

The following publications will be updated:

SA38-0674

z/OS: MVS System Messages, Volume 7 (IEB-IEE)

Updated text is marked with | below:

IEE459I (form 3 of 5) hh.mm.ss DEVSERV QDASD [id]

..

ATTRIBUTE/FEATURE

SOLID STATE DRIVES

The device is a solid state device if q is y.

ENCRYPTION

The device is a encrypted device if q is y.

| COMPRESSION

| The device is a compression volume if q is y.

SC23-6861

z/OS: DFSMSdfp Advanced Services

Chapter 12. User Access to Subsystem Statistics, Status, and Counts
Information

Updated text is marked with | below:

Passed Argument List -- SSGARGL

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MAPPING FOR THE SUBSYSTEM GET OUTPUT BUFFER
FOR RANK PERFORMANCE STATISTICS

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=====					
OFFSET	OFFSET				
DECIMAL	HEX	TYPE	LENGTH	NAME (DIM)	DESCRIPTION
=====					
0	(0)	STRUCTURE	*	SSGRRST	Rank stats entry mapping includes one or more entries for array information
0	(0)	UNSIGNED	2	SSGRRID	Rank identifier
2	(2)	UNSIGNED	2	SSGRRPNM	Extent pool number
4	(4)	UNSIGNED	1	SSGRRCNT	Count of arrays in rank
5	(5)	BITSTRING	1	SSGRRRTQ	Rank Type Qualifier
		1... ..		SSGRRDER	Data Encrypted Rank. When '1', the data stored on the physical media (i.e disk) is encrypted.
|		.1... ..		SSGRRCP	Compression Rank. When '1', the data stored on the physical media (i.e disk) may be data reduced.

				..xx xxx.	*	RESERVED	
				.... ...1		SSGRRAPV	Adapter Pair ID Valid. When '1', the Adapter Pair ID in Bytes 6-7 is valid.
6	(6)	CHARACTER	2			SSGRRAPI	Adapter Pair ID
32	(20)	CHARACTER	24			SSGRRAR(*)	Array information Mapping
53	(35)	BITSTRING	1			SSGRRACS	Array Device Class and Array Status
		11..				SSGRRADC	Mask bits for Array Device Class Device Class
							'00'b Enterprise
							'01'b Enterprise Near-line (An Advanced Technology Attachment (ATA) Drive)
							'10'b SATA (Serial Advanced Technology Attachment (ATA) Drive)
							'11'b Solid State Drive (SSD)
		..1.				SSGRRAS1	Raid Degraded. One or more array members need rebuilding
		...1				SSGRRAS2	DDM Throttling. A Near-line DDM in the array is throttling performance due to temperature or workload.
		.... 1...				SSGRRAS3	RPM Exception. A DDM with a slower RPM than the normal array DDMs is a member of the array as a result of a sparing sparing action.
		.... .1..				SSGRRAS4	Flash Storage Type
							'0'b Flash Tier 0
							'1'b Flash Tier 1 or Flash Tier 2
		.... ..1.				SSGRRAS5	Compression Drive (Compression Flash Tier)
		.... ..1.					The DDM class is Compression
		.... ...x			*		Not used
54	(36)	CHARACTER	2			SSGRRACP	Array Effective DDM Capacity (GB)
							For Compression drives, this is the Total Logical Capacity. The Total Logical Capacity is the total amount of capacity that can be written. This is the total addressable space. Also referred to as total effective capacity. It is the total Logical Block Addressable (LBA) range.

