```
EEEEEEEEEEEEEEEEE   RRRRRRRRRRRR       FFFFFFFFFFFFFFFF
EEEEEEEEEEEEEEEEE   RRRRRRRRRRRR       FFFFFFFFFFFFFFFF
EEEEEEEEEEEEEEEEE   RRRRRRRRRRRR       FFFFFFFFFFFFFFFF
EEE                 RRR        RRR     FFF
EEE                 RRR        RRR     FFF
EEE                 RRR        RRR     FFF
EEE                 RRR        RRR     FFF
EEE                 RRR        RRR     FFF
EEE                 RRR        RRR     FFF
EEEEEEEEEEEE        RRRRRRRRRRRR       FFFFFFFFFFFF
EEEEEEEEEEEE        RRRRRRRRRRRR       FFFFFFFFFFFF
EEEEEEEEEEEE        RRRRRRRRRRRR       FFFFFFFFFFFF
EEE                 RRR   RRR          FFF
EEE                 RRR   RRR          FFF
EEE                 RRR   RRR          FFF
EEE                 RRR     RRR        FFF
EEE                 RRR     RRR        FFF
EEE                 RRR     RRR        FFF
EEEEEEEEEEEEEEEE    RRR        RRR     FFF
EEEEEEEEEEEEEEEE    RRR        RRR     FFF
EEEEEEEEEEEEEEEE    RRR        RRR     FFF
```

ERFSUMM

MAP

```
+------------------------------+
! Object Module Synopsis !
+------------------------------+
```

Module Name	Ident	Bytes	File	Creation Date	Creator	Sy
ERFSHR	V04-000	0	_255DUA28:[ERF.OBJ]ERFSHR.EXE;1	16-SEP-1984 04:31	VAX-11 Linker V04-00	CA
FORRTL	V04-000	0	_255DUA28:[SYSLIB]FORRTL.EXE;1	16-SEP-1984 04:07	VAX-11 Linker V04-00	CA
LIBRTL	V04-000	0	_255DUA28:[SYSLIB]LIBRTL.EXE;1	16-SEP-1984 04:00	VAX-11 Linker V04-00	CC
MTHRTL	V04-000	0	_255DUA28:[SYSLIB]MTHRTL.EXE;1	16-SEP-1984 04:04	VAX-11 Linker V04-00	
ERFCOMMON	V04-000	0	_255DUA28:[ERF.OBJ]ERFCOMMON.EXE;1	16-SEP-1984 04:31	VAX-11 Linker V04-00	
ERFSUMMVECT	V04-000	8	_255DUA28:[ERF.OBJ]ERF.OLB;1	15-SEP-1984 23:57	VAX/VMS Macro V04-00	
ERFSUMMARY	V04-000	381	_255DUA28:[ERF.OBJ]ERF.OLB;1	-Sep-1984 23:48	VAX-11 Bliss-32 V4.0-742	
ROLLUP	01	2865	_255DUA28:[ERF.OBJ]ERF.OLB;1	1u-Sep-1984 00:14	VAX-11 FORTRAN V3.4-56	
LABEL_OUT	01	1313	_255DUA28:[ERF.OBJ]ERF.OLB;1	16-Sep-1984 00:05	VAX-11 FORTRAN V3.4-56	CC
MEMORY_DISPLAY	01	1626	_255DUA28:[ERF.OBJ]ERF.OLB;1	16-Sep-1984 00:07	VAX-11 FORTRAN V3.4-56	
DECODE_ECC	01	931	_255DUA28:[ERF.OBJ]ERF.OLB;1	16-Sep-1984 00:19	VAX-11 FORTRAN V3.4-56	
ENTRY_SUMMARY_DESCRIPTOR_LOAD						CC
	01	1596	_255DUA28:[ERF.OBJ]ERF.OLB;1	16-Sep-1984 00:28	VAX-11 FORTRAN V3.4-56	
ENTRY_SUMMARY_UPDATE						
	01	4436	_255DUA28:[ERF.OBJ]ERF.OLB;1	16-Sep-1984 00:28	VAX-11 FORTRAN V3.4-56	
ENTRY_SUMMARY_WRITE						EF
	01	353	_255DUA28:[ERF.OBJ]ERF.OLB;1	16-Sep-1984 00:28	VAX-11 FORTRAN V3.4-56	FC
TIMCMP	01	190	_255DUA28:[ERF.OBJ]ERF.OLB;1	16-Sep-1984 00:28	VAX-11 FORTRAN V3.4-56	FC
SYS$P1_VECTOR	V04-000	0	_255DUA28:[SYSLIB]STARLET.OLB;2	16-SEP-1984 00:40	VAX/VMS Macro V04-00	FC

```
+--------- ----------------------------+
! Module Relocatable Reference Synopsis !
+--------------------------------------+
```

