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/sadmin/bin# sadmlib_std_demo.sh
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sadmlib_std_demo.sh v3.5 - Library v2.37
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User Var.	that affect SADMIN behavior	Description	This System Result
[001]	\$SADM_VER	Script Version Number	: 3.5
[002]	\$SADM_PN	Script Name	: sadmlib_std_demo.sh
[003]	\$SADM_INST	Script Name Without Extension	: sadmlib_std_demo
[004]	\$SADM_USERNAME	Current User Name	: root
[005]	\$SADM_TPID	Current Process ID	: 13964
[006]	\$SADM_MULTIPLE_EXEC	Allow running multiple copy	: Y
[007]	\$SADM_USE_RCH	Gen. entry in .rch file	: N
[008]	\$SADM_LOG_TYPE	Set Output to [S]creen [L]og [B]oth	: B
[009]	\$SADM_LOG_APPEND	Append Log or Create New One	: N
[010]	\$SADM_LOG_HEADER	Generate Header in log	: N
[011]	\$SADM_LOG_FOOTER	Generate or not Footer in log	: N
[012]	\$SADM_EXIT_CODE	Script Exit Return Code	: 0
[013]	\$SADM_ALERT_TYPE	0=No 1=OnError 2=OnSuccess 3=Allways	: 1
[014]	\$SADM_ALERT_GROUP	Alert Group (alert_group.cfg)	: sinfo
[015]	\$SADM_MAIL_ADDR	SysAdmin Email	: duplessis.jacques@gmail.com

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Calling Functions	Description	This System Result
[001]	\$(sadm_get_release)	SADMIN Release Number (XX.XX) : 0.89
[002]	\$(sadm_get_ostype)	OS Type (Uppercase,LINUX,AIX,DARWIN): LINUX
[003]	\$(sadm_get_osversion)	Return O/S Version (Ex: 7.2, 6.5) : 7.5.1804
[004]	\$(sadm_get_osmajorversion)	Return O/S Major Version (Ex 7, 6) : 7
[005]	\$(sadm_get_osminorversion)	Return O/S Minor Version (Ex 2, 3) : 5
[006]	\$(sadm_get_osname)	O/S Name (REDHAT,CENTOS,UBUNTU,...) : CENTOS
[007]	\$(sadm_get_oscodename)	O/S Project Code Name : Core
[008]	\$(sadm_get_kernel_version)	O/S Running Kernel Version : 3.10.0-862.11.6.el7.x86_64
[009]	\$(sadm_get_kernel_bitmode)	O/S Kernel Bit Mode (32 or 64) : 64
[010]	\$(sadm_get_hostname)	Current Host Name : holmes
[011]	\$(sadm_get_host_ip)	Current Host IP Address : 192.168.1.12
[012]	\$(sadm_get_domainname)	Current Host Domain Name : maison.ca
[013]	\$(sadm_get_fqdn)	Fully Qualified Domain Host Name : holmes.maison.ca
[014]	\$(sadm_get_epoch_time)	Get Current Epoch Time : 1537368987
[015]	\$(sadm_epoch_to_date 1537368987)	Convert epoch time to date : 2018.09.19 10:56:27
[016]	\$(sadm_date_to_epoch "\$WDATE")	Convert Date to epoch time : 1537368987
	WDATE='2018.09.19 10:56:27'	
	DATE1='2016.01.30 10:00:44'	
	DATE2='2016.01.30 10:00:03'	
[017]	\$(sadm_elapse "\$DATE1" "\$DATE2")	Elapse Time between two timestamps : 00:00:41

