.
16   !
17   define verb patch
18           image patch
19           parameter p1,label=file,prompt="File",value(required,type=$infile)
20           qualifier absolute
21           qualifier command,       value(type=$outfile)
22           qualifier journal,       value(type=$outfile),default
23           qualifier new_version,   default
24           qualifier output,        value(type=$outfile),default
25           qualifier update,        value(required,list)
26           qualifier volume,        value
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

```
 1    !
 2    !   Version:      'V04-000'
 3    !
 4
 5    define verb PHONE
 6         image phone
 7         parameter p1,label=token1,prompt="Command Token 1:"
 8         parameter p2,label=token2,prompt="Command Token 2:"
 9         parameter p3,label=token3,prompt="Command Token 3:"
10         parameter p4,label=token4,prompt="Command Token 4:"
11         qualifier SWITCH_HOOK,default,nonnegatable,value(default="%")
12         qualifier VIEWPORT_SIZE,default,nonnegatable,value(default="10")
13         qualifier SCROLL,default
```

```
$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT
```

```
 1  !
 2  !  Version:    'V04-000'
 3  !
 4
 5  define verb rename
 6          image rename
 7          parameter p1,prompt="From",value(required,list,impcat,type=$infile)
 8          parameter p2,prompt="To",value(required,type=$outfile)
 9          qualifier new_version,  default
10          qualifier before,       value(default=today,type=$datetime)
11          qualifier since,        value(default=today,type=$datetime)
12          qualifier created
13          qualifier modified
14          qualifier expired
15          qualifier backup
16          qualifier exclude,      value(required,list)
17          qualifier by_owner,     value(type=$uic)
18          qualifier confirm
19          qualifier log
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

```
    1  !
    2  !  Version:     'V04-000'
    3  !
    4
    5  define verb reply
    6      image reply
    7      parameter p1,prompt="Text"
    8
    9      qualifier abort                    value(required,type=$number)
   10      qualifier all
   11      qualifier bell
   12      qualifier blank_tape               value(required,type=$number)
   13      qualifier disable                  value(list)
   14      qualifier enable                   value(list)
   15      qualifier initialize_tape          value(required,type=$number)
   16      qualifier log
   17      qualifier node                     value(list)
   18      qualifier notify                   default
   19      qualifier pending                  value(required,type=$number)
   20      qualifier shutdown
   21      qualifier status
   22      qualifier temporary
   23      qualifier terminal                 value(list,required)
   24      qualifier to                       value(required,type=$number)
   25      qualifier urgent
   26      qualifier username                 value(list)
   27      qualifier wait
   28
   29      disallow (any2 (abort, all, blank_tape, disable, enable, initialize_tape,
   30                      log, pending, status, terminal, to, username))
   31      disallow (any2 (bell,
   32                      abort, blank_tape, disable, enable, initialize_tape,
   33                      log, pending, status, to))
   34      disallow (any2 (notify,
   35                      abort, blank_tape, disable, enable, initialize_tape,
   36                      log, pending, status, to))
   37      disallow (any2 (shutdown,
   38                      abort, blank_tape, disable, enable, initialize_tape,
   39                      log, pending, status, to))
   40      disallow (any2 (urgent,
   41                      abort, blank_tape, disable, enable, initialize_tape,
   42                      log, pending, status, to))
   43      disallow (any2 (wait,
   44                      abort, blank_tape, disable, enable, initialize_tape,
   45                      log, pending, status, to))
   46      disallow (shutdown and urgent)
   47      disallow (temporary and not enable)
   48
   49  define verb request
   50      image request
   51      parameter p1,prompt="Text"
   52      qualifier reply
   53      qualifier to                       value(required,list)
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

```
 1 !
 2 !   Version:      'V04-000'
 3 !
 4 !        V03-014 MCN0179         Maria del C. Nasr        9-Jul-1984
 5 !                Make /NOAUTHORIZE the default for RUNDET.
 6 !
 7 !        V03-013 WMC0007         Wayne Cardoza            16-Jan-1983
 8 !                Remove all CHKPNT stuff.
 9 !
10 !        V03-012 WMC0006         Wayne Cardoza            14-Nov-1983
11 !                New qualifier for .CHK file name.
12 !
13 !        V03-011 TMK0001         Todd M. Katz             13-Nov-1983
14 !                Add the qualifier job_table_quota to the run verb. This
15 !                qualifier can be used to specify the job-wide logical
16 !                name table creation quota when creating a detached
17 !                process.
18 !
19 !        V03-010 WMC0005         Wayne Cardoza            10-Nov-1983
20 !                Allow checkpoint file name to be specified.
21 !
22 !        V03-009 WMC0004         Wayne Cardoza            28-Jul-1983
23 !                New checkpoint qualifier /WAIT
24 !
25 !        V03-008 MTR0002         Mike Rhodes              12-Jul-1983
26 !                Change /DELAY, /INTERVAL and /TIME_LIMIT qualifier
27 !                values to use the new "$deltatime" token identifier.
28 !                Correct the /PROCESS qualifiers to /PROCESS_NAME.
29 !
30 !        V03-007 WMC0003         Wayne Cardoza            21-Jun-983
31 !                Allow /DEBUG on RUN/CHECK
32 !
33 !        V03-006 RSH0026         R. Scott Hanna           24-May-1983
34 !                Add SECURITY privilege
35 !
36 !        V03-005 MTR0001         Mike Rhodes              23-May-1983
37 !                Add SHARE privilege keyword.
38 !
39 !        V03-004 PRB0175         Paul Beck               26-APR-1983 21:31:36
40 !                Add TMPJNL and PRMJNL
41 !
42 !        V03-003 WMC0002         Wayne Cardoza            14-Apr-1983
43 !                Parameter is /DETACHED
44 !
45 !        V03-002 WMC0001         Wayne Cardoza            13-Apr-1983
46 !                /DETACH, /DUMP qualifiers
47 !
48 !        V03-001 PCG0001         Peter George             13-Apr-1983
49 !                Create RUN.CLD.
50 !
51 define type privileges
52         keyword acnt,negatable
53         keyword allspool,negatable
54         keyword altpri,negatable
55         keyword bugchk,negatable
56         keyword bypass,negatable
```

```
 57          keyword cmexec,negatable
 58          keyword cmkrnl,negatable
 59          keyword detach,negatable
 60          keyword diagnose,negatable
 61          keyword exquota,negatable
 62          keyword group,negatable
 63          keyword grpnam,negatable
 64          keyword log_io,negatable
 65          keyword mount,negatable
 66          keyword netmbx,negatable
 67          keyword oper,negatable
 68          keyword pfnmap,negatable
 69          keyword phy_io,negatable
 70          keyword prmceb,negatable
 71          keyword prmgbl,negatable
 72          keyword prmjnl,negatable
 73          keyword prmmbx,negatable
 74          keyword pswapm,negatable
 75          keyword same,negatable
 76          keyword security,negatable
 77          keyword setprv,negatable
 78          keyword share,negatable
 79          keyword shmem,negatable
 80          keyword syslck,negatable
 81          keyword sysgbl,negatable
 82          keyword sysnam,negatable
 83          keyword sysprv,negatable
 84          keyword tmpjnl,negatable
 85          keyword tmpmbx,negatable
 86          keyword volpro,negatable
 87          keyword world,negatable
 88
 89  !**JNL** define syntax run_checkpoint
 90  !**JNL**         image    chkpntcmd
 91  !**JNL**         parameter p1,prompt="File",value(required,type=$infile)
 92  !**JNL**         qualifier error,         value(required,type=$outfile)
 93  !**JNL**         qualifier input,         value(required,type=$outfile)
 94  !**JNL**         qualifier output,        value(required,type=$outfile)
 95  !**JNL**         qualifier priority,      value(required)
 96  !**JNL**         qualifier privileges,    value(required,list,type=privileges)
 97  !**JNL**         qualifier process_name,  value(required)
 98  !**JNL**         qualifier resource_wait,default
 99  !**JNL**         qualifier service_failure
100  !**JNL**         qualifier swapping,      default
101  !**JNL**         qualifier uic,           value(required,type=$uic)
102  !**JNL**         qualifier accounting,    default
103  !**JNL**         qualifier buffer_limit,  value(required)
104  !**JNL**         qualifier time_limit,    value(required, type=$deltatime)
105  !**JNL**         qualifier file_limit,    value(required)
106  !**JNL**         qualifier page_file,     value(required)
107  !**JNL**         qualifier queue_limit,   value(required)
108  !**JNL**         qualifier subprocess_limit,value(required)
109  !**JNL**         qualifier maximum_working_set,value(required)
110  !**JNL**         qualifier working_set,   value(required)
111  !**JNL**         qualifier authorize,     default
112  !**JNL**         qualifier ast_limit,     value(required)
```

```
113   !**JNL**        qualifier io_buffered,  value(required)
114   !**JNL**        qualifier io_direct,    value(required)
115   !**JNL**        qualifier enqueue_limit,value(required)
116   !**JNL**        qualifier extent,       value(required)
117   !**JNL**        qualifier auto_restart
118   !**JNL**        qualifier paging_file,  value(required,type=$outfile)
119   !**JNL**        qualifier detached
120   !**JNL**        qualifier dump
121   !**JNL**        qualifier debug
122   !**JNL**        qualifier wait,         default
123   !**JNL**        qualifier chk_file,     value(required,type=$outfile)
124
125   !**JNL** define syntax run_restart
126   !**JNL**        image    chkrstcmd
127   !**JNL**        parameter p1,prompt="File",value(required,type=$infile)
128   !**JNL**        qualifier error,        value(required,type=$outfile)
129   !**JNL**        qualifier input,        value(required,type=$outfile)
130   !**JNL**        qualifier output,       value(required,type=$outfile)
131   !**JNL**        qualifier priority,     value(required)
132   !**JNL**        qualifier privileges,   value(required,list,type=privileges)
133   !**JNL**        qualifier process_name, value(required)
134   !**JNL**        qualifier resource_wait,default
135   !**JNL**        qualifier service_failure
136   !**JNL**        qualifier swapping,     default
137   !**JNL**        qualifier uic,          value(required,type=$uic)
138   !**JNL**        qualifier accounting,   default
139   !**JNL**        qualifier buffer_limit, value(required)
140   !**JNL**        qualifier time_limit,   value(required, type=$deltatime)
141   !**JNL**        qualifier file_limit,   value(required)
142   !**JNL**        qualifier page_file,    value(required)
143   !**JNL**        qualifier queue_limit,  value(required)
144   !**JNL**        qualifier subprocess_limit,value(required)
145   !**JNL**        qualifier maximum_working_set,value(required)
146   !**JNL**        qualifier working_set,  value(required)
147   !**JNL**        qualifier authorize,    default
148   !**JNL**        qualifier ast_limit,    value(required)
149   !**JNL**        qualifier io_buffered,  value(required)
150   !**JNL**        qualifier io_direct,    value(required)
151   !**JNL**        qualifier enqueue_limit,value(required)
152   !**JNL**        qualifier extent,       value(required)
153   !**JNL**        qualifier auto_restart
154   !**JNL**        qualifier dump
155   !**JNL**        qualifier debug
156   !**JNL**        qualifier wait,         default
157
158   define syntax run_process
159          image rundet
160
161   define verb run
162          synonym r
163          synonym ru
164          cliroutine run
165          cliflags(abbreviate)
166          prefix cli$k_run_
167          parameter p1,prompt="File",value(required,type=$infile)
168   !**JNL**        qualifier checkpoint,   syntax=run_checkpoint
```

I 9

16-SEP-1984 04:00   VAX/VMS Command Definition Utility (V4-001)   Page 4
15-SEP-1984 22:45   _255DUA28:[CLD.SRC]RUN.CLD;1 (1)

```
169   !**JNL**        qualifier restart,         syntax=run_restart
170         qualifier delay,          value(required, type=$deltatime),
171                                   syntax=run_process
172         qualifier error,          value(required,type=$outfile),
173                                   syntax=run_process
174         qualifier input,          value(required,type=$outfile),
175                                   syntax=run_process
176         qualifier interval,       value(required, type=$deltatime),
177                                   syntax=run_process
178         qualifier output,         value(required,type=$outfile),
179                                   syntax=run_process
180         qualifier priority,       value(required),
181                                   syntax=run_process
182         qualifier privileges,     value(required,list,type=privileges),
183                                   syntax=run_process
184         qualifier process_name,   value(required),
185                                   syntax=run_process
186         qualifier resource_wait,default,syntax=run_process
187         qualifier schedule,       value(required,type=$datetime),
188                                   syntax=run_process
189         qualifier service_failure,syntax=run_process
190         qualifier swapping,       default,syntax=run_process
191         qualifier uic,            value(required,type=$uic),
192                                   syntax=run_process
193         qualifier accounting,     default,syntax=run_process
194         qualifier buffer_limit,   value(required),syntax=run_process
195         qualifier time_limit,     value(required, type=$deltatime),syntax=run_process
196         qualifier file_limit,     value(required),syntax=run_process
197         qualifier page_file,      value(required),syntax=run_process
198         qualifier queue_limit,    value(required),syntax=run_process
199         qualifier subprocess_limit,value(required),syntax=run_process
200         qualifier maximum_working_set,value(required),syntax=run_process
201         qualifier working_set,    value(required),syntax=run_process
202         qualifier debug
203         qualifier authorize,      syntax=run_process
204         qualifier mailbox,        value(required),syntax=run_process
205         qualifier ast_limit,      value(required),syntax=run_process
206         qualifier io_buffered,    value(required),syntax=run_process
207         qualifier io_direct,      value(required),syntax=run_process
208         qualifier enqueue_limit,value(required),syntax=run_process
209         qualifier extent,         value(required),syntax=run_process
210         qualifier detached,       syntax=run_process
211         qualifier dump,           syntax=run_process
212         qualifier job_table_quota,value(required),syntax=run_process
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