MAPPING FOR THE SUBSYSTEM GET OUTPUT BUFFER
FOR EXTENT POOL PERFORMANCE STATISTICS

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OFFSET DECIMAL	OFFSET HEX	TYPE	LENGTH	NAME (DIM)	DESCRIPTION
0	(0)	STRUCTURE	*	SSGSBUFR	
0	(0)	CHARACTER	56	SSGSHDR	Queue element header
28	(1C)	CHARACTER	28	SSGSSHDR	Extent pool stats info
28	(1C)	UNSIGNED	2	SSGSNSET	Num of pool stats sets read
30	(1E)	UNSIGNED	2	SSGSLSET	Size of each set
32	(20)	CHARACTER	6	SSGSCUT	Control unit type
38	(26)	CHARACTER	3	SSGSCUM	Control unit model
41	(29)	CHARACTER	10	SSGSSEQ	Control unit sequence number
51	(33)	CHARACTER	1	SSGSVER	Version of pool statistics
52	(34)	BITSTRING	1	SSGSFLG	Flags
		1... ..		SSGSVLD	Extent pool statistics valid When set to one, SSGSSRSC, SSGSSVCP, SSGSSNMV, SSGSSVSC, SSGSSSDY, and SSGSSTDY are valid.
		.1... ..		SSGSVLD2	Extent pool statistics valid 2 When set to one, SSGSSEPS, SSGSSBCE, and SSGSSBAE are valid.
		..1.		SSGSVLD3	Extent pool statistics valid 3 When set to one, SSGSSTPC, SSGSSUPC, SSGSSTLC, SSGSSULC, and SSGSSCPR are valid.
		...x xxxx	*		Not used
53	(35)	CHARACTER	3	*	Not used
56	(38)	CHARACTER	*	SSGSDADA	Extent pool perf stats read
56	(38)	CHARACTER	100	SSGSSSTA(*)	Extent pool stats entry
56	(38)	UNSIGNED	2	SSGSSGID	Extent pool identifier

OFFSET DECIMAL	OFFSET HEX	TYPE	LENGTH	NAME (DIM)	DESCRIPTION
0	(0)	STRUCTURE	100	SSGSSSTT	Extent pool stats entry includes one or more entry
0	(0)	UNSIGNED	2	SSGSSPID	Extent pool identifier
3	(3)	BITSTRING	1	SSGSSPTQ	Extent Pool Type Qualifier
		1... ..		SSGSSDEP	Data Encrypted Extent Pool. When '1', the data stored on the physical media (i.e disk) is encrypted.
		.1... ..		SSGSSCPP	Compression Extent Pool. When '1', the extent pool is a Compression Extent Pool.
		..xx xxx.	*		Reserved, set to zero
	1		SSGSSESV	Extent Sizes Valid When '1', SSGSSEPS contains the extent sizes in the Extent Pool.

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48 (30) UNSIGNED 4 SSGSSBAE Safeguarded Copy Backup
Allocated Extents

The value in fields SSGSSTPC, SSGSSUPC, SSGSSTLC, and SSGSSULC is reported based on the physical extents for the extent pool. The extent pool may have 16 MB physical extents OR 1 GB physical extents. No mixed sizes in an extent pool.

52	(34) UNSIGNED	4	SSGSSTPC	Total Physical Capacity. The total amount of capacity that can be stored on media. This is the raw physical capacity that can be stored after all compression techniques.
56	(38) UNSIGNED	4	SSGSSUPC	Used Physical Capacity. The total amount of capacity stored on media. This is the raw physical capacity that has been consumed after compression techniques.
60	(3C) UNSIGNED	4	SSGSSTLC	Total Logical Capacity. The total amount of capacity that can be written. This is the total addressable space. Also referred to as total effective capacity. It is the total Logical Block Addressable (LBA) range.
64	(40) UNSIGNED	4	SSGSSULC	Used Logical Capacity. The total amount of capacity that has been written from the host. This is written addressed space before any compression techniques have been performed. Also referred to as used effective capacity.
68	(44) UNSIGNED	4	SSGSSCPR	Compression Ratio for the Extent Pool. This value is 100 times the Used Logical Capacity (SSGSSULC) divided by the Used Physical Capacity (SSGSSUPC). This will be set to 0 if the Physical Used Capacity is 0.
72	(48) UNSIGNED	28	*	Not Used. Set to zero.