Module Name	Number	Module Name	Number	Module Name	Number
ERFSUMMARY	2	ROLLUP	29	LABEL_OUT	16
MEMORY_DISPLAY	25	DECODE_ECC	7	ENTRY_SUMMARY_DESCRIPTOR_LOAD	2
ENTRY_SUMMARY_UPDATE	29	ENTRY_SUMMARY_WRITE	2	TIMCMP	4

L 6

+---------------------------+
! Image Section Synopsis !
+---------------------------+

Cluster	Type	Pages	Base Addr	Disk VBN	PFC	Protection and Paging	Global Sec. Name	Match	Majorid	Minorid
ERFSHR	1	2	00000000-R	0	0	READ ONLY	ERFSHR_001	LESS/EQUAL	1	0
	2	2	00000400-R	0	0	READ ONLY	ERFSHR_002	LESS/EQUAL	1	0
	4	17	00000800-R	0	0	READ WRITE COPY ON REF	ERFSHR_003	LESS/EQUAL	1	0
	4	40	00002A00-R	0	0	READ WRITE COPY ON REF	ERFSHR_004	LESS/EQUAL	1	0
	4	53	00007A00-R	0	0	READ ONLY	ERFSHR_005	LESS/EQUAL	1	0
	4	4	P-0000E400-R	0	0	READ ONLY	ERFSHR_006	LESS/EQUAL	1	0
	2	10	0000EC00-R	0	0	READ WRITE FIXUP VECTORS	ERFSHR_007	LESS/EQUAL	1	0
FORRTL	3	63	00000000-R	0	0	READ ONLY	FORRTL_001	LESS/EQUAL	1	100
	4	2	00007E00-R	0	0	READ WRITE COPY ON REF	FORRTL_002	LESS/EQUAL	1	100
	2	1	00008200-R	0	0	READ WRITE FIXUP VECTORS	FORRTL_003	LESS/EQUAL	1	100
LIBRTL	3	111	00000000-R	0	0	READ ONLY	LIBRTL_001	LESS/EQUAL	1	11
	4	1	0000DE00-R	0	0	READ WRITE DEMAND ZERO	LIBRTL_002	LESS/EQUAL	1	11
MTHRTL	3	115	00000000-R	0	0	READ ONLY	MTHRTL_001	LESS/EQUAL	129	32778
	2	1	0000E600-R	0	0	READ WRITE FIXUP VECTORS	MTHRTL_002	LESS/EQUAL	129	32778
ERFCOMMON	4	13	00000000-R	0	0	READ WRITE COPY ON REF	ERFCOMMON_001	LESS/EQUAL	1	0
DEFAULT_CLUSTER	2	1	00000000-R	2	0	READ ONLY				
	4	3	00000200-R	3	0	READ ONLY				
	4	10	00000800-R	6	0	READ WRITE COPY ON REF				
	4	12	00001C00-R	16	0	READ ONLY				
	2	3	00003400-R	28	0	READ WRITE FIXUP VECTORS				

