

	CT2				TPK		
z9	SP03 SPJ1 STJ2 ST05	Active	4 LPARs	z9	SP05 ST07 (Linux)	3 LPARs	Active
	P02 P43 S41 T62 T43	Inactive	3 LPARs		P01 P53 P64 S51 S52	3 LPARs	Inactive
z990	SP04 SPJ2 CIT1 ST04 STJ1	Active	5 LPARs	z990	SP06 CIT2 ST06 SS08 SS09	5 LPARs	Active
	P01 P63 S61 T63	Inactive	4 LPARs		P32 P34 T32 T33	4 LPARs	Inactive

VE1	5700			VE11	5000
	Adapter 0: port 06 to director 71				Adapter 0: port 06 to director 61
	Adapter 1: port 06 to director 73 (ISL)				Adapter 1: port 06 to director 63 (ISL)
	Adapter 2: port 06 to director 72				Adapter 2: port 06 to director 62
	Adapter 3: port 06 to director 74 (ISL)				Adapter 3: port 06 to director 64 (ISL)
VE2	5800			VE21	5600
	Adapter 0: port 0A to director 71				Adapter 0: port 0A to director 61
	Adapter 1: port 0A to director 73 (ISL)				Adapter 1: port 0A to director 63 (ISL)
	Adapter 2: port 0A to director 72				Adapter 2: port 0A to director 62
	Adapter 3: port 0A to director 74 (ISL)				Adapter 3: port 0A to director 64 (ISL)

Legend:					
P42	SP05-COB/SP04-OSR Partition			P51	COB Partition
P43	COB#2 Partition			P53	CIT3 Production Partition
S41	SSox SysMaint Partition			P54	CFJ COB Partition
T42	Spare Development Partition			S51	Sysmaint Partition
T43	Spare Development Partition			S52	Sysmaint Partition
P61	SP06-COB/SP03-OSR Partition			P32	SP04-COB/SP06-OSR Partition
P63	COB#1 Partition			P34	CFJ COB Partition
S61	SS04 zOS License Partition			T32	Spare Development Partition
T63	SS01 Sysmaint Partition			T33	Spare Development Partition

		CT2								TPK						# Drvs Alloc	
		SP03	SP04	ST04	ST05	CIT1	SPJ1	SPJ2	STJ1	STJ2	SP05	SP06	CIT2	ST06	ST07		SS08
VE11	5000 - 500F																0
	5010 - 501F																0
	5020 - 502F																0
	5030 - 503F																0
	5040 - 504F																0
	5050 - 505F																0
	5060 - 506F																0
	5070 - 507F																0
	5080 - 508F										16						16
	5090 - 509F										16						16
	50A0 - 50AF										16						16
	50B0 - 50BF										16						16
	50C0 - 50CF												4		1		5
	50D0 - 50DF												4		1		5
	50E0 - 50EF												4		1		5
50F0 - 50FF												4		1		5	
		0		0		0		0		64		16		4		84	
VE21	5600 - 560F																0
	5610 - 561F																0
	5620 - 562F																0
	5630 - 563F																0
	5640 - 564F																0
	5650 - 565F																0
	5660 - 566F																0
	5670 - 567F																0
	5680 - 568F										16						16
	5690 - 569F										16						16
	56A0 - 56AF										16						16
	56B0 - 56BF										16						16
	56C0 - 56CF												4		1		5
	56D0 - 56DF												4		1		5
	56E0 - 56EF												4		1		0
56F0 - 56FF												4		1		0	
		0		0		0		0		64		16		4		74	
	5700 - 570F	12						4								16	
	5710 - 571F	12						4								16	
	5720 - 572F	12						4								16	
	5730 - 573F	12						4								16	

VE1	5740 - 574F		4	12					16
	5750 - 575F		4	12					16
	5760 - 576F		4	12					16
	5770 - 577F		4	12					16
	5780 - 578F								0
	5790 - 579F								0
	57A0 - 57AF								0
	57B0 - 57BF								0
	57C0 - 57CF								0
	57D0 - 57DF								0
	57E0 - 57EF								0
	57F0 - 57FF								0
		48	16	48	16	0	0	0	128
VE2	5800 - 580F	12			4				16
	5810 - 581F	12			4				16
	5820 - 582F	12			4				16
	5830 - 583F	12			4				16
	5840 - 584F		4	12					16
	5850 - 585F		4	12					16
	5860 - 586F		4	12					16
	5870 - 587F		4	12					16
	5880 - 588F								0
	5890 - 589F								0
	58A0 - 58AF								0
	58B0 - 58BF								0
	58C0 - 58CF								0
	58D0 - 58DF								0
	58E0 - 58EF								0
	58F0 - 58FF								0
		48	16	48	16	0	0	0	128

Notes:

- 1 BLUE - proposed drive assignment for CT2 systems.
- 2 RED - proposed drive assignment for TPK systems.