MAPPING FOR THE SPACE EFFICIENT VOLUME STATUS OUTPUT BUFFER

OFFSET DECIMAL	OFFSET HEX	TYPE	LENGTH	NAME (DIM)	DESCRIPTION
0	(0)	STRUCTURE	168	SSGSEBUF	
0	(0)	CHARACTER	72	SSGSEHDR	Queue element header
64	(40)	CHARACTER	3	SSGSALCM	Allocation Method
67	(43)	BITSTRING	1	SSGSGFLG	Report Volume Info Flag Byte
		1... ..		SSGSGCBI	Report SGC Backup Vol Info
		.1... ..		SSGSGCPI	Report Compression Info
		..xx xxxx		*	RESERVED
68	(44)	UNASSIGNED	4	SSGSECTL	Total compression VOL Count, only valid for head of buffer

				chain
72	(48) CHARACTER	96	SSGSEDAD	SE VOL Statistics
Specified volume				
=====				
72	(48) BITSTRING	1	SSGSEFLG	Flag Byte 1
	1... ..		SSGSEVF	ON=Track Space Efficient Volume (Legacy)
	.1... ..		SSGSEAN	ON=Space Currently Allocated is Not Available
	..1.		SSGSEEV	ON=Extent Space Efficient Volume
	...1		SSGSEBV	ON=Backup Volume The information reported is for the Backup volume.
	.... 1...		SSGSEBE	ON=Backup Volume is expanding When Backup volume (SSGSEBV) is set to one and this bit is set to one, the Backup Volume is currently expanding.
	.... .1..		SSGSECP	ON=Compression The Compression Information was requested and is reported in SSGSEUPCP and SSGSECPRV.
	.... ..1.		SSGSECV	ON=Compression Information Valid - When Compression (SSGSECP) is set to zero, this bit is ignored and set to zero. - When Compression (SSGSECP) is set to one and this bit is set zero, the Compression Information is unavailable or stale in the control unit at this point in time. SSGSEUPCP and SSGSECPRV are set to all zeros. - When Compression (SSGSECP) is set to one and this bit is set to one, the Compression Information is valid in the control unit and reported in SSGSEUPCP and SSGSECPRV.
	.... ...1		SSGSECE	ON=Compression Information Estimate for non-Compression volumes This bit is only valid when SSGSECP (Compression) is set to one and SSGSEVC (Compression Information Valid) is set to one. The information in SSGSEUPCP and SSGSECPRV for this non-Compression volume shows the estimated values as if this volume was a Compression volume.
73	(49) CHARACTER	1 *		not used
74	(4A) UNSIGNED	2	SSGSEEP	Extend Pool ID
The following fields are a percentage of the capacity remaining that will initiate a notification to the host				
=====				
76	(4C) UNSIGNED	1	SSGSECWW	Capacity Limit Warning Watermark
77	(4D) UNSIGNED	1	SSGSEGWW	Guaranteed Capacity

78	(4E) UNSIGNED	1	SSGSECLW	Warning Watermark Compression Capacity Limit Warning Watermark This value is set to the Warning Percentage EMPTY that is either the Control Unit default value or the User Specified value. The default value will be reported when the user has not specified a value. This is the percentage of the capacity remaining that will initiate a notification to the host. This byte will be set to zero if SSGSECP (Compression) is set to '0' and SSGSECE (Compression Information Estimate for non-Compression volumes) is set to '1'.
79	(4F) UNSIGNED	1	SSGSECGW	Compression Guaranteed Capacity Warning Watermark This value is set to the Guaranteed Capacity Warning Percentage EMPTY that is either the Control Unit default value or the User Specified value. The default value will be reported when the user has not specified a value. This is the percentage of the guaranteed capacity remaining that will initiate a notification to the host. This byte will be set to zero if SSGSECP (Compression) is set to '0' and SSGSECE (Compression Information Estimate for non-Compression volumes) is set to '1'.

The following fields are expressed in number of cylinders for CKD device. The following fields are expressed in TENTH of binary Gigabytes for Fixed Block device.

80	(50) UNSIGNED	4	SSGSEC	SE Volume Capacity Limit
84	(54) UNSIGNED	4	SSGSEG	SE Volume Guaranteed Capacity
88	(58) UNSIGNED	4	SSGSESCA	Space Currently Allocated in this Volumes Extent Pool This information is the Used Logical Capacity Volume for the Volume in the Extent Pool. It is the total amount of capacity that has been written from the host. This is the written addressed space before any compression techniques have been performed. Also referred to as used effective capacity.
92	(5C) UNSIGNED	4	SSGSEEPR	Size of Space to Configure Volumes
96	(60) UNSIGNED	4	SSGSECAP	SE Volume Capacity This information is the Total Logical Capacity for the Volume.