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SADMIN Bash Shell Specific Functions	Description	This System Result
[001] \$(sadm_server_type)	Host is Physical or Virtual (P/V)	: P
[002] \$(sadm_server_model)	Server model (Ex: HP ProLiant DL580)	: OptiPlex 7020
[003] \$(sadm_server_serial)	Server serial number (Ex: 4S7GYF1)	: BJSV942
[004] \$(sadm_server_memory)	Server total memory in MB (Ex: 3790)	: 7730
[005] \$(sadm_server_hardware_bitmode)	CPU Hardware capable of 32/64 bits	: 64
[006] \$(sadm_server_nb_logical_cpu)	Number of Logical CPU on server	: 4
[007] \$(sadm_server_nb_cpu)	Number of Physical CPU on server	: 1
[008] \$(sadm_server_nb_socket)	Number of socket on server	: 1
[009] \$(sadm_server_core_per_socket)	Number of Core per Socket	: 4
[010] \$(sadm_server_thread_per_core)	Number of Thread per Core	: 1
[011] \$(sadm_server_cpu_speed)	Server CPU Speed in MHz	: 3318
[012] \$(sadm_server_disks)	Disks list(MB) (DISKNAME SIZE,...)	: sda 512000,sdb 1024000
[013] \$(sadm_server_vg)	VG list(MB) (VGNAME SIZE USED FREE)	: rootvg 476426 375173 101253
[014] \$(sadm_server_ips)	Network IP(Name IP Netmask MAC)	: em1 192.168.1.12 255.255.255.0 98:90:96:b7:64:a2,em1:1 192.168.1.20 255.255.255.0 98:90:96:b7:64:a2,em1:2 192.168.1.68 255.255.255.0 98:90:96:b7:64:a2,em1:3 192.168.1.13 255.255.255.0 98:90:96:b7:64:a2,em1:4 192.168.1.6 255.255.255.0 98:90:96:b7:64:a2,em1:5 192.168.1.23 255.255.255.0 98:90:96:b7:64:a2,em1:6 192.168.1.126 255.255.255.0 98:90:96:b7:64:a2,em1:7 192.168.1.28 255.255.255.0 98:90:96:b7:64:a2
[015] sadm_toupper string	Return string uppercase	: STRING
[016] sadm_tolower STRING	Return string lowercase	: string

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Overview of sadm_start and sadm_stop function
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Example of utilisation:

```
# sadm_start                                # Init Env Dir & RC/Log File
# if [ $? -ne 0 ] ; then sadm_stop 1 ; exit 1 ;fi # Exit if Problem
# main_process                             # Main Process
# SADM_EXIT_CODE=?                         # Save Error Code
# sadm_stop $SADM_EXIT_CODE                # Close SADM Tool & Upd RCH
# exit $SADM_EXIT_CODE                     # Exit With Global Err (0/1)
```

sadm_start

```
Start and initialize sadm environment - Accept no Parameter
If SADMIN root directory is not /sadmin, make sure the SADMIN Env. variable is set to proper dir.
Please call this function when your script is starting
What this function will do for us :
1) Make sure all directories & sub-directories exist and have proper permissions.
2) Make sure log file exist with proper permission (/sadmin/log/holmes_sadmlib_std_demo.log)
3) Make sure Return Code History (.rch) exist and have the right permission
4) If PID file exist, show error message and abort.
   Unless user allow more than one copy to run simultaneously (SADM_MULTIPLE_EXEC='Y')
5) Add line in the [R]eturn [C]ode [H]istory file stating script is started (Code 2)
6) Write HostName - Script name and version - O/S Name and version to the Log file (SADM_LOG)
```

sadm_stop

Accept one parameter - Either 0 (Successfull) or non-zero (Error Encountered)

Please call this function just before your script end

What this function do.