```
  1   !
  2   !  Version:    'V04-000'
  3   !
  4   !  14 February 1984
  5   !  Command-line description file for RUNOFF
  6   !
  7      define type contents_page_options
  8          keyword  running,        negatable
  9          keyword  level,          value(required, type=$number)
 10
 11      define type index_page_options
 12          keyword  running,        negatable
 13
 14      define syntax RUN_CONTENTS
 15          image  DSRTOC
 16          parameter  p1,           label=input, prompt="File", value(required, list, type=$infile)
 17          qualifier  bold
 18          qualifier  deepest_header,      value(required, type=$number), nonnegatable
 19          qualifier  identification
 20          qualifier  indent
 21          qualifier  log
 22          qualifier  output,              value(type=$outfile), default
 23          qualifier  page_numbers,  value(required, list, type=contents_page_options), nonnegatable
 24          qualifier  require,             value(required, type=$infile)
 25          qualifier  section_numbers
 26          qualifier  underline
 27
 28      define syntax RUN_INDEX
 29          image  DSRINDEX
 30          parameter  p1,           label=input, prompt="File", value(required, list, type=$infile)
 31          qualifier  identification
 32          qualifier  lines_per_page,      value(required, type=$number), nonnegatable
 33          qualifier  log
 34          qualifier  output,              value(type=$outfile), default
 35          qualifier  page_numbers,  value(list, type=index_page_options), default
 36          qualifier  require,             value(required, type=$infile)
 37          qualifier  reserve,             value(required, type=$number)
 38
 39      define type debug_options
 40          keyword  all,            default
 41          keyword  conditionals
 42          keyword  contents
 43          keyword  files
 44          keyword  index
 45
 46      define type message_options
 47          keyword  output
 48          keyword  user
 49
 50      define verb RUNOFF
 51          image  RUNOFF
 52          parameter  p1,           label=p1, prompt="File", value(required, list, type=$infile)
 53          qualifier  backspace     placement=positional, nonnegatable
 54          qualifier  bold,         value(default=1, type=$number), default, placement=positional
 55          qualifier  change_bars,  value(default="!"), placement=positional
 56          qualifier  contents,     syntax=run_contents
```

```
57        qualifier  debug,            value(list, type=debug_options, default=ALL), placement=positional
58        qualifier  dec_internal,     value(list), placement=positional, nonnegatable
59        qualifier  device,                    value(required, list), placement=positional, nonnegatable
60        qualifier  down,             value(default=5, type=$number), placement=positional
61        qualifier  form_size,        value(required, type=$number), nonnegatable
62        qualifier  index,            syntax=run_index
63        qualifier  intermediate,     value(type=$outfile), placement=positional
64        qualifier  log
65        qualifier  messages,         value(required, type=message_options, list), placement=positional, nonnegatable
66        qualifier  output,                   value(type=$outfile), placement=positional
67        qualifier  overprint,        default, placement=positional, nonnegatable
68        qualifier  pages,            value(required), placement=positional, nonnegatable
69        qualifier  pause
70        qualifier  right,            value(default=5, type=$number), placement=positional
71        qualifier  sequence                  placement=positional
72        qualifier  simulate
73        qualifier  underline_character,    value(default=" "), default, placement=positional
74        qualifier  separate_underline,     value(default='='), placement=positional, nonnegatable
75        qualifier  nonspacing_underline,   value(default='"'), placement=positional, nonnegatable
76        qualifier  variant,          value, placement=positional, nonnegatable
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

```
 1     !
 2     ! Version:      'V04-000'
 3     !
 4
 5     define syntax NOPARSE
 6            image SDLNPARSE
 7     define verb SDL,
 8            image SDL,
 9            parameter p1, prompt="File",label=infile,value (required,list)
10            qualifier LANGUAGES, value (required,list),placement=positional
11            qualifier LIST, value,placement=positional
12            qualifier DUMP, placement=positional,value
13            qualifier PARSE, default,placement=positional,value
14            qualifier NOPARSE, syntax=noparse
15            qualifier HEADER, default,placement=positional
16            qualifier COPYRIGHT, placement=positional,value
17            qualifier COMMENTS,default, placement=positional,value
18            qualifier NOCOMMENTS, placement=positional,value
19            qualifier GLOBAL_DEFINITION, placement=positional,value
20            qualifier VMS_DEVELOPMENT, placement=positional,value
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