Key for special characters above:
+--------------------+
! R - Relocatable !
! P - Protected   !
+--------------------+

```
+----------------------------------+
! Program Section Synopsis .
+----------------------------------+
```

Psect Name	Module Name	Base	End	Length	Align	Attributes

$$ERFSUMMVECT

| | ERFSUMMVECT | 00000000 | 00000007 | 00000008 (| 8.) BYTE 0 | NOPIC,USR,CON,REL,LCL,NOSHR, EXE, RD,NOWRT,NOVEC |
| | ERFSUMMVECT | 00000000 | 00000007 | 00000008 (| 8.) BYTE 0 | |

$PDATA

		00000200	00000637	00000438 (	1080.) LONG 2	PIC,USR,CON,REL,LCL,NOSHR,NOEXE, RD,NOWRT,NOVEC
	ROLLUP	00000200	0000031F	00000120 (	288.) LONG 2	
	LABEL_OUT	00000320	000003CC	000000AD (	173.) LONG 2	
	MEMORY_DISPLAY	000003D0	000004ED	0000011E (	286.) LONG 2	
	DECODE_ECC	000004F0	000004FF	00000010 (	16.) LONG 2	
	ENTRY_SUMMARY_DESCRIPTOR_LOAD					
		00000500	00000507	00000008 (	8.) LONG 2	
	ENTRY_SUMMARY_UPDATE					
		00000508	000005E6	000000DF (	223.) LONG 2	
	ENTRY_SUMMARY_WRITE					
		000005E8	0000062E	00000047 (	71.) LONG 2	
	TIMCMP	00000630	00000637	00000008 (	8.) LONG 2	

$LOCAL

		00000800	00001B3F	00001340 (	4928.) LONG 2	PIC,USR,CON,REL,LCL,NOSHR,NOEXE, RD, WRT,NOVEC
	ROLLUP	00000800	00000A4B	0000024C (	588.) LONG 2	
	LABEL_OUT	00000A4C	00000C1B	000001D0 (	464.) LONG 2	
	MEMORY_DISPLAY	00000C1C	00000DC3	000001A8 (	424.) LONG 2	
	DECODE_ECC	00000DC4	00000E93	000000D0 (	208.) LONG 2	
	ENTRY_SUMMARY_DESCRIPTOR_LOAD					
		00000E94	000010CF	0000023C (	572.) LONG 2	
	ENTRY_SUMMARY_UPDATE					
		000010D0	00001AC7	000009F8 (	2552.) LONG 2	
	ENTRY_SUMMARY_WRITE					
		00001AC8	00001AF3	0000002C (	44.) LONG 2	
	TIMCMP	00001AF4	00001B3F	0000004C (	76.) LONG 2	

OWN

| | | 00001B40 | 00001B4F | 00000010 (| 16.) LONG 2 | PIC,USR,CON,REL,LCL,NOSHR,NOEXE, RD, WRT,NOVEC |
| | ERFSUMMARY | 00001B40 | 00001B4F | 00000010 (| 16.) LONG 2 | |

$CODE

		00001C00	000033FD	000017FE (	6142.) LONG 2	PIC,USR,CON,REL,LCL,NOSHR, EXE, RD,NOWRT,NOVEC
	ERFSUMMARY	00001C00	00001D64	00000165 (	357.) LONG 2	
	ROLLUP	00001D68	0000232C	000005C5 (	1477.) LONG 2	
	LABEL_OUT	00002330	000025D3	000002A4 (	676.) LONG 2	
	MEMORY_DISPLAY	000025D4	00002967	00000394 (	916.) LONG 2	
	DECODE_ECC	00002968	00002A2A	000000C3 (	195.) LONG 2	
	ENTRY_SUMMARY_DESCRIPTOR_LOAD					
		00002A2C	00002E23	000003F8 (	1016.) LONG 2	
	ENTRY_SUMMARY_UPDATE					
		00002E24	000032A0	0000047D (	1149.) LONG 2	
	ENTRY_SUMMARY_WRITE					
		000032A4	00003391	000000EE (	238.) LONG 2	
	TIMCMP	00003394	000033FD	0000006A (	106.) LONG 2	

```
                              +---------------------------+
                              ! Symbol Cross Reference .
                              +---------------------------+
```