56A0	2											CF	+	+	+	+	+	+	+	+	8	8
	1	ED	#	#	#	#	#	#	#	#	#	F0									0	9
	3	FF	#	#	#	#	#	#	#	#	#	FF									0	9
50B0 56B0	0											FC									0	0
	2											C7									0	0
	1	E6	#	#	#	#	#	#	#	#	#	DE	+	+	+	+	+	+	+	+	8	17
	3	EE	#	#	#	#	#	#	#	#	#	F7	+	+	+	+	+	+	+	+	8	17
50C0 56C0	0											EE	+	+	+	+	+	+	+	+	8	8
	2											FD	+	+	+	+	+	+	+	+	8	8
	1	E2	#	#	#	#	#	#	#	#	#	C4/C8									0	9
	3	E7	#	#	#	#	#	#	#	#	#	DF									0	9
50D0 56D0	0											CE									0	0
	2											EF									0	0
	1	FE	#	#	#	#	#	#	#	#	#	FE	+	+	+	+	+	+	+	+	8	17
	3	E3	#	#	#	#	#	#	#	#	#	C5/C9	+	+	+	+	+	+	+	+	8	17
50E0 56E0	0											C6	+	+	+	+	+	+	+	+	8	8
	2											CF	+	+	+	+	+	+	+	+	8	8
	1	ED	#	#	#	#	#	#	#	#	#	F0									0	9
	3	FF	#	#	#	#	#	#	#	#	#	FF									0	9
50F0 56F0	0											FC									0	0
	2											C7									0	0
	1	E6	#	#	#	#	#	#	#	#	#	DE	+	+	+	+	+	+	+	+	8	17
	3	EE	#	#	#	#	#	#	#	#	#	F7	+	+	+	+	+	+	+	+	8	17

Adapter	0		0	0	0	0	0	0	0	0		8	8	8	8	8	8	8	8	64	
	r4		0	0	0	0	0	0	0	0		8	8	8	8	8	8	8	8		64
Adapter	2		0	0	0	0	0	0	0	0		8	8	8	8	8	8	8	8	64	
	r4		0	0	0	0	0	0	0	0		8	8	8	8	8	8	8	8		64
Adapter	1		6	6	6	6	6	6	6	6		8	8	8	8	8	8	8	8	118	
	r4		16	16	16	16	16	16	16	16		8	8	8	8	8	8	8	8		208
Adapter	3		6	6	6	6	6	6	6	6		8	8	8	8	8	8	8	8	118	
	r4		16	16	16	16	16	16	16	16		8	8	8	8	8	8	8	8		208
# Paths			12	12	12	12	12	12	12	12		32	32	32	32	32	32	32	32	364	
	r4		32	32	32	32	32	32	32	32		32	32	32	32	32	32	32	32		544

Legend

+ Path online to LPAR
 # Path online to LPAR with r4 microcode

Remarks

1) All LCUs accessible to TPK LPARs via 2 paths
 2) LCUs 5x00-5x50 defined to CT2 LPARs via 2 paths. With r4, all LCUs accessible to CT2 LPARs via 2 paths
 3) Before r4, CT2 systems will receive IOS163A messages "no associated subchannels" for devices 5x60-5xF0

Scenarios (current)

- 1) Activate additional LPARs in CT2 (remote access to VE)
 - > Each LPAR uses 6 logical paths per adapter (1 & 3) => max 1 LPAR can be activated [max LPARs = $(128-118)/6 = 1$]
- 2) Activate additional LPARs in TPK (local access to VE)
 - > Each LPAR uses 8 logical paths per adapter => max 8 LPARs can be activated; each LPAR access to 8 LCUs [max LPARs = $(128-64)/8 = 8$]
- 3) For more LPARs to access VE, CHPID offline from existing LPARs or deactivate existing LPARs to release logical paths

Scenarios (r4)