```
 1      !
 2      !  Version:      'V04-000'
 3      !
 4
 5      define type search_matches
 6              keyword and
 7              keyword or,default
 8              keyword nand
 9              keyword nor
10
11      define type search_formats
12              keyword passall
13              keyword text,default
14              keyword dump
15              keyword nonulls
16
17      define verb search
18              image search
19              parameter p1,prompt="Filename(s)",value(required,list,type=$infile),
20                      label=source
21              parameter p2,prompt="String(s)",value(required,list),label=string
22              qualifier exact
23              qualifier exclude,value(required,list),nonnegatable
24              qualifier format,value(type=search_formats,default=TEXT),
25                      default,nonnegatable
26              qualifier heading,default
27              qualifier log
28              qualifier match,value(type=search_matches,default=OR),
29                      default,nonnegatable
30              qualifier numbers
31              qualifier output,value(default=SYS$OUTPUT,type=$outfile),default
32              qualifier remaining
33              qualifier statistics
34              qualifier window,value(default=5,list)
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

```
 1  ! Don't forget the MCRSET.CLD file.  It contains an equivalent set of
 2  ! definitions for MCR which should also be enhanced.
 3  !
 4  ! Version:     'V04-000'
 5  !
 6  ! Edit History:
 7  !
 8  !    V03-086 JAK0226         J A Krycka        16-Aug-1984
 9  !            Change /OWNER to /OWNER_UIC on SET QUEUE for consistency with
10  !            other commands.
11  !
12  !    V03-085 AEW0004         Anne E. Warner            02-Aug-1984
13  !            Take out /WRITE and /CONTROLLER qualifiers from
14  !            SET DEVICE/SERVED again since the code has been fixed to
15  !            accept this behavior.
16  !
17  !    V03-084 CWH3084         CW Hobbs          29-Jul-1984
18  !            Restore /WRITE and /CONTROLLER qualifiers to SET DEV /SERV
19  !
20  !    V03-083 CWH3083         CW Hobbs          27-Jul-1984
21  !            Comment out disallow references to /WRITE and /CONTROLLER
22  !            in SET DEVICE /SERVED
23  !
24  !    V03-082 AEW0003         Anne E. Warner        25-Jul-1984
25  !            1.  Take $DELTATIME value out of SET VOLUME/RETENTION.
26  !                This was added in V03-073.
27  !            2.  Comment out the qualifiers /[NO]WRITE and /CONTROLLER
28  !                in SET DEVICE/SERVED.
29  !            3.  Make SYNTAX= qualifiers nonnegatable throughout SET.
30  !            4.  Make qualifiers negatable in SET:
31  !                    ACCOUNTING          PASSWORD
32  !                    CARD_READER         PROCESS
33  !                    DAYTIME             PROTECTION
34  !                    DEVICE              RMS_DEFAULT
35  !                    DIRECTORY           VOLUME
36  !                    FILE                WORKING_SET
37  !                    LOGINS
38  !                    MESSAGE
39  !                    MAGTAPE
40  !    V03-081 JAK0220         J A Krycka        12-Jul-1984
41  !            Add [NO]FEED option to the /DEFAULT qualifier.
42  !
43  !    V03-080 DAS0003         David Solomon         09-Jul-1984
44  !            Add SET VOLUME/REBUILD.
45  !
46  !    V03-079 LMP0260         L. Mark Pilant,       25-Jun-1984  14:08
47  !            Add a qualifier, /DEFAULT, to be used with SET ACL/LIKE to
48  !            only copy default option ACEs.
49  !
50  !    V03-078 JLV0354         Jake VanNoy       12-APR-1984
51  !            Add SET HOST/DTE/DIAL
52  !
53  !    V03-077 ROW0349         Ralph O. Weber        12-APR-1984
54  !            Add SET DEVICE/[NO]DIAGNOSTIC.
55  !            Add SET HOST/HSC with executed image HSCPAD.
56  !            Add SET PRINTER /FORM_UNIT /TRUNCATE /TAB /SIXELS /BITMAPPED
```

```
 57  |          for Elliott.
 58  |
 59  |    V03-076 PCG0019           Peter George              30-Mar-1984
 60  |          Add SET RMS/NETWORK_BLOCK_COUNT.
 61  |          Add SET DEVICE/SERVED/NOWRITE/CONTROLLER.
 62  |          Add /LOG qualifier to SET TERM/X29.
 63  |          Require SET TERM/X29/HOLD_TIMER to have a value.
 64  |          Make the PSISETX29_ACTION keywords negatable.
 65  |
 66  |    V03-075 LMP0217           L. Mark Pilant,           24-Mar-1984  22:22
 67  |          Change all references to SETACL to be SETSHOACL.
 68  |
 69  |    V03-074 BLS0291           Benn Schreiber            24-MAR-1984
 70  |          SET PASSWORD is now in SETP0
 71  |
 72  |    V03-073 PCG0018           Peter George              15-Mar-1984
 73  |          Remove unnecessary PREFIX statements.
 74  |          Specify SET VOL/RETENTION takes delta time values.
 75  |
 76  |    V03-072 HWS0030           Harold Schultz            14-Mar-1984
 77  |          Fix HWS0024
 78  |
 79  |    V03-071 PRB0322           Paul Beck                 11-MAR-1984 13:17
 80  |          Add SET CLUSTER /QUORUM
 81  |
 82  |    V03-070 LMP0210           L. Mark Pilant,           9-Mar-1984  13:46
 83  |          Change the /MODIFY qualifier on the various SET xxx/ACL
 84  |          commands to be /REPLACE.
 85  |
 86  |    V03-069 HWS0024           Harold Schultz            09-Mar-1984
 87  |          Remove NETWORK_SPECIFIC keyword and add /PERMANENT
 88  |          qualifier to SET TERM/X29 command.
 89  |
 90  |    V03-068 PLL0001           Pamela Levesque           07-Mar-1984
 91  |          Remove terminal definitions from SET TERM/DEVICE.
 92  |          (to allow termtable defined terminals)
 93  |
 94  |    V03-067 SHZ0003           Stephen H. Zalewski,      06-Mar-1984
 95  |          Disallow SET PASSWORD/SYSTEM/SECONDARY.
 96  |
 97  |    V03-066 HWS0018           Harold Schultz            06-Mar-1984
 98  |          Integrate in SET HOST/X29, SET TERM/X29 and associated
 99  |          qualifiers.
100  |
101  |    V03-065 EMD0057           Ellen M. Dusseault        02-Mar-1984
102  |          Add new terminal device name, PRO_SERIES for SET
103  |          TERMINAL/DEVICE=
104  |
105  |    V03-064 EMD0052           Ellen M. Dusseault        28-Feb-1984
106  |          Allow SET TERMINAL qualifier, DEC_CRT to have a value
107  |          and also a list of elements.
108  |
109  |    V03-063 MCN0154           Maria del C. Nasr         27-Feb-1984
110  |          Add DETACHED, SUPROCESS as keywords to /ENABLE in
111  |          SET ACCOUNTING.
112  |
```

```
113  !    V03-062 RSH0106         R. Scott Hanna        24-Feb-1984
114  !            Fix field test 1 problems with SET AUDIT.
115  !
116  !    V03-061 PCG0017         Peter George          14-Feb-1984
117  !            Change behavior of queue parameter, /BLOCK_LIMIT
118  !            qualifier, and /PAGE qualifier to SET QUEUE.
119  !
120  !    V03-060 SHZ0002         Stephen H. Zalewski   13-Feb-1984
121  !            Add SET PASSWORD/SECONDARY.
122  !
123  !    V03-059 DAS0002         David Solomon         6-Feb-1984
124  !            Remove /JOURNAL keyword from SET FILE and SET AUDIT.
125  !
126  !    V03-058 LMP0185         L. Mark Pilant,       3-Feb-1984  19:54
127  !            Add a support for a SET DEVICE/ACL command.
128  !
129  !    V03-057 LMP0185         L. Mark Pilant,       1-Feb-1984  12:18
130  !            Add support for device ACLs.
131  !
132  !    V03-053 MCN0146         Maria del C. Nasr     1-Feb-1984
133  !            Add MESSAGE keyword to /ENABLE for SET ACCOUNTING
134  !
135  !    V03-052 MMD0230         Meg Dumont            1-Feb-1984
136  !            Add /PROTOCOL and values to SET TERMINAL
137  !
138  !    V03-051 EMD0042         Ellen M. Dusseault    31-Feb-1984
139  !            add /FALLBACK to SET PRINTER
140  !
141  !    V03-050 SHZ0001         Stephen H. Zalewski   03-Jan-1984
142  !            add /GENERATE to SET PASSWORD.
143  !
144  !      V03-049 AEW0002         Anne Warner          15-Dec-1983
145  !              Add /PROTECTION to SET FILE
146  !
147  !      V03-048 AEW0001         Anne Warner          08-Nov-1983
148  !              Add /UNLOCK to SET FILE
149  !
150  !    V03-047 GAS0175         Gerry Smith           30-Aug-1983
151  !            Add SET BROADCAST.
152  !
153  !    V03-046 PCG0016         Peter George          25-Aug-1983
154  !            Add SET HOST/SNA /CHARACTER_SET qualifier.
155  !
156  !    V03-045 MIR0083         Michael I. Rosenblum  23-Aug-1983
157  !            Add SYSPASSWORD to set terminal.
158  !
159  !    V03-044 BLS0232         Benn Schreiber        5-Aug-1983
160  !            Add SET TERM/PASTHRU, which was omitted
161  !
162  !    V03-043 MLJ0043         Martin L. Jack        29-Jul-1983
163  !            Enhance SET QUEUE.
164  !
165  !    V03-042 GAS0153         Gerry Smith           27-Jul-1983
166  !            Add SET AUDIT.
167  !
168  !    V03-041 PCG0015         Peter George          27-Jul-1983
```

```
169  !        Add SET HOST/BTS
170  !
171  !   V03-040 PCG0015         Peter George           21-Jun-1983
172  !        Change $PARENTHESIZED_VALUE to $ACL.
173  !
174  !   V03-039 PCG0014         Peter George           21-Jun-1983
175  !        Put $DELTATIME back in SET OUTPUT_RATE.
176  !
177  !   V03-038 GAS0139         Gerry Smith            17-Jun-1983
178  !        Add SET PASSWORD/SYSTEM.
179  !
180  !   V03-037 JLV0271         Jake VanNoy            14-JUN-1983
181  !        Add SET HOST/LOG=output_file
182  !
183  !   V03-036 PCG0013         Peter George           31-May-1983
184  !        Make SET OUTPUT_RATE work in build.
185  !
186  !   V03-035 MLJ0035         Martin L. Jack         27-May-1983
187  !        Change set host/old default.
188  !
189  !   V03-034 JLV0256         Jake VanNoy            26-May-1983
190  !        Change set host/old default.
191  !
192  !   V03-033 RSH0027         R. Scott Hanna         24-May-1983
193  !        Add SECURITY privilege
194  !
195  !   V03-032 LMP0117         L. Mark Pilant,        19-May-1983  10:48
196  !        Add the new command SET FILE/ACL.
197  !
198  !   V03-031 GAS0132         Gerry Smith            19-May-1983
199  !        Add HIGHWATER, ERASE_ON_DELETE, UNLOAD, and
200  !        MOUNT_VERIFICATION to SET VOLUME.  Also remove the
201  !        defaults for SET MESSAGE, since it makes more sense
202  !        to change the documentation than the way SET MESS works.
203  !
204  !   V03-030 PCG0012         Peter George           03-May-1983
205  !        Add SET OUTPUT_RATE, SET VERIFY=(PROCEDURE,IMAGE)
206  !
207  !   V03-029 PCG0011         Peter George           30-Apr-1983
208  !        Change SET PROMPT/CONTROL to /CARRIAGE_CONTROL.
209  !
210  !   V03-028 MIR0042         Michael I. Rosenblum   29-Apr-1983
211  !        Move importaint information to the top of the module
212  !
213  !   V03-027 MLJ0027         Martin L. Jack         27-Apr-1983
214  !        Changes for new QUEMAN image.
215  !
216  !   V03-026 GAS0127         Gerry Smith            27-Apr-1983
217  !        Make SET MESSAGE default to /FAC/ID/SEV/TEXT.
218  !
219  !   V03-025 KPL0001         Peter Lieberwirth      27-Apr-1983
220  !        Add qualifiers AI_JOURNAL, AT_JOURNAL, and BI_JOURNAL
221  !        to SET FILE to permit specification of journal names.
222  !        Remove EXPIRED qualifier from SET FILE for Gerry.
223  !
224  !   V03-024 PRB0175         Paul Beck         27-APR-1983 10:36:50
```

```
225             Add privileges TMPJNL and PRMJNL.
226
227   V03-023 MIR0035          Michael I. Rosenblum 18-Apr-1983
228             Add qualifiers DISMISS_PARITY, APPLICATIONS, NUMERIC
229             FRAME, add Vt200 support and associated qualifiers.
230
231   V03-022 PCG0010          Peter George    13-Apr-1983
232             Add SET RESTART_VALUE.
233
234   V03-021 GAS0116          Gerry Smith     12-Apr-1983
235             Add common qualifiers to SET FILE, SET DIRECTORY
236
237   V03-020 WMC0020          Wayne Cardoza   11-Apr-1983
238             Add SET PROC/DUMP
239
240   V03-019 GAS0112          Gerry Smith     29-Mar-1983
241             Add labels for the parts of set which are being
242             converted to the new CLI interface.
243
244   V03-018 PCG0009          Peter George    28-Mar-1983
245             Add SET KEY.
246             Delete MCR-specific statements.
247
248   V03-017 PCA1008          Paul C. Anagnostopoulos 25-Mar-1983
249             Replace definition of SET COMMAND for new CDU.
250             Make all necessary changes for new CDU.
251
252   V03-016 GAS0106          Gerry Smith     12-Mar-1983
253             Add five new privileges, as well as /LOG to
254             many new SET options.
255
256   V03-015 MLJ0015          Martin L. Jack  01-Mar-1983
257             Changes for new QUEMAN image.
258
259   V03-014 PCA1008          Paul C. Anagnostopoulos 11 Feb 1983
260             Add a comment about the equivalent CLD for MCR.
261
262   V03-013 JLV0229          Jake VanNoy     11-Feb-1983
263             Add temporary /OLD to SET HOST as a means of using
264             either protocol to remote node.
265
266   V03-012 PCA1008          Paul C. Anagnostopoulos 10 Feb 1983
267             Remove MCRIGNORE flag from SET_PROMPT syntax definition, as
268             the new CDU won't support it.
269
270   V03-011 GAS0105          Gerry Smith     27-Jan-1983
271             Add /LOG qualifier.
272
273   V03-010 MLJ0010          Martin L. Jack  01-Jan-1983
274             Changes for new QUEMAN image.
275
276   V03-009 PCG0008          Peter George    19-Nov-1982
277             Correct placement of PROMPT keyword.
278
279   V03-008 PCG0007          Peter George    14-Nov-1982
280             Set MCRIGNORE flag for SET PROMPT.
```

```
281   !
282   !       V03-007 PCG0006        Peter George    29-Oct-1982
283   !               Add SET PROMPT.  Fix SET TIME.
284   !
285   !       V03-006 PCG0005        Peter George    21-Oct-1982
286   !               Make SET PROTECTION work.
287   !
288   !       V03-005 DWT0061        David Thiel     20-Oct-1982
289   !               Use keywords for value of /CLI qualifier
290   !
291   !       V03-004 PCG0004        Peter George    19-Oct-1982
292   !               Correct spelling of SET CONTROL_Y keyword.
293   !               Copy previous parameter definitions into each
294   !               DEFINE SYNTAX statement.
295   !
296   !       V03-003 PCG0003        Peter George    06-Oct-1982
297   !               Correct placement of /PROTECTION and /DEFAULT
298   !               qualifiers to SET PROTECTION.  Put mcroptdelim
299   !               flag into cliflags construct.
300   !
301   !       V03-002 PCG0002        Peter George    03-Aug-1982
302   !               Add SET HOST/SNA
303   !
304   !       V03-001 PCG0001        Peter George    15-Jul-1982
305   !               Allow negated privileges
306   !
307   define type file_access_types
308           keyword all
309           keyword control
310           keyword delete
311           keyword execute
312           keyword read
313           keyword write
314
315   define type file_audit_types
316           keyword all
317           keyword bypass,       value(list,default=all,type=file_access_types)
318           keyword downgrade,    value(list,default=all,type=file_access_types)
319           keyword failure,      value(list,default=all,type=file_access_types)
320           keyword grpprv,       value(list,default=all,type=file_access_types)
321           keyword readall,      value(list,default=all,type=file_access_types)
322           keyword success,      value(list,default=all,type=file_access_types)
323           keyword sysprv,       value(list,default=all,type=file_access_types)
324           keyword upgrade,      value(list,default=all,type=file_access_types)
325
326   define type breakin_types
327           keyword all
328           keyword detached
329           keyword dialup
330           keyword local
331           keyword network
332           keyword remote
333
334   define type loginout_types
335           keyword all
336           keyword batch
```

```
337             keyword detached
338             keyword dialup
339             keyword local
340             keyword network
341             keyword remote
342             keyword subprocess
343
344     define type audit_types
345             keyword acl
346             keyword all
347             keyword authorization
348             keyword file_access,     value(required,list,type=file_audit_types)
349             keyword breakin,         value(required,list,type=breakin_types)
350             keyword logfailure,      value(required,list,type=loginout_types)
351             keyword login,           value(required,list,type=loginout_types)
352             keyword logout,          value(required,list,type=loginout_types)
353             keyword mount
354
355     define type keep_file
356             keyword recovery
357             keyword journal
358
359     define type mode_types
360             keyword prompt,          default,negatable
361
362     define type acl_objects
363             keyword file
364             keyword device
365             keyword queue
366             keyword event_cluster
367             keyword logical_name_table
368             keyword process
369             keyword global_section
370
371     define type skiptypes
372             keyword end_of_tape
373             keyword files,value
374             keyword blocks,value
375             keyword records,value
376
377     define type print_bft
378             keyword all,default
379             keyword one
380
381     define type defaults
382             keyword burst,negatable,value(type=print_bft)
383             keyword feed,negatable
384             keyword flag,negatable,value(type=print_bft)
385             keyword trailer,negatable,value(type=print_bft)
386
387     define type retain
388             keyword all,default
389             keyword error
390
391     define type protection
392             keyword system,value
```

```
393          keyword group,value
394          keyword owner,value
395          keyword world,value
396
397   define type control_keys
398          keyword t
399          keyword y
400
401   define type verify_keys
402          keyword procedure,negatable
403          keyword image,negatable
404
405   define type privileges
406          keyword acnt,negatable
407          keyword allspool,negatable
408          keyword altpri,negatable
409          keyword bugchk,negatable
410          keyword bypass,negatable
411          keyword cmexec,negatable
412          keyword cmkrnl,negatable
413          keyword detach,negatable
414          keyword diagnose,negatable
415          keyword downgrade,negatable
416          keyword exquota,negatable
417          keyword group,negatable
418          keyword grpnam,negatable
419          keyword grpprv,negatable
420          keyword log_io,negatable
421          keyword mount,negatable
422          keyword netmbx,negatable
423          keyword oper,negatable
424          keyword pfnmap,negatable
425          keyword phy_io,negatable
426          keyword prmceb,negatable
427          keyword prmgbl,negatable
428          keyword prmjnl,negatable
429          keyword prmmbx,negatable
430          keyword pswapm,negatable
431          keyword readall,negatable
432          keyword same,negatable
433          keyword security,negatable
434          keyword setprv,negatable
435          keyword share,negatable
436          keyword shmem,negatable
437          keyword syslck,negatable
438          keyword sysgbl,negatable
439          keyword sysnam,negatable
440          keyword sysprv,negatable
441          keyword tmpjnl,negatable
442          keyword tmpmbx,negatable
443          keyword upgrade,negatable
444          keyword volpro,negatable
445          keyword world,negatable
446
447   define type accounting_types
448          keyword batch
```

```
449              keyword interactive
450              keyword login_failure
451              keyword print
452              keyword process
453              keyword network
454              keyword image
455              keyword message
456              keyword detached
457              keyword subprocess
458
459      define type brdcst_types
460              keyword all
461              keyword none
462              keyword general,negatable
463              keyword phone,negatable
464              keyword mail,negatable
465              keyword queue,negatable
466              keyword shutdown,negatable
467              keyword urgent,negatable
468              keyword dcl,negatable
469              keyword opcom,negatable
470              keyword user1,negatable
471              keyword user2,negatable
472              keyword user3,negatable
473              keyword user4,negatable
474              keyword user5,negatable
475              keyword user6,negatable
476              keyword user7,negatable
477              keyword user8,negatable
478              keyword user9,negatable
479              keyword user10,negatable
480              keyword user11,negatable
481              keyword user12,negatable
482              keyword user13,negatable
483              keyword user14,negatable
484              keyword user15,negatable
485              keyword user16,negatable
486
487      define type journal_keywords
488              keyword ai,negatable,value
489              keyword at,negatable,value
490              keyword bi,negatable,value
491              keyword never_ru,negatable
492              keyword only_ru,negatable
493              keyword ru,negatable
494
495      define type schedule
496              keyword size,negatable
497
498      define type separate
499              keyword burst,negatable
500              keyword flag,negatable
501              keyword reset,negatable,value(required,list)
502              keyword trailer,negatable
503
504      define type protocol_types
```

```
505          keyword none
506          keyword ddcmp
507
508    define          type      psisetx29_int_brk
509          keyword action  negatable,value(type=psisetx29_action,required,list)
510                          label=psisetx29_action
511          keyword string  negatable,value(required),label=psisetx29_string
512
513    define          type      psisetx29_action
514          keyword purge   negatable,label=psisetx29_purge
515          keyword reset   negatable,label=psisetx29_reset
516          keyword clear   negatable,label=psisetx29_clear
517
518    define          type x29_param_type
519          keyword break,          label=x29_break,negatable,
520                                   value(type=$number,default=1)
521          keyword 7,               label=x29_break_n,
522                                   value(required,type=$number)
523          keyword crfill,          label=x29_crfill,negatable,
524                                   value(type=$number,default=1)
525          keyword 9,               label=x29_crfill_n,
526                                   value(required,type=$number)
527          keyword delete,          label=x29_delete,negatable,
528                                   value(type=$number,default=1)
529          keyword 16,              label=x29_delete_n,
530                                   value(required,type=$number)
531          keyword discard_output, label=x29_discard_output,negatable,
532                                   value(type=$number,default=1)
533          keyword 8,               label=x29_discard_output_n,
534                                   value(required,type=$number)
535          keyword echo,            label=x29_echo,negatable,
536                                   value(type=$number,default=1)
537          keyword 2,               label=x29_echo_n,
538                                   value(required,type=$number)
539          keyword edit,            label=x29_edit,negatable,
540                                   value(type=$number,default=1)
541          keyword 15,              label=x29_edit_n,
542                                   value(required,type=$number)
543          keyword escape_character, label=x29_escape,negatable,
544                                   value(type=$number,default=1)
545          keyword 1,               label=x29_escape_n,
546                                   value(required,type=$number)
547          keyword forwarding_characters, label=x29_forwarding,negatable,
548                                   value(type=$number,default=1)
549          keyword 3,               label=x29_forwarding_n,
550                                   value(required,type=$number)
551          keyword hostsync,        label=x29_hostsync,negatable,
552                                   value(type=$number,default=1)
553          keyword 5,               label=x29_hostsync_n,
554                                   value(required,type=$number)
555          keyword lffill,          label=x29_lffill,negatable,
556                                   value(type=$number,default=1)
557          keyword 14,              label=x29_lffill_n,
558                                   value(required,type=$number)
559          keyword line_delete,     label=x29_line_delete,negatable,
560                                   value(type=$number,default=1)
```

```
561         keyword 17,              label=x29_line_delete_n,
562                                 value(required,type=$number)
563         keyword messages,       label=x29_messages,negatable,
564                                 value(type=$number,default=1)
565         keyword 6,              label=x29_messages_n,
566                                 value(required,type=$number)
567         keyword new_line,       label=x29_new_line,negatable,
568                                 value(type=$number,default=1)
569         keyword 13,             label=x29_new_line_n,
570                                 value(required,type=$number)
571         keyword redisplay_line, label=x29_redisplay_line,negatable,
572                                 value(type=$number,default=1)
573         keyword 18,             label=x29_redisplay_line_n,
574                                 value(required,type=$number)
575         keyword speed,          label=x29_speed,negatable,
576                                 value(type=$number,default=1)
577         keyword 11,             label=x29_speed_n,
578                                 value(required,type=$number)
579         keyword timeout,        label=x29_timeout,negatable,
580                                 value(type=$number,default=1)
581         keyword 4,              label=x29_timeout_n,
582                                 value(required,type=$number)
583         keyword ttsync,         label=x29_ttsync,negatable,
584                                 value(type=$number,default=1)
585         keyword 12,             label=x29_ttsync_n,
586                                 value(required,type=$number)
587         keyword wrap,           label=x29_wrap,negatable,
588                                 value(type=$number,default=1)
589         keyword 10,             label=x29_wrap_n,
590                                 value(required,type=$number)
591
592 define syntax acledit
593         image acledt
594         parameter p1,label=option,value(required)
595         parameter p2,prompt="Object Name",value(required,type=$infile),label=input
596         qualifier journal,      default,value(type=$infile)
597         qualifier recover,      value(type=$infile)
598         qualifier keep,         value(list,type=keep_file)
599         qualifier mode,         default,value(type=mode_types)
600         qualifier object_type,  value(type=acl_objects)
601
602 define syntax set_accounting
603         parameter p1,label=option,value(required)
604         qualifier disable,      value(list,type=accounting_types)
605         qualifier enable,       value(list,type=accounting_types)
606         qualifier new_file
607         qualifier log
608
609 define syntax set_acl
610         image setshoacl
611         parameter p1,label=option,value(required)
612         parameter p2,prompt="Object",value(required),label=input
613         qualifier acl,          value(list,type=$acl)
614         qualifier after,        value(required,type=$acl)
615         qualifier backup
616         qualifier before,       value(default=today)
```

```
617         qualifier by_owner,     value(type=$uic)
618         qualifier confirm
619         qualifier created
620         qualifier default
621         qualifier delete
622         qualifier edit,         syntax=acledit,nonnegatable
623         qualifier exclude,      value(required,list)
624         qualifier expired
625         qualifier like,         value(required,type=set_acl_like)
626         qualifier log
627         qualifier modified
628         qualifier new
629         qualifier object_type,  value(type=acl_objects)
630         qualifier replace,      value(required,list,type=$acl)
631         qualifier since,        value(default=today)
632
633     define type set_acl_like
634         keyword object_name,    value(required)
635         keyword object_type,    value(required,type=acl_objects)
636
637     define type dial_keywords
638         keyword number,         value(required)
639         keyword modem_type,     value(default=DF03),default
640
641     define syntax set_audit
642         parameter p1,label=option,value(required)
643         disallow not alarm
644         disallow not enable and not disable
645         qualifier alarm,        nonnegatable
646         qualifier disable,      nonnegatable,value(required,list,type=audit_types)
647         qualifier enable,       nonnegatable,value(required,list,type=audit_types)
648         qualifier log           nonnegatable
649
650     define syntax set_broadcast
651         parameter p1,label=option,value(required,list,type=set_options)
652         noqualifiers
653
654     define syntax set_card_reader
655         parameter p1,label=option,value(required)
656         parameter p2,label=device,prompt="Device",value(required,type=$device)
657         qualifier 026
658         qualifier 029
659         qualifier log
660
661     define syntax set_cluster
662         qualifier quorum,       value,nonnegatable
663
664     define syntax set_control
665         parameter p1,label=option,value(required)
666         noqualifiers
667         cliroutine setctly
668
669     define syntax set_device
670         parameter p1,label=option,value(required)
671         parameter p2,label=file,prompt="Device",value(required,type=$device)
672         qualifier spooled,      value(list)
```

```
673            qualifier error_logging
674            qualifier available
675            qualifier dual_port
676            qualifier log
677            qualifier served
678      !     qualifier write
679      !     qualifier controller,   value(required)
680            qualifier diagnostic
681
682            qualifier acl,                   syntax=set_dev_acl,nonnegatable,
683                                             value(list,type=$acl)
684            qualifier after,                 value(required,type=$acl)
685            qualifier default
686            qualifier delete
687            qualifier edit,                  syntax=acledit,nonnegatable
688            qualifier like,                  value(required,type=$device)
689            qualifier new
690            qualifier replace,               value(required,list,type=$acl)
691      !     disallow (write or controller or neg write) and not served
692
693   define syntax set_dev_acl
694            image setshoacl
695            parameter p1,label=option,value(required)
696            parameter p2,prompt="Device",value(list,required,type=$infile),label=input
697
698   define syntax set_default
699            cliroutine setdefalt
700            parameter p1,label=option,value(required)
701            parameter p2,prompt="Directory",value(required,type=$directory)
702            noqualifiers
703
704   define syntax set_directory
705            parameter p1,label=option,value(required)
706            parameter p2,label=directory,prompt="Directory",value(list,required,impcat,type=$directory)
707            qualifier confirm
708            qualifier log
709            qualifier owner_uic,             value(type=$uic)
710            qualifier version_limit,         value
711            qualifier exclude,               value(required,list)
712            qualifier before,               value(default=today)
713            qualifier since,                value(default=today)
714            qualifier backup
715            qualifier created
716            qualifier modified
717            qualifier expired
718            qualifier by_owner,              value(type=$uic)
719            qualifier acl,                   syntax=set_dir_acl,
720                                             value(list,type=$acl),nonnegatable
721            qualifier after,                 value(required,type=$acl)
722            qualifier default
723            qualifier delete
724            qualifier edit,                  syntax=acledit,nonnegatable
725            qualifier like,                  value(required,type=$infile)
726            qualifier new
727            qualifier replace,               value(required,list,type=$acl)
728
```

```
729    define syntax set_dir_acl
730        image setshoacl
731        parameter p1,label=option,value(required)
732        parameter p2,prompt="Directory",value(list,required,type=$infile),label=input
733
734    define syntax set_file
735        parameter p1,label=option,value(required)
736        parameter p2,label=file,prompt="File",value(list,impcat,required,type=$infile)
737        qualifier backup
738        qualifier confirm
739        qualifier data_check,          value(list)
740        qualifier end_of_file,
741        qualifier enter                value(required,type=$infile)
742        qualifier erase_on_delete
743        qualifier expiration_date,      value(required,type=$datetime)
744        qualifier extension,            value
745        qualifier global_buffers,       value(required)
746 !**JNL**      qualifier journal,              value(required,list,
747 !**JNL**                                      type=journal_keywords),nonnegatable
748        qualifier log
749        qualifier nodirectory
750        qualifier owner_uic,           value(type=$infile)
751        qualifier record_protection,    value
752        qualifier truncate
753        qualifier remove
754        qualifier version_limit,        value
755        qualifier exclude,             value(required,list)
756        qualifier before,              value(default=today)
757        qualifier since,               value(default=today)
758        qualifier created
759        qualifier modified
760        qualifier by_owner,            value(type=$uic)
761        qualifier acl,                 syntax=set_file_acl,
762                                        value(list,type=$acl),nonnegatable
763        qualifier after,               value(required,type=$acl)
764        qualifier default
765        qualifier delete
766        qualifier edit,                syntax=acledit,nonnegatable
767        qualifier like,                value(required,type=$infile)
768        qualifier new
769        qualifier replace,             value(required,list,type=$acl)
770        qualifier unlock,
771        qualifier protection,          value(list,type=protection)
772
773    define syntax set_file_acl
774        image setshoacl
775        parameter p1,label=option,value(required)
776        parameter p2,prompt="File",value(list,required,type=$infile),label=input
777
778    define syntax set_output_rate
779        cliroutine setflush
780        parameter p1,label=option,value(required,type=set_options)
781
782    define syntax set_host_bts
783        image btslnk
784        qualifier exit_key,     label=exitkey,nonnegatable,value(required)
```

```
785
786     define syntax set_host_hsc
787             image hscpad
788             noqualifiers
789
790     define syntax set_host_sna
791             image   snaterm
792             qualifier access_name,    label=snaterm_access_name,
793                               value(required),nonnegatable,placement=global
794             qualifier session_address, label=snaterm_session_addr,
795                               value(required),nonnegatable,placement=global
796             qualifier circuit,        label=snaterm_circuit,
797                               value(required),nonnegatable,placement=global
798             qualifier application_name, label=snaterm_appl_name,
799                               value(required),nonnegatable,placement=global
800             qualifier logon_mode,     label=snaterm_logon_mode,
801                               value(required),nonnegatable,placement=global
802             qualifier user_name,      label=snaterm_user_name,
803                               value(required),nonnegatable,placement=global
804             qualifier data,           label=snaterm_data,
805                               value(required),nonnegatable,placement=global
806             qualifier password,       label=snaterm_password,
807                               value(required),nonnegatable,placement=global
808             qualifier printer,        label=snaterm_printer,
809                               value(required,type=$outfile),
810                               nonnegatable,placement=global
811             qualifier wait,           label=snaterm_wait,placement=global
812             qualifier character_set,label=snaterm_character_set,
813                               value(required,type=$infile),nonnegatable
814
815     define        syntax set_host_x29
816             image psipad
817             parameter p1,             label=option,value(required)
818             parameter p2,             label=psipad_dte,prompt="Node",value(required)
819             qualifier ccitt,          label=psipad_ccitt,syntax=set_host_x29_ccitt,
820                               nonnegatable
821             qualifier closed_user_group, label=psipad_cug,nonnegatable,value
822             qualifier default_escape_character, label=psipad_dle,default,
823                               value(default=P)
824             qualifier facilities,     label=psipad_facilities,
825                               value(required,list,type=$number)
826             qualifier fast_select,    label=psipad_fast_select
827             qualifier local_dte,      label=psipad_local_dte,value(required)
828             qualifier log,            label=psipad_log,
829                               value(type=$outfile,default=PSIPAD.LOG)
830             qualifier packet_size,    label=psipad_packet_size,
831                               value(type=$number,required)
832             qualifier parameters,     label=psipad_parameters,
833                               value(type=x29_param_type,list,required)
834             qualifier profile,        label=psipad_profile,value(required,list)
835             qualifier protocol_identifier, label=psipad_protocol_id,nonnegatable,
836                               value(required)
837             qualifier reverse_charging, label=psipad_reverse
838             qualifier statistics,     label=psipad_statistics,default
839             qualifier subaddress,     label=psipad_subaddress,value(required)
840             qualifier thruput_class, label=psipad_thruput_class,
```

```
841                                value(required,type=$number)
842         qualifier user_data,    label=psipad_user_data,value(required)
843         qualifier vms_mode,     label=psipad_vms_mode
844         qualifier window_size,  label=psipad_window_size,
845                                value(required,type=$number)
846         disallow psipad_parameters.x29_speed
847         disallow psipad_parameters.x29_speed_n
848
849 define         syntax set_host_x29_ccitt
850         parameter p1,           label=option,value(required)
851         parameter p2,           label=psipad_dte,prompt="Node"
852         disallow <set_host_x29>psipad_parameters.x29_speed
853         disallow <set_host_x29>psipad_parameters.x29_speed_n
854         disallow not psipad_dte and (
855                        <set_host_x29>psipad_cug or
856                        <set_host_x29>psipad_facilities or
857                        <set_host_x29>psipad_fast_select or
858                        <set_host_x29>psipad_local_dte or
859                        <set_host_x29>psipad_packet_size or
860                        <set_host_x29>psipad_protocol_id or
861                        <set_host_x29>psipad_reverse or
862                        <set_host_x29>psipad_subaddress or
863                        <set_host_x29>psipad_thruput_class or
864                        <set_host_x29>psipad_user_data or
865                        <set_host_x29>psipad_window_size )
866
867 define syntax set_host
868         image rtpad
869         parameter p1,label=option,value(required)
870         parameter p2,prompt="Node",value(required,type=$node),
871                        label=node
872         qualifier sna,          nonnegatable,syntax=set_host_sna
873         qualifier bts,          nonnegatable,syntax=set_host_bts
874         qualifier old,          label=old
875         qualifier log,          label=log,
876                                value(default=SETHOST.LOG,type=$outfile)
877         qualifier dte,          label=dte
878         qualifier dial,         value(list,type=dial_keywords)
879         qualifier hsc,          nonnegatable,syntax=set_host_hsc
880         qualifier x29,          nonnegatable,syntax=set_host_x29
881
882 define syntax set_key
883         prefix cli$k_stky_
884         cliroutine setkey
885         qualifier state,value(required)
886         qualifier log
887
888 define syntax set_logins
889         parameter p1,label=option,value(required)
890         qualifier interactive,  value
891
892 define syntax set_magtape
893         parameter p1,label=option,value(required)
894         parameter p2,label=device,prompt="Device",value(required,type=$device)
895         qualifier density,      value(required)
896         qualifier rewind
```

```
897          qualifier unload
898          qualifier logsoft
899          qualifier log
900          qualifier end_of_file,
901          qualifier skip,              value(required,type=skiptypes)
902
903    define syntax set_message
904          image setp0
905          parameter p1,label=option,value(required)
906          parameter p2,label=file,prompt="File",value(type=$infile)
907          qualifier delete,
908          qualifier facility
909          qualifier ident
910          qualifier severity
911          qualifier text
912          qualifier language,         value(required)
913
914    define syntax set_on
915          cliroutine seton
916          parameter p1,label=option,value(required)
917          noqualifiers
918
919    define syntax set_password
920          image setp0
921          parameter p1,label=option,value(required)
922          qualifier generate          value(type=$number)
923          qualifier secondary
924          qualifier system
925
926          disallow  secondary and system
927
928    define syntax set_printer
929          parameter p1,label=option,value(required)
930          parameter p2,label=device,prompt="Device",value(required,type=$device)
931          qualifier cr
932          qualifier ff
933          qualifier uppercase
934          qualifier lowercase
935          qualifier la11              nonnegatable
936          qualifier la180             nonnegatable
937          qualifier lp11              nonnegatable
938          qualifier page,             default,value,nonnegatable
939          qualifier unknown           nonnegatable
940          qualifier width,            default,value,nonnegatable
941          qualifier passall
942          qualifier fallback
943          qualifier davfu
944          qualifier form_unit
945          qualifier wrap
946          qualifier printall
947          qualifier log
948          qualifier truncate
949          qualifier tab
950          qualifier sixels
951          qualifier bitmapped
952
```

```
953    define syntax set_process
954            parameter p1,label=option,value(required)
955            parameter p2,label=process,prompt="Process",value(type=$process)
956            qualifier identification,value(required)
957            qualifier priority,      value(required)
958            qualifier resource_wait
959            qualifier swapping
960            qualifier privileges,    value(list,required,type=privileges)
961            qualifier suspend
962            qualifier resume,
963            qualifier name,          value(required)
964            qualifier log
965            qualifier dump
966
967    define syntax set_prompt
968            cliroutine setprompt
969            parameter p1,label=option,value
970            qualifier carriage_control
971
972    define syntax set_def_prot
973            cliroutine setprot
974            prefix cli$k_stpr
975            parameter p1,label=option,value(required)
976            qualifier default
977
978    define syntax set_protection
979            parameter p1,label=option,value(required,type=set_options)
980            parameter p2,label=file,prompt="File",value(list,required,impcat,type=$infile)
981            qualifier default,        syntax=set_def_prot,nonnegatable
982            qualifier protection,     placement=local,
983                                      value(list,type=protection,required)
984            qualifier device
985            qualifier owner_uic,      value(type=$uic)
986            qualifier confirm
987            qualifier log
988
989    define syntax set_queue
990            image queman
991            parameter p1,label=option,value(required,type=set_options)
992            parameter p2,prompt="Queue",value(required)
993            qualifier after,          value(required,type=$datetime)
994            qualifier base_priority,value(required)
995            qualifier block_limit,  value(list)
996            qualifier burst
997            qualifier characteristics,value(required,list)
998            qualifier checkpoint,    default
999            qualifier cli,            value(required)
1000           qualifier copies,         value(required)
1001           qualifier cpudefault,     value(required)
1002           qualifier cpumaximum,     value(required)
1003           qualifier cputime,        value(required)
1004           qualifier default,        value(required,list,type=defaults)
1005           qualifier delete
1006           qualifier disable_swapping
1007           qualifier enable_generic
1008           qualifier entry,          value(required)
```

```
1009          qualifier feed
1010          qualifier flag
1011          qualifier form,          value(required)
1012          qualifier header
1013          qualifier hold
1014          qualifier job_,          value(required) ! collision: job_count, job_limit
1015          qualifier keep
1016          qualifier log_file,       value(required)
1017          qualifier lowercase
1018          qualifier name,          value(required)
1019          qualifier note,          value(required)
1020          qualifier notify
1021          qualifier operator,       value(required)
1022          qualifier owner_uic,      value(required,type=$uic)
1023          qualifier pages,          value(list)
1024          qualifier parameters,     value(required,list)
1025          qualifier passall
1026          qualifier printer,        value(required)
1027          qualifier priority,       value(required)
1028          qualifier protection,     value(required,list,type=protection)
1029          qualifier release
1030          qualifier requeue,        value(required)
1031          qualifier restart
1032          qualifier retain,         value(type=retain)
1033          qualifier schedule,       value(required,list,type=schedule)
1034          qualifier separate,       value(required,list,type=separate)
1035          qualifier setup,          value(required,list)
1036          qualifier space
1037          qualifier trailer
1038          qualifier wsdefault,      value(required)
1039          qualifier wsextent,       value(required)
1040          qualifier wsquota,        value(required)
1041
1042   define syntax set_restart_value
1043          image queman
1044          parameter p1,label=option,value(required,type=set_options)
1045
1046   define syntax set_rms_default
1047          parameter p1,label=option,value(required)
1048          qualifier block_count,    value(required)
1049          qualifier buffer_count,  value(required)
1050          qualifier disk
1051          qualifier magtape
1052          qualifier unit_record
1053          qualifier hash
1054          qualifier indexed
1055          qualifier relative
1056          qualifier sequential
1057          qualifier system
1058          qualifier space_holder
1059          qualifier prologue,       value(required)
1060          qualifier extend_quantity,value(required)
1061          qualifier network_block_count,value(required)
1062
1063   define syntax set_terminal
1064          parameter p1,label=option,value(required)
```

```
1065            parameter p2,label=device,prompt="Device",value(type=$device)
1066            qualifier application_keypad
1067            qualifier broadcast
1068            qualifier crfill,           value
1069            qualifier dismiss_parity
1070            qualifier echo
1071            qualifier eight_bit
1072            qualifier escape
1073            qualifier hardcopy
1074            qualifier hold_screen
1075            qualifier hostsync
1076            qualifier interactive
1077            qualifier la36              nonnegatable
1078            qualifier lffill,           value
1079            qualifier form
1080            qualifier frame,            value,nonnegatable
1081            qualifier lowercase
1082            qualifier numeric_keypad
1083            qualifier page,             value
1084            qualifier passall
1085            qualifier la120             nonnegatable
1086            qualifier scope
1087            qualifier scribe
1088            qualifier speed,            value(required,list)
1089            qualifier tab
1090            qualifier ttsync
1091            qualifier typeahead
1092            qualifier unknown           nonnegatable
1093            qualifier uppercase
1094            qualifier vt05              nonnegatable
1095            qualifier vt52              nonnegatable
1096            qualifier vt55              nonnegatable
1097            qualifier width,            value
1098            qualifier wrap
1099            qualifier parity,           value
1100            qualifier readsync
1101            qualifier permanent         nonnegatable
1102            qualifier vt100             nonnegatable
1103            qualifier ft1               nonnegatable
1104            qualifier ft2               nonnegatable
1105            qualifier ft3               nonnegatable
1106            qualifier ft4               nonnegatable
1107            qualifier ft5               nonnegatable
1108            qualifier ft6               nonnegatable
1109            qualifier ft7               nonnegatable
1110            qualifier ft8               nonnegatable
1111            qualifier fulldup
1112            qualifier halfdup
1113            qualifier local_echo
1114            qualifier autobaud
1115            qualifier hangup
1116            qualifier brdcstmbx
1117            qualifier dma
1118            qualifier altypeahd
1119            qualifier ansi_crt
1120            qualifier regis
```

```
1121            qualifier block_mode
1122            qualifier advanced_video
1123            qualifier xon               nonnegatable
1124            qualifier device_type       value(required),nonnegatable
1125            qualifier modem
1126            qualifier inquire           nonnegatable
1127            qualifier dec_crt,          value(list)
1128            qualifier edit
1129            qualifier set_speed
1130            qualifier line_edit
1131            qualifier disconnect
1132            qualifier fallback
1133            qualifier dialup
1134            qualifier insert_editing
1135            qualifier printer_port
1136            qualifier secure_server
1137            qualifier sixel
1138            qualifier soft_characters
1139            qualifier overstrike
1140            qualifier log
1141            qualifier pasthru
1142            qualifier syspassword
1143            qualifier protocol          value(required,type=protocol_types),nonnegatable
1144            qualifier x29,              nonnegatable,syntax=set_term_x29
1145
1146    define      syntax  set_term_x29
1147            image   psisetx29
1148            parameter       p1,     label=option,value(required)
1149            parameter       p2,     label=device,prompt="Device",value(type=$device)
1150            qualifier       hold_timer,     value(type=$number,required)
1151                            label=psisetx29_hold_timer
1152            qualifier       interrupt,      value(type=psisetx29_int_brk,list,
1153                                    required),
1154                                    label=psisetx29_interrupt
1155            qualifier       break,          value(type=psisetx29_int_brk,list,
1156                                    required),
1157                                    label=psisetx29_break
1158            qualifier       parameters,     label=psisetx29_parameters
1159                            value(type=x29_param_type,list,required)
1160            qualifier       network_specific label=psisetx29_network_specific
1161                            value(list,required)
1162            qualifier       permanent,      label=psisetx29_permanent,nonnegatable
1163            qualifier       log,            label=psisetx29_log
1164
1165    define syntax set_uic
1166            cliroutine setuic
1167            parameter p1,label=option,value(required)
1168            parameter p2,prompt="UIC",value(required,type=$uic)
1169            noqualifiers
1170
1171    define syntax set_verify
1172            cliroutine setverify
1173            parameter p1,label=option,value(required,type=set_options)
1174            disallow (not verify and (verify.procedure or verify.image))
1175
1176    define syntax set_volume
```

```
1177          parameter p1,label=option,value(required)
1178          parameter p2,label=volume,prompt="Volume",value(required,type=$infile)
1179          qualifier accessed,            value
1180          qualifier data_check,          value(list)
1181          qualifier erase_on_delete
1182          qualifier extension,           value
1183          qualifier file_protection,     value(type=protection,list,required)
1184          qualifier highwater_marking
1185          qualifier label,               value(required)
1186          qualifier log
1187          qualifier mount_verification
1188          qualifier owner_uic,           value(type=$uic)
1189          qualifier protection,          value(type=protection,list,required)
1190          qualifier rebuild
1191          qualifier retention,           value(list,required)
1192          qualifier unload
1193          qualifier user_name,           value
1194          qualifier windows,             value
1195
1196  define syntax set_working_set
1197          parameter p1,label=option,value(required)
1198          qualifier limit,          value(required)
1199          qualifier quota,          value(required)
1200          qualifier extent,         value(required)
1201          qualifier adjust
1202          qualifier log
1203
1204  define syntax set_day
1205          parameter p1,label=option,value(required)
1206          qualifier primary
1207          qualifier secondary
1208          qualifier default
1209
1210  ! The following definitions comprise the SET COMMAND command, which is used
1211  ! to compile and manipulate command definition (CLD) files and their
1212  ! associated CLI tables.
1213
1214  define type cli_names
1215          keyword dcl,label=cli_dcl,default
1216          keyword mcr,label=cli_mcr
1217
1218  define syntax set_command
1219          image cdu
1220          parameter p1,label=option,value(required)
1221          parameter p2,label=cld_spec,prompt="CLD File(s)",value(list,type=$infile)
1222          qualifier delete,value(required,list)
1223          qualifier object,value(type=$outfile)
1224          qualifier replace,default
1225          qualifier symbols,value(required,type=$outfile)
1226          qualifier cli,default,nonnegatable,value(required,type=cli_names)
1227          qualifier listing,value(type=$outfile)
1228          qualifier log
1229          qualifier output,default,value(type=$outfile)
1230          qualifier tables,default,value(type=$infile)
1231          disallow (any2(delete,object,replace,symbols))
1232          disallow (listing and (delete or symbols))
```

```
1233
1234     define syntax no_parameter
1235          parameter p1,label=option,value(required,type=set_options)
1236          noqualifiers
1237
1238     define type set_options
1239          keyword accounting,     syntax=set_accounting
1240          keyword acl,            syntax=set_acl
1241          keyword audit,          syntax=set_audit
1242          keyword broadcast,      syntax=set_broadcast,
1243                                  value(list,required,type=brdcst_types)
1244          keyword card_reader,    syntax=set_card_reader
1245          keyword cluster,        syntax=set_cluster
1246          keyword device,         syntax=set_device
1247          keyword default,        syntax=set_default
1248          keyword directory,      syntax=set_directory
1249          keyword file,           syntax=set_file
1250          keyword logins,         syntax=set_logins
1251          keyword magtape,        syntax=set_magtape
1252          keyword on,             syntax=set_on,negatable
1253          keyword password,       syntax=set_password
1254          keyword printer,        syntax=set_printer
1255          keyword process,        syntax=set_process
1256          keyword protection,     syntax=set_protection,
1257                                  value(list,type=protection)
1258          keyword queue,          syntax=set_queue
1259          keyword terminal,       syntax=set_terminal
1260          keyword uic,            syntax=set_uic
1261          keyword verify,         syntax=set_verify,negatable,
1262                                  value(list,type=verify_keys)
1263          keyword volume,         syntax=set_volume
1264          keyword working_set,    syntax=set_working_set
1265          keyword rms_default,    syntax=set_rms_default
1266          keyword control_y,      syntax=set_control,negatable,
1267                                  value(list,type=control_keys)
1268          keyword time,           syntax=no_parameter,value
1269          keyword host,           syntax=set_host
1270          keyword message,        syntax=set_message
1271          keyword command,        syntax=set_command
1272          keyword day,            syntax=set_day
1273          keyword prompt,         syntax=set_prompt,value
1274          keyword key,            syntax=set_key
1275          keyword restart_value,  syntax=set_restart_value,value
1276          keyword output_rate,    syntax=set_output_rate,value(type=$deltatime)
1277
1278     define verb set
1279          parameter p1,label=option,prompt="What",
1280                          value(required,type=set_options)
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