Symbol	Value	Defined By	Referenced By ...
COMPRESS4	00003474-RX	ERFSHR	ENTRY_SUMMARY_WRITE
			LABEL_OUT
			MEMORY_DISPLAY
			ROLLUP
COMPRESSC	00003448-RX	ERFSHR	ENTRY_SUMMARY_WRITE
DECODE_ECC	00002968-R	DECODE_ECC	
DISPLAY_ROLLUP	000020BF-R	ROLLUP	ERFSUMMARY
ENTRY_SUMMARY_DESCRIPTOR_LOAD	00002A2C-R	ENTRY_SUMMARY_DESCRIPTOR_LOAD	ENTRY_SUMMARY_UPDATE
ENTRY_SUMMARY_OUTPUT	00002FCD-R	ENTRY_SUMMARY_UPDATE	ERFSUMMARY
ENTRY_SUMMARY_UPDATE	00002E24-R	ENTRY_SUMMARY_UPDATE	ERFSUMMARY
ENTRY_SUMMARY_WRITE	000032A4-R	ENTRY_SUMMARY_WRITE	ENTRY_SUMMARY_UPDATE
FOR$IO_END	00003490-RX	FORRTL	ENTRY_SUMMARY_UPDATE
			ENTRY_SUMMARY_WRITE
			LABEL_OUT
			MEMORY_DISPLAY
			ROLLUP
FOR$IO_L_R	0000348C-RX	FORRTL	ENTRY_SUMMARY_UPDATE
			ENTRY_SUMMARY_WRITE
			LABEL_OUT
			MEMORY_DISPLAY
			ROLLUP
FOR$IO_T_DS	00003488-RX	FORRTL	ENTRY_SUMMARY_UPDATE
			ENTRY_SUMMARY_WRITE
			LABEL_OUT
			MEMORY_DISPLAY
			ROLLUP
FOR$IO_W_R	00003480-RX	FORRTL	ENTRY_SUMMARY_UPDATE
FOR$WRITE_SF	00003484-RX	FORRTL	ENTRY_SUMMARY_UPDATE
			ENTRY_SUMMARY_WRITE
			LABEL_OUT
			MEMORY_DISPLAY
			ROLLUP
FRCTOF	0000345C-RX	ERFSHR	ENTRY_SUMMARY_UPDATE
			LABEL_OUT
			MEMORY_DISPLAY
			ROLLUP
GET_CURRENT_LABEL	00003468-RX	ERFSHR	ROLLUP
GET_MEMORY_0_INFO	00003450-RX	ERFSHR	MEMORY_DISPLAY
GET_QUEUE_INFO	00003454-RX	ERFSHR	LABEL_OUT
INSQUE	00003464-RX	ERFSHR	ENTRY_SUMMARY_UPDATE
			ROLLUP
LABEL_OUT	00002330-R	LABEL_OUT	ERFSUMMARY
LIB$EXTZV	000034A0-RX	LIBRTL	DECODE_ECC
			ENTRY_SUMMARY_DESCRIPTOR_LOAD
			ENTRY_SUMMARY_UPDATE
			MEMORY_DISPLAY
			ROLLUP
			TIMCMP
LIB$GET_VM	0000349C-RX	LIBRTL	ENTRY_SUMMARY_UPDATE