It is the total amount of capacity that can be written. This is the total addressable space. Also referred to as total effective capacity. It is the total Logical Block Addressable (LBA) range.

Backup Volume

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100	(64)	BITSTRING	1	SSGSEFLGB	Flag Byte 1
		1... ..		SSGSEVFB	ON=Track Space Efficient Volume (Legacy)
		.1.. ..		SSGSEANB	ON=Space Currently Allocated is Not Available
		..1. ..		SSGSEEVb	ON=Extent Space Efficient Volume
		...1 ..		SSGSEBVB	ON=Backup Volume The information reported is for the Backup volume.
		.... 1..		SSGSEBEB	ON=Backup Volume is expanding When Backup volume (SSGSEBVB) is set to one and this bit is set to one, the Backup Volume is currently expanding.
		.... .1..		SSGSECPB	ON=Compression The Compression Information was requested and is reported in SSGSEUPCP and SSGSECPRV.
		.... ..1.		SSGSECVB	ON=Compression Information Valid - When Compression (SSGSECPB) is set to zero, this bit is ignored and set to zero. - When Compression (SSGSECPB) is set to one and this bit is set zero, the Compression Information is unavailable or stale in the control unit at this point in time. SSGSEUPCP and SSGSECPRV are set to all zeros. - When Compression (SSGSECPB) is set to one and this bit is set to one, the Compression Information is valid in the control unit and reported in SSGSEUPCP and SSGSECPRV.
		.... ...1		SSGSECEB	ON=Compression Information Estimate for non-Compression volumes This bit is only valid when SSGSECPB (Compression) is set to one and SSGSEVCB (Compression Information Valid) is set to one. The information in SSGSEUPCP and SSGSECPRV for this non-Compression volume shows the estimated values as if this volume was a Compression volume.
101	(65)	CHARACTER	1 *		not used
102	(66)	UNSIGNED	2	SSGSEEPB	Extend Pool ID

The following fields are a percentage of the capacity remaining that will initiate a notification to the host

104	(68)	UNSIGNED	1	SSGSECWWB	Capacity Limit Warning Watermark
105	(69)	UNSIGNED	1	SSGSEGWWB	Guaranteed Capacity Warning Watermark
106	(6A)	UNSIGNED	1	SSGSECLWB	Compression Capacity Limit Warning Watermark This value is set to the Warning Percentage EMPTY that is either the Control Unit default value or the User Specified value. The default value will be reported when the user has not specified a value. This is the percentage of the capacity remaining that will initiate a notification to the host. This byte will be set to zero if SSGSECPB (Compression) is set to '0' and SSGSECEB (Compression Information Estimate for non-Compression volumes) is set to '1'.
107	(6B)	UNSIGNED	1	SSGSECGWB	Compression Guaranteed Capacity Warning Watermark This value is set to the Guaranteed Capacity Warning Percentage EMPTY that is either the Control Unit default value or the User Specified value. The default value will be reported when the user has not specified a value. This is the percentage of the guaranteed capacity remaining that will initiate a notification to the host. This byte will be set to zero if SSGSECPB (Compression) is set to '0' and SSGSECEB (Compression Information Estimate for non-Compression volumes) is set to '1'.
<p>The following fields are expressed in number of cylinders for CKD device. The following fields are expressed in TENTH of binary Gigabytes for Fixed Block device.</p>					
108	(6C)	UNSIGNED	4	SSGSECB	SE Volume Capacity Limit
112	(70)	UNSIGNED	4	SSGSEGB	SE Volume Guaranteed Capacity
116	(74)	UNSIGNED	4	SSGSESCAB	Space Currently Allocated in this Volumes Extent Pool This information is the Used Logical Capacity Volume for the Volume in the Extent Pool. It is the total amount of capacity that has been written from the host. This is the written addressed space before any compression techniques have been performed. Also referred to as used effective capacity.
120	(78)	UNSIGNED	4	SSGSEEPRB	Size of Space to Configure

Volumes

124	(7C)	UNSIGNED	4	SSGSECAPB	SE Volume Capacity This information is the Total Logical Capacity for the Volume. It is the total amount of capacity that can be written. This is the total addressable space. Also referred to as total effective capacity. It is the total Logical Block Addressable (LBA) range.
128	(80)	UNSIGNED	4	SSGSESEQB	Sequence Number of the last Consistency Group in the prior SGC Backup Capacity Volume Size
132	(84)	CHARACTER	4 *		Not Used

Compression

The following field is expressed in number of cylinders for CKD device. The following fields are expressed in TENTH of binary Gigabytes for Fixed Block device.