- 1) If Exit Code is not zero, change it to 1.
- 2) Get Actual Time and Calculate the Execution Time.
- 3) Writing the Script Footer in the Log (Script Return code, Execution Time, ...)
- 4) Update the RCH File (Start/End/Elapse Time and the Result Code)
- 5) Trim The RCH File Based on User choice in sadmin.cfg
- 6) Write to Log the user mail alerting type choose by user (sadmin.cfg)
- 7) Trim the Log based on user selection in sadmin.cfg
- 8) Send Email to sysadmin (if user selected that option in sadmin.cfg)
- 9) Delete the PID File of the script (SADM_PID_FILE)
- 10) Delete the User 3 TMP Files (SADM_TMP_FILE1, SADM_TMP_FILE2, SADM_TMP_FILE3)

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SADMIN CONFIG FILE VARIABLES	Description	This System Result
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[001] \$SADM_SERVER	SADMIN SERVER NAME (FQDN)	: holmes.maison.ca
[002] \$SADM_HOST_TYPE	SADMIN [C]lient or [S]erver	: S
[003] \$SADM_MAIL_ADDR	SADMIN Administrator Default Email	: duplessis.jacques@gmail.com
[004] \$SADM_ALERT_TYPE	0=NoMail 1=OnError 2=OnSuccess 3=All:	1
[005] \$SADM_ALERT_GROUP	Default Alert Group	: sinfo
[006] \$SADM_CIE_NAME	Your Company Name	: Your Cie Name
[007] \$SADM_DOMAIN	Server Creation Default Domain	: maison.ca
[008] \$SADM_USER	SADMIN User Name	: sadmin
[009] \$SADM_GROUP	SADMIN Group Name	: sadmin
[010] \$SADM_WWW_USER	User that Run Apache Web Server	: apache
[011] \$SADM_WWW_GROUP	Group that Run Apache Web Server	: apache
[012] \$SADM_DBNAME	SADMIN Database Name	: sadmin
[013] \$SADM_DBHOST	SADMIN Database Host	: sadmin.maison.ca
[014] \$SADM_DBPORT	SADMIN Database Host TCP Port	: 3306
[015] \$SADM_RW_DBUSER	SADMIN Database Read/Write User	: sadmin
[016] \$SADM_RW_DBPWD	SADMIN Database Read/Write User Pwd	: Nimdas17!
[017] \$SADM_RO_DBUSER	SADMIN Database Read Only User	: squery
[018] \$SADM_RO_DBPWD	SADMIN Database Read Only User Pwd	: Query18!
[019] \$SADM_RRDTOOL	RRDTOOL Binary Location	: /bin/rrdtool
[020] \$SADM_SSH_PORT	SSH Port to communicate with client	: 32
[021] \$SADM_NMON_KEEPPAYS	Nb. of days to keep nmon perf. file	: 60
[022] \$SADM_RCH_KEEPPAYS	Nb. days to keep unmodified rch file:	60
[023] \$SADM_LOG_KEEPPAYS	Nb. days to keep unmodified log file:	60
[024] \$SADM_MAX_RCLINE	Trim rch file to this max. of lines	: 125
[025] \$SADM_MAX_LOGLINE	Trim log to this maximum of lines	: 2000
[026] \$SADM_NETWORK1	Network/Netmask 1 inv. IP/Name/Mac	: 192.168.1.0/24
[027] \$SADM_NETWORK2	Network/Netmask 2 inv. IP/Name/Mac	:
[028] \$SADM_NETWORK3	Network/Netmask 3 inv. IP/Name/Mac	:
[029] \$SADM_NETWORK4	Network/Netmask 4 inv. IP/Name/Mac	:

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[030] $SADM_NETWORKS          Network/Netmask 5 inv. IP/Name/Mac :
[031] $SADM_MKSYSB_NFS_SERVER   AIX MKSYSB NFS Server IP or Name : batnfs.maison.ca
[032] $SADM_MKSYSB_NFS_MOUNT_POINT AIX MKSYSB NFS Mount Point : /volume1/mksysb
[033] $SADM_MKSYSB_BACKUP_TO_KEEP AIX MKSYSB NFS Backup - Nb. to keep : 2
[034] $SADM_REAR_NFS_SERVER      Rear NFS Server IP or Name : batnas.maison.ca
[035] $SADM_REAR_NFS_MOUNT_POINT Rear NFS Mount Point : /volume1/Linux_DR
[036] $SADM_REAR_BACKUP_TO_KEEP   Rear NFS Backup - Nb. to keep : 3
[037] $SADM_BACKUP_NFS_SERVER      NFS Backup IP or Server Name : batnas.maison.ca
[038] $SADM_BACKUP_NFS_MOUNT_POINT NFS Backup Mount Point : /volume1/backup_linux
[039] $SADM_DAILY_BACKUP_TO_KEEP   Nb. of Daily Backup to keep : 3
[040] $SADM_WEEKLY_BACKUP_TO_KEEP  Nb. of Weekly Backup to keep : 3
[041] $SADM_MONTHLY_BACKUP_TO_KEEP Nb. of Monthly Backup to keep : 3
[042] $SADM_YEARLY_BACKUP_TO_KEEP  Nb. of Yearly Backup to keep : 2
[043] $SADM_WEEKLY_BACKUP_DAY      Weekly Backup Day (1=Mon,...,7=Sun) : 5
[044] $SADM_MONTHLY_BACKUP_DATE    Monthly Backup Date (1-28) : 1
[045] $SADM_YEARLY_BACKUP_MONTH     Month to take Yearly Backup (1-12) : 12
[046] $SADM_YEARLY_BACKUP_DATE      Date to do Yearly Backup(1-DayInMth): 31
[047] $SADM_STORIX_NFS_SERVER      Storix NFS Server IP or Name : batnas.maison.ca
[048] $SADM_STORIX_NFS_MOUNT_POINT Storix NFS Mount Point : /volume1/storix
[049] $SADM_STORIX_BACKUP_TO_KEEP   Storix NFS Backup - Nb. to Keep : 3

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Client Directories Var. Avail.	Description	This System Result
[001] \$SADM_BASE_DIR	SADMIN Root Directory	: /sadmin
[002] \$SADM_BIN_DIR	SADMIN Scripts Directory	: /sadmin/bin
[003] \$SADM_TMP_DIR	SADMIN Temporary file(s) Directory	: /sadmin/tmp
[004] \$SADM_LIB_DIR	SADMIN Shell & Python Library Dir.	: /sadmin/lib
[005] \$SADM_LOG_DIR	SADMIN Script Log Directory	: /sadmin/log
[006] \$SADM_CFG_DIR	SADMIN Configuration Directory	: /sadmin/cfg
[007] \$SADM_SYS_DIR	Server Startup/Shutdown Script Dir.	: /sadmin/sys
[008] \$SADM_DOC_DIR	SADMIN Documentation Directory	: /sadmin/doc
[009] \$SADM_PKG_DIR	SADMIN Packages Directory	: /sadmin/pkg
[010] \$SADM_DAT_DIR	Server Data Directory	: /sadmin/dat
[011] \$SADM_NMON_DIR	Server NMON - Data Collected Dir.	: /sadmin/dat/nmon
[012] \$SADM_DR_DIR	Server Disaster Recovery Info Dir.	: /sadmin/dat/dr
[013] \$SADM_RCH_DIR	Server Return Code History Dir.	: /sadmin/dat/rch
[014] \$SADM_NET_DIR	Server Network Info Dir.	: /sadmin/dat/net
[015] \$SADM_RPT_DIR	SYStem MONitor Report Directory	: /sadmin/dat/rpt
[016] \$SADM_DBB_DIR	Database Backup Directory	: /sadmin/dat/dbb
[017] \$SADM_SETUP_DIR	SADMIN Installation/Update Dir.	: /sadmin/setup
[018] \$SADM_USR_DIR	User/System specific directory	: /sadmin/usr
[019] \$SADM_UBIN_DIR	User/System specific bin/script Dir.	: /sadmin/usr/bin
[020] \$SADM_ULIB_DIR	User/System specific library Dir.	: /sadmin/usr/lib
[021] \$SADM_UDOC_DIR	User/System specific documentation	: /sadmin/usr/doc
[022] \$SADM_UMON_DIR	User/System specific SysMon Scripts	: /sadmin/usr/mon