```
 1   Version:    'V04-000'
 2
 3       V03-034 AEW0003          Anne E. Warner          20-Jul-1984
 4   |       Change SHOW MSCP to be SHOW DEVICE/SERVED.  Add syntax
 5   |       show_served pointed to by qualifier 'served' in
 6   |       show_device.  Show_served has the following qualifiers:
 7   |           1.  ALL
 8   |           2.  COUNT
 9   |           3.  HOST
10   |           4.  RESOURCE
11   |           5.  OUTPUT
12
13       V03-034 MCN0173          Maria del C. Nasr       25-Jun-1984
14   |       Make the /OUTPUT qualifier default to SYS$OUTPUT.
15
16
17       V03-033 AEW0002          Anne E. Warner          27-Apr-1984
18   |       Add keyword MSCP to show Mass Storage devices.  This
19   |       keyword has the qualifiers:
20   |           1.  COUNT
21   |           2.  HOST
22   |           3.  RESOURCE
23   |           4.  UNITS
24   |           5.  OUTPUT
25
26       V03-032 HWS0020          Harold Schultz          10-Apr-1984
27   |       Add qualifier /LOG to SHOW KEY.
28
29       V03-031 LMP0217          L. Mark Pilant,         24-Mar-1984  22:21
30   |       Change all references to SHOWACL to SETSHOACL.
31
32         V03-030       PCG0010       Peter George          14-Mar-1984
33   |       Change default value of SHOW QUEUE/OUTPUT.
34   |       Make SHOW KEY/DIR and /FULL mutually exclusive.
35   |       Add SHOW SYMBOL/LOG.
36   |       Update SHOW LOGICAL command.
37
38       V03-029 HWS0019          Harold Schultz          06-Mar-1984
39   |       Integrate in SHOW TERM/X29
40
41        V03-028 PCG0009                Peter George           29-Feb-1984
42   |       Add /OUTPUT qualifier to SHOW QUEUE.
43
44       V03-025 PRD0068          Paul R. DeStefano       28-Feb-1984
45   |       Change SHOW CLUSTER/INTERVAL=deltatime to
46   |       /INTERVAL=seconds.  Limit values on /REPORT=
47   |       to CLUSTER, LOCAL_PORTS, and CYCLE.
48
49        V03-026 PCG0008                Peter George           27-Feb-1984
50   |       Add /FULL qualifier to SHOW KEY.
51
52       V03-025 MCN0152          Maria del C. Nasr       23-Feb-1984
53   |       Disallow /CONTINUOUS and /OUTPUT qualifiers for
54   |       SHOW PROCESS.
55
56         V03-024 AEW0001          Anne E. Warner  02-Feb-1984
```