136	(88)	UNSIGNED	4	SSGSEUPCP	Used Physical Capacity The total amount of capacity stored on media. This is the raw physical capacity that has been consumed after compression techniques.
140	(8C)	UNSIGNED	4	SSGSECPRV	Compression Ratio for the Volume. This value is 100 times the Used Logical Capacity (SSGSESCA) divided by the Used Physical Capacity (SSGSEUPCP). This will be set to 0 if the Used Physical Capacity is 0.
144	(90)	CHARACTER	24 *		Not Used. Set to 0.

MAPPING FOR THE EXTENT POOL CONFIGURATION STATUS OUTPUT BUFFER

OFFSET DECIMAL	OFFSET HEX	TYPE	LENGTH	NAME (DIM)	DESCRIPTION
0	(0)	STRUCTURE	*	SSGEPBUF	
0	(0)	CHARACTER	44	SSGEHDR	Queue element header

The format of the next eight bytes is repeated the number times as indicated by SSGEPCNT.

76	(4C)	CHARACTER	8	SSGEPSUM	Ext Pool summary data
76	(4C)	CHARACTER	2	SSGEPIDS	Extent Pool ID

The following two fields are a remaining percentage of usable space that will initiate a notification to the host

78	(4E)	CHARACTER	1	SSGEPRWP	SE Repository Capacity Available Warning Percentage (Legacy)
79	(4F)	CHARACTER	1	SSGEPFWP	Real Ext Threshold

					Percentage	
|	80	(50)	BITSTRING	2	SSGEPFLG	Extent Pool Summary Flags
			1... ..		SSGEPFB	Extent Pool Type 0=CKD Ext Pool, 1=FB Ext Pool
|			.1..		SSGEPRC	TSE Volumes Repository Configured (Legacy)
|			..1.		SSGEOPV	ESE Volumes Configured
			...1		SSGESTD	STD (FP) Volumes Configured
			.... 1...		SSGEESV	Extent Sizes Valid When set to one, SSGEESZ contains the extent sizes in the Extent Pool.
			.... .1..		SSGEPWP	Real Capacity at or below Warning Percentage
			.... ..1.		SSGEPF	No Available Real Capacity (i.e. Full)
			.... ...1		SSGESGC	SGC Backup Volumes Configured
|	81	(51)	1... ..		SSGECPE	Compression enabled
|			.1..		SSGECIE	Compression Information Estimate for non-Compression extents In Extent Pool Detailed Info Version 3, the info in SSGTPCAP3 provided for this non-Compression extent shows the estimated benefit if this extent was for Compression.
|			..1.		SSGECWP	Compression Capacity at or below Warning Percentage
|			...1		SSGENAC	No Available Compression Capacity (i.e. full)
|			.... xxxx		*	Not Used. Set to zero.
|	82	(52)	BITSTRING	1	SSGEESZ	Extent Sizes in Extent Pool
|			x... ..		*	Reserved
			.1..		SSGS01GB	1 GB Extents
|			..xx xxx.		*	Reserved
			.... ...1		SSGS16MB	16 MB Extents
	83	(53)	CHARACTER	1	SSGECETP	Compression Extent Threshold Percentage This percentage represents at what percentage of remaining space in the Compression extent pool that a warning message is issued. This is a user settable parameter.

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| The following fields contain detailed information of the Extent
| Pool provided by the caller (Ver 1).

