



Welcome



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Culbert Healthcare Solutions

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Configuration

Licenses

OS – Based on license purchased

Cache – Equal to the total number of PROCESSES that the system will be running

Security Plus – Equal to the number of concurrent users

Web users take 2 Cache license slots per actual user

Character cell users take 1 license slot

Cache	Security Plus	Result
equal	equal	no issues
higher	lower	you will have excess capacity for non-GE Centricity users
lower	higher	you will not be able to fully utilize your GE Centricity license

Namespaces & Databases

Namespace – can contain multiple databases

OS directory name must match namespace name

Database – contains data in globals. Where GE Centricity data is stored

CPF file

Contains all configuration data needed for Cache to run cleanly
Old versions should be kept when making modifications
Modifications take effect upon next Cache restart

Journaling

Write Image Journal –

Keeps copy of data block prior to change to allow for recovery.
Should be placed on disk that does not have database files on it
Cache reads from the WIJ upon every start up.

Global Journaling –

Saves all sets and kills to a database for use in recovery.
Journal files must be closed prior to the backup
Closed Journal files should be purged on a regular schedule after they have been backed up.

Useful Information

MSU Table

Stores database names, disk location, current size, extend by and maximum size.
All displayed in megabytes

	UIC	Block size	# of vols	File size(MB)	Exp # (MB)	Max # (MB)	Global dir	New gbl pntrs	New gbl data	Collate type
_\$1\$DGA101:[ABC]	100,1	8192	1	43368	164	0	3	16	50	5
Freeze on database errors Database Read Mode: Read/Write Database Mount Mode: Automatic										
_\$1\$DGA102:[ABCDBMS]	100,1	8192	1	28841	128	42000	3	16	50	5
Freeze on database errors Database Read Mode: Read/Write Database Mount Mode: Automatic										
_\$1\$DGA104:[AIS]	100,1	8192	1	32	32	224	3	16	50	5
Freeze on database errors Database Read Mode: Read/Write Database Mount Mode: Automatic										
_\$1\$DGA104:[ABCINDX]	100,1	8192	1	3500	250	6000	3	16	50	5
Freeze on database errors Database Read Mode: Read/Write Database Mount Mode: Automatic										

Useful Information

Night Jobs

GE Centricity table where automated nightly processing job information is displayed. Should be checked daily to insure that all necessary jobs have completed successfully, reviewed for 'no routine' errors and should be purged of old jobs

DIRECTORY	ROUTINE	ENTRY PT	FREQ	DAY TO RUN	START TIME	DON'T START IF AFTER	DON'T RUN BEFORE	DATE LAST RUN	COMMENT
ABC	UXUTLPRG		D		12:01AM	12:59AM		03 Sep 2009	interface purges
ABC	APCSINITJ	AUTO	D		12:30AM	05:00AM		03 Sep 2009	PCS NIGHT JOBS
%SYS	%ZIDKZSC		D		01:15AM	06:30AM		03 Sep 2009	KILL ZSC GLOBAL
ABCTST	AWNJ	AUTO	D		02:00AM	05:00AM		03 Sep 2009	BAR NIGHT JOBS
ABCTST	SCHEDNJ	A	D		02:00AM	05:30AM		03 Sep 2009	SCHED NIGHT JOBS
ABC	SCHEDNJ	A	D		02:00AM	05:30AM		03 Sep 2009	SCHED NIGHT JOBS
ABC	AWNJ	AUTO	D		02:00AM	05:00AM		03 Sep 2009	BAR NIGHTJOBS
ABC	UDQLRUN("CLAIM")	NJRUNQD			02:15AM	09:00AM		21 Aug 2009	03 Sep 2009
ABC	UDQLRUN("FSC_7")	NJRUNQD			02:25AM	09:00AM		03 Sep 2009	
ABC	UDQLRUN("FSC_2")	NJRUNQD			02:25AM	09:00AM		03 Sep 2009	
ABCTEST	ABARTST		D		07:22AM	09:00AM		No such routine	

Spool printing

Device 2 (%SPOOL)

Intersystems spool device that stores all data in a global within %SYS.