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Server Directories Var. Avail.	Description	This System Result
[001] \$SADM_WWW_DIR	SADMIN Web Site Root Directory	: /sadmin/www
[002] \$SADM_WWW_DOC_DIR	SADMIN Web Documentation Dir.	: /sadmin/www/doc
[003] \$SADM_WWW_DAT_DIR	SADMIN Web Site Systems Data Dir.	: /sadmin/www/dat
[004] \$SADM_WWW_LIB_DIR	SADMIN Web Site PHP Library Dir.	: /sadmin/www/lib
[005] \$SADM_WWW_TMP_DIR	SADMIN Web Temp Working Directory	: /sadmin/www/tmp
[006] \$SADM_WWW_PERF_DIR	SADMIN Web Performance Graph Dir.	: /sadmin/www/tmp/perf

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SADMIN FILES VARIABLES AVAIL.	Description	This System Result
[001] \$SADM_PID_FILE	Current script PID file	: /sadmin/tmp/sadmlib_std_demo.pid
[002] \$SADM_CFG_FILE	SADMIN Configuration File	: /sadmin/cfg/sadmin.cfg
[003] \$SADM_CFG_HIDDEN	SADMIN Initial Configuration File	: /sadmin/cfg/.sadmin.cfg
[004] \$SADM_TMP_FILE1	User usable Temp Work File 1	: /sadmin/tmp/sadmlib_std_demo_1.13964
[005] \$SADM_TMP_FILE2	User usable Temp Work File 2	: /sadmin/tmp/sadmlib_std_demo_2.13964
[006] \$SADM_TMP_FILE3	User usable Temp Work File 3	: /sadmin/tmp/sadmlib_std_demo_3.13964
[007] \$SADM_LOG	Script Log File	: /sadmin/log/holmes_sadmlib_std_demo.log
[008] \$SADM_RCHLOG	Script Return Code History File	: /sadmin/dat/rch/holmes_sadmlib_std_demo.rch
[009] \$DBPASSFILE	SADMIN Database User Password File	: /sadmin/cfg/.dbpass
[010] \$SADM_RPT_FILE	SYSTEM MONitor Report File	: /sadmin/dat/rpt/holmes.rpt

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COMMAND PATH USE BY SADMIN STD. LIBR.	Description	This System Result
[001] \$SADM_LSB_RELEASE	Cmd. 'lsb_release', Get O/S Version	: /bin/lsb_release
[002] \$SADM_DMIDECODE	Cmd. 'dmidecode', Get model & type	: /sbin/dmidecode
[003] \$SADM_FACTER	Cmd. 'facter', Get System Info	: /bin/facter
[004] \$SADM_BC	Cmd. 'bc', Do some Math.	: /bin/bc
[005] \$SADM_FDISK	Cmd. 'fdisk', Get Partition Info	: /sbin/fdisk
[006] \$SADM_WHICH	Cmd. 'which', Get Command location	: /bin/which
[007] \$SADM_PERL	Cmd. 'perl', epoch time Calc.	: /bin/perl
[008] \$SADM_MAIL	Cmd. 'mail', Send SysAdmin Email	: /bin/mail
[009] \$SADM_MUTT	Cmd. 'mutt', Used to Send Email	: /bin/mutt
[010] \$SADM_CURL	Used to send alert to Slack	: /bin/curl
[011] \$SADM_LSCPU	Cmd. 'lscpu', Socket & thread info	: /bin/lscpu
[012] \$SADM_NMON	Cmd. 'nmon', Collect Perf Statistic	: /bin/nmon
[013] \$SADM_PARTED	Cmd. 'parted', Get Disk Real Size	: /sbin/parted
[014] \$SADM_ETHTOOL	Cmd. 'ethtool', Get System IP Info	: /sbin/ethtool
[015] \$SADM_SSH	Cmd. 'ssh', SSH to SADMIN client	: /bin/ssh
[016] \$SADM_SSH_CMD	Cmd. 'ssh', SSH to Connect to client	: /bin/ssh -qnp32

/sadmin/bin#