	0	(0)	CHARACTER	12316	SSGEPDAT	
	0	(0)	CHARACTER	2	SSGEPIDD	Ext Pool ID for detailed data
	2	(2)	BITSTRING	1	SSGEPDFG	Extent Pool Detailed Flags
|			1... ..		SSGEPARN	SE Repository Capacity is Not Available (Legacy)
|			.1..		SSGEPRAW	SE Repository at or below Warning Percentage (Legacy)
|			..1.		SSGEPREF	No Available SE Repository Capacity (i.e. full) (Legacy)

...	1	....		SSGEPESV	Extent Sizes Valid When set to one, SSGEPESZ contains the extent sizes in the Extent Pool.
|		.... xxxx		*	RESERVED
	3	(3) BITSTRING	1	SSGEPESZ	Extent Sizes in Extent Pool
|		x...		*	Reserved
		.1...		SSGED01GB	1 GB Extents
|		..xx xxx.		*	Reserved
		.... ...1		SSGED16MB	16 MB Extents

The following field is expressed in number of cylinders for CKD device. The following fields are expressed in TENTH of binary Gigabytes for Fixed Block device.

4	(4)	UNSIGNED	4	SSGEPsz	Sizes of Extent Pool
8	(8)	UNSIGNED	4	SSGEALOC	Space Currently Allocated in Extent Pool
|	12	(C) UNSIGNED	4	SSGEPsz	Size of TSE Extent
|					Pool Repository (Legacy)
|	16	(10) UNSIGNED	4	SSGEPRAL	Space Currently Allocated in TSE
|					Extent Pool Repository (Legacy)
|	20	(14) UNSIGNED	4	SSGEPGSZ	Amount of Guaranteed Space in Repository (Legacy)
|	24	(18) UNSIGNED	4	SSGEPGAL	Allocated Guaranteed Capacity

The next three fields are 32k bitmaps

28	(1C) BITSTRING	4096	SSGENORM	Standard (FP) Vols
4124	(101C) BITSTRING	4096	SSGEPOPV	Extent Space Efficient Vols
|	8220 (201C) BITSTRING	4096	SSGEPSEV	Track Space Efficient Vols (Legacy)

The following fields contain detailed information of the Extent Pool provided by the caller (Ver 2).

0	(0)	CHARACTER	16512	SSGEPDV2	
0	(0)	CHARACTER	2	SSGEPIDD2	Ext Pool ID for detailed data
2	(2)	BITSTRING	1	SSGEPDFG2	Extent Pool Detailed Flags
|		1... ..		SSGEPARN2	SE Repository Capacity is Not Available (Legacy)
|		.1... ..		SSGEPRAW2	SE Repository at or below Warning Percentage (Legacy)
|		..1.		SSGEPRF2	No Available SE Repository Capacity (i.e. full) (Legacy)
|		...1		SSGEPESV2	Extent Sizes Valid
					When set to one, SSGEPESZ2 contains the extent sizes in the Extent Pool.
|		.... xxxx		*	RESERVED
3	(3)	BITSTRING	1	SSGEPESZ2	Extent Sizes in Extent Pool
|		x... ..		*	Reserved
		.1... ..		SSGED01GB2	1 GB Extents
|		..xx xxx.		*	Reserved
		.... ...1		SSGED16MB2	16 MB Extents

The following fields are expressed in number of cylinders for CKD

device. The following fields are expressed in TENTH of binary Gigabytes for Fixed Block device.

4	(4)	UNSIGNED	4	SSGEPSZ2	Physical Size of Extent Pool
8	(8)	UNSIGNED	4	SSGEALOC2	Space Currently Allocated in Extent Pool
12	(C)	UNSIGNED	4	SSGEPRSZ2	Size of TSE Extent Pool Repository (Legacy)
16	(10)	UNSIGNED	4	SSGEPRAL2	Space Currently Allocated in TSE Extent Pool Repository (Legacy)
20	(14)	UNSIGNED	4	SSGEPGSZ2	Amount of Guaranteed Space in Repository (Legacy)
24	(18)	UNSIGNED	4	SSGEPGAL2	Allocated Guaranteed Capacity
28	(1C)	UNSIGNED	4	SSGEPECC2	ESE Volumes Capacity Configured
32	(20)	UNSIGNED	4	SSGEPTCC2	TSE Volumes Capacity Configured
36	(24)	UNSIGNED	4	SSGEPFCC2	STD (FP) Volumes Capacity Configured

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The next three fields are 32k bitmaps

128	(80)	BITSTRING	4096	SSGENORM2	Standard (FP) Vols
4224	(1080)	BITSTRING	4096	SSGEPOPV2	Extent Space Efficient Vols
8320	(2080)	BITSTRING	4096	SSGEPSEV2	Track Space Efficient Vols (Legacy)
12416	(3080)	BITSTRING	4096	SSGEPSGC2	Safeguarded Copy Backup Vols

The following fields contain detailed information of the Extent Pool provided by the caller (Ver 3).