```
57  !         Add qualifier /FULL  to SHOW SYSTEM.
58  !
59  !   V03-023 LMP0185          L. Mark Pilant,          1-Feb-1984  13:53
60  !           Add support for device ACLs.
61  !
62  !   V03-022 TMK0001          Todd M. Katz   18-Oct-1983
63  !           Change which SHOW LOGICAL qualifiers are mutually
64  !           exclusive. Also, change the spelling of the qualifier
65  !           descendents to descendants.
66  !
67  !   V03-021 KFH0003          Ken Henderson  22 Sep 1983
68  !           Mods to support generized table handling in
69  !           SHOW LOGICAL.
70  !
71  !   V03-020 GAS0175          Gerry Smith    30-Aug-1983
72  !           Add SHOW BROADCAST, as well as /OUTPUT where
73  !           possible.
74  !
75  !   V03-019 PCG0007          Peter George   17-Aug-1983
76  !           Remove SHOW XTRANSLATION.
77  !
78  !   V03-018 GAS0154          Gerry Smith    25-Jul-1983
79  !           Add SHOW AUDIT.
80  !
81  !   V03-017 KFH0002          Ken Henderson  21 Jul 1983
82  !           Modify SHOW LOGICAL.
83  !
84  !   V03-016 MAJ0001          Melanie Johnson 23-Jun-1983
85  !           Remove mcrignore flag from SHOW XTRAN.
86  !
87  !   V03-015 MLJ0115          Martin L. Jack  23-Jun-1983
88  !           Update SHOW QUEUE.
89  !
90  !   V03-014 KFH0001          Ken Henderson  16 Jun 1983
91  !           Modify SHOW LOGICAL.
92  !
93  !   V03-013 PCG0006          Peter George   27-May-1983
94  !           Add SHOW XTRAN.
95  !
96  !   V03-012 MLJ0012          Martin L. Jack  27-May-1983
97  !           Changes for new QUEMAN image.
98  !
99  !   V03-011 PCG0005          Peter George   13-Apr-1983
100 !           Add SHOW KEY/BRIEF/DIRECTORY.
101 !
102 !   V03-010 PRD0010          Paul DeStefano 28-Mar-1983
103 !           Added qualifiers to SHOW CLUSTER command.
104 !
105 !   V03-009 PCG0004          Peter George   28-Mar-1983
106 !           Add SHOW KEY.
107 !           Uncomment NOSTATs.
108 !
109 !   V03-008 PCA1008          Paul C. Anagnostopoulos 25-Mar-1983
110 !           Make all necessary changes for new CDU.
111 !
112 !   V03-007 PCG0003          Peter George   02-Mar-1983
```