- 1) Activate additional LPARs in CT2 (remote access to VE)
 - > Each LPAR uses 16 logical paths per adapter (1 & 3) => max 3 LPARs can be activated [max LPARs = $(256-208)/16 = 3$]
- 2) Activate additional LPARs in TPK (local access to VE)
 - > Each LPAR uses 8 logical paths per adapter => all 9 inactive LPARs can be activated; each LPAR access to 8 LCUs [max LPARs = $(256-64)/8 = 2$]
- 3) For more LPARs to access VE, CHPID offline from existing LPARs or deactivate existing LPARs to release logical paths

58A0	2	E5	+	+	+	+	+	+	+	+	+	+								9	9	
	1	ED											F0	+	+	+	+	+	+	+	8	8
	3	FF											FF	+	+	+	+	+	+	+	8	8
57B0	0	F0																			0	0
58B0	2	E1																			0	0
	1	E6	+	+	+	+	+	+	+	+	+	+	DE	+	+	+	+	+	+	+	17	17
	3	EE	+	+	+	+	+	+	+	+	+	+	F7	+	+	+	+	+	+	+	17	17
57C0	0	DD	+	+	+	+	+	+	+	+	+	+									9	9
58C0	2	F7	+	+	+	+	+	+	+	+	+	+									9	9
	1	E2											C4/C8	+	+	+	+	+	+	+	8	8
	3	E7											DF	+	+	+	+	+	+	+	8	8
57D0	0	E4																			0	0
58D0	2	DE																			0	0
	1	FE	+	+	+	+	+	+	+	+	+	+	FE	+	+	+	+	+	+	+	17	17
	3	E3	+	+	+	+	+	+	+	+	+	+	C5/C9	+	+	+	+	+	+	+	17	17
57E0	0	E0	+	+	+	+	+	+	+	+	+	+									9	9
58E0	2	E5	+	+	+	+	+	+	+	+	+	+									9	9
	1	ED											F0	+	+	+	+	+	+	+	8	8
	3	FF											FF	+	+	+	+	+	+	+	8	8
57F0	0	F0																			0	0
58F0	2	E1																			0	0
	1	E6	+	+	+	+	+	+	+	+	+	+	DE	+	+	+	+	+	+	+	17	17
	3	EE	+	+	+	+	+	+	+	+	+	+	F7	+	+	+	+	+	+	+	17	17

Adapter	0		8	8	8	8	8	8	8	8	8	8	0	0	0	0	0	0	0	0	72	
	r4		8	8	8	8	8	8	8	8	8	8	0	0	0	0	0	0	0	0		72
Adapter	2		8	8	8	8	8	8	8	8	8	8	0	0	0	0	0	0	0	0	72	
	r4		8	8	8	8	8	8	8	8	8	8	0	0	0	0	0	0	0	0		72
Adapter	1		8	8	8	8	8	8	8	8	8	8	6	6	6	6	6	6	6	6	120	
	r4		8	8	8	8	8	8	8	8	8	8	16	16	16	16	16	16	16	16		200
Adapter	3		8	8	8	8	8	8	8	8	8	8	6	6	6	6	6	6	6	6	120	
	r4		8	8	8	8	8	8	8	8	8	8	16	16	16	16	16	16	16	16		200
# Paths			32	32	32	32	32	32	32	32	32	32	12	12	12	12	12	12	12	12	384	
	r4		32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32		544

Legend

+ Path online to LPAR
 # Path online to LPAR with r4 microcode

Remarks

1) All LCUs accessible to CT2 LPARs via 2 paths
 2) LCUs 5xA0-5xF0 defined to TPK LPARs via 2 paths. With r4, all LCUs accessible to TPK LPARs via 2 paths
 3) Before r4, TPK systems will receive IOS163A messages "no associated subchannels" for devices 5x00-5x90

Scenarios (current)

- 1) Activate additional LPARs in CT2 (local access to VE)
 - > Each LPAR uses 8 logical paths per adapter => max 7 LPARs can be activated; each LPAR access to 8 LCUs [max LPARs = $(128-72)/8 = 7$]
- 2) Activate additional LPARs in TPK (remote access to VE)
 - > Each LPAR uses 6 logical paths per adapter (1 & 3) => max 1 LPAR can be activated [max LPARs = $(128-120)/6 = 1$]
- 3) For more LPARs to access VE, CHPID offline from existing LPARs or deactivate existing LPARs to release logical paths

Scenarios (r4)