0	(0)	CHARACTER	16896	SSGEPDV3	
0	(0)	CHARACTER	2	SSGEPIDD3	Ext Pool ID for detailed data
2	(2)	BITSTRING	2	SSGEPDFG3	Extent Pool Detailed Flags
		1... ..		SSGEPFB3	Extent Pool Type 0=CKD Ext Pool, 1=FB Ext Pool
		.1... ..		SSGEPRC3	TSE Volumes Repository Configured (Legacy)
		..1.		SSGEOPV3	ESE Volumes Configured
		...1		SSGESTD3	STD (FP) Volumes Configured
		.... 1...		SSGEESV3	Extent Sizes Valid When set to one, SSGEPESZ3 contains the extent sizes in the Extent Pool.
		.... .1..		SSGRCWP3	Real Capacity at or below Warning Percentage
		.... ..1.		SSGRCF3	No Available Real Capacity (i.e. full)
		.... ...1		SSGEPRAW3	SE Repository at or below Warning Percentage (Legacy)
3	(3)	1... ..		SSGEPRF3	No Available SE

					Repository Capacity (i.e. full) (Legacy)	
	.1..			SSGESGC3	SGC Backup Volumes Configured	
	..1.			SSGECWP3	Compression Capacity at or below Warning Percentage	
	...1			SSGENAC3	No Available Compression Capacity (i.e. full)	
	.... xx..			*	Not Used	
	.... ..1.			SSGEPARN3	SE Repository Capacity is Not Available (Legacy)	
	.... ...1			SSGEPRIS3	SE Repository contains Inaccessible Space (Legacy)	
..						
	26	(1A)	UNSIGNED	1	SSGAVECP3	Available ESE Real Capacity Percentage
	27	(1B)	UNSIGNED	1	SSGISRCP3	Percentage of Inaccessible SE Repository Capacity (Legacy)
..						
	128	(80)	UNSIGNED	8	SSGMVARC3	Allocated Real Capacity used to Provision Metadata Virtual Capacity
	136	(88)	UNSIGNED	8	SSGTSARC3	Allocated Real Capacity used to Provision TSE Repository (Legacy)
..						
	240	(F0)	UNSIGNED	8	SSGCESVC3	Configured ESE Volumes Virtual Capacity (Legacy)
	248	(F8)	UNSIGNED	8	SSGCT SVC3	Configured TSE Volumes Virtual Capacity (Legacy)
..						
	296	(128)	UNSIGNED	32	*	Reserved
	328	(148)	UNSIGNED	8	SSGTSERC3	TSE Repository Capacity (Legacy)
	336	(150)	UNSIGNED	8	SSGALTSC3	Allocated TSE Repository Capacity (Legacy)
	344	(158)	UNSIGNED	8	SSGAVTSC3	Available TSE Repository Capacity (Legacy)
	352	(160)	UNSIGNED	8	SSGIATSC3	Inaccessible TSE Repository Capacity (Legacy)
	360	(168)	UNSIGNED	8	SSGGT SRC3	Guaranteed TSE Repository Capacity (Legacy)
	368	(170)	UNSIGNED	8	SSGPT SRC3	Preserved TSE Repository Capacity (Legacy)
	376	(178)	UNSIGNED	8	SSGTPCAP3	Compression Total Physical Capacity. The total amount of capacity that can be stored on media. This is the raw physical capacity that can be stored after all compression techniques. If SSGECIE (Compression Information Estimate for non-Compression Extents) in