Device 5 – (ZIDSPOL)

GE Centricity defined spool device that keeps a pointer in Cache to the data store in the VMS directory IDX\$SPOOL

Cleanup of spool files should be done from within Cache

DBMS

Important to carefully create queries to pull the largest sub set of data on the initial pass and then the secondary criteria can be applied. During the query run a temporary global is built and stores the findings. Upon completion this global is deleted. Can create filefulls during query run and lead to over allocation of space to database.

System Monitoring

Processes

%SS utility provides a snapshot of all processes running on the system.

Process	Devices	KB	Namespace	Routine	CPU,Glob	Pri	UIC	Location
30D			%SYS		580260,46217213	14	1,4	WRTDMN
30E			%SYS		100,47676	10	1,4	GARCOL
30F			%SYS		9577185,6101723	10	1,4	JRNDMN
310			%SYS		35,0	10	1,4	EXPDMN
311			%SYS		398224,1561558	14	1,4	SLAVWD1
8E653	_NLA0:	184	ABC	UZ323DRV	50177778,3656800	4	1,4	
31B	TCP 1972	52	%SYS	%cmtP	45,13	4	1,4	
89656	_TNA280	238	ABC	ZIDREAD	949958,24345	4	100,1	
75952	_NLA0:	106	ABCTST4	UZ310COM	11751802,503389	4	1,4	
8F908	_NLA0:	105	ABC	UX2KUCOM	9773209,453273	4	1,4	
910F1	_TNA385:	245	ABC	ZIDREAD	1219138,28662	4	100,1	
9284C	_NLA0:	126	ABC	UZAHS DRV	15023199,842602	4	1,4	

Jobexam utility can be used to view the commands a single process is running.

Cache for OpenVMS/ALPHA V7.x (Alpha) 5.0.20

M System Status: 9:37 am 03 Sep 2009

Process	Devices	KB	Namespace	Routine	CPU,Glob	Pri	UIC	Location
910F1	_TNA385:	192	ABC	ZIDREAD	255609,11985		4	100,1

Last global reference: REC(17,318057,100)

Last line of code:

```
I $(LEN)=" " R VALUE:TIMEOUT S SUCCESS=$T I '$T S POPVAR=1 Q ""
```

Local Lock entries:

Entry	Owner	X#	S#	Flg	Item	Locked
-------	-------	----	----	-----	------	--------

Locks

Prior to a process changing a global node a lock of the node is initiated to avoid another process from attempting to change the same node. The locktable in Cache displays all processes on the system that have a lock and provides information about the lock. A process with a lock should only be removed from the system (killed) with the utmost care.

```
Node Name: ALPHA1 Cluster Master: ALPHA1
LOCK table entries at 10:44AM 09/10/2009
905648 bytes usable, 1008848 bytes available.
```

Entry	Owner	X#	S#	Flg	W#	Item Locked
1)	111D	1				^[^^^_ \$1\$DGA101: [ABC]"EDIQ(1,"RUNNING",1)
2)	111D	1				^[^^^_ \$1\$DGA101: [ABC]"EDIQ(1,"SLEEP")
3)	98A46	4				^[^^^_ \$1\$DGA101: [ABC]"PT(9893)
4)	94327	1				^[^^^_ \$1\$DGA101: [ABC]"PT(63927)
5)	9CAD0	4				^[^^^_ \$1\$DGA101: [ABC]"PT(164371)

Database Integrity

The integrity routine should be run weekly to check the internal health of the databases. The routine verifies that all the block mapping is in tact. The process should be run to spool device 2 and then the ZIDCHK routine can be used scan the file. Prior to beginning any system or application upgrades a integrity check should be run and verified 'clean'.