Symbol	Value	Defined By	Referenced By ...
			ROLLUP
LINCHK	00003458-RX	ERFSHR	ENTRY_SUMMARY_UPDATE
			ENTRY_SUMMARY_WRITE
			LABEL_OUT
			MEMORY_DISPLAY
			ROLLUP
MEMORY_DISPLAY	000025D4-R	MEMORY_DISPLAY	ERFSUMMARY
MOVC3	0000346C-RX	ERFSHR	ENTRY_SUMMARY_UPDATE
			LABEL_OUT
			MEMORY_DISPLAY
			ROLLUP
MOVC5	00003470-RX	ERFSHR	ENTRY_SUMMARY_UPDATE
			ROLLUP
MOVL	00003460-RX	ERFSHR	ROLLUP
MOVQ	0000344C-RX	ERFSHR	ENTRY_SUMMARY_UPDATE
PROCESSED_ENTRIES_HISTO_OUTPUT	00003109-R	ENTRY_SUMMARY_UPDATE	ERFSUMMARY
PROCESSED_ENTRIES_HISTO_UPDATE	0000321C-R	ENTRY_SUMMARY_UPDATE	ERFSUMMARY
ROLLUP	00001D68-R	ROLLUP	ERFSUMMARY
SUMMARY_DISPATCHER	00001C00-RU	ERFSUMMARY	ERFSUMMVECT
SUMMINIT	00000000-R	ERFSUMMVECT	
SYS$ASCTIM	7FFEDE48	SYS$P1_VECTOR	ENTRY_SUMMARY_UPDATE
SYS$NUMTIM	7FFEDFB8	SYS$P1_VECTOR	ENTRY_SUMMARY_UPDATE
TIMCMP	00003394-R	TIMCMP	ENTRY_SUMMARY_UPDATE

```
+--------------------+
! Symbols By Value . !
+--------------------+
```

Value	Symbols...
00000000	R-SUMMINIT
00001C00	R-SUMMARY_DISPATCHER
00001D68	R-ROLLUP
000020BF	R-DISPLAY_ROLLUP
00002330	R-LABEL_OUT
000025D4	R-MEMORY_DISPLAY
00002968	R-DECODE_ECC
00002A2C	R-ENTRY_SUMMARY_DESCRIPTOR_LOAD
00002E24	R-ENTRY_SUMMARY_UPDATE
00002FCD	R-ENTRY_SUMMARY_OUTPUT
00003109	R-PROCESSED_ENTRIES_HISTO_OUTPUT
0000321C	R-PROCESSED_ENTRIES_HISTO_UPDATE
000032A4	R-ENTRY_SUMMARY_WRITE
00003394	R-TIMCMP
00003448	RX-COMPRESSC
0000344C	RX-MOVQ
00003450	RX-GET_MEMORY_Q_INFO
00003454	RX-GET_QUEUE_INFO
00003458	RX-LINCHK
0000345C	RX-FRCTOF
00003460	RX-MOVL
00003464	RX-INSQUE
00003468	RX-GET_CURRENT_LABEL
0000346C	RX-MOVC3
00003470	RX-MOVC5
00003474	RX-COMPRESS4
00003480	RX-FOR$IO_W_R
00003484	RX-FOR$WRITE_SF
00003488	RX-FOR$IO_T_DS
0000348C	RX-FOR$IO_L_R
00003490	RX-FOR$IO_END
0000349C	RX-LIB$GET_VM
000034A0	RX-LIB$EXTZV
7FFEDE48	SYS$ASCTIM
7FFEDFB8	SYS$NUMTIM