384	(180)	UNSIGNED	8	SSGUPCAP3	SSGEPFLG (Extent Pool Summary Flags) is set, this information shows the estimated value if this extent was a Compression extent. Compression Used Physical Capacity. The total amount of capacity stored on media. This is the raw physical capacity that has been consumed after compression techniques. If SSGECIE (Compression Information Estimate for non-Compression Extents) in SSGEPFLG (Extent Pool Summary Flags) is set, this information shows the estimated value if this extent was a Compression extent.
392	(188)	UNSIGNED	8	SSGTLCAP3	Compression Total Logical Capacity. The total amount of capacity that can be written. This is the total addressable space. It is total Logical Block Addressable (LBA) range. Also referred to as total effective capacity. If SSGECIE (Compression Information Estimate for non-Compression Extents) in SSGEPFLG (Extent Pool Summary Flags) is set, this information shows the estimated value if this extent was a Compression extent.
400	(190)	UNSIGNED	8	SSGULCAP3	Compression Used Logical Capacity The total amount of capacity that has been written from the host. This is the written addressed space before any compression techniques have been performed. Also referred to as used effective capacity. If SSGECIE (Compression Information Estimate for non-Compression Extents) in SSGEPFLG (Extent Pool Summary Flags) is set, this information shows the estimated value if this extent was a Compression extent.
408	(198)	UNSIGNED	4	SSGCPRAT3	Compression Ratio for the Extent Pool. This value is 100 times the Used Logical Capacity (SSGULCAP3) divided by the Used Physical Capacity (SSGUPCAP3). This will be set to 0 if the Used Physical Capacity is 0. If SSGECIE (Compression Information Estimate for non-Compression Extents) in SSGEPFLG (Extent Pool Summary Flags) is set, this information shows the estimated value if this extent was a Compression extent.
412	(19C)	UNSIGNED	4	*	Reserved

416	(1A0)	UNSIGNED	8	SSGSGRUL3	Compression Reserved Used Logical Capacity The reserved amount of capacity that can be written from the host. This is the written addressed space before any compression techniques have been performed. Also referred to as used effective capacity.
424	(1A8)	UNSIGNED	8	SSGSGRUP3	Compression Reserved Used Physical Capacity The reserved amount of capacity to be stored on media. This is the raw physical capacity that can be consumed after compression techniques.
432	(1B0)	UNSIGNED	1	SSGSGELP3	Compression Extent Limit Percentage This value indicates the maximum percentage of the Compression Physical Capacity that is allowed to be allocated in this extent pool.
433	(1B1)	UNSIGNED	1	SSGSGETP3	Compression Extent Threshold Percentage This value is used to set the state in Compression Extent Status (SSGSGCES3) and represents a percentage that is compared against the Available Compression Physical Capacity Percentage. The Available Physical Capacity Percentage may be calculated using the formula: $((\text{Compression Total Physical Capacity (SSGTPCAP3)} - \text{Compression Used Physical Capacity (SSGUPCAP3)}) / \text{Compression Total Physical Capacity (SSGTPCAP3)}) * 100$
434	(1B2)	UNSIGNED	1	SSGSGCES3	Compression Extent Status Set to one of the following values: 00 - The percentage of the Available Compression Extents is greater than zero and is greater than the extent threshold. 01 - The percentage of the Available Compression Extents is greater than zero and is less than the extent threshold. 10 - The percentage of the Available Compression Extents is zero. When set to '01' or '10', SSGECWP3 (Compression Capacity at or below Warning Percentage) is set to '1'.
435	(1B3)	UNSIGNED	5	*	Reserved
440	(1B8)	UNSIGNED	4	SSGSGARC3	SGC Backup Volumes Allocated Real Capacity
444	(1BC)	UNSIGNED	4	SSGCSGVC3	Configured SGC Backup Volumes

						Virtual Capacity
	448	(1C0)	UNSIGNED	64	*	Reserved

The next three fields are 32k bitmaps

	512	(200)	BITSTRING	4096	SSGENORM3	Standard (FP) Vols
	4608	(1200)	BITSTRING	4096	SSGEPOPV3	Extent Space Efficient Vols
	8704	(2200)	BITSTRING	4096	SSGEPSEV3	Track Space Efficient Vols (Legacy)
	12800	(3200)	BITSTRING	4096	SSGEPSGC3	Safeguarded Copy Backup Vols

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