```
113     !          Comment out NOSTATs for now.
114     !
115     !    V03-006 PCG0002         Peter George    24-Feb-1983
116     !          Set NOSTAT bit in SHOW STATUS and SHOW SYMBOL.
117     !
118     !    V03-005 PRD0007         Paul DeStefano   2-Feb-1983
119     !          Added SHOW CLUSTER command.
120     !          Removed all PREFIX statements.
121     !
122     !    V03-004 GAS0101         Gerry Smith     13-Jan-1983
123     !          Complete GAS0099.
124     !
125     !    V03-003 GAS0099         Gerry Smith      7-Jan-1983
126     !          Changes for the new SHOW image.
127     !
128     !    V03-002 MLJ0002         Martin L. Jack  01-Jan-1983
129     !          Changes for new QUEMAN image.
130     !
131     !    V03-001 PCG0001         Peter George    19-Oct-1982
132     !          Copy previous parameter definitions into each
133     !          DEFINE SYNTAX statement.  Change SHOW DEVICE to
134     !          SHOW DEVICES.
135     !
136
137     define type acl_objects
138          keyword file
139          keyword device
140          keyword queue
141          keyword event_cluster
142          keyword logical_name_table
143          keyword process
144          keyword global_section
145
146
147     define type acmode
148          keyword user_mode
149          keyword supervisor_mode
150          keyword executive_mode
151          keyword kernel_mode
152
153     define syntax show_acl
154          image setshoacl
155          parameter p1,label=option,value(required)
156          parameter p2,label=input,prompt="Object name",value(required)
157          qualifier object_type,  value(required,type=acl_objects)
158
159     define syntax show_broad
160          parameter p1,label=option,value(required)
161          qualifier output,       default,value(type=$file,default="SYS$OUTPUT")
162
163     define syntax show_cpu
164          image mp
165          parameter p1,label=option,value(required)
166          noqualifiers
167
168     define syntax show_daytime
```

```
169         cliroutine showtime
170         parameter p1,label=option,value(required)
171         noqualifiers
172
173 define syntax show_default
174         cliroutine showdef
175         parameter p1,label=option,value(required)
176         noqualifiers
177
178 define syntax show_all_keys
179         parameter p1,label=option,value(required)
180
181 define syntax show_all_states
182         parameter p1,label=option,value(required)
183
184 define syntax show_key
185         prefix cli$k_shky_
186         cliroutine showkey
187         parameter p1,label=option,value(required)
188         parameter p2,prompt="Key name",value(required)
189         qualifier all,syntax=show_all_keys
190         qualifier state,value(required,list)
191         qualifier brief
192         qualifier directory,syntax=show_all_states
193         qualifier full
194         qualifier log
195         disallow directory and (brief or state or all or full)
196
197 define syntax show_logical
198         parameter p1,label=option,value(required)
199         parameter p2,label=logname,prompt="Logical name",value(list,type=$inlog)
200         qualifier output,          default,value(type=$file,default="SYS$OUTPUT")
201         qualifier system
202         qualifier group
203         qualifier process
204         qualifier job
205         qualifier all
206         qualifier table,value(list,required)
207         qualifier descendants
208         qualifier structure
209         qualifier access_mode,value(required,type=acmode)
210         qualifier full
211         disallow structure and
212             (system or group or job or process or table or descendants)
213
214 define syntax show_protection
215         cliroutine showprot
216         parameter p1,label=option,value(required)
217         noqualifiers
218
219 define syntax show_queue
220         image queman
221         parameter p1,label=option,value(required)
222         parameter p2,prompt="Queue",value(default="*")
223         qualifier all
224         qualifier batch
```