Key for special characters above:
```
+-------------------+
!  *  - Undefined   !
!  U  - Universal   !
!  R  - Relocatable !
!  X  - External    !
+-------------------+
```

```
                                  +------------------+
                                  ! Image Synopsis .
                                  +------------------+

Virtual memory allocated:                  00000000 000039FF 00003A00 (14848. bytes, 29. pages)
Stack size:                                         0. pages
Image header virtual block limits:                  1.         1. (    1. block)
Image binary virtual block limits:                  2.        18. (   17. blocks)
Image name and identification:             ERFSUMM V04-000
Number of files:                                    9.
Number of modules:                                 16.
Number of program sections:                        22.
Number of global symbols:                         952.
Number of cross references:                       105.
Number of image sections:                          20.
User transfer address:                     00000000
Number of address fixups:                         117.
Number of code references to shareable images:     19.
Image type:                                PIC, SHAREABLE. Global Section Match=LESS/EQUAL, Ident, Major=1, Minor=0
Map format:                                FULL WITH CROSS REFERENCE in file _$255$DUA28:[ERF.LIS]ERFSUMM.MAP;1
Estimated map length:                      174. blocks

                                  +----------------------+
                                  ! Link Run Statistics !
                                  +----------------------+


Performance Indicators                     Page Faults   CPU Time        Elapsed Time
----------------------                     -----------   --------        ------------
      Command processing:                         121   00:00:01.05      00:00:01.36
      Pass 1:                                     212   00:00:01.84      00:00:12.92
      Allocation/Relocation:                       27   00:00:00.22      00:00:01.66
      Pass 2:                                      79   00:00:01.20      00:00:09.32
      Map data after object module synopsis:       19   00:00:00.59      00:00:01.31
      Symbol table output:                          4   00:00:00.07      00:00:00.94
Total run values:                                 462   00:00:04.97      00:00:27.51
```

Using a working set limited to 1200 pages and 527 pages of data storage (excluding image)

Total number object records read (both passes):   363
     of which 141 were in libraries and 38 were DEBUG data records containing 2479 bytes

Number of modules extracted explicitly   = 10
     with 1 extracted to resolve undefined symbols

2 library searches were for symbols not in the library searched

A total of 5 global symbol table records was written

```
LINK/USERLIB=PROC/NOTRACE/MAP=MAP$:ERFSUMM/FULL/CROSS/SHARE=EXE$:ERFSUMM LIB$:ERF/INCLUDE=(ERFSUMMVECT,ERFSUMMARY,ROLLUP,LABEL_OUT,M
EMORY_DISPLAY,DECODE_ECC,ENTRY_SUMMARY_DESCRIPTOR_LOAD,ENTRY_SUMMARY_UPDATE,ENTRY_SUMMARY_WRITE,TIMCMP),COM$:PSECTATTR/OPT
EXE$:erfshr.exe/share
EXE$:erfcommon.exe/share
gsmatch=lequal,1,0
psect_attr=$blank,noshr
psect_attr=$pdata,noshr
psect_attr=$code,noshr
```

```
psect_attr=devchar,noshr
psect_attr=dr32,noshr
psect_attr=emb,noshr
psect_attr=erfcom,noshr
psect_attr=mode,noshr
psect_attr=mrd,noshr
psect_attr=opcode,noshr
psect_attr=qiocommon,noshr
psect_attr=sa,noshr
psect_attr=syecom,noshr
psect_attr=trans_addr,noshr
psect_attr=tables,noshr
psect_attr=_lib$code,noshr
psect_attr=_img$code,noshr
```

gsr
psc
psc
psc
psc
psc
psc
psc
psc
psc
psc
psc
psc
psc
psc
psc

EMBETDEF
REQ

BUGCHK
LIS

DEVERR
FOR

MODES
FOR

SSMESSAGE
FOR

B_C_DISP
LIS

ERFPROC4
MAP

ERFSHR
MAP

BSDRIVER
LIS

ERFPROC3
MAP

ERFDEF
REQ

MSGHDR
FOR

SYECOM
FOR

ERFRLTIM
MAP

ERFTAPE
MAP

PARSERDAT
SDL

DEV_CLASS
FOR

DR32COM
FOR

OPCODES
FOR

VOLMOUNT
FOR

ERFSUMM
MAP

EMBLMDEF
FOR

QIOCOMMON
FOR

ERFPROC5
MAP

DEVERRDEF
REQ

RECSELDEF
REQ

BRIEF
LIS

EMBSPDEF
FOR