Logs

Syslog – Displays Cache errors with Intersystem internal error codes

Cconsole.log – Any event occurring in Cache

Cache (5a8d) Mon Oct 27 17:44:11 2008

Jrn info from prior WIJ (imflags: 0):

fspec: _\$1\$DGA108: [CACHE.MGR.JOURNAL]20081027.002

filecnt: 2

fileoff: 7947568

min trans cnt: 2

min trans index: 132400

Cache (5a8d) Mon Oct 27 17:44:11 2008

cstart of Cache for OpenVMS/ALPHA V7.x (Alpha) 5.0.20 (Build 6305 + Adhoc 3587) 23-FEB-2006 19:34:44.52.

in _\$1\$DGA108: [CACHE.MGR]

with wij: _\$1\$DGA108: [CACHE.MGR]CACHE.WIJ

and pij:

from

VMS V7.3-2, hp AlphaServer ES47 7/1150, node VMS01, 2 active cpus, 2 available cpus.

Cache (5a8d) Mon Oct 27 17:44:11 2008

Operator.log – Displays OS errors and events on Alpha/Integrity VMS systems

Database cleanup

X GLOBALS - Used for issue troubleshooting or setup. Upon getting approval from GE Centricity application support can be removed

Spool files

Error Traps

Interface logs

Cachetemp

OS

All LOG files (FTP, Backup etc)

CBOXT*. * files

EDI file – need to save at least 90 days

User directories

System Management Calendar

To include all Applications and Systems tasks

September 2009						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1 Month End Close Monitor all processes on system	2 Monitor all processes on system	3 Printing for Month End Monitor all processes on system	4	5
6	7	8	9	10	11 Review Vendor site for OS Patches	12
13	14	15	16	17 Broadcast system outage to all users	18 Broadcast system outage to all users	19 Broadcast system outage to all users
20 Preventative Maintenance Outage Midnight – 4am	21	22	23	24	25	26
27	28 Verify Integrity checks, Backup, Journal files, Disk space	29 Verify Integrity checks, Backup, Journal files, Disk space	30 Monitor all processes on system			

System Setup Document

Example

System Configuration	System 1	System 2
1. System		
Model (HP VMS Servers, IBM AIX Servers)		
Total number of processors		
Memory (size in mb)		
Cache Memory (turned on – yes or no)		
Type of Interconnect (Fiber, SCSI etc)		
Type of TCP/IP (Multinet, UCX or other) & Version		
Number of total system processes (average low/high)		
OS Version (AIX, Windows, VMS)		
Size of Primary Page file		
Is Primary page file on system disk (yes or no)		
Size of Secondary Page file (VMS blocks)		
Is Secondary Page file on system disk		
Size of Swap file (VMS blocks)		
Is Swap file on system disk (yes or no)		
Date of last AUTOGEN (requested feed back and reviewed)		
Are VMS patches up-to-date (yes or no) /Date last reviewed		
2. Disk		
Type of RAID (Controller or Host Based)		
RAID version & level (0, 1, 0+1)		
Controller Model		
Controller Cache (size in mb)		
VMS Shadowing (yes or no)		
VMS Striping (yes or no)		
VMS Bound volume sets (yes or no)		
Is write-back caching enabled (yes, no or only on selected drives)		
3. Tape		
Tape Controller & Model		
Tape data transfer speed		
Number of tape drives		
Tape traffic on CL, SAN, Fiber (yes or no)		
4. Backup		
ZBACKUP (yes, no or other)		
ZBACKUP Incremental (yes or no)		
Total time to backup		
Amount of data backed up (in VMS blocks)		
Date of last Image backup of the system disk		
Date of last restore		
5. Cache		
Cache version (W SZF)		
Licensed for how many users		
Number of total Cache processes (average low/high)		
Number of Global & Routine Buffers		
Journaling (yes or no)		
Implicit Globals (yes or no)		
5. Miscellaneous		
Number of DBMS queries run daily (average low/high)		
ZLIB version (D *ZLIBVER)		
ZCALL version		
Test UCLs on Live production system or on separate system		
Integrity Check (last performed & verified)		

THANK YOU!

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For additional information about Culbert Healthcare Solutions please visit our new website at:

www.culberthealth.com