```
225          qualifier brief
226          qualifier characteristics
227          qualifier device
228          qualifier files
229          qualifier forms
230          qualifier full
231          qualifier output,       default,value(default="SYS$OUTPUT",type=$file)
232
233    define syntax show_all_symbols
234          parameter p1,label=option,value(required)
235
236    define syntax show_symbol
237          cliroutine showsymbl
238          prefix cli$k_shsy
239          cliflags(nostatus)
240          parameter p1,label=option,value(required)
241          parameter p2,prompt="Symbol",value(required,type=$insym)
242          qualifier global,       placement=positional
243          qualifier local,        placement=positional
244          qualifier all,          placement=positional,syntax=show_all_symbols
245          qualifier log
246
247    define syntax show_translation
248          cliroutine showtran
249          parameter p1,label=option,value(required)
250          parameter p2,prompt="Log_name",value(required,type=$inlog)
251          qualifier table,value(required)
252
253    define syntax show_served
254              parameter p1,label=option,value(required)
255          qualifier output,       default,value(type=$file,default="SYS$OUTPUT")
256          qualifier all,
257          qualifier count,
258          qualifier host,
259          qualifier resource,
260          qualifier served,       default,nonnegatable    ! 'served' is here
261                                  !because the code for show_device and show_served
262                                  !is different.  When the show_device code is
263                                  !entered the syntax being used is the show_served
264                                  !syntax but all of the qualifiers are different
265                                  !so it won't work.  The solution is to add the
266                                  !qualifier 'served' and have the show-device
267                                  !check for it first and to branch to the
268                                  !show_syntax code where this syntax will work.
269                                  !At this point 'served'is always present so it
270                                  !is 'default' and it is 'nonnegatable' to someone
271                                  !can't mess everything up by saying 'noserved'.
272
273    define syntax show_device
274          parameter p1,label=option,value(required)
275          parameter p2,label=device,prompt="Device",value(type=$device)
276          qualifier output,       default,value(type=$file,default="SYS$OUTPUT")
277          qualifier allocated,
278          qualifier brief
279          qualifier full
280          qualifier mounted
```

```
281          qualifier files
282          qualifier system
283          qualifier windows
284          qualifier served,          nonnegatable,syntax=show_served
285          disallow served and (allocated or brief or full or mounted or files or
286              system or windows)
287
288     define syntax show_status
289          cliroutine showstat
290          cliflags(nostatus)
291          parameter p1,label=option,value(required)
292          noqualifiers
293
294     define syntax show_process
295          parameter p1,label=option,value(required)
296          parameter p2,label=process,prompt="Process",value(type=$process)
297          qualifier output,          default,value(type=$file,default="SYS$OUTPUT")
298          qualifier quotas              nonnegatable
299          qualifier accounting          nonnegatable
300          qualifier privileges          nonnegatable
301          qualifier memory              nonnegatable
302          qualifier subprocesses         nonnegatable
303          qualifier identification      value(required),nonnegatable
304          qualifier continuous          nonnegatable
305          qualifier all                 nonnegatable
306          disallow continuous and output
307
308     define syntax show_system
309          parameter p1,label=option,value(required)
310          qualifier output,        default,value(type=$file,default="SYS$OUTPUT")
311          qualifier process,       default,nonnegatable
312          qualifier batch          nonnegatable
313          qualifier subprocess     nonnegatable
314          qualifier network        nonnegatable
315            qualifier full           nonnegatable
316
317     define syntax show_terminal
318          parameter p1,label=option,value(required)
319          parameter p2,label=device,prompt="Device",value(type=$device)
320          qualifier output,        default,value(type=$file,default="SYS$OUTPUT")
321          qualifier permanent      nonnegatable
322          qualifier x29,           syntax=show_term_x29
323
324     define       syntax   show_term_x29
325          image    psishowx29
326
327     define syntax show_printer
328          parameter p1,label=option,value(required)
329          parameter p2,label=device,prompt="Device",value(required,type=$device)
330          qualifier output,        default,value(type=$file,default="SYS$OUTPUT")
331
332     define syntax show_magtape
333          parameter p1,label=option,value(required)
334          parameter p2,label=device,prompt="Device",value(required,type=$device)
335          qualifier output,        default,value(type=$file,default="SYS$OUTPUT")
336
```

```
337    define syntax show_quota
338           cliroutine showquota
339           prefix cli$k_shqo
340           parameter p1,label=option,value(required)
341           qualifier disk,          default,value(type=$device)
342           qualifier user,          value(required,type=$uic)
343
344    define syntax show_memory
345           parameter p1,label=option,value(required)
346           qualifier output,                  default,value(type=$file,default="SYS$OUTPUT")
347           qualifier physical_memory          nonnegatable
348           qualifier slots                    nonnegatable
349           qualifier pool                     nonnegatable
350           qualifier files                    nonnegatable
351           qualifier full                     nonnegatable
352           qualifier all                      nonnegatable
353
354    define syntax show_error
355           parameter p1,label=option,value(required)
356           qualifier output,        default,value(type=$file,default="SYS$OUTPUT")
357           qualifier brief          nonnegatable
358           qualifier full           nonnegatable
359
360    define syntax show_user
361           parameter p1,label=option,value(required)
362           parameter p2,label=username,prompt="Username",value
363           qualifier output,        default,value(type=$file,default="SYS$OUTPUT")
364
365    define syntax no_parameter
366           parameter p1,label=option,value(required)
367           noqualifiers
368
369    define type cluster_reports
370           keyword cluster
371           keyword local_ports
372           keyword cycle
373
374    define syntax show_cluster
375           image shwclstr
376           parameter p1,label=option,value(required)
377           qualifier beginning      value(required,type=$datetime),nonnegatable
378           qualifier continuous     nonnegatable
379           qualifier ending         value(required,type=$datetime),nonnegatable
380           qualifier interval       value(required,type=$number),nonnegatable
381           qualifier output         default,value(type=$file,default="SYS$OUTPUT")
382           qualifier report         value(required,type=cluster_reports),
383                                    nonnegatable
384
385    define type show_options
386           keyword acl,             syntax=show_acl
387           keyword broadcast,       syntax=show_broad
388           keyword cpu,             syntax=show_cpu
389           keyword daytime,         syntax=show_daytime
390           keyword time,            syntax=show_daytime
391           keyword default,         syntax=show_default
392           keyword logical,         syntax=show_logical
```

```
393          keyword protection,        syntax=show_protection
394          keyword queue,             syntax=show_queue
395          keyword symbol,            syntax=show_symbol
396          keyword translation,       syntax=show_translation
397          keyword working_set,       syntax=show_broad
398          keyword devices,           syntax=show_device
399          keyword status,            syntax=show_status
400          keyword process,           syntax=show_process
401          keyword system,            syntax=show_system
402          keyword terminal,          syntax=show_terminal
403          keyword printer,           syntax=show_printer
404          keyword network,           syntax=show_broad
405          keyword rms_default,       syntax=show_broad
406          keyword magtape,           syntax=show_magtape
407          keyword quota,             syntax=show_quota
408          keyword memory,            syntax=show_memory
409          keyword users,             syntax=show_user
410          keyword error,             syntax=show_error
411          keyword accounting,        syntax=show_broad
412          keyword cluster,           syntax=show_cluster
413          keyword key,               syntax=show_key,cliflags(mcrignore)
414          keyword audit,             syntax=show_broad
415
416   define verb show
417          parameter p1,label=option,prompt="What",
418                      value(required,type=show_options)
419
420
421
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

```
 1    !
 2    !  Version:    'V04-000'
 3    !
 4
 5    module sortmerge
 6    define type sort_key
 7          keyword position,value(required,type=$number)
 8          keyword size,value(required,type=$number)
 9          keyword number,value(required,type=$number)
10          keyword binary
11          keyword character
12          keyword decimal
13          keyword d_floating
14          keyword f_floating
15          keyword g_floating
16          keyword h_floating
17          keyword packed_decimal
18          keyword zoned
19          keyword signed
20          keyword unsigned
21          keyword leading_sign
22          keyword trailing_sign
23          keyword overpunched_sign
24          keyword separate_sign
25          keyword ascending
26          keyword descending
27 !!       keyword dtype,value(required)
28
29    define type sort_type
30          keyword address
31          keyword index
32          keyword record
33          keyword tag
34
35    define type record_format
36          keyword fixed,          value(type=$number)
37          keyword variable,       value(type=$number)
38          keyword controlled,     value(type=$number)
39          keyword size,           value(required,type=$number)
40          keyword block_size,     value(required,type=$number)
41          keyword record_size,    value(type=$number)
42          keyword file_size,      value(type=$number)
43
44    define type collating_type
45          keyword ascii
46          keyword ebcdic
47          keyword multinational
48
49    define syntax sort_using_srt
50          image backtrans
51
52    define verb sort
53          image sortmerge
54          prefix cli$k_sort_
55          parameter p1,prompt="Input",value(required,list,type=$infile)
56          parameter p2,prompt="Output",value(required,type=$outfile)
```

```
 57          qualifier process,      value(required,type=sort_type)
 58          qualifier key,          value(required,list,type=sort_key)
 59          qualifier zzzz,
 60          qualifier work_files,   value(type=$number), default
 61          qualifier specification,value(type=$infile)
 62          qualifier rsx11,        syntax=sort_using_srt
 63          qualifier format,       value(required,list,type=record_format),
 64                                  placement=local
 65          qualifier bucket_size,  value(required,type=$number),
 66                                  placement=positional
 67          qualifier allocation,   value(required,type=$number),
 68                                  placement=positional
 69          qualifier block_size,   value(required,type=$number),placement=local,
 70                                  syntax=sort_using_srt
 71          qualifier contiguous,   placement=positional
 72          qualifier device,       value(required,type=$device),
 73                                  syntax=sort_using_srt
 74          qualifier indexed_sequential,value(type=$number),placement=positional
 75          qualifier relative,     placement=positional
 76          qualifier sequential,   placement=positional
 77          qualifier overlay,      placement=local
 78          qualifier stable,
 79          qualifier statistics,
 80          qualifier load_fill,    placement=local
 81          qualifier collating_sequence value(required,type=collating_type)
 82          qualifier duplicates,   default !!,value
 83          qualifier check_sequence
 84
 85  define verb merge
 86          image sortmerge
 87          prefix cli$k_merg_
 88          parameter p1,prompt="Input",value(required,list,type=$infile)
 89          parameter p2,prompt="Output",value(required,type=$outfile)
 90          qualifier process,      value(required,type=sort_type)
 91          qualifier key,          value(required,list,type=sort_key)
 92          qualifier zzzz,
 93          qualifier work_files,   value(type=$number)
 94          qualifier specification,value(type=$infile)
 95          qualifier zzzy,
 96          qualifier format,       value(required,list,type=record_format),
 97                                  placement=local
 98          qualifier bucket_size,  value(required,type=$number),
 99                                  placement=positional
100          qualifier allocation,   value(required,type=$number),
101                                  placement=positional
102          qualifier block_size,   value(required,type=$number),placement=local
103                                  syntax=sort_using_srt
104          qualifier contiguous,   placement=positional
105          qualifier zzzx,
106          qualifier indexed_sequential,value(type=$number),placement=positional
107          qualifier relative,     placement=positional
108          qualifier sequential,   placement=positional
109          qualifier overlay,      placement=local
110          qualifier stable
111          qualifier statistics
112          qualifier load_fill,    placement=local
```

```
   113          qualifier collating_sequence,value(required,type=collating_type)
   114          qualifier duplicates,    default !!,value
   115          qualifier check_sequence,         default
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