- 1) Activate additional LPARs in CT2 (local access to VE)
 - > Each LPAR uses 8 logical paths per adapter => all 9 LPARs can be activated; each LPAR access to 8 LCUs [max LPARs = $(256-72)/8 = 23$]
- 2) Activate additional LPARs in TPK (remote access to VE)
 - > Each LPAR uses 16 logical paths per adapter (1 & 3) => max 3 LPARs can be activated [max LPARs = $(256-200)/16 = 3$]
- 3) For more LPARs to access VE, CHPID offline from existing LPARs or deactivate existing LPARs to release logical paths

56A0	2																							0	0
	1	ED	#	#	#	#	#	#	#	#	#	#	F0	#	#	#	#	#	#	#	#	#	#	0	17
	3	FF	#	#	#	#	#	#	#	#	#	#	FF	#	#	#	#	#	#	#	#	#	#	0	17
50B0 56B0	0																							0	0
	2																							0	0
	1	E6	#	#	#	#	#	#	#	#	#	#	DE	#	#	#	#	#	#	#	#	#	#	0	17
	3	EE	#	#	#	#	#	#	#	#	#	#	F7	#	#	#	#	#	#	#	#	#	#	0	17
50C0 56C0	0																							0	0
	2																							0	0
	1	E2	#	#	#	#	#	#	#	#	#	#	C4/C8	#	#	#	#	#	#	#	#	#	#	0	17
	3	E7	#	#	#	#	#	#	#	#	#	#	DF	#	#	#	#	#	#	#	#	#	#	0	17
50D0 56D0	0																							0	0
	2																							0	0
	1	FE	#	#	#	#	#	#	#	#	#	#	FE	#	#	#	#	#	#	#	#	#	#	0	17
	3	E3	#	#	#	#	#	#	#	#	#	#	C5/C9	#	#	#	#	#	#	#	#	#	#	0	17
50E0 56E0	0																							0	0
	2																							0	0
	1	ED											F0											0	0
	3	FF											FF											0	0
50F0 56F0	0																							0	0
	2																							0	0
	1	E6											DE											0	0
	3	EE											F7											0	0

Adapter	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	r4		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adapter	2		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	r4		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adapter	1		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	102
	r4		14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	238
Adapter	3		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	102
	r4		14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	238
# Paths			12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	204
	r4		28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	476

Legend

+ Path online to LPAR

Path online to LPAR with r4 microcode

Remarks

1) LCUs 5x00-5x50 defined to all LPARs via 2 paths. With r4, all LCUs accessible to TPK LPARs via 2 paths

2) Before r4, all systems will receive IOS163A messages "no associated subchannels" for devices 5x60-5xF0

3) With r4, all systems will receive IOS163A messages "no associated subchannels" for devices 5xE0-5xF0

Scenarios (current)

- 1) Activate additional CT2 LPARs (remote access)
 - > Each LPAR uses 6 logical paths per adapter (1 & 3) => max 4 LPAR can be activated [max LPARs = $(128-102)/6 = 4$]
- 2) Activate additional TPK LPARs (remote access)
 - > Each LPAR uses 6 logical paths per adapter (1 & 3) => max 4 LPAR can be activated [max LPARs = $(128-102)/6 = 4$]
- 3) For more LPARs to access VE, CHPID offline from existing LPARs or deactivate existing LPARs to release logical paths

Scenarios (r4)

- 1) Activate additional CT2 LPARs (remote access)
 - > Each LPAR uses 14 logical paths per adapter (1 & 3) => max 1 LPARs can be activated [max LPARs = $(256-238)/14 = 1$]
- 2) Activate additional TPK LPARs (remote access)
 - > Each LPAR uses 14 logical paths per adapter (1 & 3) => max 1 LPARs can be activated [max LPARs = $(256-238)/14 = 1$]
- 3) For more LPARs to access VE, CHPID offline from existing LPARs or deactivate existing LPARs to release logical paths