```
 1   !
 2   !    Version:      'V04-000'
 3   !
 4   !        V03-007 HWS042                 Harold Schultz  29-Mar-1984
 5   !            Add SPAWN/TABLE
 6   !
 7   !        V03-006 MAJ0001                Melanie Johnson 04-Jan-1984
 8   !            Flag qualifiers that MCR should ignore.
 9   !
10   !        V03-005 PCG0004                Peter George    27-Jun-1983
11   !            Add SPAWN/CLI.
12   !
13   !        V03-004 PCG0003                Peter George    21-Jun-1983
14   !            Add SPAWN/KEYPAD.
15   !
16   !        V03-003 PCG0002                Peter George    30-Apr-1983
17   !            Add SPAWN/PROMPT/CARRIAGE_CONTROL.
18   !
19   !        V03-002 PCA1008        Paul C. Anagnostopoulos 25-Mar-1983
20   !            Make all necessary changes for new CDU.
21   !
22   !        V03-001 PCG0001                Peter George    02-Feb-1983
23   !            Add SPAWN/SYMBOLS/LOGICAL_NAMES/NOTIFY/CONTINUE
24   !            Remove /TIME_LIMIT.
25   !
26
27   define verb spawn
28        cliroutine spawn
29        prefix cli$k_spaw_
30        parameter p1,value(type=$rest_of_line)
31        qualifier process,      value(required)
32        qualifier wait,         default
33        qualifier log,          default
34        qualifier input,        value(required,type=$infile)
35        qualifier output,       value(required,type=$outfile)
36        qualifier symbols,      default,cliflags(mcrignore)
37        qualifier logical_names,default
38        qualifier notify
39        qualifier carriage_control,cliflags(mcrignore)
40        qualifier prompt,       value,cliflags(mcrignore)
41        qualifier keypad,       default,cliflags(mcrignore)
42        qualifier cli,          value(required,type=$file)
43        qualifier table         value(required,type=$file)
44
45   define syntax attach_by_pid
46        noparameters
47
48   define verb attach
49        cliroutine attach
50        prefix cli$k_atta_
51        parameter p1,value(required),prompt="Process"
52        qualifier identification, value(required),syntax=attach_by_pid
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

```
 1  !
 2  !   Version:    'V04-000'
 3  !
 4  !       V03-016 JAK0227         J A Krycka              17-Aug-1984
 5  !               Disallow certain printer queue specific qualifiers to be used
 6  !               with /BATCH and /GENERIC.
 7  !
 8  !       V03-009 JAK0226         J A Krycka      16-Aug-1984
 9  !               Change /OWNER to /OWNER_UIC for consistency with other commands.
10  !               Omit "list" as an attribute for the /OWNER_UIC qualifier.
11  !
12  !       V03-008 JAK0220         J A Krycka      12-Jul-1984
13  !               Add [NO]FEED option to the /DEFAULT qualifier.
14  !
15  !       V03-007 JAK0219         J A Krycka      11-Jul-1984
16  !               Add /BUFFER_COUNT and /EXTEND_QUANTITY qualifiers.
17  !
18  !       V03-006 MLJ0006         Martin L. Jack  29-Jul-1983
19  !               Add /LIBRARY and /SCHEDULE.
20  !
21  !       V03-005 MLJ0005         Martin L. Jack  27-May-1983
22  !               Changes for new QUEMAN image.
23  !
24  !       V03-004 MLJ0004         Martin L. Jack  27-Apr-1983
25  !               Changes for new QUEMAN image.
26  !
27  !       V03-003 MLJ0003         Martin L. Jack  01-Mar-1983
28  !               Changes for new QUEMAN image.
29  !
30  !       V03-002 PCA1008         Paul C. Anagnostopoulos 10 Feb 1983
31  !               Remove PREFIX clause.
32  !
33  !       V03-001 MLJ0001         Martin L. Jack  03-Jan-1982
34  !               Changes for new QUEMAN image.
35  !
36  define type print_bft
37          keyword all,default
38          keyword one
39
40  define type defaults
41          keyword burst,negatable,value(type=print_bft)
42          keyword feed,negatable
43          keyword flag,negatable,value(type=print_bft)
44          keyword trailer,negatable,value(type=print_bft)
45
46  define type retain
47          keyword all,default
48          keyword error
49
50  define type schedule
51          keyword size,negatable
52
53  define type separate
54          keyword burst,negatable
55          keyword flag,negatable
56          keyword reset,negatable,value(required,list)
```

```
 57          keyword trailer,negatable
 58
 59   define type protection
 60          keyword system,value
 61          keyword group,value
 62          keyword owner,value
 63          keyword world,value
 64
 65   define syntax start_cpu
 66          image mp
 67          noparameters
 68          noqualifiers
 69
 70   define syntax start_queue
 71          parameter p1,prompt="Queue",value(required)
 72
 73   define syntax start_queue_manager
 74          parameter p1,prompt="File",value(type=$infile)
 75
 76   define verb start
 77          image queman
 78          parameter p1,prompt="What",value(required)
 79          qualifier align,         value(list)
 80          qualifier backward,      value
 81          qualifier base_priority,value(required)
 82          qualifier batch
 83          qualifier block_limit,   value(required,list)
 84          qualifier buffer_count,  value(required)
 85          qualifier characteristics,value(required,list)
 86          qualifier cpu,nonnegatable,syntax=start_cpu
 87          qualifier cpudefault,    value(required)
 88          qualifier cpumaximum,    value(required)
 89          qualifier default,       value(required,list,type=defaults)
 90          qualifier disable_swapping
 91          qualifier enable_generic
 92          qualifier extend_quantity,value(required)
 93          qualifier form,          value(required)
 94          qualifier forward,       value
 95          qualifier generic,       value(list)
 96          qualifier job_limit,     value(required)
 97          qualifier library,       value(required)
 98          qualifier manager,       syntax=start_queue_manager
 99          qualifier new_version
100          qualifier next
101          qualifier on,            value(type=$infile,required)
102          qualifier owner_uic,     value(required,type=$uic)
103          qualifier processor,     value(required)
104          qualifier protection,    value(required,list,type=protection)
105          qualifier queue,         syntax=start_queue
106          qualifier retain,        value(type=retain)
107          qualifier schedule,      value(required,list,type=schedule)
108          qualifier search,        value(required)
109          qualifier separate,      value(required,list,type=separate)
110          qualifier terminal
111          qualifier trailer
112          qualifier top_of_file
```

```
113        qualifier wsdefault,    value(required)
114        qualifier wsextent      value(required)
115        qualifier wsquota,      value(required)
116        disallow default and (batch or generic)
117        disallow separate and (batch or generic)
118        disallow form and (batch or generic)
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

```
 1  !
 2  !  Version:      'V04-000'
 3  !
 4  !      V03-009 JAK0220 J A Krycka                      22-Jul-1984
 5  !              Eliminate the default attribute from the FEED qualifier
 6  !              because there there is now a queue level default for it.
 7  !
 8  !      V03-008 RRB0021 Rowland R. Bradley              19-Jun-1984
 9  !              Add the common qualifier package to both PRINT and
10  !              SUBMIT.  The qualifiers include /confirm, /exclude,
11  !              /before, /since, /created, /modified, /expired, /backup,
12  !              and /by_owner.  Disallow /REMOTE with other qualifiers than
13  !              the common qualifier ones.
14  !
15  !      V03-007 PCG000c         Peter George            14-Feb-1984
16  !              Add SUBMIT/PRINTER default.
17  !
18  !      V03-006 PCG0002         Peter George            15-Aug-1983
19  !              Add SUBMIT/SNA qualifiers.
20  !
21  !      V03-005 MLJ0005         Martin L. Jack          26-May-1983
22  !              Changes for new SUBMIT image.
23  !
24  !      V03-004 MLJ0004         Martin L. Jack          27-Apr-1983
25  !              Changes for new SUBMIT image.
26  !
27  !      V03-003 MLJ0003         Martin L. Jack          01-Mar-1983
28  !              Changes for new SUBMIT image.
29  !
30  !      V03-002 MLJ0002         Martin L. Jack          30-Dec-1982
31  !              Changes for new SUBMIT image.
32  !
33  !      V03-001 PCG0001         Peter George            05-Sep-1982
34  !              Add SUBMIT/SNA.
35  !
36  define type print_bft
37          keyword all,default
38          keyword one
39
40  define verb print
41          image submit
42          parameter p1,prompt="File",value(required,list,impcat,type=$infile)
43          qualifier after,            value(required,type=$datetime)
44          qualifier backup
45          qualifier before,           value(default=today,type=$datetime)
46          qualifier burst,            value(type=print_bft),placement=positional
47          qualifier by_owner,         value(type=$uic)
48          qualifier characteristics,value(required,list)
49          qualifier confirm
50          qualifier copies,           value(required),placement=positional
51          qualifier created
52          qualifier delete,           placement=positional
53          qualifier device,           value(required)
54          qualifier exclude,          value(required,list)
55          qualifier expired
56          qualifier feed,             placement=positional
```

```
57          qualifier flag,          value(type=print_bft),placement=positional
58          qualifier form,          value(required)
59          qualifier header,        placement=positional
60          qualifier hold
61          qualifier identify,      default
62          qualifier job_count,     value(required)
63          qualifier lowercase
64          qualifier modified
65          qualifier name,          value(required)
66          qualifier note,          value(required)
67          qualifier notify
68          qualifier operator,      value(required)
69          qualifier pages,         value(required,list),placement=positional
70          qualifier parameters,    value(required,list)
71          qualifier passall,       placement=positional
72          qualifier priority,      value(required)
73          qualifier queue,         value(required)
74          qualifier remote
75          qualifier restart
76          qualifier setup,         value(required,list),placement=positional
77          qualifier since,         value(default=today,type=$datetime)
78          qualifier space,         placement=positional
79          qualifier trailer,       value(type=print_bft),placement=positional
80          qualifier user,          value(required)
81          disallow                 remote and (user or trailer or space or
82                                   setup or restart or queue or
83                                   priority or passall or parameters or pages or
84                                   operator or notify or note or name
85                                   or lowercase or job_count or identify or hold
86                                   or header or form or flag or feed
87                                   or device or delete or after
88                                   or copies or characteristics or burst)
89
90  define type translate_keywords
91          keyword ebcdic,          default
92
93  define syntax submit_sna
94          image snasubmit
95
96  define verb submit
97          parameter p1,prompt="File",value(required,list,impcat,type=$infile)
98          qualifier after,         value(required,type=$datetime)
99          qualifier backup
100         qualifier before,        value(default=today,type=$datetime)
101         qualifier by_owner,      value(type=$uic)
102         qualifier characteristics,value(required,list)
103         qualifier cli,           value(required)
104         qualifier confirm
105         qualifier cputime,       value(required)
106         qualifier created
107         qualifier delete,        placement=positional
108         qualifier exclude,       value(required,list)
109         qualifier expired
110         qualifier hold
111         qualifier identify,      default
112         qualifier keep
```

```
 113        qualifier log_file,       value(required)
 114        qualifier modified
 115        qualifier name,           value(required)
 116        qualifier notify
 117        qualifier parameters,     value(required,list)
 118        qualifier printer,        value(default="SYS$PRINT")
 119        qualifier priority,       value(required)
 120        qualifier queue,          value(required)
 121        qualifier remote
 122        qualifier restart
 123        qualifier since,          value(default=today,type=$datetime)
 124        qualifier sna,            syntax=submit_sna                        ! SNA
 125        qualifier translate,      default,placement=positional,           ! SNA
 126                                  value(type=translate_keywords,default="EBCDIC")
 127        qualifier user,           value(required)
 128        qualifier wsdefault,      value(required)
 129        qualifier wsextent,       value(required)
 130        qualifier wsquota,        value(required)
 131        qualifier record_size,    nonnegatable,placement=positional,      ! SNA
 132                                  value(required)
 133        qualifier tab,            placement=positional                    ! SNA
 134        disallow                  remote and (tab or record_size or wsquota or
 135                                  wsdefault or user or translate or sna
 136                                  or restart or queue or priority or printer or
 137                                  parameters or notify or name or
 138                                  log_file or keep or identify or hold
 139                                  or delete or cputime or after or wsextent
 140                                  or cli or characteristics)
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

```
 1  !
 2  !   Version:      'V04-000'
 3  !
 4  !       V03-002 MLJ0002          Martin L. Jack          30-Dec-1982
 5  !                   Changes for new QUEMAN image.
 6  !
 7  define verb synchronize
 8          image queman
 9          parameter p1,prompt="Jobname"
10          qualifier entry,        value(required)
11          qualifier queue,        value(required)
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

```
 1  !
 2  !  Version:     'V04-000'
 3  !
 4  !       V03-004 MCN0173         Maria del C. Nasr              09-Jul-1984
 5  !               Let /OUTPUT qualifier default to SYS$OUTPUT.
 6  !
 7  !       V03-003 SHZ0003         Stephen H. Zalewski            16-Feb-1984
 8  !               Disallow /OUTPUT and /PAGE.
 9  !
10  !       V03-002 SHZ0002         Stephen H. Zalewski            12-Mar-1983
11  !               Changed /BYOWNER qualifier to /BY_OWNER.
12  !
13  !       V03-001 SHZ0001         Stephen H. Zalewski            10-mar-1983
14  !               Add common qualifer package to TYPE.  Modified TYPE to use
15  !               new CLD.
16  !
17  define verb type
18          image type
19          parameter p1,prompt="File",value(required,list,impcat,type=$infile), label=input
20          qualifier backup
21          qualifier before,         value(default=today,type=$datetime)
22          qualifier confirm
23          qualifier created
24          qualifier exclude,        value(required,list)
25          qualifier expired
26          qualifier modified
27          qualifier on,             value(default=today,type=$datetime)      ! not yet implemented
28          qualifier output,         default,value(type=$file,default="SYS$OUTPUT")
29          qualifier page,
30          qualifier since,          value(default=today,type=$datetime)
31          qualifier by_owner,       value(type=$uic)
32
33          disallow  output and page
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT

```
1  !
2  !   Version:    'V04-000'
3  !
4  !   Edit History
5  !
6  !       V03-001 AEW0001          Anne E. Warner              09-Nov-1983
7  !               PREFIX clause removed.
8  !
9  define verb unlock
10         image unlock
11         parameter p1,prompt="File",value(required,list,impcat,type=$infile)
12         qualifier confirm
13         qualifier log
```

$ SET COMMAND SRC$:ACC.CLD,ANALYZE.CLD,BACKUP.CLD,CHECKSUM.CLD,CONVERT.CLD,COPY.CLD,CREATE.CLD,DCLINT.CLD,DELETE.CLD,DIFF.CLD,DIRECT