58A0	2	E5	+	+	+	+	+	+	+	+	+	+	+	CF	+	+	+	+	+	+	+	+	+	17	17
	1	ED												F0										0	0
	3	FF												FF										0	0
57B0	0	F0												FC										0	0
58B0	2	E1												C7										0	0
	1	E6	+	+	+	+	+	+	+	+	+	+	+	DE	+	+	+	+	+	+	+	+	+	17	17
	3	EE	+	+	+	+	+	+	+	+	+	+	+	F7	+	+	+	+	+	+	+	+	+	17	17
57C0 58C0	0	DD	#	#	#	#	#	#	#	#	#	#	#	EE	#	#	#	#	#	#	#	#	#	0	17
	2	F7	#	#	#	#	#	#	#	#	#	#	#	FD	#	#	#	#	#	#	#	#	#	0	17
	1	E2												C4/C8										0	0
	3	E7												DF										0	0
57D0 58D0	0	E4												CE										0	0
	2	DE												EF										0	0
	1	FE	#	#	#	#	#	#	#	#	#	#	#	FE	#	#	#	#	#	#	#	#	#	0	17
	3	E3	#	#	#	#	#	#	#	#	#	#	#	C5/C9	#	#	#	#	#	#	#	#	#	0	17
57E0 58E0	0	E0	#	#	#	#	#	#	#	#	#	#	#	C6	#	#	#	#	#	#	#	#	#	0	17
	2	E5	#	#	#	#	#	#	#	#	#	#	#	CF	#	#	#	#	#	#	#	#	#	0	17
	1	ED												F0										0	0
	3	FF												FF										0	0
57F0 58F0	0	F0												FC										0	0
	2	E1												C7										0	0
	1	E6	#	#	#	#	#	#	#	#	#	#	#	DE	#	#	#	#	#	#	#	#	#	0	17
	3	EE	#	#	#	#	#	#	#	#	#	#	#	F7	#	#	#	#	#	#	#	#	#	0	17

Adapter	0		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	102	
	r4		8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8		136
Adapter	2		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	102	
	r4		8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8		136
Adapter	1		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	102	
	r4		8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8		136
Adapter	3		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	102	
	r4		8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8		136
# Paths			24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	408	
	r4		32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32		544

Legend

+ Path online to LPAR
 # Path online to LPAR with r4 microcode

Remarks

1) LCUs 5x00-5xB0 defined to all LPARs via 2 paths. With r4, all LCUs accessible to all LPARs via 2 paths
 2) Before r4, all systems will receive IOS163A messages "no associated subchannels" for devices 5xC0-5xF0

Scenarios (current)

- 1) Activate additional CT2 LPARs (local access)
 - > Each LPAR uses 6 logical paths per adapter => max 4 LPAR can be activated [max LPARs = $(128-102)/6 = 4$]
- 2) Activate additional TPK LPARs (local access)
 - > Each LPAR uses 6 logical paths per adapter => max 4 LPAR can be activated [max LPARs = $(128-102)/6 = 4$]
- 3) For more LPARs to access VE, CHPID offline from existing LPARs or deactivate existing LPARs to release logical paths

Scenarios (r4)

- 1) Activate additional CT2 LPARs (local access)
 - > Each LPAR uses 8 logical paths per adapter => max 15 LPARs can be activated [max LPARs = $(256-136)/8 = 15$]
- 2) Activate additional TPK LPARs (local access)
 - > Each LPAR uses 8 logical paths per adapter => max 15 LPARs can be activated [max LPARs = $(256-136)/8 = 15$]
- 3) For more LPARs to access VE, CHPID offline from existing LPARs or deactivate existing LPARs to release logical paths

Analysis based on Jan 2007 SMF data for Production LPARs:

Concurrent Drive Distribution

Date	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Max
All	70	55	74	63	68	94	95	75	81	87	59	59	64	47	32	41	33	49	43	38	55	53	59	91	95
Mon 29/01/2007	-	-	-	-	4	8	16	25	28	18	17	16	23	15	10	13	26	31	27	20	40	35	54	66	66
Tue 30/01/2007	50	44	48	63	61	77	95	75	72	87	59	56	46	41	32	41	33	49	34	35	55	53	59	91	95
Wed 31/01/2007	70	53	49	57	68	94	86	72	81	84	54	59	64	47	26	31	32	48	43	38	52	50	59	87	94
Thu 01/02/2007	54	55	74	50	63	91	80	25	5	6	6	9	5	5	4	14	5	4	4	5	6	9	7	17	91

Concurrent Drive Usage by LPAR

Workload	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Max
SP03	23	18	19	25	20	40	31	23	16	16	13	11	9	7	7	6	8	11	9	12	18	16	30	36	40
SP04	21	23	28	22	14	31	34	19	16	16	12	10	6	6	4	8	6	13	14	9	30	14	26	27	34
SP05	13	14	20	26	35	34	26	30	31	34	24	36	29	25	22	13	12	13	12	16	11	17	13	16	36
SP06	18	16	19	15	23	30	21	20	26	28	21	21	25	10	14	11	15	21	16	13	8	15	16	25	30
CIT2	10	9	8	10	11	6	6	5	6	7	6	9	5	6	4	14	7	7	4	9	6	9	7	17	17